



Resources and Equalities Scrutiny Panel

01/02/2024

Report title	Digital Wolverhampton Strategy Update	
Cabinet member with lead responsibility	Councillor Obaida Ahmed	
Wards affected	All	
Accountable director	Charlotte Johns, Director of Strategy	
Originating service	External Funding and Digital Projects	
Accountable employee(s)	Heather Clark Tel Email	Head of Digital Projects 01902 555614 Heather.Clark2@wolverhampton.gov.uk
Report to be/has been considered by	Cabinet Member Briefing	1 February 2023

Recommendation(s) for action or decision:

The Scrutiny Panel is recommended to:

1. Scrutinise the progress and approach to delivering priorities of the Digital Wolverhampton Strategy.

1. Purpose

- 1.1. To provide an update on progress in the delivery of the Digital Wolverhampton Strategy adopted in March 2022.

2. Background

- 2.1 The Council adopted the Wolverhampton Digital Infrastructure Strategy in January 2020 to support the rollout of futureproofed digital infrastructure including full fibre broadband and 5G. Futureproofed digital infrastructure is the backbone of a modern thriving economy driving productivity and spreading growth and in delivering effective and efficient public services.
- 2.2 The Council appointed a Cabinet Member for Digital City to drive forward this agenda supported by the Council's Digital Champion and Co-ordinator. The Digital Wolverhampton Partnership, comprising the key anchor institutions in the city the Council, University of Wolverhampton, City of Wolverhampton College, The Royal Wolverhampton NHS Trust, Black Country Integrated Care Board (ICB) and Wolverhampton Homes, oversees the City's approach to digital.
- 2.3 The adoption of digital services is considered critical to level-up our economy to power economic and social recovery with the pandemic accelerating their adoption by between 2-5 years.
- 2.4 In light of the significant progress in delivering the aims of the Wolverhampton Digital Infrastructure Strategy, the Digital Wolverhampton Strategy was adopted in March 2022 to deliver the following aims:
 - A. Wolverhampton is a Gigabit and Smart City with futureproofed digital infrastructure including full fibre broadband and 5G utilised to transform delivery of services and develop new applications to unlock its potential.
 - B. 100% digitally included Wolverhampton ensuring all residents have the access to devices, connectivity and skills to take advantage of what digital has to offer.
 - C. Growing the Digital Economy and talent pipeline building on our futureproofed infrastructure to start and grow businesses creating jobs for local residents meeting skills needs for the future.

3. Progress in delivering the Digital Wolverhampton Strategy

- 3.1 **Digital Infrastructure:** significant progress has been made in the rollout of futureproofed digital infrastructure since the adoption of the Wolverhampton Digital Infrastructure Strategy in January 2020. Additional public buildings and assets are being connected to full fibre public sector network (PSN) building on the initial 170 public sector buildings funded by £4.9 million Local Full Fibre Network grant. Wolverhampton's gigabit coverage (300MB) increased from 2% in September 2020 to 94.61% end 2023. Full fibre

broadband coverage (1GB) has increased from 1% of properties in January 2020 to 68.45% of properties at the end 2023 (Think Broadband November 2023).

Wolverhampton now has the second highest proportion of full fibre in the WMCA area (from the lowest in 2020) and was named as a rising star having seen the second greatest proportional increase in the UK (2023 state of fibre report).

A report on the economic impact of full fibre rollout (Hatch March 2022) outlined key benefits from the rollout of full fibre including:

- A. Jobs created through the network build and associated productivity gains.
- B. Estimated 0.8% increase in house prices from full fibre connectivity as compared to superfast connectivity.
- C. 1.2% increase in business productivity as well as benefits arising from flexible working and a wider pool of labour.
- D. Direct benefits to the public sector estimated at 1.2% cost savings from efficiencies.
- E. Wider benefits in relation to supporting the rollout of 5G, enabling Smart City and Internet of Things, health care benefits and environmental benefits from carbon savings.

Full fibre will have enough capacity for multiple devices to be used simultaneously and supports future emerging technologies. Faster speeds will support businesses to sell goods online, access cloud services and increase their productivity and turnover. Broadband suppliers will attempt to use existing techniques to deploy the full fibre infrastructure which include using existing ducts, overhead cables and pole before digging up public highways.

