# Wolverhampton Digital Infrastructure Strategy

## Introduction and Context

Having future proofed digital infrastructure is crucial to making Wolverhampton a more attractive place to live, run a business and invest.  Currently 97% of Wolverhampton is connected to superfast broadband (fibre to the cabinet and copper to the premise with speeds up to 30 MB) but the future is full fibre (1GB equivalent to 1000 MB).  The Government has committed to full fibre coverage by 2033, however if the City of Wolverhampton is ahead of the game, this makes us more attractive for investment and supports economic growth.

The benefits of **full fibre broadband** are significant – doubling the connection speed would result in an additional 0.3 percentage points to annual GDP growth (Study of OECD countries 2012) and accelerated deployment of FTTP infrastructure which resulted in 55% of households using FTTP by 2025 could result in GDP levels 0.54% higher than the status quo.  Over 15 years, full fibre broadband in Wolverhampton would lead to £27million direct impact, £64 million business impact and £58 million of benefits to households (Economic Impact of full fibre infrastructure Regeneris January 2018).

**Wireless connectivity** covers a wide range of technology including wireless technology on rooftops, high rise aerials, small cell technology and Wi-Fi meshes.  The City currently has good coverage of 4G and 4G+ but our Strategy aims to support early rollout of 5G.  **5G** is mobile internet as fast as fibre with speeds up to 1GB, five-ten times faster than current home broadband connectivity. 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 (doesn't drop connections) – which will be transformational for industry.  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.

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### Support the rollout of full fibre broadband

Our aim is to support the rollout of full fibre broadband to public sector premises, across housing areas and businesses.

| Priorities |
|---|
| Support the rollout 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 Wolverhampton, including Council premises such as libraries, Wolverhampton Homes offices, schools and the City of Wolverhampton College.  Full fibre will open up opportunities for more innovative ways of delivery, efficiency and cost savings. |
| Support the rollout of full fibre broadband on housing estates through developing non-exclusive wayleave agreements covering whole residential estates.  This approach, based on best practice from elsewhere, includes guidance and principles commercial providers must sign up.  Removing barriers to rollout and standardising procedures is essential to facilitate the rollout of full fibre broadband across the city. |
| Support the take-up of Gigabit Vouchers by Wolverhampton Businesses including raising awareness.  Gigabit Vouchers can be used by small and medium sized businesses to contribute to the installation cost of a gigabit capable connection. Businesses can claim up to £2,500 against the cost of connection either individually or as part of a group project aggregating vouchers to fibre up a multi-tenant building or estate. |

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### 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:** West Midlands Combined Authority secured DCMS funding for an Urban Connected Communities 5G programme to support the rollout of 5G infrastructure.  We will work closely with WM5G to:<br><br>• 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 for capacity to facilitate the rollout.<br><br>• Demonstrate the potential for 5G through testbeds and application accelerators that develop new applications and services using 5G to demonstrate the financial case for investment.<br><br>• Explore innovative uses of 5G in the delivery of services through a series of 5G imagine events. |
| **Upgrade to Smart Infrastructure**.  Funding from the European Regional Development Fund has been secured to introduce smart enabled technology on street furniture.  Funding will upgrade street lamp columns to facilitate the rollout of 5G, add smart data collection sensors to enable environment and traffic monitoring and smarter delivery through light and temperature sensors resulting in cost and energy efficiencies. The project will also pilot electric vehicle charging points and solar lighting along the canal to encourage walking and cycling and collect data to inform behaviour change. |
| **Identify future Smart and IOT opportunities** seeking external funding for projects resulting in efficiency savings and improved quality of life. |

# Wolverhampton Digital Infrastructure Strategy

**Barrier busting**

Wolverhampton has committed to developing our local approach to highways, planning, wayleaves that optimises the environment to improve digital infrastructure enabling full fibre broadband and 5G, removing barriers to commercial rollout based on good practice guidance from www.gov.uk/guidance/access-to-public-sector-assets. Going forward, our approach will be in line with the Electronic Communication Code.

