

Cabinet Meeting on Wednesday 15 June 2022

Digital Connectivity Strategy in Staffordshire



Cllr Simon Tagg, Cabinet Member for Environment, Infrastructure and Climate Change said,

“Getting as many places as possible gigabit-ready means more digital capacity for everyone through greater bandwidth and lightning-fast connectivity.

“Our vision is that no-one is left out, even the hard-to-reach places, so the Gigafast Staffordshire team is about working with partners to create the right demand and market conditions so that everyone can get hooked up.

“We have a track-record of pushing the boundaries so that more people feel the benefits of digital technology. By bringing together the most innovative digital minds, we’ll maximise digital opportunities for everyone.”

Report Summary:

A key priority of the Strategic Plan 2022-26 is to improve digital connections and to use digital technology to connect, inform and support the people of Staffordshire. The Digital Infrastructure Strategic Framework (DISF) sets out key objectives to deliver improved connectivity and realise the benefits for Staffordshire businesses and residents.

The DISF will be delivered through a programme that provides the infrastructure and technology for access to gigabit connectivity; enabling increased access and take-up of digital services; and supporting the realisation and benefits that increased adoption and consumption of improved connectivity brings.

Enabling increased access and demand for gigabit connectivity will require the continued shaping and influence of both commercial operators in the market and of public investment through programmes such as Project Gigabit and Shared Rural Network where there is a lack of commercial viability. In addition, to accelerate access and take-up of digital connectivity, we need to identify our priorities for investment, support and any intervention we make.

Our investment in digital connectivity through the Superfast programme provides us with both a legacy gainshare for potential investment as well as a staffing resource to support the future programme. A decision is required on the priorities to invest in and how to fund the resources required to deliver the programme in future years.

Recommendations

I recommend that Cabinet:

- a. Approve the Digital Infrastructure Strategic Framework (DISF) for Staffordshire
- b. Support the use of the £4million gainshare funding to resource and support delivery of the DISF through the Digital Connectivity Hub and delivery programme.
- c. Delegate the authority to the Director for Economy, Infrastructure and Skills in consultation with the Cabinet Member for Environment, Infrastructure and Climate Change to fund digital connectivity projects and programmes that market the opportunity improved digital connectivity brings, demonstrate and test new connectivity technologies and its advantages and pilot connectivity solutions through the use of the gainshare funding.



Local Members Interest
N/A

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Digital Connectivity Strategy in Staffordshire

Recommendations of the Cabinet Member for Environment, Infrastructure and Climate Change

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- b. Support the use of the £4million gainshare funding to resource and support delivery of the DISF through the Digital Connectivity Hub and delivery programme.
- c. Delegate the authority to the Director for Economy, Infrastructure and Skills in consultation with the Cabinet Member for Environment, Infrastructure and Climate Change to fund digital connectivity projects and programmes that market the opportunity improved digital connectivity brings, demonstrate and test new connectivity technologies and its advantages and pilot connectivity solutions through the use of the gainshare funding.

Report of the Director for Economy, Infrastructure and Skills

Digital Connectivity Strategy

1. A key priority of the Strategic Plan 2022-26 is to improve digital connections and to use digital technology to connect, inform and support the people of Staffordshire. The Digital Infrastructure Strategic Framework (DISF) was developed in March 2021 and set out the vision and objectives for Staffordshire.
2. The vision is for Staffordshire to be a county with access to 100% gigabit connectivity by 2030. To achieve this vision there are five key objectives:
 - i. To enable and accelerate delivery of gigabit capable technologies and infrastructure to provide full access.
 - ii. To maximise the opportunities and benefits of 5G across Staffordshire.
 - iii. To enable rural and digitally isolated communities where market intervention has failed.

- iv. To enable the growth of the digital economy in Staffordshire
 - v. Demonstrate the benefits of gigabit technology to businesses and communities
3. The Framework was developed in recognition that the operating environment is fluid, complex, evolving and is both commercially & technologically driven. The Strategic Framework provides direction and flexibility to respond to developments and opportunities, alongside working with different delivery partners in delivering our mission to:
- Accelerate delivery of gigabit capable technologies, maximising the opportunities and benefits for the businesses and residents of Staffordshire to enable the growth of our digital economy***
4. Delivery of improved digital connectivity will enable the benefits of this connectivity to be realised across Staffordshire through the development of the wider digital economy and how we connect, inform and support our residents and businesses.

