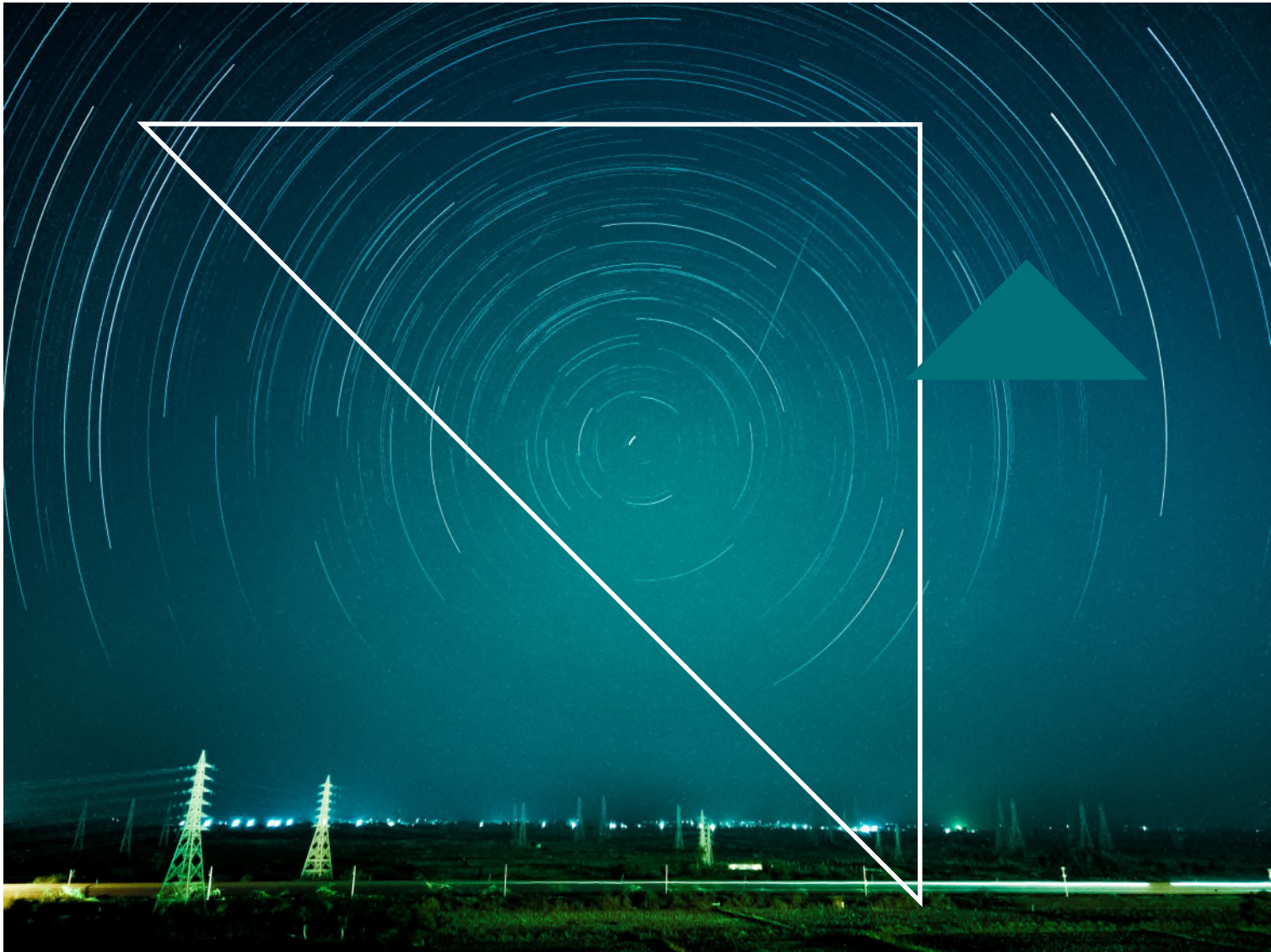APPENDIX A

EXECUTIVE REPORT

Towards Digital Growth – framework & priorities

October 2021

Introduction and purpose

In recognition of the growing importance of digital infrastructures, Hertfordshire Local Enterprise Partnership (LEP), working in collaboration with Hertfordshire County Council, has undertaken an initial 'digital landscaping' exercise. This work has also been developed with the oversight of the Hertfordshire Growth Board.

