

Building the Municipal Connectivity Ecosystem

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Connected Places
Transformation Manager

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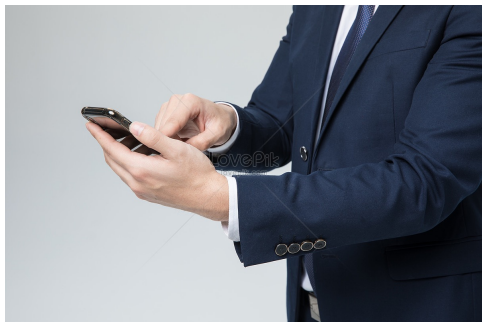


Borough Profile

- Large population and experiencing huge growth rate
- Diverse Borough with diverse connectivity challenges



We rely on a lot of mobile & IoT sims to deliver council services



Corporate phone users (5G)



Wireless Enforcement cameras (4G LTE)



Community Safety Bodycams (4G M2M)



Parking enforcement (4G LTE)



Connected Bin lorries(4G LTE)



28,000 Connected Streetlights (4G LTE)



Fire alarms (2G GPRS)



Door intercoms (2G GPRS)



Lift monitoring (4G LTE)



12,000 Connected smoke alarms in social housing dwellings (2G GPRS)



Adult social care (4G LTE)

Understanding the issues



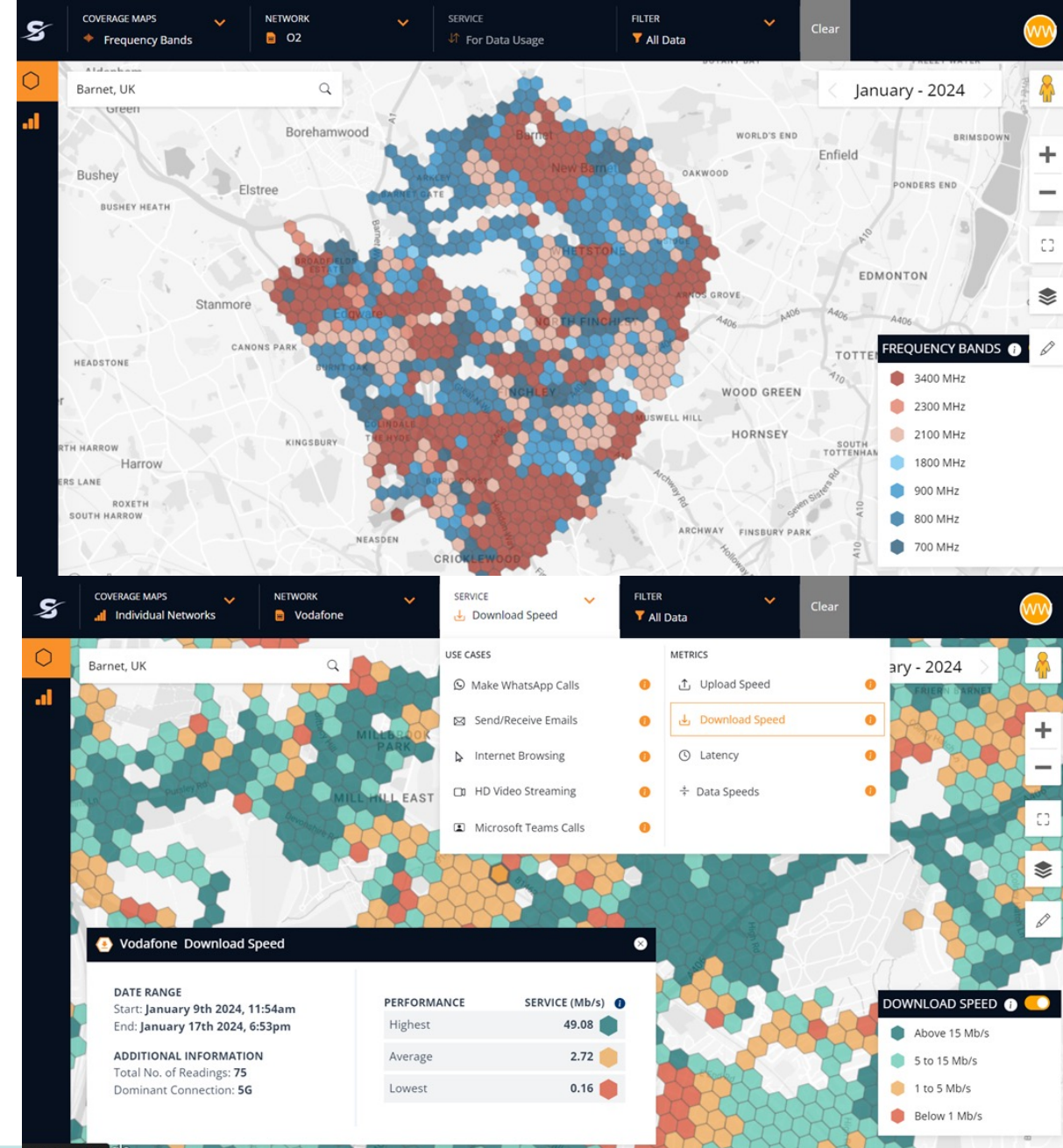
- **99% coverage claim**
- **We are on the front line with the public**
- **We play an important in enabling and coordinating infrastructure deployment in the Borough**
- **We have a lot of rooftops, land, and street furniture available**
- **We are a planning authority**
- **We are a highways authority**
- **We are both a user and operator of networks**