| Priorities |
| --- |
| Maximise the use of public assets and street furniture to facilitate the rollout of digital infrastructure:<br>**Stage 1: identifying suitable assets** that meet relevant regulatory requirements, are viable for telecoms use and factors that may impact deployment.<br>**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.<br>**Stage 3: Access agreements:**<br>• **Wayleave** for deployment of fixed-line broadband infrastructure providing right to access land and/or property to install and maintain electronic communication apparatus.<br>• **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. |
| 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:<br>• Discussions with developers to encourage installing ducting/ full fibre at the same time as other utilities.<br>• Make available city development plans, showing where new housing, commercial and transport infrastructure will go and when, to encourage rollout of full fibre at build stage encouraging infrastructure providers.<br>• Review of the Black Country Joint Core Strategy (Wolverhampton's statutory development plan) to encourage full fibre infrastructure and building design for high bandwidth and high availability wireless access technologies. An infrastructure study is currently underway. |

## Wolverhampton Digital Infrastructure Strategy

**Cross cutting**

**Growing the Digital Economy** through supporting the growth of the digital and tech economy (nationally this sector is growing twice as fast as the economy as a whole and its workers more productive) and the digital transformation of businesses in other sectors which can make them more productive and support economic growth. In Wolverhampton, this builds on a growing knowledge economy, cluster of creative tech businesses contributing £201.5m GVA and employing 4,527 people and an increase in digital startups of 422% dominated by companies in the "scale up" phase suggesting potential for significant growth[1].

**Digital Skills:** in order to fully benefit from a growing digital economy, we must ensure our residents have the skills. Employers indicate that one-third of difficult to fill vacancies are to a degree due to a lack of digital skills. Digital and non-digital companies are increasingly more reliant on workers with digital skills (essential requirement for over two-thirds of UK occupations). Jobs with a digital skill requirement also carry with them a wage differential. To address this, we need to develop, retain and attract digital skills.

**Digital Inclusion:** in recognition that not all residents have access to the internet at home whilst others lack the skills and confidence to get online. Digital inclusion is increasingly essential to access benefits, services and work opportunities, for education, training and improving children's educational performance, boosting total lifetime earnings and increasing chances of employment.

| Priorities |
|---|
| Growing the Digital Economy by supporting the growth of the knowledge economy and the digital sector in Wolverhampton through digital upskilling of existing businesses through schemes such as E-bays Retail Revival scheme and workshops through the Black Country Growth Hub, Digital Passport and AIM for GOLD.  Complemented by encourage take-up of Gigabit Vouchers. |
| Increasing digital skills by developing, retaining and attracting digital skills into Wolverhampton through development and implementation of a digital skills plan developing skills throughout education and in the workplace and maximising ensuring local delivery of the WMCA digital skills retraining fund to benefit both our residents and . |
| Support access to computers and digital connectivity (public access points and WiFi) and ensuring support is available to improve confidence and skills to get online, working closely with the Voluntary Community Sector. |

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[1] Tech Nation Report

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**Resourcing the Digital Infrastructure Programme:**

Digital Infrastructure deployment requires involvement from a number of departments within each local authority - such as corporate landlord, highways, planning, legal and so on.  The following roles will support implementation of the Digital Infrastructure Strategy:

The **Digital Champion** will help disseminate the council's overarching strategy, bring colleagues together and coordinate pan-council 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 Councillor Champion** is also being considered.

The role of the **Digital Infrastructure Team** will include 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
- Rollout best practice around barrier busting

The Team is made up of:

- **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.
- **LFFN Project Manager** will project manages the £4.9 million Local Full Fibre Network (LFFN) project rolling out full fibre broadband infrastructure.  The project is currently out for procurement with planning of rollout anticipated to start Summer 2019.
- **Smart Infrastructure (street lighting) Project Manager** – funded by ERDF, this role will manage the delivery of the Smart Infrastructure project including dealing with compliance with EU rules and regulations and aligning with the wider digital infrastructure programme.