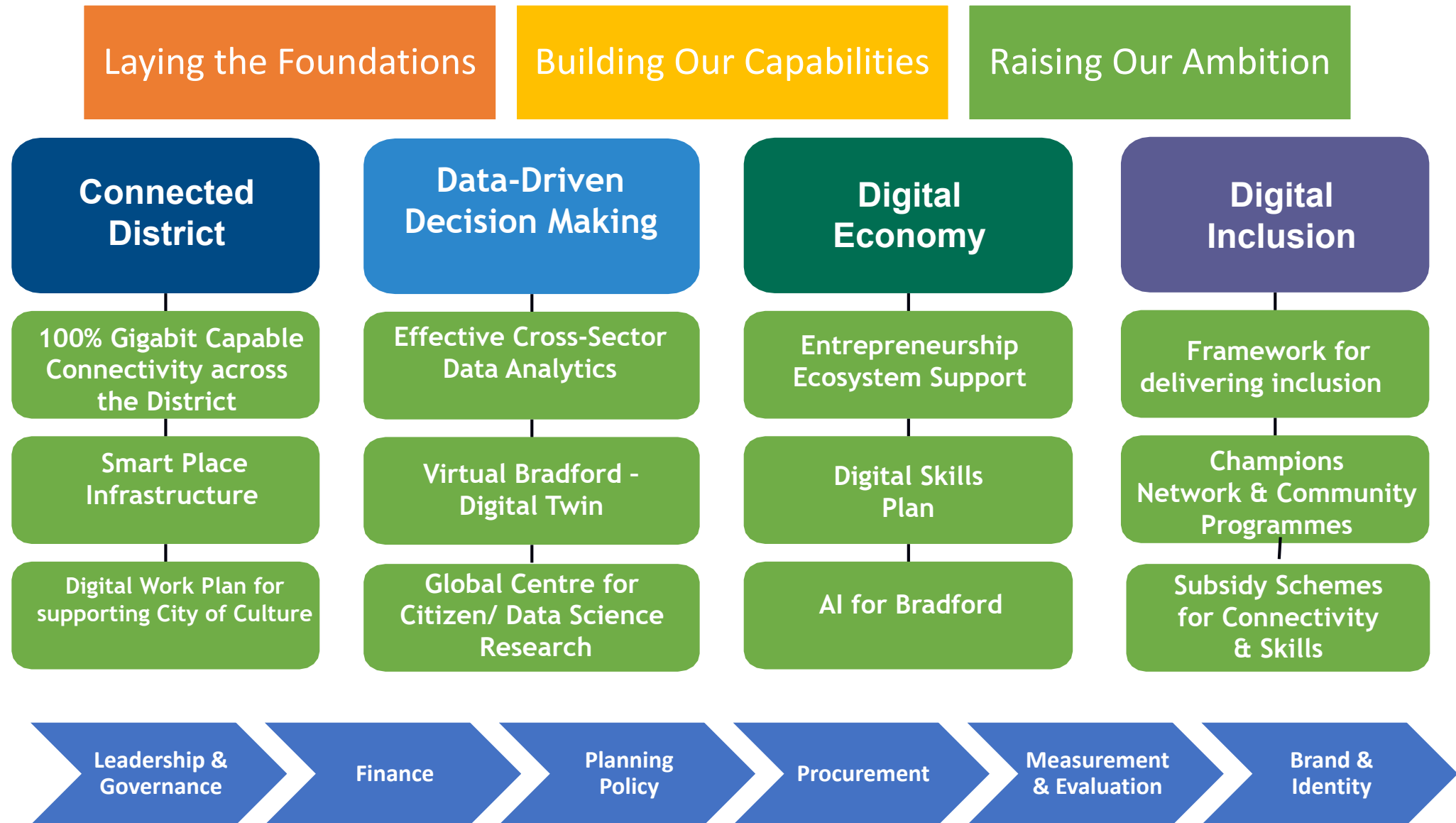# Digital Strategy for Bradford District Update to Wellbeing Board
28th November 2023

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Aim: To support Bradford District's social and economic development in a sustainable way

Laying the Foundations	Building Our Capabilities	Raising Our Ambition

Connected District	**Data-Driven Decision Making**	**Digital Economy**	**Digital Inclusion**
100% Gigabit Capable Connectivity across the District	Effective Cross-Sector Data Analytics	Entrepreneurship Ecosystem Support	Framework for delivering inclusion
Smart Place Infrastructure	Virtual Bradford – Digital Twin	Digital Skills Plan	Champions Network & Community Programmes
Digital Work Plan for supporting City of Culture	Global Centre for Citizen/ Data Science Research	AI for Bradford	Subsidy Schemes for Connectivity & Skills