Mobile Survey

- Carried out testing of all mobile networks using slow moving vehicles
- Capturing data at hyper local granular intervals in every road in the Borough
- Signal strength/ coverage and capacity
- Informs engagement with MNOs

streetwave

Caring for people, our places and the planet



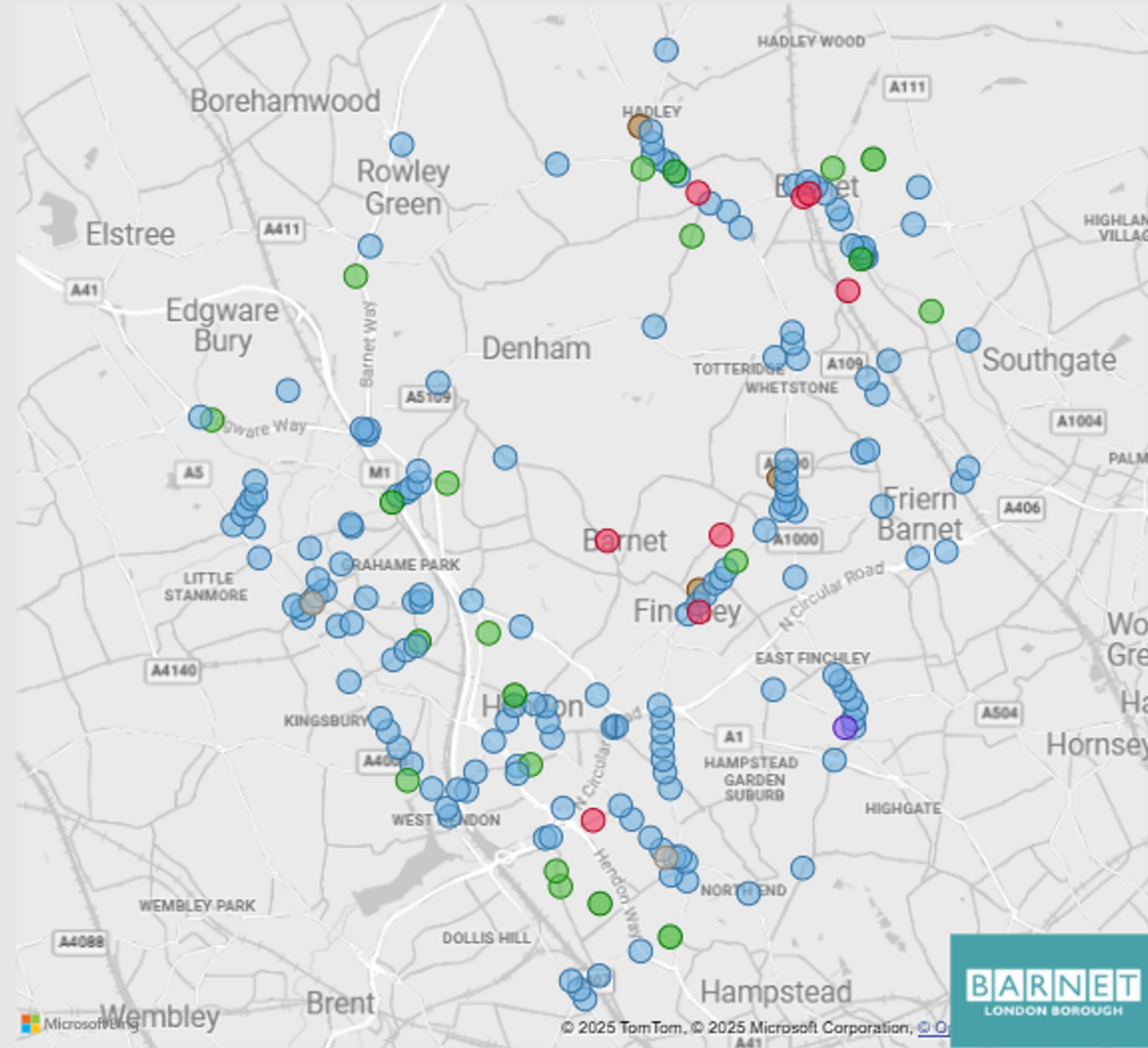
Small cells

- Over 90 small cells currently deployed across the Borough (O2, EE, Three)
- Developed standard open access agreement template with West London Alliance
- Worked on DCIA Pilot with DSIT and Industry



Fibre foundation

- £1.1 million Grant funded programme to connect council assets and sites
- Over 150km
- 200 CCTV poles (in strategic locations such as town centres, parks, and outside venues)
- 10 Libraries
- 30 Corporate buildings
- ‘Oven ready’ PoPs for small cells