All Mobile Network Operators are rolling out 5G in the City accelerated due to our proactive approach. Wolverhampton's coverage by all mobile network operators is currently 66%, the highest in the West Midlands Combined Authority area and one of the highest outside of London. Small cells have been installed on nine streetlights across the city facilitated through introduction of a toolkit and licence agreement to support the rollout. Over 20,000 streetlights have been upgraded to LED and installed with Smart City nodes as part of the European Regional Development Fund Smart Infrastructure project enabling installation of sensors contributing to our smart city ambitions.

- 3.2 Digital Inclusion:** in response to the scale of digital exclusion highlighted during the pandemic, the Council set up Wolves Online, a device and connectivity lending scheme, to support residents to get online. Overall working with a network of 75 trusted partners, our schemes have provided 3491 devices and 91,040 gigabit of data (equivalent of 3.64 million hours of data) supporting 7100 residents to get online and improve digital skills.
- 3.3 Wolves Online** has distributed 1450 devices, 19,040 gigabit of data and supporting over 3500 residents to improve their digital skills. To support our Trusted Partners, a

Digital Champion network is available which recruits volunteers to support the delivery of digital skills in the community working in partnership with Barclays Wings and Eagles digital skills offering. An online portal supports the development of digital skills, online live learning sessions and Digital Champions. Barclays train the trainer program works with organisations, charities and UK public to train people to become confident and have the skill set to support others with digital skills. The Council is also working closely with NHS Black Country Integrated Care Board Connected for a Healthier Future to distribute 496 devices to Wolverhampton residents through our trusted partner network.

- 3.4 Wolves Tech Aid**, Wolverhampton's local device recycling scheme, has to date recycled 558 devices and distributed to children across the city including 100 devices to one school alone. Additional comms campaigns to donate devices are anticipated January and March 2024 targeting residents and businesses alike to encourage donation of unused devices for recycling and distribution. The Council are donating 650 end of life devices to the scheme for recycling.
- 3.5 Connected Services Programme:** West Midlands Combined Authority secured £4 million to purchase devices across the WMCA area. Wolverhampton received over 1483 devices to be distributed to community organisations and eligible residents in nine wards. 527 devices have been distributed to community organisations and 956 to residents together with 72,000 GB of data supporting 3000 residents in just 6 months.
- 3.6 Digital Innovation:** supports the Our City: Our Plan driven by digital agenda and has the potential to improve efficiencies and contribute to the Medium-Term Financial Strategy. Building on the city's futureproofed digital infrastructure, the digital innovation priority explores how the use of technology, such as sensors and smart cameras, can transform service delivery driving digital innovation. The use of Gainshare monies was approved by Cabinet Resources Panel on 12 July 2023 as a proof-of-concept fund to support the digital innovation priority in order to become a smart city for the future and improve service delivery by embedding emerging technologies.

Gainshare monies are a result of a share of surplus from the former Building Digital UK (BDUK) funded Black Country superfast programme to increase the number of premises across the Black Country with superfast broadband. It was originally managed by Black Country Local Enterprise Partnership (LEP) which ceased to exist on 31 March 2023. Current and future Gainshare receipts will be split equally between the four Black Country local authorities. Each local authority received £250,273 with future Gainshare take-up assessments due to take place in December 2023. It is likely that a further payment will be distributed between the local authorities at a later date. Black Country LEP has requested that the Gainshare funding is spent on digital activities only. We've entered into a collaboration agreement with as the governing and accountable council.

A smart city is an urban area that uses different types of Internet of Things (IoT) sensors to collect data and then use this data to manage assets and resources efficiently. The Digital Wolverhampton Strategy's digital innovation priority outlined how the Council will

aim to use technology to improve services. By streamlining processes and removing some manual processes, the Council will make savings that will contribute to the Medium-Term Financial Strategy (MTFS).

Our aim is to explore how we can use technology to innovate services, address key challenges and contribute to savings. Initial use cases have been identified to utilise the proof-of-concept fund to provide evidence to support invest to save through evidencing service efficiencies and savings and inform external funding bids to scale up including:

- Home sensors supporting independent living, early intervention and prevention improving quality of life including damp & mould, heat & humidity and vulnerable residents
- Environmental sensors including bin and gulley sensors and fly tipping cameras
- Footfall counters monitor high street vitality & network management
- Air quality sensors assessing impact on public health

All data will be collated on an IoT Platform showing trend analysis, reports by areas, date and hour, enabling cross reference between data.