Leadership & Governance → Finance → Planning Policy → Procurement → Measurement & Evaluation → Brand & Identity
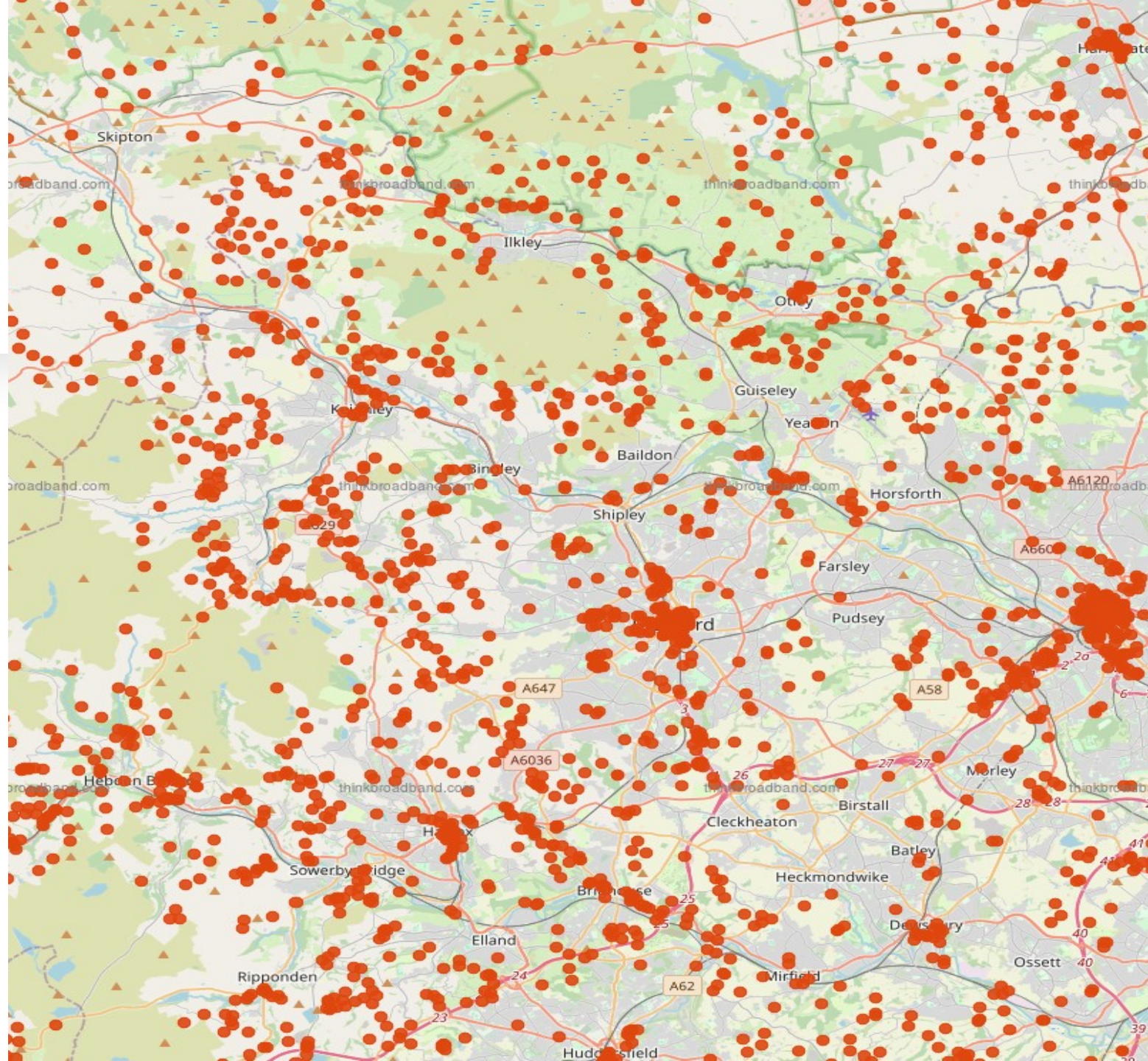
Connectivity State of Play – November 2023

Area	FTTP/FTTH	Openreach	Alnets (Alternative Network Providers)	Gigabit	Below Legal USO (Universal Service Offering <10Mb/sec)
England	57.67	35.51	29.82	79.69	0.65
Bradford District	62.71	24.55	41.36	90.86	0.30
Leeds	81.55	68.75	40.43	92.82	0.26
Wakefield	77.92	59.88	30.62	86.09	0.39
Calderdale	21.96	8.89	5.48	58.95	0.60
Kirklees	66.45	42.52	41.35	84.48	0.23
Sheffield	74.72	57.64	33.12	83.01	0.22
Newcastle	72.39	47.30	43.23	88.19	0.25
Liverpool	63.96	55.69	19.27	89.94	0.02
Manchester	67.69	29.27	40.66	83.68	0.19

