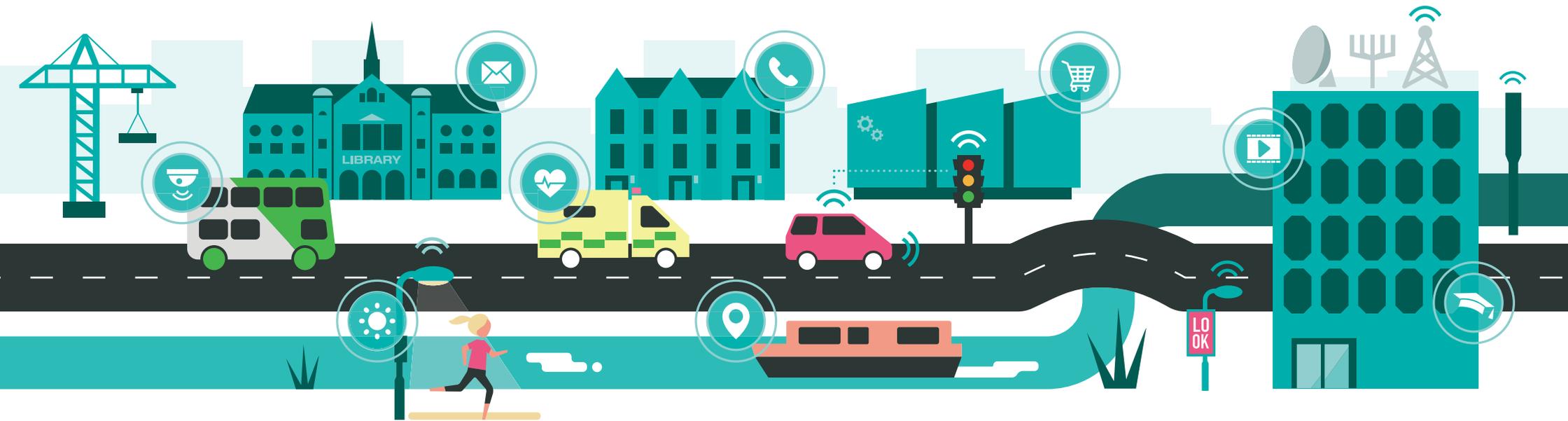


Digital Infrastructure Strategy





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Introduction and Context

Digital cuts across **Wolverhampton's vision for 2030** supporting a buoyant and resilient economy with strong, vibrant innovative business base. It supports the four themes of **Wolverhampton's Strategic Economic Plan** – an enterprising city, a working and inclusive city, a vibrant city and a future city - with a specific focus on delivering the 'Smart Connected' priority within its Future City theme to develop gigabit connectivity across the city.

Digital is embedded throughout **Wolverhampton's Council Plan** with the aim to deliver smart technology to improve connectivity and accessibility for all, supporting electric vehicle growth, improved digital infrastructure and sustainable transport. The Our Technology strand of the council programme embraces digital technology to enhance customer access and improve the efficiency and joined-up nature of our services.

Wolverhampton's Vision for Education 2030 Commercial and Digital Transformation theme 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 are essential to ensure residents are digital 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 residential estates will open up opportunities for residents and improve the delivery and efficiency of services.

