

Warwickshire County Council

Digital Infrastructure Strategy



Contents



Foreword	2
Introduction and Context	3
Council Plan	4
Why is digital infrastructure important?	5
Plan on a page	7
Support the rollout of full fibre broadband	8
Wireless Connectivity	9
Cross cutting themes	11
Delivering the Digital Infrastructure Programme	14

Foreword

Having access to fast high speed and reliable internet is now no longer a luxury; it is a necessity and described as the fourth utility. It is an important consideration for residents and businesses when considering living, working or investing in Warwickshire.

Our local economy depends on our digital infrastructure delivering the necessary connectivity for everyone, both now and in the future. Fast and reliable broadband connections will enable community hubs, public services, and businesses to grow and develop as well as opening up the possibilities of new services for individuals.

Whilst parts of Warwickshire have good broadband access, there are still many rural areas that do not. This creates an inequality across communities that the council must and will address.

Taking full fibre connections further out across the county is also vital for the development of 5G - the next generation of mobile technology.

Emerging technology also means that connectivity to fibre broadband, gigabit capable wireless and mobile connectivity (including 5G), are essential foundations for economic growth and prosperity. It helps to establish the region as a digital county and destination for investment, jobs, new housing and business infrastructure.

This strategy, therefore, has an essential role to play in aligning with the current, key strategies of the council, including the Council Plan 2020 -2025, the Covid-19 Recovery Plan, the Economic Growth Strategy and the Digital Strategy. These, together with existing policy guidance for planning and regeneration support the building of a better digital infrastructure.



Izzi Secombe
Leader of the County Council
Warwickshire County Council



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Chief Executive
Warwickshire County Council

Introduction and Context

Digital cuts across Warwickshire's vision for the future, supporting a buoyant and resilient economy with a strong, vibrant and innovative business base.

Warwickshire's Economic Growth Strategy highlights the importance of a good digital infrastructure to facilitate and enable future economic growth, with an emphasis on delivering gigabit connectivity.

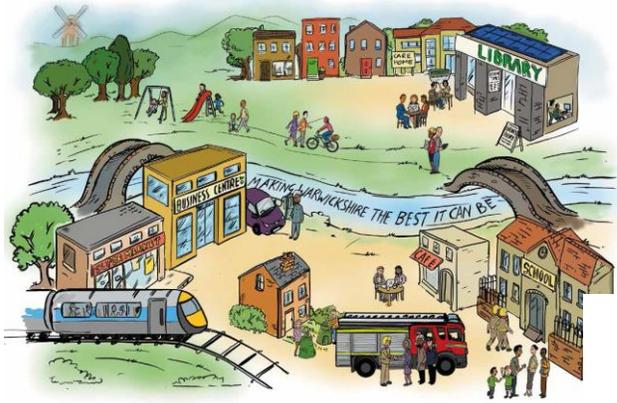
Digital is embedded throughout Warwickshire's Council Plan with the aim to deliver smart technology to improve connectivity and accessibility for all, supporting electric vehicle growth and digital infrastructure.

The Council Change Plan embraces digital technology to enhance customer access and improve the efficiency and joined-up nature of our services.

Warwickshire's Vision for Education supports the development of digitally innovative and future-proofed learning environments and curriculums that ensure that our learners leave school as some of the most technologically capable young people in the country.

Better connectivity in public buildings is essential to ensure residents are digitally included. Libraries are committed to giving people access to new and emerging digital technology through the provision of computers, free WiFi and other digital technologies and developing digital skills. Supporting the rollout of full fibre across communities will open up opportunities for residents and improve the delivery and efficiency of services.

Faster broadband and better mobile connectivity is essential for ensuring businesses remain competitive in an increasingly digital economy. Connectivity is becoming increasingly vital, and as a county we need to ensure our digital infrastructure is suited to the needs of modern day operations and processes.



Faster broadband and the pilot of 5G across the West Midlands region will benefit business, public services and society.

Artificial intelligence, predictive analytics and robotics will become increasingly important in service delivery and improvement.



Growth in the use of self-driving, electric and hybrid vehicles.