The district has 90.86% of its premises with access to Gigabit capable connectivity leaving 9.14% still to gain this level of access. 62.71% (up from 40% 2022) of premises across the district have FTTP leaving 37.29% premises still to receive FTTP.
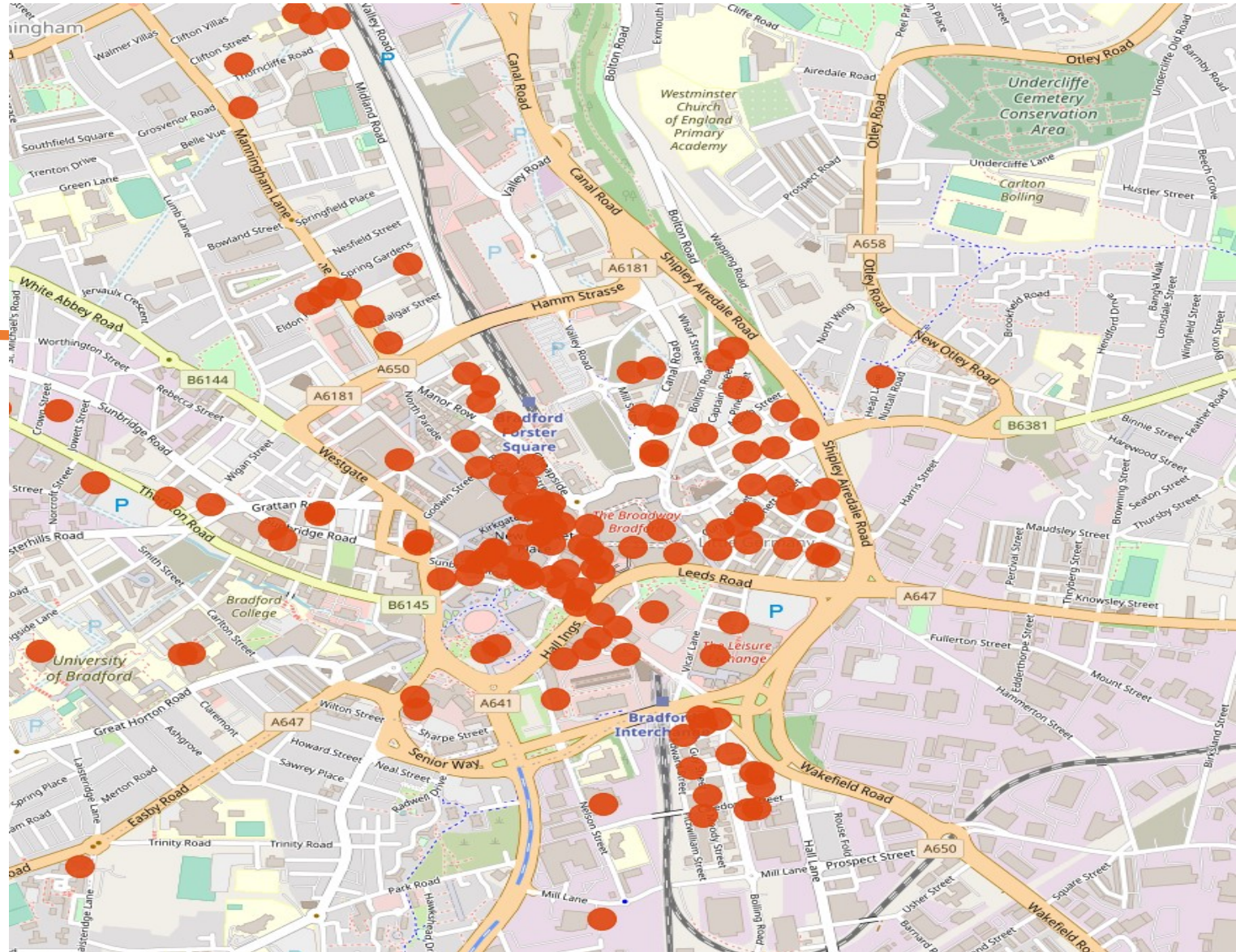
ThinkBroadBand Data November 2023

Postcodes with < 24Mb/Sec Broadband

- The aim now is to target those urban and rural "low spots/not spots".

- Working with BDUK (DSIT), Bradford chosen as 1 of 4 pilots to engage with the Market to understand reasons for these underdeveloped areas.

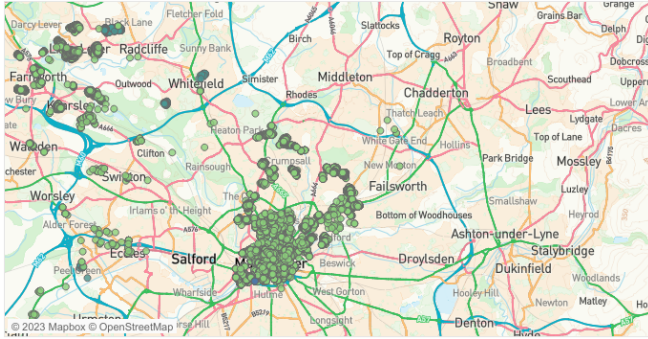- Engagement underway with expected funding via Voucher Scheme to address the issue.