This report has sought to:

- understand the current digital landscape in respect to the current levels of full fibre/gigabit and mobile coverage within the county;

- understand the future investment plans of the telecommunications sector in Hertfordshire;

- compare Hertfordshire with its local authority neighbours surrounding London;

- understand the market's current interest in Hertfordshire and the extent of any interest;

- ascertain how Hertfordshire is perceived by the telecom sector; do its policies attract or discourage investment?

- ascertain what role the public and private sectors can play in attracting further investment.

The insights from these different strands of work have informed the development of this Digital Framework and, specifically, the four Priorities identified within it.

The intention now is to develop this Framework so that it can become a wide-ranging Digital Strategy for Hertfordshire.

Understanding Hertfordshire's 'digital landscape' – and the view of the market

The current situation

The following tables provide an overview into the availability and presence of full-fibre and gigabit capable networks as of 22nd February 2021 *(data based on Think Broadband database).*

Table 1 compares Hertfordshire's digital landscape with that in neighbouring county/unitary areas. It shows that Hertfordshire is significantly adrift in having access to FTTP (Full Fibre to the Premise) and Gigabit capable networks – in other words, digital infrastructure of a high quality. It also shows the dominance of Virgin Media in relation to overall provision.

Table 1: Comparison of current coverage in neighbouring county/unitary authorities in Southern England.

Council/Area	FFTP %	Gigabit Capable %	Virgin Media Coverage %
Hertfordshire	7.99	8.04	79.44
Berkshire	12.18	63.03	63.43
Bucks	10.26	17.96	33.72
Essex	16.16	21.50	36.82
Kent	18.54	22.43	38.55
Surrey	15.40	17.17	66.15
Slough	19.93	19.93	83.92

Further points to note include the following:

- CityFibre is currently investing in a full fibre deployment in Slough, Reading, Maidenhead and Milton Keynes;

- Openreach is currently investing in a full fibre deployment in Slough;

- Virgin Media has already completed its Gigabit upgrade in Berkshire;

The second table provides a district-level breakdown within Hertfordshire. This shows a mixed picture. St Albans is the district which appears to fare best whilst Stevenage and Watford currently have limited high quality provision.

Table 2: Current coverage overview at county, borough and district level

Council District	Superfast 30Mb> %	FTTP %	Gigabit Capable %	Virgin Media Coverage %
Hertfordshire	98.06	7.99	8.04	79.44
Broxbourne	99.31	2.98	2.98	87.59
Dacorum	98.08	4.90	4.90	78.31
East Herts	96.11	10.80	10.80	63.87
Hertsmere	98.48	7.01	7.01	82.20
North Herts	97.07	3.89	3.89	75.06
St Albans	98.28	24.33	24.33	85.04
Stevenage	99.61	1.57	1.57	91.09
Three Rivers	98.15	7.06	7.06	77.18
Watford	99.98	2.38	2.38	93.46
Welwyn Hatfield	97.26	7.76	7.76	71.38

The situation is however fluid and it is important to note the following:

- Openreach is already progressing and/or has announced full fibre investments based on the following telephone exchanges in Hemel Hempstead, Watford, Harpenden, St Albans, Codicote and Rickmansworth;

- Virgin Media has a penetration of 79% across Hertfordshire which will follow the proposed upgrade of its existing network by the end of 2021; this means that this network will be deemed gigabit capable;

- Other than St Albans, every other district within Hertfordshire is below the national average;

- Some rural parts of Hertfordshire will benefit from the Department for Digital, Culture, Media & Sport's (DCMS) 'Outside In' Fund which is focused on addressing those areas which have not been identified by the private sector as areas of potential investment.

Market Engagement

In order to understand better the current and future fibre landscape within the county, a process of market engagement was undertaken during January and February 2021. A series of individual virtual sessions was hosted by Regional Network Solutions (RNS) in collaboration with Hertfordshire County Council and Hertfordshire LEP.

The purpose of these sessions was to listen to the market and understand in more detail:

- the current levels of full fibre coverage in Hertfordshire;

- their current and future plans for full fibre investment;

- what would encourage companies to invest in further full fibre deployment?

- how such fibre connectivity could be an enabler for future public sector reform;

- what barriers are there to future investment?

The companies that took part included Fibre Carriers (Openreach, Virgin Media, CityFibre, Swish Fibre, Zayo, Zzoomm, Hyperoptic, Gigaclear, SSE Telecom) and Mobile Operators (Vodafone, 3, and EE).

Key messages from the market engagement process are summarized in Box 1.

Box 1: Key messages from market engagement, January-February 2021

- **There is real market desire interest to invest**, albeit much of this interest remains commercially confidential.

- There is clear evidence that **Hertfordshire would benefit from further investment** and would see a significant rise in the level of Gigabit capable networks which is currently below the national average of 34.6%.