National Context

5. There is a growing need for increased connectivity in terms of access, speed and reliability with demand for digital services increasing rapidly. It is estimated that urban areas will have approximately one million internet connected devices per square kilometre in the next few years. On average in excess of 200 devices per household will be connected, from toothbrushes to 8K tv's, all requiring access to fast digital connectivity, whether through fixed (fibre) or mobile connections. Globally, the expectation is that the number of internet connected devices will increase from 31 billion to 75 billion in the next 5 years.
6. The UK Government has recognised this need for improved connectivity and to intervene where the commercial market will not deliver. The government has a series of investment programmes that are part of the Build Back Better and Levelling Up agenda. By 2030, the ambition is that the UK will have nationwide gigabit-capable broadband and 4G coverage across the nation, along with 5G coverage for the majority of the population.
7. The UK Government **Project Gigabit** will invest £5 billion in reaching the additional premises the market will not connect with the ambition of reaching 85% by 2025 and the remainder to follow shortly afterwards through public & private investments. In Staffordshire Project Gigabit will enable connection to around 70,000 premises and see an investment of circa £123 million from the UK Government.

8. A visual map by premise in Staffordshire showing those premises with broadband speeds with access to or planned commercial access to 1,000 Mbs service is shown in Appendix 4 (Appendix 4 - Premises identified with access or planned access to 1000Mbs speed). The latest DCMS OMR exercise is being completed now which is likely to show a revised position.
9. In order to leverage the use of public sector assets the Government will also create **GigaHubs** as part of Project Gigabit. This will utilise up to £110 million to connect public buildings such as rural schools, doctors' surgeries and libraries to gigabit broadband. For Staffordshire there is an opportunity to work with Midlands Engine as part of a £17 million programme across the West Midlands in connecting Gigahubs. In Staffordshire so far 75 public assets have been identified as potential Gigahub sites and we are working with Midlands Engine to bring these forwards as part of the scheme.
10. The UK Government along with mobile operators is also investing over £1 billion in the **Shared Rural Network** (SRN) programme. This will deliver reliable mobile coverage to 95% of the UK, addressing the digital divide by improving 4G coverage in the areas that need it most. This includes £500 million to build new masts to eliminate not-spot areas where there is currently no coverage at all. Currently in West Midlands and Staffordshire, coverage from all four operators will rise to a minimum of 78%, up from 92%. Coverage from at least one operator will be 99% by the end of the programme.

Staffordshire Context

Superfast Staffordshire

11. Superfast Staffordshire Programme is a partnership between Staffordshire County Council, Building Digital UK (BDUK) and Openreach to deliver the Superfast Broadband programme across the county. Approximately 83,400 (24%) of premises in Staffordshire have gained access to superfast broadband (>24Mbps) services as a result. Coverage of services has increased from 65% (2013) to 96.95% (March 2022) because of the programme. Consequently, we now have over 400,000 premises with access to superfast broadband across the county.
12. The headline figures for the "take up" of superfast services that have been provided by the programme is currently 78.94%, way beyond the 20% originally envisaged. This take up provides a return on investment in the form of a gainshare to the County Council.

13. The Superfast Staffordshire contracts have concluded their fibre deployment phase having delivered all their contractual commitments. The programme is now transitioning to deliver full fibre (gigabit capable) solutions. Staffordshire currently has 55.95% gigabit capable coverage, of which 20.4% is delivered through a full fibre network.

Gigabit Broadband Vouchers

14. The programme team are currently working with over 70 rural communities to access the UK Gigabit Voucher Scheme, part of Project Gigabit. The Superfast Staffordshire programme has ensured that 96.95% have superfast broadband connectivity across the County, connecting 1,811 additional premises to date, with another 1,238 premises scheduled to be connected before the end of the programme (subject to DCMS approval). These numbers include a portion of the committed SCC gainshare, investing £1 million in Rural Gigabit Vouchers to top up the existing DCMS schemes.

Hard-to-reach Premises

15. The Superfast Staffordshire programme was originally (2012) aimed at delivering broadband speeds of 24Mbps and above to non-commercial premises, during the programme and to remain consistent with the national and international approach this was increased to 30Mbps, a figure now generally considered to be the minimum acceptable broadband connection speed. We note the differences when figures are mentioned in this document.
16. A visual map by premise in Staffordshire showing those premises with broadband speeds less than 30Mbps is shown in Appendix 4 (Appendix 4 - Premises identified with access to less than 30Mbps speed). The latest DCMS OMR exercise is being completed now which is likely to show a revised position.
17. It is estimated that at the end of the Superfast Staffordshire programme that approximately 7% of premises (approx. 30,000 premises) in Staffordshire will still not have access to 30Mbps or higher broadband speeds. There are still approximately 4,500 premises with connectivity below 10Mbps (which is considered below Universal Service Obligation).
18. At present there is approximately 44% of premises in Staffordshire unable to get access to Gigabit speeds (1,000Mbps). The DCMS Project Gigabit initiative and commercial intervention is targeted to deliver gigabit connectivity universally by 2030 (or as close to 100% as possible).