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

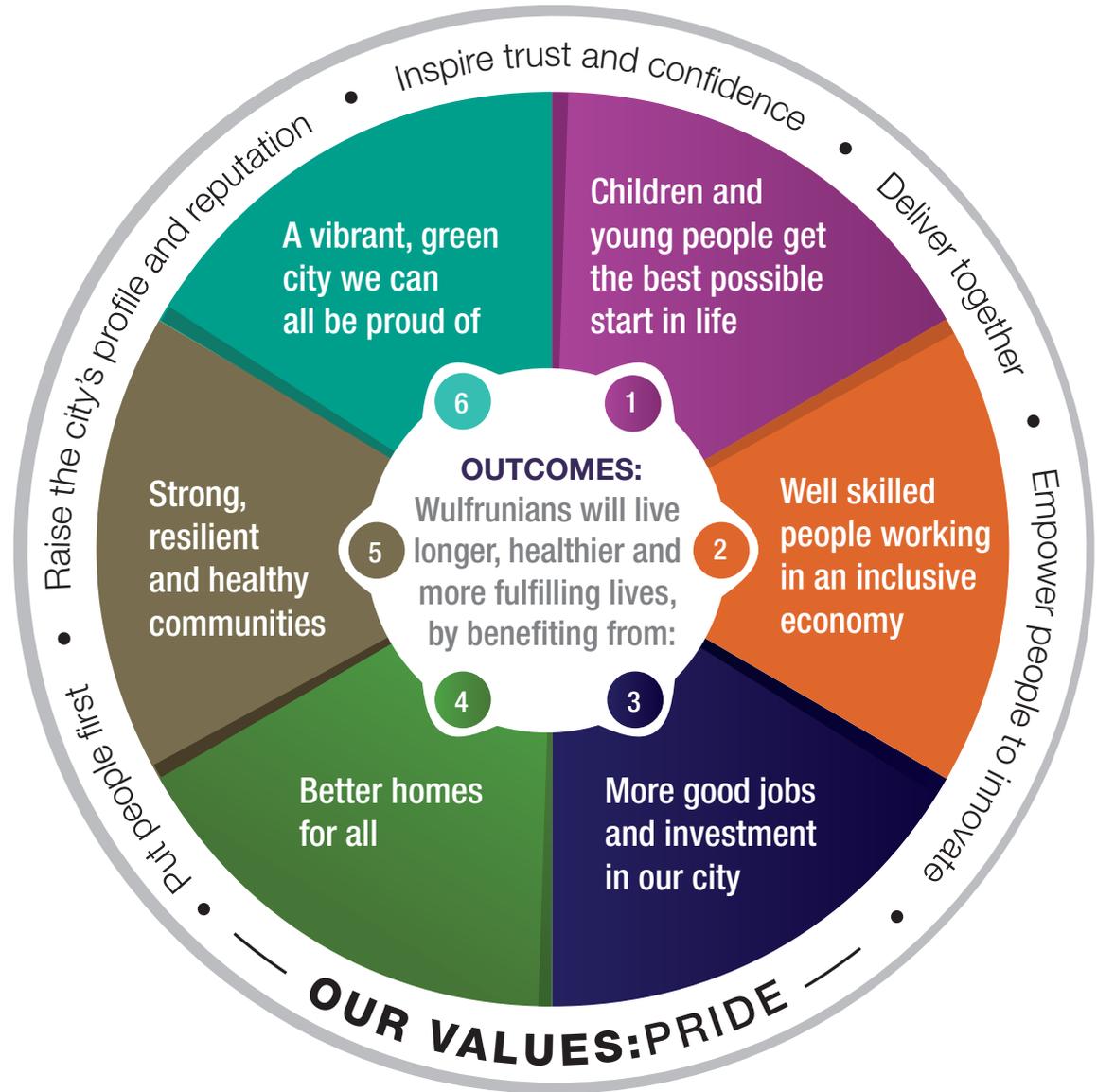
Council Plan

Working together to be a city of opportunity and to deliver our contribution to Vision 2030.

Digital is a key enabler which supports the delivery of our Council Plan. With the right digital infrastructure in place it will enable us as a council and wider city to improve outcomes for local people.

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COUNCIL

**WOLVERHAMPTON
FOR EVERYONE**



Why is digital infrastructure important?

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 to our economy, residents, businesses and the way services are delivered to meet local needs. 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 (Regeneris January 2018).

Better connectivity will result in more efficient and innovative ways of meeting the needs of residents and support the redesign 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.