3.7 Environmental Sensors offer us an opportunity to improve service efficiency and save including:

- **Fly tipping** costs the council £300,000 per year and may contain hazardous chemicals and materials. The proof of concept to trial four Artificial Intelligence (AI) enabled smart mobile cameras to support the 'shop a tipper' initiative and facilitate increased fly-tipping enforcement. Benefits demonstrated by other local authorities trialling this approach included the potential for significant reductions of incidents in monitored areas, increase in fixed penalty notices and prosecutions, reduction in complaints and positive impact on residents.
- **Smart bins:** there are currently significant costs associated with emptying public bins. The proof of concept will trial bin sensors and route planning. Benefits from other areas trialling the approach included a 53% reduction in collections (Derby), 50% of resources reallocated to other areas, 50% reduction in complaints and 49% reduction in carbon emissions (Newcastle).
- **Gulley Sensors:** although not funded by the proof-of-concept fund, the City is currently trialling gulley sensors to identify blocked gulleys to help prevent flooding.

3.8 Care Sensors: Tech can help support independent living, enable early intervention and prevention, improve quality of life, increasing independence and deliver better outcomes by supporting daily living activities and wellbeing. The data collected enables prevention, early intervention, customised care plans – data-led practice – families monitoring through apps reducing demand on services. Ultimately sensors can help reduce demand for care generating savings, prevent escalating needs, delay increasing needs with individual data targets care and avoid costs. Experience from elsewhere shows significant benefits, for example Suffolk installed 2600 devices in residents home saving £4.2m cost avoidance and cashable savings of £430,000, preventing admissions to hospital of 170 days and 118 ambulance callouts. Richmond and Wandsworth resulted in £900,000 savings on referrals on 153 cases.

- 3.9 Air Quality and Traffic Management:** Air quality sensors are already deployed on key routes throughout the city. There are further opportunities to utilise our upgraded Smart LED streetlamps to house air quality sensors. The data collected from air quality sensors helps to assess impacts caused by poor air quality on public health. The data collected will provide air quality and congestion levels at various locations, influencing policy and interventions such as closing roads near schools, reducing anti-social parking etc.
- 3.10** Wolverhampton is a partner in a successful West Midlands Combined Authority **5G innovation Region** bid aimed to drive innovative applications powered by 5G from proof of concept to widespread adoption. The successful bid focused on two sectors: Advanced Manufacturing and Smart Communities. The Council are partners in the Smart Communities element and will receive funding to establish an adoption hub exploring how technology could improve housing and adult social care.
- 3.11 Smart City Region:** WMCA successfully bid for £10m region funding from the Department of Levelling Up, Housing and Communities. The purpose of the funding is to scale up digital in health tech, future mobility and smart energy, aiming to address the following issues:
- Increased waiting times in health
 - public transport demand in decline
 - price fluctuations in the energy market and reaching Net Zero by 2041.

Embedding technologies that meet the needs of communities by improving service efficiencies using sensors, data and connectivity to optimise, transform, supply and demand.

Enabling remote monitoring and deployment of 5G technologies that underpins remote health diagnosis.

- 3.12 Digital Economy (business):** Wolverhampton is home to a number of digital companies employing 2327 with anticipated growth of 5.7% above national average. These include the School of Code, Learnplay, Stonestrow Media and Goldilock (winner of tech start-up of the year at Birmingham Tech Week). The Creative Chain network brings together leading digital agencies in Wolverhampton. There is significant scope for further growth building on full fibre broadband and 5G, the University of Wolverhampton's (Cyber University of the Year) strengths in digital and tech, 5prinG Accelerator and ambitions for the Green Innovation Corridor.
- 3.13 Digital Economy (skills and jobs):** Digital skills are crucial for the workplace. Nationally only 52% of workforce have the necessary digital skills for work. There are significant opportunities with tech vacancies making up a higher proportion of all vacancies in the UK with the average tech salary 50% higher than the average. 184 Wolverhampton residents have benefited from Digital Bootcamps that develop skills and support unemployed residents (58%) and career changers (42%) into digital jobs. This is an

increase in relation to the proportion of Wolverhampton residents benefiting from 6% in 2022 to 11% in 2023 reflecting joint work with the Wolves at Work team to raise awareness and promote the opportunities and locally delivered opportunities. Nearly one thirds of participants were women and two thirds from ethnic groups. The largest proportion of participants took bootcamps in games development/software development/ social media and content (37%) followed by cyber security (12%), data analytics (10%) and 15% in green industries. Digital Infrastructure bootcamps for Civils and Telecoms Engineers were held in November 2023 to fill address challenges in recruitment which is slowing down take up of full fibre.