19. Project Gigabit nationally is estimating that despite the £1.9Bn initiative into providing gigabit capable connectivity to hard-to-reach areas, it estimates that premises that are very-hard-to-reach (VHTR) will be approximately 0.3% nationally, we estimate that this may be as high as 1% in Staffordshire due to its rural nature, approximately 4,000 premises in the County. The VHTR premises will require either further financial support or different technological solutions. We intend to use the gainshare monies to investigate and deliver where viable solutions to these areas.

Digital Connectivity Programme

20. The DISF will be delivered through a programme and will be co-ordinated and delivered through the Digital Connectivity Hub (Digital Infrastructure team) as the operating model for the service and the one-stop shop for digital connectivity. The Hub will function as the single point of contact in management of resources and relationships to deliver the programme, enabling access and take-up of gigabit connectivity and promoting the benefits that increased adoption and consumption of improved connectivity brings.

21. The Digital Connectivity programme has three key programme elements which are:

1) Enabling the deployment and delivery of Digital Infrastructure

- a) Investing and supporting programmes and projects & funding using and influencing e.g. – Superfast Gainshare, Project Gigabit, Gigahubs, other potential funding sources to deploy infrastructure
- b) Providing a barrier busting & red-carpet approach to regulation, incentives, policies (e.g., NPPF 2019) that enable infrastructure delivery
- c) Connectivity Technologies – FTTP, Analogue line redundancy, 5G, satellite, fixed wireless, etc

2) Enabling Access to Digital Connectivity

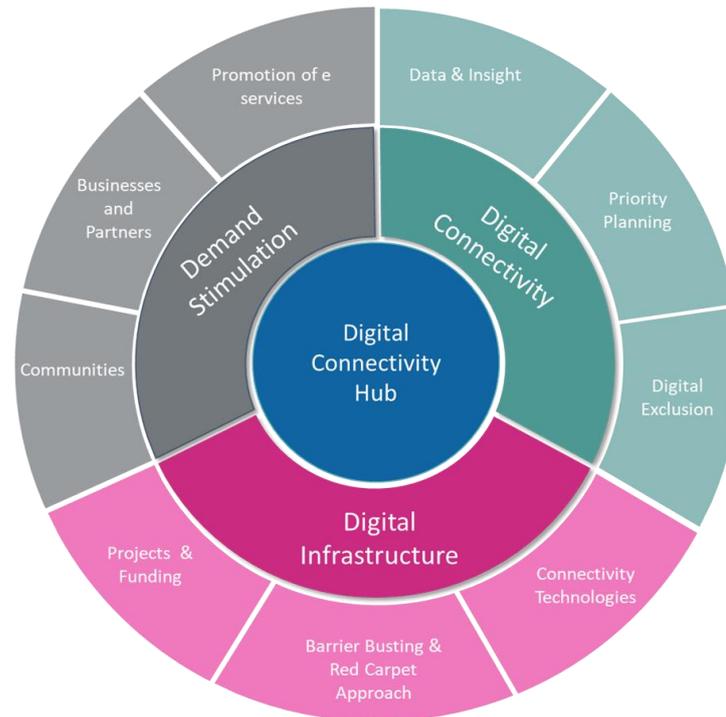
- a) Using data and insight through mapping availability of services (GIS), coverage and speeds of fixed fibre, mobile 4G and satellite to shape and inform investment
- b) Identifying priority areas for investment and where to direct Government funding
- c) Reducing digital exclusion by influencing operator plans to tackle priority areas
- d) Working with commercial operators to promote access and uptake of services

3) Stimulating and transforming demand and use of digital connectivity

- a) Working with digital programmes to improve and enhance digital skills in communities
 - b) Working with universities, ITBEP, etc to showcase the use & benefit of gigabit connectivity to business
 - c) Use public private partnerships to support delivery of public services such as Health Care, Education, Emergency Services, Government bodies, etc
 - d) Promotion and demonstration areas to showcase benefits gigabit connectivity and e-services to business, residents and communities
 - e) Developing and enabling integrated digital infrastructure programmes
22. To enable increased access and demand for gigabit connectivity will require the continued shaping and influence of both commercial operators in the market and of public investment through programmes such as Project Gigabit and Shared Rural Network where there is a lack of commercial viability. In addition, to accelerate access and take-up of digital connectivity, we need to identify our priorities for investment, support and any intervention we make.
23. Our investment in digital connectivity through the Superfast programme provides us with both a legacy gainshare as well as a staffing resource to support the future programme. A decision is required on the priorities to invest in and how to fund resources required to deliver the programme.

Digital Connectivity Hub

24. The proposed Digital Infrastructure Programme can be viewed as 3 key components that form the operating model for enabling the transformation of digital connectivity in Staffordshire. The programme will be delivered by the Digital infrastructure Team through a Digital Connectivity Hub. The hub will be the key enabler for the transformation of digital connectivity in Staffordshire.