There will be more journeys on our network due to increased population

There will be more walking and cycling corridors



PRIORITY OUTCOME



Warwickshire's economy is vibrant and supported by the right jobs, training, skills and infrastructure

Council Plan

- ▶ We will invest in and support the digital skills of our communities, businesses and young people so that Warwickshire is in a strong position in an increasingly digital economy.
- ▶ We will continue to support the roll-out of a Full Fibre broadband service and 5G to all communities, which will support residents and businesses in both rural and urban areas. You will have access to 5G whether you live in the countryside or town.
- ▶ We will attract new business to Warwickshire, focusing on those sectors where we have particular strengths including automotive technology, advanced manufacturing, creative digital (such as gaming) and tourism. This will bring new economic investment and maximise the rate of employment, business growth and skill levels in Warwickshire.

Why is digital infrastructure important?

- ▶ Having future proofed digital infrastructure is crucial to making Warwickshire a more attractive place to live, run a business and invest. Currently 98% of Warwickshire premises are connected to superfast broadband, but the future is full fibre connectivity capable of gigabit speeds (1GB equivalent to 1000 MB). The Government has committed to full fibre coverage by 2033, however Warwickshire needs to accelerate full fibre deployment in order to attract investment and support economic growth.
- ▶ The benefits of full fibre broadband are significant to our economy, residents, businesses and the way services are delivered to meet local needs. Having access to fast Broadband connectivity is no longer a luxury; it is considered as the fourth utility.
- ▶ Better connectivity will result in more efficient and innovative ways of meeting the needs of residents and support the re-design of services across the public sector. Key opportunities include:



Better connectivity in schools can enable more digitally innovative learning environments preparing our young people for the future.



Residents benefit from better access to services which are increasingly online, skills and employment and consumer benefits.

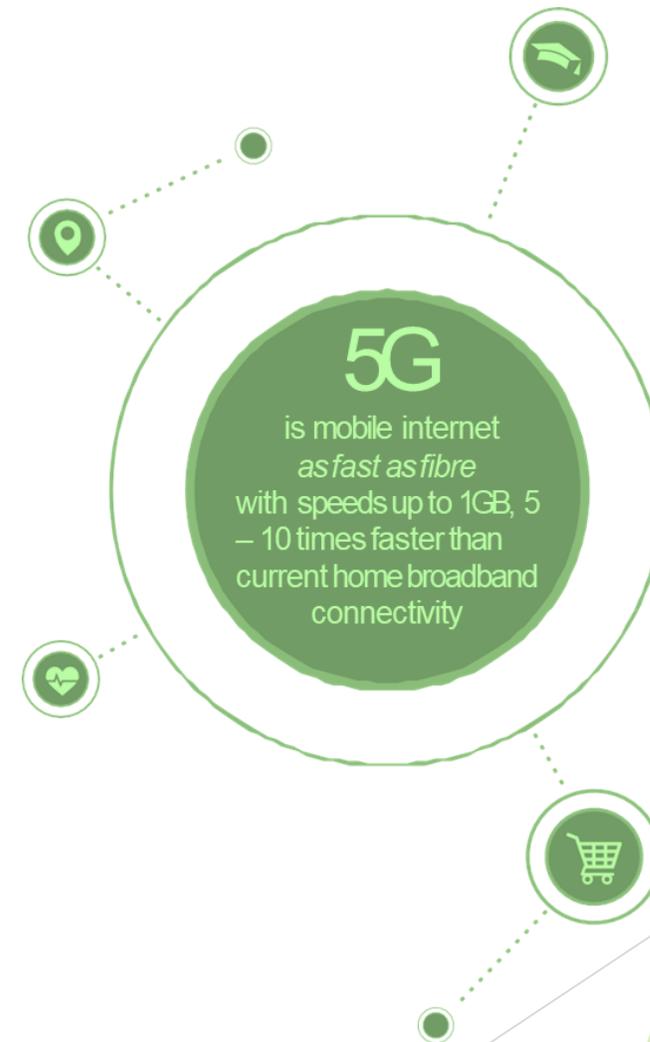


Full fibre connectivity for businesses plays a crucial role in the attraction, growth and retention of businesses resulting in increased productivity, innovation and growth in knowledge based sectors.

Wireless connectivity covers a wide range of technology including wireless technology on rooftops, high rise aerials, small cell technology and Wi-Fi meshes. Towns within Warwickshire have good coverage of 4G but our strategy aims to support early rollout of 5G.