Bradford City Centre

- Postcodes < 24Mb/Sec

- Clearly work to do in the City Centre to ensure our businesses and communities have adequate connectivity.

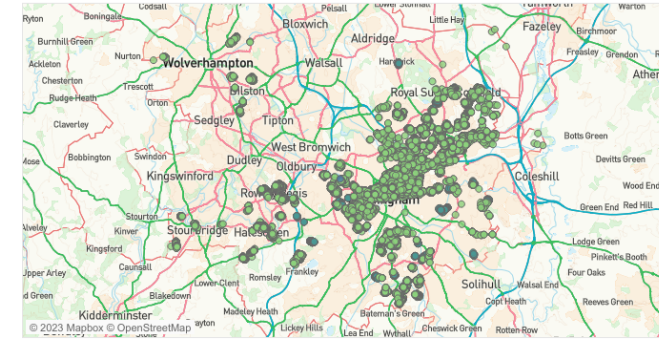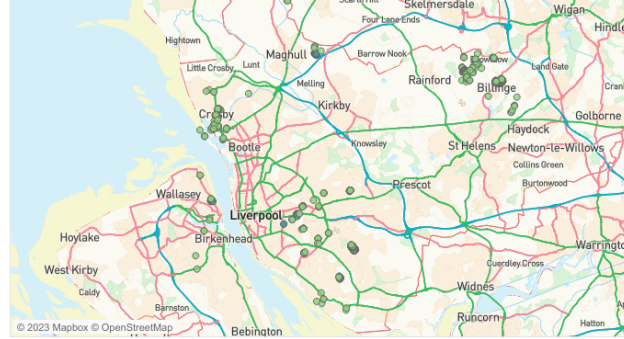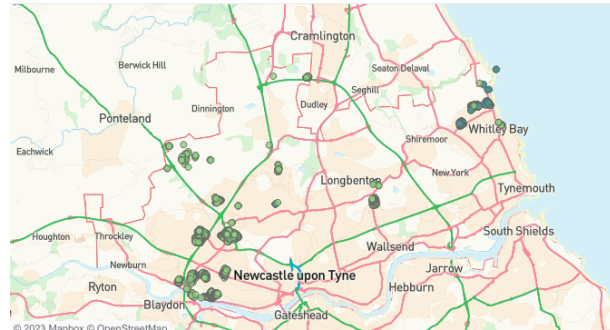- Does not take account of any commercially leased lines by businesses.
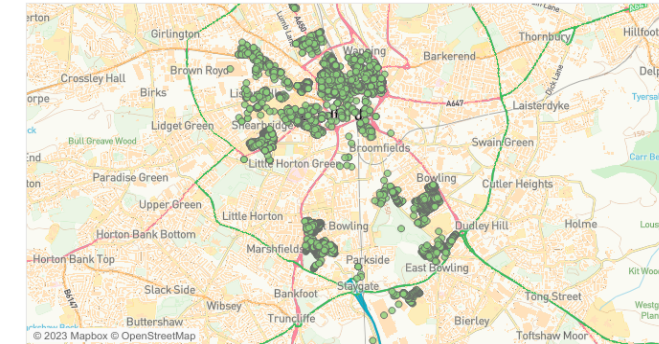
How big is the issue ?

Manchester & Merseyside (Circa 120K Prems)

Birmingham and the Black Country (Circa 130K Prems)

London (Circa 650K premises)

Newcastle and Tyneside(Circa 20K premises)

Bradford (Circa 5K Premises)

Based on these figures there could potentially be over 1 Million Urban premises that are sub superfast with no future plans to upgrade either through commercial build or public intervention.
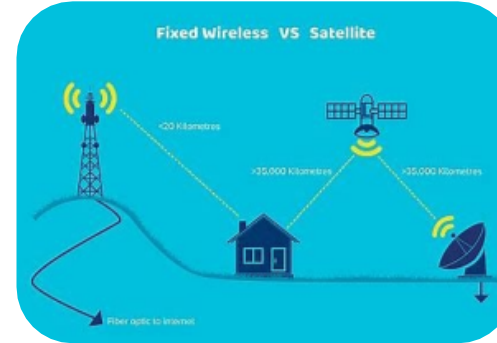
Council Actions & Interventions to Accelerate Fibre & Mobile Connectivity
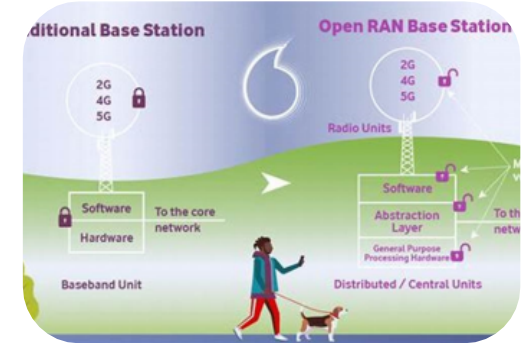