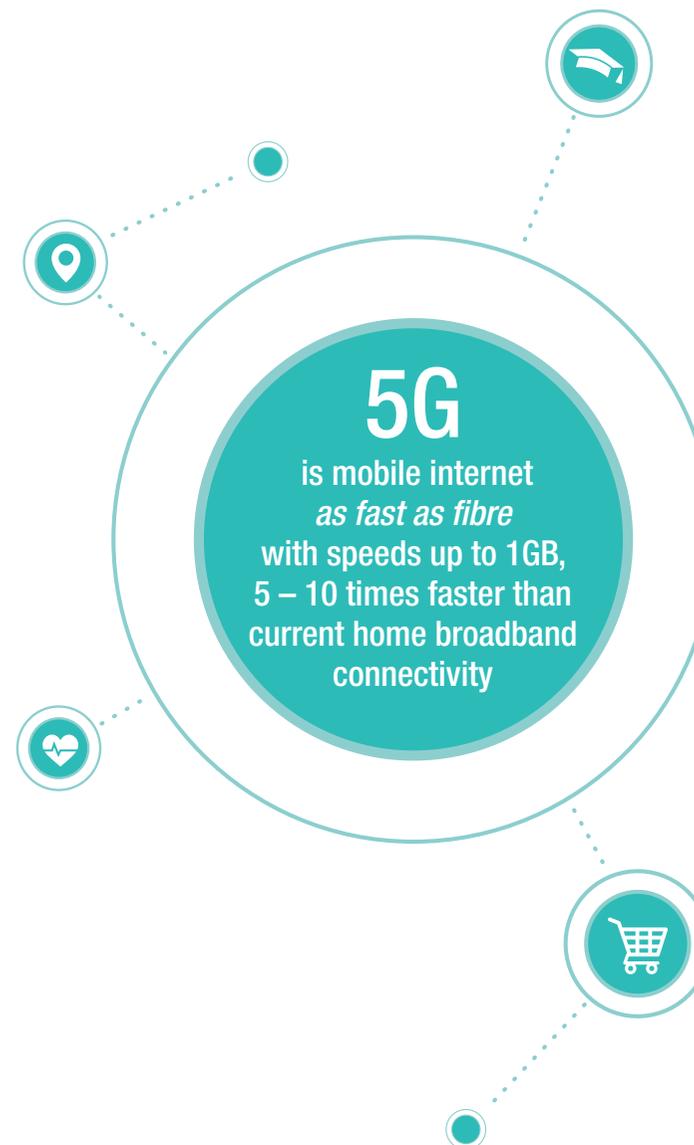
Residents benefit from better access to services which are increasingly online, skills and employment and consumer benefits.



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. The city currently has good coverage of 4G and 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 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.



Wolverhampton's Digital Infrastructure Strategy

Full-fibre Broadband

Local Full fibre network

Connecting public sector premises across Wolverhampton to a full fibre broadband network

Social housing fibre rollout

Through use of non-exclusive wayleaves to enable rollout

Gigabit vouchers

£2,500 available to small and medium-sized enterprises



Wireless Connectivity

Smart infrastructure

Upgrading lampposts to run Smart technologies and facilitate the rollout of 5G small cell

WMCA Urban Connected Communities 5G

Facilitating the rollout of 5G across Wolverhampton including infrastructure acceleration and a testbed around construction

Cross cutting

Assets for technology

Addressing barriers and maximising use of council assets for technology

Growing Wolverhampton's digital economy, skills and inclusion

Maximising benefit from digital infrastructure to Wolverhampton's businesses and residents

1.

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

- 1.1 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 by April 2021.
- 1.2 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.



1.3 Support the take-up of Gigabit Vouchers by Wolverhampton businesses including raising awareness of the scheme <https://gigabitvoucher.culture.gov.uk>. 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 and residents £500 as part of a group scheme with a business, 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.

1.4 Encourage developers to consider full fibre as the fourth utility and build into all new developments through production of a toolkit to inform discussions with Developers.



2. 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

2.1 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:

- 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.
- 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, contribution to innovation and growth and service efficiencies.
- Explore innovative uses of 5G in the delivery of services working with partners.



2.2 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.

2.3 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.

3.

Cross cutting

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.* Our approach is in line with the Electronic Communication Code 2017.