5G benefits include:

- Huge capacity with the ability to connect thousands of users and devices at the same time at consistently ultra-fast speeds e.g. mobile phones, cars, ambulances, machines, medical devices, CCTV, buildings, and environmental sensors monitoring and controlling intelligent infrastructure - all without needing a fibre broadband connection;
- Ultra-reliable, secure and low latency (which means it does not drop connections) – which will be transformational for business. 5G will create indoor and outdoor networks within businesses, factories and warehouses to support industries and critical communications like medical devices, guided vehicles, machine-to-machine communication, remote control and monitoring of stationary and mobile equipment, and augmented reality support in design, maintenance, repair and construction.



Warwickshire's Digital Infrastructure Strategy

Full Fibre Broadband

Local Full Fibre Network
Connecting public sector buildings across Warwickshire to Full Fibre connectivity

Extending the deployment of Full Fibre connectivity to all communities



Wireless Connectivity

Facilitating the rollout of 5G across Warwickshire including infrastructure acceleration and a testbed to support businesses in the use of this technology.

Upgrading lampposts and street furniture to run smart technologies and facilitate the rollout of 5G small cell

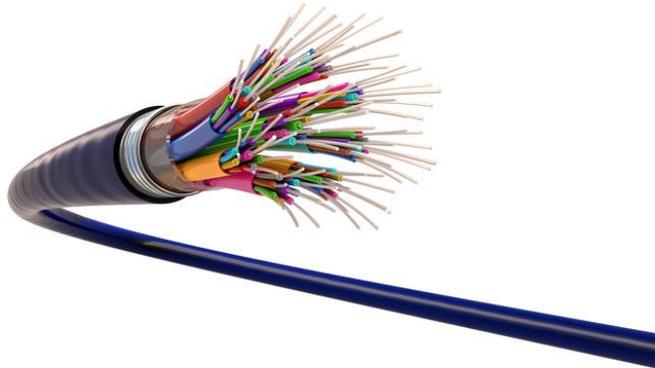
Cross Cutting

Assets for Technology
Addressing barriers and maximising use of council assets for technology

Growing Warwickshire's digital economy, skills and inclusion
Maximising the benefit from digital infrastructure to Warwickshire's businesses and residents

Support the rollout of full fibre broadband

- ▶ Our priority is to support the roll-out of full fibre broadband to public sector premises, to communities and businesses.



Before we can take advantage of improved 4G and 5G technologies it will be essential to extend and improve the full fibre network to every community across the county. This will provide the fibre ‘backhaul’ for any 4G and 5G mobile networks.

We will support the roll-out of full fibre broadband to public sector premises through implementation of the Department of Digital Culture Media and Sport (DCMS) funded Local Full Fibre Network project. The project will roll out full fibre to public sector premises across Warwickshire, including council premises such as libraries, council buildings and schools. This, in turn, will bring Full Fibre connectivity into the areas surrounding these buildings and will open up opportunities for more innovative ways of delivery, leading to greater efficiency and cost savings.

We must support the roll-out of full fibre broadband into rural communities within Warwickshire. This will include increasing the take-up of Rural Gigabit Vouchers by Warwickshire businesses and residents.

Working with the planning authorities in our Districts and Boroughs we will encourage developers to consider full fibre as the fourth utility and build into all new developments.

Wireless Connectivity

Our aim is to support the rollout of wireless technology, in particular 5G, on rooftops and high rise aerials, small cell technology and Wi-Fi meshes.

PRIORITIES

Support the rollout of 5G

- Remove barriers to rollout by providing access to our assets, facilitating Mobile Network Operators to upgrade existing masts to enable coverage and invest in new 5G infrastructure, including small cell technology.
- Demonstrate the potential for 5G through testbeds and application accelerators that develop new applications and services.
- Develop the financial case for investment, to support innovation, growth and service efficiencies.
- Explore innovative uses of 5G in the delivery of services working with partners.





5G

Identify future Smart and Internet of Things (IoT) opportunities

- Developing and seeking funding for projects resulting in efficiency savings and improved quality of life and embedding in service delivery including the potential for Smart Energy.

Upgrade to Smart Infrastructure

- Developing and seeking funding to upgrade street lamp columns to facilitate the rollout of 5G.
- Install smart data collection sensors to enable environment and traffic monitoring and smarter delivery through light and temperature sensors resulting in cost and energy efficiencies.
- Develop projects to pilot electric vehicle charging points and solar lighting.