Continue focused engagement with Telcos, MNOs & Infrastructure Code Operators, mapping existing and future plans

Completion of a Small Cell Licence Agreement to provide controlled access to our street assets to MNOs

Satellite Connectivity for 12 Rural Villages – Proposal in Development

Council ducting to enable full fibre backhaul investment to small cell 5G OpenRan Network in Millenium Square – Proposal in Development

Top-up Voucher Scheme for local businesses & communities

IoT/LoRaWAN Expansion & Upgrade Programme to the Things Network

Continued Engagement with Market to develop CoC Plan and ensure readiness

5G Innovation Region Bid – Alternative funding sought
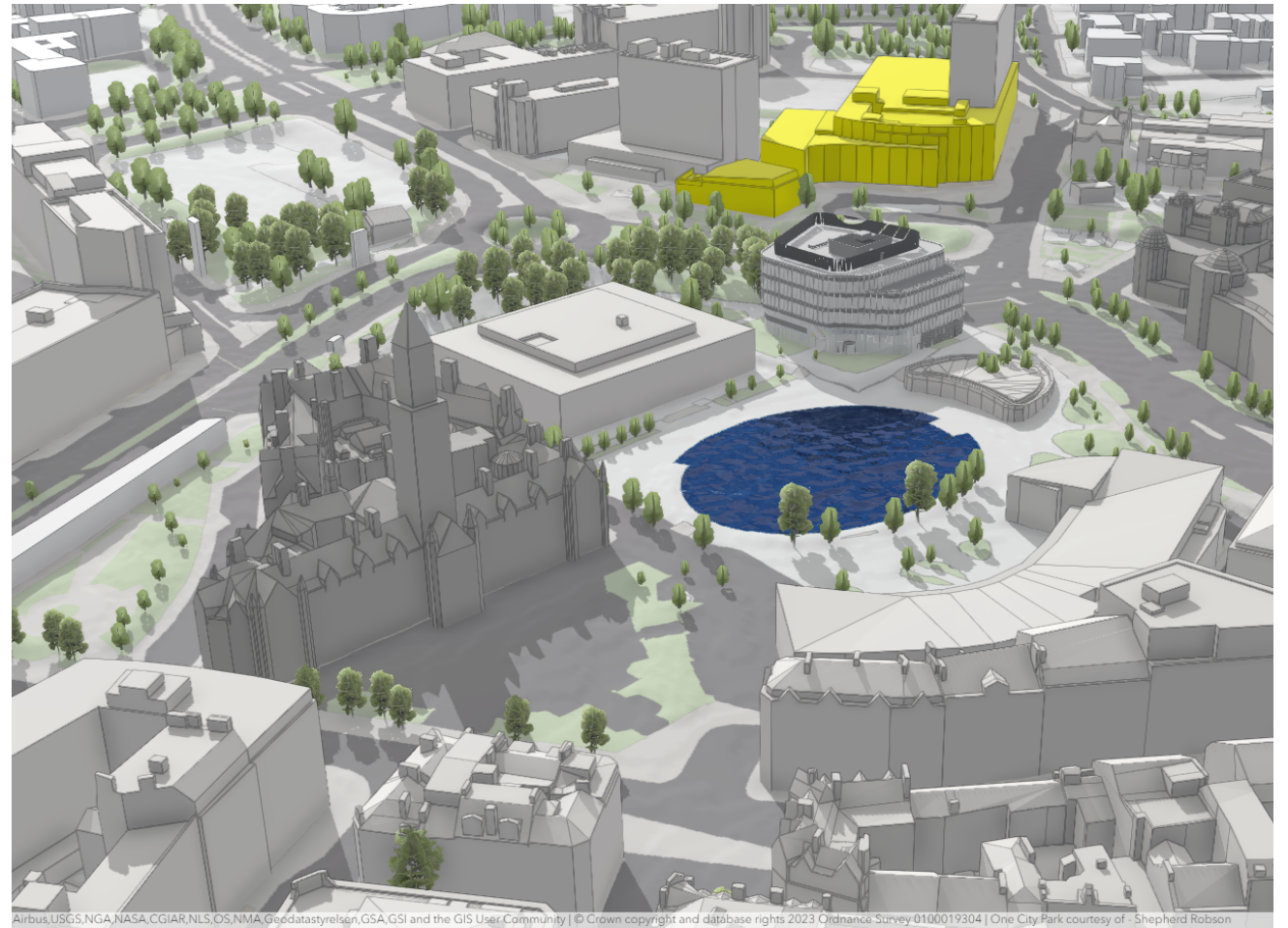
Digital Inclusion Highlights