- There were no clear signs that Hertfordshire would attract immediate further investment in full fibre, in sharp contrast to other neighbouring authorities. This was reflected in CityFibre's latest roll-out announcement in March, when Berkshire and Essex were included but not Hertfordshire.

- **Virgin Media's planned upgrade** of its Data Over Cable Service Interface Specifications (DOCSIS) network will result in over 79% of residences and business having access to a gigabit capable network by the end of 2021. However, while this will mean that Hertfordshire will move above the national headline average for access to gigabit capable connectivity, it may also have an impact on actual FTTP investment which potentially will reduce competition and limit opportunity. This could place Hertfordshire at a disadvantage.

- **A number of Alnets (Alternative Network Providers) remain keen to invest in Hertfordshire**. However the investment may be influenced by the presence of Virgin Media. [Although note that the presence of Virgin Media has not deterred full fibre investment in Berkshire where the Virgin Media upgrade of its network has already been completed (CityFibre is already delivering in Reading, Slough and Maidenhead)].

- **There is interest in developing a public sector anchor tenancy model** based on public sector connectivity requirements which could accelerate full fibre investment in Hertfordshire across individual councils as well as collectively across the county. This model is based on the principle that a local authority's future connectivity requirements become an anchor on a fibre network delivered through private sector investment (guaranteed rental revenue over a 10 to 15-year period but at a substantially reduced cost to councils).

- **There is general support for a market information day** to be potentially hosted by Hertfordshire LEP and Hertfordshire County Council. This would give the market insight into development opportunities and understand how further market engagement and fibre investment could be promoted.

- **Proactive marketing** of Hertfordshire's opportunities will generate further interest and investment.

- Hertfordshire appears to have only recently started to benefit from **increased investment in 5G** and this investment is primarily focused on 3 and, to a lesser extent, EE. o2 Telefonica and Vodafone do not appear to view Hertfordshire as a priority area for 5G.

- **This engagement exercise was welcomed by the market** and was viewed as a platform which should encourage further and more extensive future dialogue.

- The work of **Connected Counties** was recognised and should be seen as a key channel for future engagement in respect to both fibre and mobile coverage.

A Digital Framework for Hertfordshire

Given the context set out above – and the principal messages from the market engagement process – it is clear that Hertfordshire needs to take urgent steps <u>to accelerate the delivery of a high quality digital infrastructure</u> which is at least on a par with that of its neighbours. This is the first priority within our Digital Framework.

Hertfordshire then needs to use this infrastructure.

In seeking to achieve pervasive digitization, it must <u>flex public sector assets, levers and resources to the full (Priority 2).</u> Consistent with the findings of the Made Smarter Review – led by Jurgen Maier a few years ago – there is a need to effect <u>widespread adoption of digital technologies across businesses of all sizes and from all sectors, and within places and communities (Priority 3)</u>.

In addition, Hertfordshire needs to seize the opportunity to <u>build a world class digital sector (Priority 4)</u>. It has some world class digital businesses – but there is scope for many more, particularly if it can nurture outstanding digital talent across its workforce.

These four elements define the basis for a wide-ranging digital strategy – and this will be developed in more detail over the next few months. Here we describe the four overarching Priorities of the Framework which must underpin it.

Figure 1: A Digital Framework for Hertfordshire
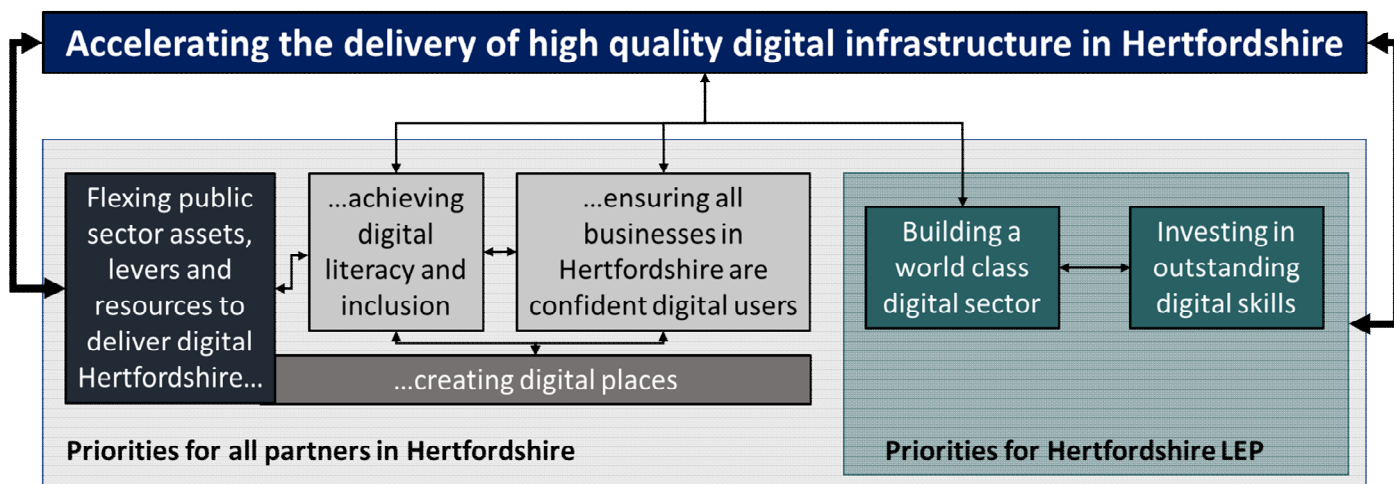
Priority 1: Accelerating the delivery of high quality digital infrastructure in Hertfordshire