Cross Cutting Themes

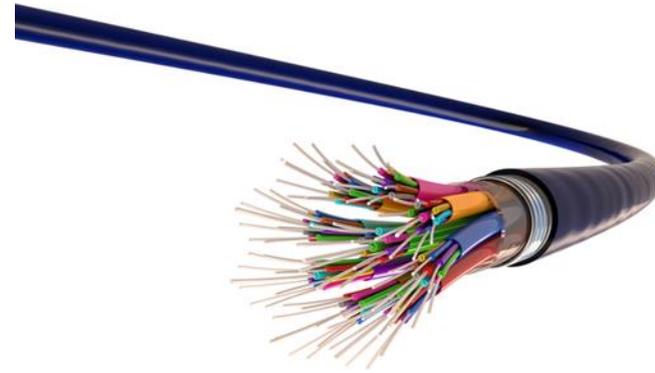
Warwickshire will develop a local approach to highways, planning and wayleaves which optimises the environment to improve digital infrastructure enabling full fibre broadband and 5G, removing barriers to commercial roll-out based on good practice guidance. Our approach is in line with the Electronic Communication Code 2017.

Barrier Busting

Barrier busting

Maximise the use of public assets and street furniture to facilitate the roll-out of digital infrastructure:

- Stage 1: identifying suitable assets that meet relevant regulatory requirements, are viable for telecoms use and factors that may impact deployment.
- Stage 2: commercial model: agree a model to facilitate the rollout. National guidance recommends an open model through a simple agreement offering access to one or more sites/locations on standard non-discriminatory terms. This approach is favoured by network providers as it minimises complexity and therefore cost.



- Stage 3: Access agreements:
 - Wayleave for deployment of fixed-line broadband infrastructure providing right to access land and/or property to install and maintain electronic communication apparatus.
 - Actively support the commercialisation of our public assets by developing lease agreements for mobile masts on land and rooftops giving right to use the property for a specified period of time in return for periodic payments.
 - Develop plans to commercialise public assets by developing lease agreements for small cell deployment on lamp posts and other street furniture.
 - Ensure that our commercialisation plans are structured to attract mobile network operators into Warwickshire to increase investment and coverage, leading to longer term income opportunities.



Influence stakeholders to support the rollout of digital infrastructure through the planning process to ensure that fibre broadband and connectivity is considered the fourth utility:

Barrier busting – planning

- Develop a connectivity toolkit to inform discussions with developers during planning stage to encourage installing ducting/full fibre at the same time as other utilities.
- Make available our development plans, showing where new housing, commercial and transport infrastructure will go and when, to encourage rollout of full fibre at build stage.
- Develop any further supplementary planning guidance which may be required at a local level.

Delivering the Digital Infrastructure Programme

Digital Infrastructure deployment requires involvement from a number of departments within each Council, District and Borough authority - such as assets, highways, planning, legal –and other partners.

Internally, the following roles will support implementation of the Digital Infrastructure Strategy:

- A Digital Innovation Councillor Ambassador will support and promote the digital innovation agenda.
- A Digital Innovation Officer Champion will help disseminate the council's overarching strategy, bring colleagues together and coordinate pan-council and county solutions to support infrastructure deployment. The Champion has the authority to ensure that departments across the organisation work together to achieve the policy goals and support effective engagement between local authority and network operators.
- A Digital Infrastructure Co-ordinator acting as the single point of contact within the council, they will work in partnership with network operators to help them navigate through the areas of the organisation with which they need to engage.

Delivering this strategy will involve developing our local approach to highways, planning, wayleaves, use of assets such as street lights and rooftops that optimises the environment to improve digital infrastructure enabling full fibre broadband and removing barriers to commercial rollout including:

- Removing barriers to rapid delivery of digital infrastructure
- Enabling and encouraging investment
- Reducing delays and costs, simplifying processes and encouraging best practice
- Develop relationships with providers and Mobile Network Operators
- Central point to facilitate and co-ordinate wayleaves, street works licences and planning as well as making public sector assets available
- Rollout best practice around barrier busting

We will work with a broad range of stakeholders including WM5G, commercial providers and Mobile Network Operators to support the rollout. Locally, the team will work with key local partners including our Districts and Boroughs, Universities, Colleges, Health partners and our strong digital creative sector to maximise the benefits across the County including identifying future Smart and Internet of Things (IOT) opportunities.

Measuring our performance we will:

- improve broadband speeds across the county
- improve full fibre coverage across the county
- Improve 5G availability