- **Raspberry PI** - Working with Raspberry Pi we secured circa 60 devices that were donated to refugees and asylum seekers children and young people. Ukrainian; Afghan and Syrian. Due to our speed of distribution we are first on the list for further donations.
- **Joint WYCA Gainshare application –** secured £135,000 pa for 2 years to fund a digital inclusion officer proposed April 1st start date to align with funding.
- **Good Things Foundation** - Encouraged 59 organisations to register with the GTF. Providing access to grant funding opportunities; immediate access to free Sim Cards and devices for distribution to individuals they support. 5,000 Sim Cards have been distributed. 10 organisations in Bradford secured £6,000 each to support them to deliver Digital Inclusion. This includes 5 libraries. We are now working with all recipients to develop a full wraparound support package including digital champion training etc
- **Digital Unite Platform** – training platform for digital champions, we have 50 licences funded by the NHS. 28 licences in use with over 500 people supported. In the process of allocating the remainder of licences to library staff and a community based organisation to help with a health focussed project. Work is ongoing with GP practices and social prescribers network.
- **Barclays Digital Eagles** –Digital Champion Training secured in closed Bradford Only cohorts. The first 30 people have completed the training in October, these are family navigators and business support staff in Family Hubs. Further cohorts are being planned. All champions completed citizen coin training so they can get rewards for the training and helping others.
- **Collaboration** - Programme Manager has done extensive networking and sits on a number of Boards including the Bradford and Craven NHS Digital Board; WYCA Digital Inclusion Steering Group; LGA Digital Steering group; British Academy Digital Forum etc. This provides opportunities for collaborative working and opportunities to showcase work in Bradford.
- **West Yorkshire Digital Inclusion Programme -** launched last week. The Bradford Digital Inclusion Programme contributes to the wider WYCA programme.
- **Contract Social Value** – now a key part of Council procurements. Virgin Media, most recent, providing twenty, 5-year business level internet connections. One has been allocated to the Valley Project in Holmewood, helping families to be digitally engaged. Work is in progress with the community partnerships to agree an application process and assessment panels. This will ensure a fair allocation across the district. This initiative will be launched early next year.
  - Further exploration of social value in NHS contracts is in progress. Assessing how we can maximise on opportunities by joining social value together strategically
- **Digital Inclusion Index** – collaboration with YemeTech on development of the index. Showcased in no. of forums gaining interest. VCSE organisations to be added and digital champions to enhance local information.
- **Bradford, Craven and Airedale reducing inequalities team** - Developed a matrix of need aligned to specific cohorts, now working up projects to deliver digital inclusion support
- **Digital Inclusion Programme Branding** – Outlines developed and final 3 or 4 will be used to engage with communities to select the best brand. This will then be used on a dedicated website and marketing materials/social media etc. the purpose of the site will be to have all digital inclusion support and advice in one place.

Virtual Bradford (Digital Twin)

- 3D digital model of Bradford city centre completed.
- Produced in collaboration with University of Bradford
- Data captured from drone aerial imagery + terrestrial photography and laser scanning
- Open data available for anyone to use
- Phase 2 - Saltaire World Heritage Site ongoing.
- Provides a basis for a digital twin of Bradford to display data driven modelling and near real time metrics
- Collaboration between Nottingham CC with CBMDC & UoB named partners on a recent £300k DLUHC funded PropTech Engagement grant secured to support sharing of knowledge and knowhow.
- Funding sought from WYCA Gainshare Capacity Building to fund the modelling of Southern Gateway Framework area.
  - This will allow the development and design to be democratised by providing stakeholders with 3D models of different designs to consult on.
  - Allow assessment of environmental impact, transport etc.

Airbus,USGS,NGA,NASA,CGIAR,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community | © Crown copyright and database rights 2023 Ordnance Survey 0100019304 | One City Park courtesy of - Shepherd Robson

One City Park – BIM model courtesy Sheppard Robson

Virtual Bradford provides stimulus for Bradford as a leading clean growth city, supporting:

Investment ❖ Urban planning ❖ Architectural design ❖ Regeneration ❖ Disaster planning ❖ Modelling & Visualisation ❖ Data-driven decision making ❖ Public engagement ❖ Social inclusion ❖ Creative economy ❖ Educational resources ❖ Heritage ❖ Tourism ❖ Augmented Reality

What is AI for Bradford?

We invited companies based in the Bradford district to participate in an online survey to better understand the Artificial Intelligence (AI) adoption readiness and maturity level of businesses, and future needs of an AI for Bradford offer.

The findings from this survey will help gather insights that shape an investment case and plans to provide support to local businesses in identifying opportunities to deploy AI in their business setting, which will support increased productivity and growth. This support could include opportunity assessment, upskilling, knowledge transfer and potentially investment in tools and capability.

Develop plan based on results – e.g. consider AI Accelerator Programme.