There are two main strands within Priority 1: engaging fully to ensure that the market 'works' in delivering high quality digital infrastructure, and ensuring that Hertfordshire secures central government support to accelerate the delivery process. Both elements are critical. To date, both elements have been under-powered given the scale and potential of the county. In part at least, this has reflected the county's polycentric settlement structure, compounded by the prevalence of (relatively) small district councils. Hertfordshire 'as a whole' needs to engage with the market far more effectively.

Table 1: Delivering Priority 1

Workstream	Aim/Objectives	Outcomes
Market Information Day	• to invite carriers and other key telecom infrastructure companies to hear about Hertfordshire's full fibre vision and the planned opportunities which could be of interest to the market, attracting and acting as a catalyst for further private sector investment	To accelerate full-fibre investment into the county benefiting businesses and residents
On-going Market Engagement – Fibre Carriers	• to instigate on a quarterly basis further engagement with a view to seeking an update on current and future plans across Hertfordshire • to share opportunities regarding major developments/regeneration schemes such as Hemel Garden Communities and Harlow Gilston Garden Town	Raise the profile of Hertfordshire with the market and ensure that the current level of FTTP coverage in Hertfordshire (which is currently below the national average) is increased through private sector investment
On-going Market Engagement – Mobile Operators	• to instigate on a quarterly basis further engagement with the mobile operators with a view to seeking an update on current and future plans across Hertfordshire	Improve mobile coverage and ensure that Hertfordshire benefits from future 5G investment
Securing government funding	• to explore the option of developing a sustainable business case to justify the funding of a full-fibre solution to rural public sector buildings, including schools within Hertfordshire	Hertfordshire will be prepared to bid for any future infrastructure funding where the delivery of digital infrastructure could be considered

Priority 2: Flexing public sector assets, levers and resources to deliver digital Hertfordshire

Hertfordshire's public sector has a key role in relation to digital infrastructure: it is a customer, a market maker and – through the planning system – a regulator at a local level. If the public sector was to use its assets and powers well, it could do much to 'make the market work'. Various workstreams are proposed in this context.

Table 2: Delivering Priority 2

Workstream	Aim/Objectives	Outcomes
Public assets and infrastructure	• to develop a schedule of sites (greenfield, rooftop and building) which could be offered to mobile operators	Provide a means of addressing current coverage issues and accelerating future 5G deployment
Local Plans	• to ensure that a full fibre aspiration is incorporated within draft Local Plans	Provide a clear statement to developers and the market in respect to the importance of connectivity
Mapping	• to map points of presence, infrastructure, assets and connectivity across the county with all new developments, planned regeneration schemes, social housing, private residential care homes, business parks, hubs and sector clusters	Overview of all public sector assets which could be an enabler for full fibre and/or mobile deployment Overview of sites and public sector fibre requirements as a catalyst for further private sector investment Contribute to future funding bids
Assessing future public sector requirements	• to generate a view of current connectivity provision and costs (fixed and mobile) as well as associated service delivery costs • to understand how connectivity contracts and requirements could inform the basis of future procurement	Realise potential savings and improvement in service delivery Ensure that fibre being taken out to public sector sites could extend the reach of fibre into communities which, in turn, would generate greater investment from the market
Wayleaves	• to explore how local authorities could collectively adopt a proactive approach to wayleaves	Consistent and transparent policy toward permit and wayleave fees Practical approach to providing a bulk wayleave process for telecom providers with a view to accelerating deployment
IOT LoRaWAN investment case	• to explore the merits of investing in the deployment of a public sector owned and managed LoRaWAN network	Supporting the development of local digital skills, creating a platform for local enterprise and innovation and contributing to how the public sector delivers services and supports communities and businesses

Priority 3: Achieving pervasive digitisation – places, communities and businesses

Increasingly, the deployment and use of digital technologies is a hallmark of successful places, communities and businesses. Put another way, within Hertfordshire, the intention is that no place (whether a town centre

or a village), no community or household (however young or old) and no business (however small) is 'left behind' because of digital issues.