PRIORITIES

3.1 Barrier busting

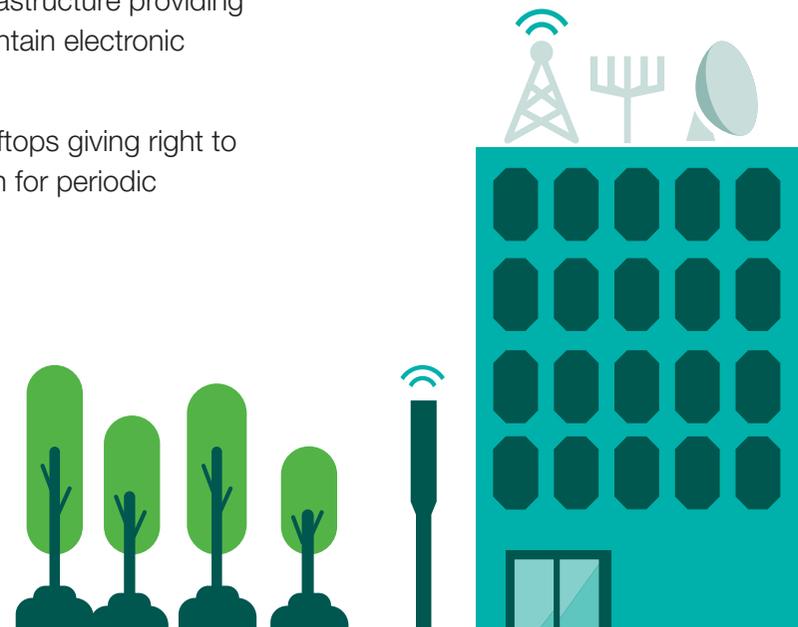
Maximise the use of public assets and street furniture to facilitate the rollout of digital infrastructure:

- **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.
- **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:



PRIORITY

3.2 Barrier busting – planning

- Develop a connectivity toolkit to inform discussions with developers during at planning stage to encourage installing ducting/full fibre at the same time as other utilities.
- 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.
- As part of the review of the Black Country Core Strategy - Wolverhampton's strategic local plan (to become the Black Country Plan) - ensure planning policies require both full fibre infrastructure and building design for high bandwidth and high availability wireless access technologies and provide positive planning guidance for 5G infrastructure providers. A utilities infrastructure capacity study to inform this review is currently underway.
- Develop any further supplementary planning guidance which may be required at a local level.

Nationally this sector is growing twice as fast as the economy as a whole. The digital sector supports productivity and growth, including the transformation of other sectors. In Wolverhampton, this builds on a growing knowledge economy and clusters 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.

PRIORITY

3.3 Growing the Digital Economy

Support the growth of the knowledge economy and the digital sector in Wolverhampton through digital upskilling of existing businesses through schemes such as eBay’s Retail Revival scheme and workshops through the Black Country Growth Hub, Digital Passport and AIM for GOLD, and encourage the take-up of Gigabit Vouchers. Explore potential for digital co-working space as part of our wider vision of creating a vibrant city centre.



In order to fully benefit from a growing digital economy, we must ensure our residents have the right 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) with jobs with a digital skill requirement carrying with them a wage differential. To address this, we need to develop, retain and attract digital skills.

PRIORITY

3.4 Increasing digital skills

Retain and attract 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 businesses.

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.

PRIORITY

3.5 Digital inclusion

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 and Community Sector.



Delivering the Digital Infrastructure Programme

Digital Infrastructure deployment requires involvement from a number of departments within each local 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 Champion** will support and promote the digital innovation agenda.
- The **Digital Champion** will help disseminate the council's overarching strategy, bring colleagues together and coordinate pan-council and city 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 the University, College, Health partners to maximise the benefits across the city including identifying future Smart and Internet of Things (IOT) opportunities.

Measuring our performance we will:

- improve broadband speeds in the city
- improve full fibre coverage in the city
- improve 5G availability in the city

For more information: www.insight.wolverhampton.gov.uk

You can get this information in large print, braille,
audio or in another language by calling 01902 551155

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City of Wolverhampton Council, Civic Centre, St. Peter's Square, Wolverhampton WV1 1SH