The City of Bradford Metropolitan District Council and the University of Bradford seek to establish an AI partnership within the Bradford district as a catalyst for establishing an innovation ecosystem for business in the region and drive knowledge exchange.

An ecosystem that will help establish maturity in our processes, better target inward investment for Bradford, identify use cases and collaborative opportunities that address societal challenges and boost business growth. That unified front door.
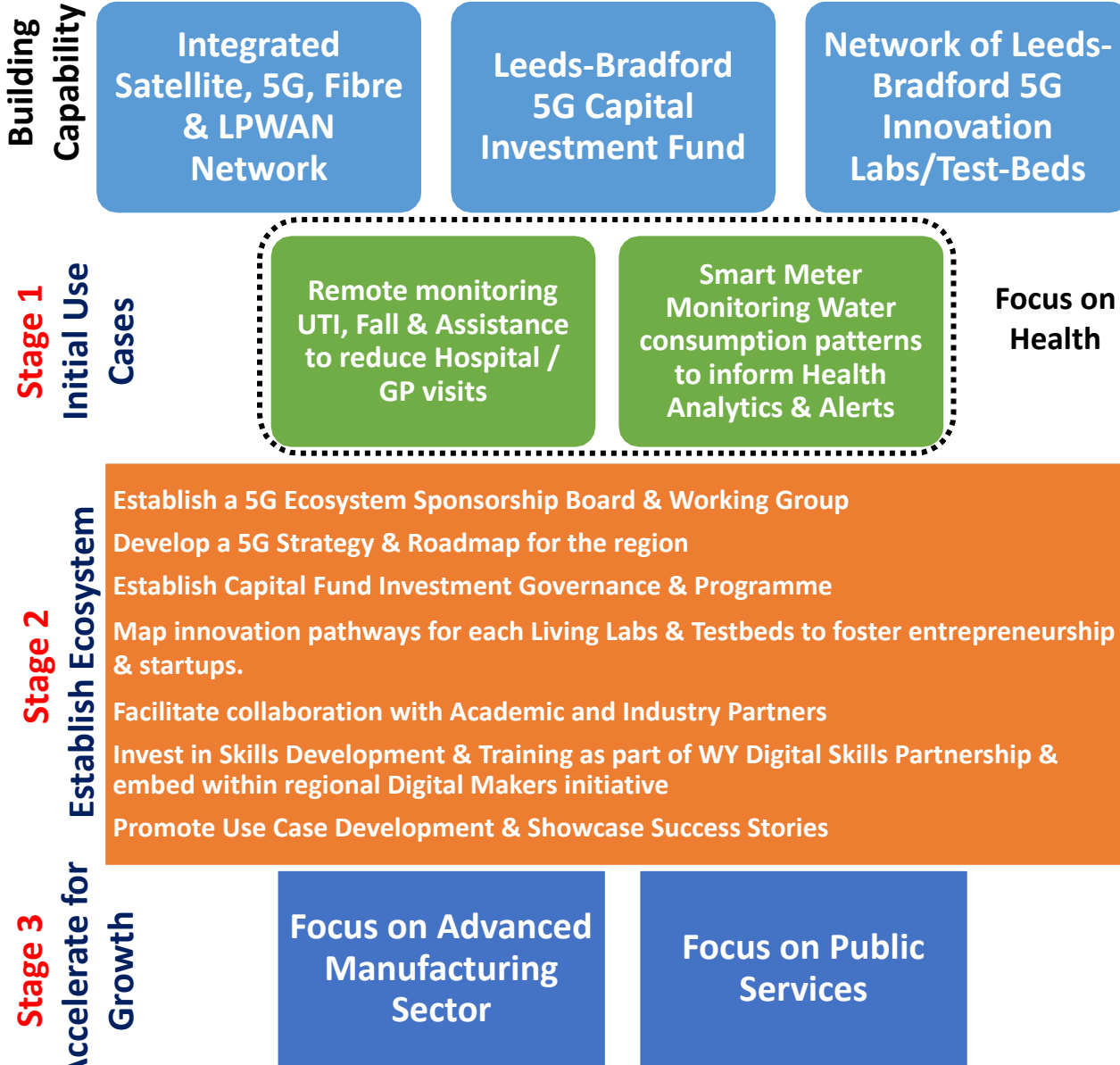
Q&A

APPENDIX SLIDES

For reference

AI Industry Forum, UoB, Q&A Panel- CBMDC represented, positive feedback

5G Leeds-Bradford Regional Innovation Ecosystem

Building Capability

- Integrated Satellite, 5G, Fibre & LPWAN Network
- Leeds-Bradford 5G Capital Investment Fund
- Network of Leeds-Bradford 5G Innovation Labs/Test-Beds

Stage 1 – Initial Use Cases

- Remote monitoring UTI, Fall & Assistance to reduce Hospital / GP visits
- Smart Meter Monitoring Water consumption patterns to inform Health Analytics & Alerts