25. There is a clear mandate for the Digital Infrastructure Team in place as part of the Digital Programme. In addition, there are clear governance arrangements in place that include the programme to the corporate Digital Programme Board set out in appendix 2.

Benefits of Digital Connectivity

26. The improvement in provision, access and use of digital connectivity provides both economic and social benefits. For the local economy of Staffordshire, the estimated uplift is estimated at £845m by 2030. In, addition we estimate that the uplift will increase to £1,134million by 2030 as a result of the digital transformation programmes enabled through the DISF programme, a net increase of £289million in GVA.
27. There are also wider benefits in health, education, transport, tourism, energy, industry, smart living, and climate change as set out in appendix 3.

Timescale

28. The DISF sets out the framework for delivery up until 2030 when we will achieve 100% gigabit connectivity. Key Milestones are included in Appendix 1 and a detailed programme for delivery is outlined in Appendix 6.

Legal Implications

29. The Superfast Staffordshire contracts (contract 1 and contract 2) are coming to an end in their delivery phase, although the gainshare element (whereby SCC will continue to receive gainshare monies) will continue. There may be some continued financial and legal resource to monitor the end of the programme.
30. The Project Gigabit – LOT 19 procurement exercise will be run by BDUK (an arm of DCMS) and SCC will not be involved in any contract negotiation.
31. However, as a key stakeholder in the outcome of Project Gigabit and other Digital Infrastructure projects, discussions with other parties, are likely to be require advice around non-disclosure agreements, Memorandum of Understanding and potential partnering agreements.

Resource and Value for Money Implications

32. The County Council investment in the Superfast Programme is forecasted to make a return of £4million in the form of gainshare based on take-up of services. Of the forecasted gainshare, £1.5million has been received to date of which £1.1 million has been invested in the Rural Gigabit Voucher Scheme. This leaves a further forecasted gainshare of £2.5million to be utilised, £2.9M in total.
33. Investment from the County Council and the well-established team have created a legacy of good community, stakeholder and operator relationships in addition to the return on our investment through the gainshare agreements in driving forward connectivity in Staffordshire.
34. It is worth noting that public investment is the minority stakeholder, and it is the commercial network operators who will deliver the majority of investment and infrastructure. Enabling increased access and meeting demand for gigabit connectivity will require the continued shaping and influence of both commercial operators in the market and of public investment.
35. The current Superfast Team is funded through the capital programme and in addition there are two fixed term Digital Infrastructure posts until March 2023. It is proposed to merge the Superfast team and Digital Infrastructure team into one team; becoming the Digital Infrastructure team, to operate the 'Digital Connectivity Hub'.

36. The digital programme will fund projects and programmes that market the opportunity improved digital connectivity brings, demonstrate and test new connectivity technologies and its advantages and pilot connectivity solutions.

Climate Change Implications

37. According to the World Economic Forum, digital technologies could reduce global carbon emissions by 15% - almost one third of the 50% reduction required by 2030. The DISF allows the teams to work with the relevant stakeholders to accelerate this innovation in Staffordshire.
38. Trials have demonstrated how enhanced connectivity can optimise areas such as energy production by monitoring wind turbines in real-time to maximise productivity; optimising waste flows for more efficient recycling; or gather real time data to help residents in zero carbon buildings reduce their energy consumption.
39. Better connectivity such as 5G can provide the following benefits linked to climate change:
- i. **Smart agriculture** - Lower impact on natural resources, biodiversity restoration, better animal welfare, fewer emissions from fertilisers, regenerative agriculture, smaller land use.
 - ii. **Smart logistics** - Lower fuel consumption, continuous incremental efficiency gains, supply chain traceability, fewer emissions, less waste (including food).
 - iii. **Smart manufacturing** - Greater resource efficiency, lower energy consumption, improved health and safety, circular economy potential, less pollution and waste, greater precision / fewer faults.
40. Gigabit capable connectivity also has broader applications with the potential to make systems cleaner and more reliable, allowing intelligent transportation solutions to monitor vehicle and pedestrian flows.
41. It is noteworthy that there is likely to be CO² emissions output as a result of operator works in deployment of infrastructure (e.g. digging up roads) but to minimise the impact of this we will be working closely with operators to encourage efficient ways of working e.g. only accessing an area once / coordinating works across operators and providers to minimise disruption.

List of Background Documents/Appendices:

Appendix 1 Milestone Plan
Appendix 2 Governance Arrangements
Appendix 3 Economic Benefits
Appendix 4 Maps showing coverage as of June 2021
Appendix 5 Digital Infrastructure Strategic Framework (DISF)
Appendix 6 DISF Delivery Update Report

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