The Council are also exploring the role of Artificial Intelligence (AI) in improving efficiency of service delivery and impact of AI on jobs. AI is not about machines replacing humans, rather that humans will increasingly work alongside machines and AI in the future workplace, driving productivity and freeing up time for workers to exercise their human skills, creativity, and expertise to deliver more value as technology increasingly helps people do their work. Although AI may displace some low skilled jobs, it will also augment others and create new ones. We are currently exploring the key areas that AI could improve efficiency and training and development requirements going forward.

The Digital Wolves website continues to be reviewed and improved with further access to key information for key stakeholders.

4 Financial implications

- 4.1 There are no direct financial implications from the recommendations of the report. The existing approved delivery of the Digital Wolverhampton Strategy is as outlined below.
- 4.2 **Digital Infrastructure:** The ongoing rollout of digital infrastructure is commercially funded with the Council performing an enabler and facilitation role. Any surplus income from telecoms equipment is requested to transfer into the Digital Infrastructure reserve in line with financial procedure rules that is available to be used to address barriers to the rollout.
- 4.3 **Digital Inclusion:** Budgets have already been established to fund the digital inclusion programme, specifically £500,000 within the approved capital programme (Cabinet 23 February 2022) and £500,000 revenue from the Covid Emergency Grant Fund (Individual Executive Decision Notice March 2022). The Connected Services Programme devices were funded through WMCA. UK Shared Prosperity Fund has funded some digital inclusion activity through community grants and public WiFi. We also anticipate the WMCA will make available some adult community learning for voluntary community sector to deliver support to get residents online. We will continue to seek external funding to enhance our digital inclusion approach.

- 4.4 **Digital Innovation:** Gainshare resources have been approved to fund proof of concept use cases. The Council is a partner of a successful 5G Innovation Region bid led by WM5G which will enable us to develop an adoption hub in the city focusing on adult social care and building management. For technology enabled independent living, we will explore opportunities such as the use of disability facilities grant and personal budgets, as well as partner investment and external funding opportunities.
- 4.5 **Digital Economy:** is funded by national and regional business support and skills activities funding including UK Shared Prosperity Fund and Adult Education Budget.

[LD/15012024/K]

5 Legal implications

- 5.1 As an update on progress in delivering the strategy, there are no direct legal implications from this report. However, part of our enabling role for the rollout of digital infrastructure has involved standardised wayleaves, leases and licence agreements in line with Electronic Communication Code.

6 Equalities implications

- 6.1 Digital and smart technology could potentially have significant positive equalities implications, for example making it easier for people with health problems to live more independently through the provision of telecare and e-health solutions.

7 Climate change and environmental implications

- 7.1 Digital Infrastructure enabling Smart technology can have positive implications on the environment and climate change, for example enabling the Council to capture environmental information and improve service delivery.
- 7.2 Encouraging residents and businesses in the city to donate end of life devices to Wolves Tech Aid has a positive impact on climate change and the environment. E-waste is the fastest growing waste stream nationally.

8 Health and Wellbeing Implications

- 8.1 There is regular review of the evidence base around risk of telecommunications. The Council regularly checks this with the national responsible agency, UK National Security Agency, and there is no peer review published high quality evidence of any association between 5G and harmful health. The UK National Security Agency advise that the current exposure of the general public to radio waves is well within the international health-related guideline levels that are used in the UK. Research into the safety of radio signals has been conducted for more than 50 years. The strong consensus of the public health agencies, such as the World Health Organisation, is that no health risks have

been established from exposure to the low-level radio signals used for mobile communications.

- 8.2 Digital can also offer health benefits arising from increased use of technology in the delivery of health and social care and technology enabled independent living. 5G is enabling the opportunity to pilot health use cases including remote diagnostics between GPs and care homes.

9 Human resources implications

- 9.1 The Council is currently developing a digital skills offer to improve digital skills of the workforce and ensuring all employees have access to digital. The potential impact of AI on the workforce is being reviewed.

10 Corporate landlord implications

- 10.1 Corporate Landlord were involved in developing standardised lease agreements to use Council assets for the location of telecoms infrastructure.

11 Schedule of background papers

- a. Cabinet - 22 January 2020 [Wolverhampton Digital Infrastructure Strategy](#)
- b. Cabinet – 23 March 2022 [Digital Wolverhampton Strategy](#)
- c. Cabinet – 19 October 2022 [Digital Wolverhampton Strategy Update](#)
- d. Resources and Equalities Scrutiny 2 February 2022 [Digital Wolverhampton Strategy Update](#)
- e. Cabinet Resources Panel - 12 July 2023 [LEP Gainshare monies for Digital Innovation purposes](#)

12 Appendices