Focus on Health

Stage 2 – Establish Ecosystem

- Establish a 5G Ecosystem Sponsorship Board & Working Group
- Develop a 5G Strategy & Roadmap for the region
- Establish Capital Fund Investment Governance & Programme
- Map innovation pathways for each Living Labs & Testbeds to foster entrepreneurship & startups.
- Facilitate collaboration with Academic and Industry Partners
- Invest in Skills Development & Training as part of WY Digital Skills Partnership & embed within regional Digital Makers initiative
- Promote Use Case Development & Showcase Success Stories

Stage 3 – Accelerate for Growth

- Focus on Advanced Manufacturing Sector
- Focus on Public Services

Vision

To establish Leeds-Bradford as a global leader in 5G innovation, where diverse sectors thrive through transformative 5G-enabled solutions. The creation of the Leeds-Bradford 5G Innovation Region will serve as a catalyst for promoting the development and accelerated adoption of 5G-enabled services in key sectors such as health, advanced manufacturing, and public services. This innovative ecosystem will be a beacon of technological progress, fostering collaboration and inspiring stakeholders to unleash the full potential of 5G for economic and social transformation.

Advancing Healthcare Solutions: Our initial focus is on the healthcare sector, harnessing the power of 5G and AI-enabled sensor-based technologies to revolutionise patient care. Our plan is to reduce demand into health & care settings and support independent living. Our 5G enabled services will focus on impactful, sustainable, and scale-able solutions that will tackle the demographic timebomb of increasingly ageing population, especially in underserved areas. The AI model will detect changes in a person's routine/behaviour and alert the support network for early intervention. This lifestyle monitoring coupled with AI will predict those who are at risk of catching Urinary Tract Infections (UTIs), together with associated falls, a significant cause of hospitalisations and more expensive healthcare. Additionally, we will work in partnership with Yorkshire Water on a comprehensive network of smart meters monitoring water consumption patterns to support early interventions on potential health issues.

Creating an Enabling Ecosystem: The Leeds-Bradford 5G Innovation Region will foster collaboration among businesses, academia, startups, and public entities. It will utilise the existing strong network of state-of-the-art 5G infrastructure and living labs, providing innovative spaces for testing and validating new ideas. Partnership collaborations will be encouraged, attracting investment from our local industry leaders seeking to capitalise on the region's 5G-driven potential. The region's strong support for research and development will attract top talent and become a hotbed for innovation. The region's attractiveness to investors will stimulate foreign direct investment, driving regional development and prosperity.

Focus on Local Sector Strengths: Ecosystem to focus on supporting growth opportunities in local sector strengths, in the design and manufacture of electronic systems, passive and active RF and microwave components, Synthetic Aperture Radar, Communications & Space where significant capabilities and opportunities for growth exist.

Appendix A: Leeds - Bradford Network of Innovation Labs, Test Beds & Research Centres

Helix Centre
- Maker space, digital innovation lab

Ingenuity 5G
- State-of-the-art Innovation Hub

Communications & Network Research Unit
- radio frequency engineering, mobile & satellite communications networks and applications.

The Alan Turing Institute
- Leading AI Research Institute

The Pollard Institute
RF & Microwave Research

The Institute for Communication and Power Networks
Optical Communications, Signal Processing & networking

The Technology Enabled Care House (TEC House)
- two storey house to showcase TEC offer

The Centre for Digital Innovations in Health & Social Care
- high quality, co-created applied research on digital health technologies

Rendulchintala Centre for Space AI
centre of excellence in Space AI Technology

Digital Health Enterprise Zone
- linking digital health businesses and health and social care partners with University expertise

Bradford Life Critical Project
- an open smart digital city and citizen observatory

Virtual Bradford
- Digital Twin Modelling

Health Technologies for Quality & Safety research group
- design and evaluation of health technologies

IoT Innovation Lab, UoB
- IoT / LoRaWAN / Sensor technology to deliver citizen value

The network represents the region's broader efforts to drive 5G innovation, accelerate the growth of the 5G ecosystem and driving the development of transformative technologies that can have a positive impact on local industries, communities, and individuals. It will foster innovation and serve as a platform for industry leaders, startups, academia, and technology enthusiasts to collaborate, experiment, and create new use cases for 5G networks. The key features and capabilities include collaborative spaces, technical support, prototyping, and testing, use case exploration, networking and partnership. It will create opportunities for the public to experience and experiment with 5G technology. The network will be involved in various projects and initiatives, including the development of 5G-enabled applications for industries like healthcare, entertainment, and manufacturing.
We will map each capability's innovation pathway on testbed accessibility, with a strong focus on validation, testing, implementing and scaling, on adoption/accelerating commercialisation, lead times, protocols and ability to enable business and other users to rapidly test innovations and get the data they need.