Table 3: Delivering Priority 3

Workstream	Aim/Objectives	Outcomes
Town centre regeneration	• to align the role of digital connectivity with town centre regeneration schemes – covering fixed, mobile, wireless and IOT connectivity and services	More vibrant town centres across Hertfordshire
Digital inclusion	• to address digital inclusion within social housing through private sector investment which is encouraged to deploy a FFTP solution at no cost to local authorities or housing associations	A service which is accessible and affordable to residents (based on flexible contracts and no credit checks) and contributes to addressing social and digital inclusion within our communities.
Digital skills	• to consider how through public sector procurement social value can be generated with a focus on advancing digital skills funded and promoted by the private sector; • to examine how improving connectivity into schools could support improvement in digital skills (coding) as well as promoting digital skills within the local community, with schools potentially performing the role of a local digital skills hub; • to advance a countywide digital skills initiative which shares insights, collaborates on opportunities and becomes the point of reference for promoting private sector initiatives	Provision of basic skills required to 'get on line', which will help young people to prepare for employment; new skills in an ever changing workplace; and skills supporting more elderly and infirm residents who will benefit from digital based services.
Business connectivity	• to work with small businesses to raise awareness about the business benefit of fibre • to advance a county based business gigabit voucher scheme	Better business connectivity in all sectors, particularly across SMEs

Priority 4: Building a world class digital sector and world class digital skills

Hertfordshire has some world class digital businesses – Imagination Technologies is a case in point. However compared to other local economies in the greater south east, the digital sector as a whole is under-represented. This is, arguably, a missed opportunity. The University of Hertfordshire has clear strengths (linked for example to digital animation), and these ought to be nurturing more high profile businesses. In addition, there are clearly opportunities for digital businesses to contribute to – and benefit from – some of Hertfordshire's foremost knowledge-based sectors and clusters – notably both life sciences, and film and TV. The need to animate the digital sector is a clear one – as is the imperative to invest in associated workplace skills.

Table 4: Delivering Priority 4

Workstream	Aim/Objectives	Outcomes
Digital sector action plan	• to develop an action plan to support the growth of a world class digital sector within Hertfordshire, which has links to other key parts of the county's knowledge economy	High profile and innovative businesses creating major new opportunities
High level digital skills	• to create a supply of high level digital skills – including data science and analytics	A supply of highly skilled people and a pipeline of talent, consistent with the needs of a globally significant sector

Investing to move from Framework to Strategy

All four of the Priorities described above are critical for Hertfordshire. All four need to be developed and actioned, and our proposal is to put in place a strategic resource for this purpose. Once in place, we will be able to develop a more rounded Digital Strategy, with SMART actions and a full set of targets and accountabilities.

Creation of a County Digital Governance Board

It is proposed that a Hertfordshire Digital Board be established to have the requisite insight and oversight of this framework and the development of a fuller digital strategy.

As well as the development and refinement of an overall digital strategy for the County, the Board would also provide a coordination role to advise on related issues such as:

- public sector connectivity (not exclusively local authorities);

- IOT Strategy – opportunities for sharing and developing a countywide IOT network;

- development of countywide planning policies re. full fibre and mobile deployment;

- sharing digital initiatives – public and private sectors;

- co-ordinate responses to national funding bids.

Many successful areas have similar structures, which comprise of representatives from public authorities, related industry representatives and skills/academic bodies.

It is proposed that the Board would be supported via expanded capacity (see below) supported by HCC, the LEP and the Growth Board.

Establishing operational capacity

Whilst there is existing officer capacity within the Hertfordshire Connected Counties Team, it is very much focussed on the roll out of existing programmes and additional project management resource would be required to take this frame work forward.

In order to progress this work it is anticipated that the requisite project management, support, industry engagement and communications capacity required would be required over a three year period via a three-way contribution from HCC, the LEP and the Growth Board.

HCC is prepared to host the resource and there is a logic in ensuring engagement with the existing Connected Counties team.