Municipal ecosystem through layering



CCTV Surveillance



Streetlights



Rooftops and land

Asset Layer



Footfall Analytics



Traffic Enforcement



Traffic Analytics



Smart Parking

Urban Analytics

- Mobile Network Operators
- Fibre Operators
- IoT Vendors

Operator Layer



Fibre Backhaul



Small cell



Public Wi-Fi



LPWAN IoT network

Connectivity Layer



Phone users



Smart Waste



Water Metering



Flood detection



Smart buildings



Air Quality monitoring



Highway sensors



Adult Social Care

Application layer



Data management



Integration



Analytics

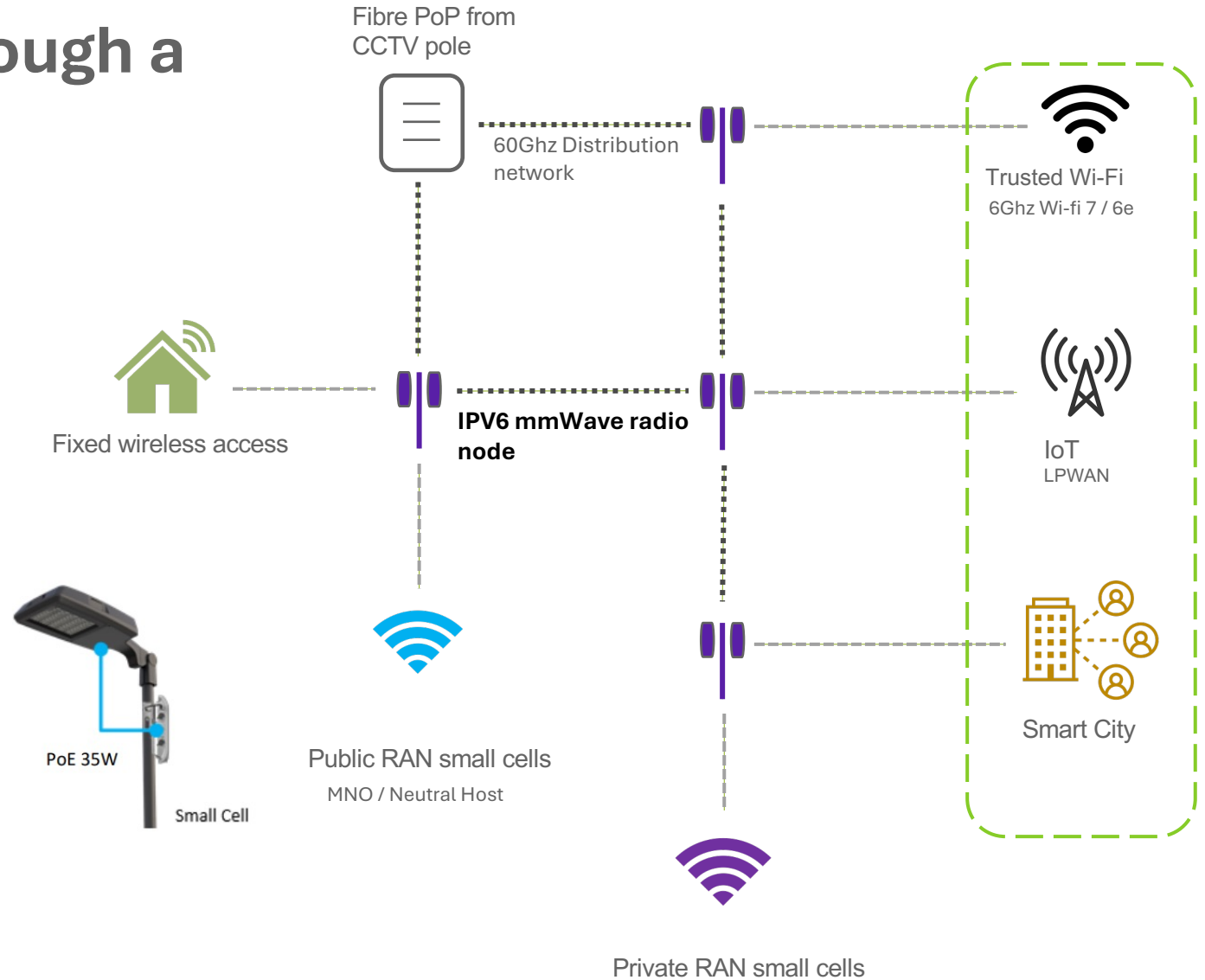


Automation

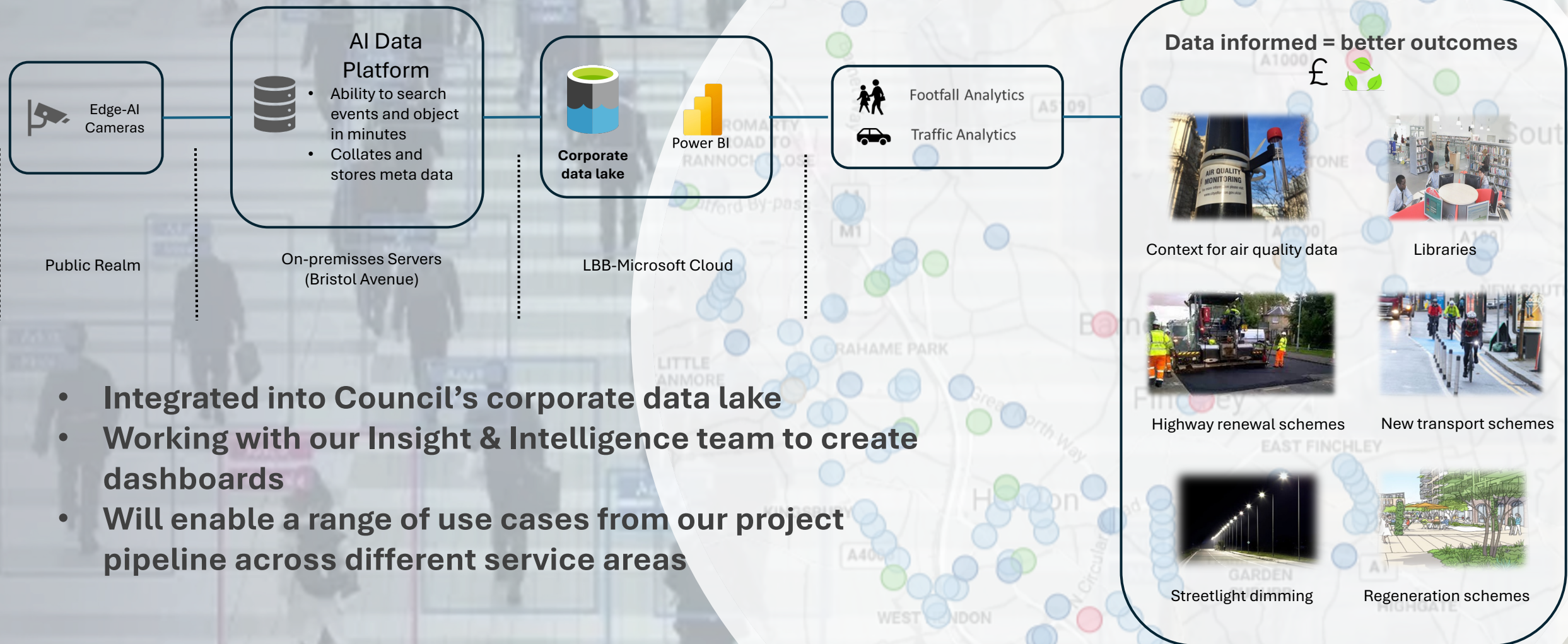
Data Sharing Layer

Ubiquify- Densification through a network of networks

- **Umbrella network**
 - Deployed within streetlights
 - mmWave
 - self-forming, self-healing mesh
- Network slicing via secure transmission network
- Allows small cells to be deployed at scale cost effectively and quickly

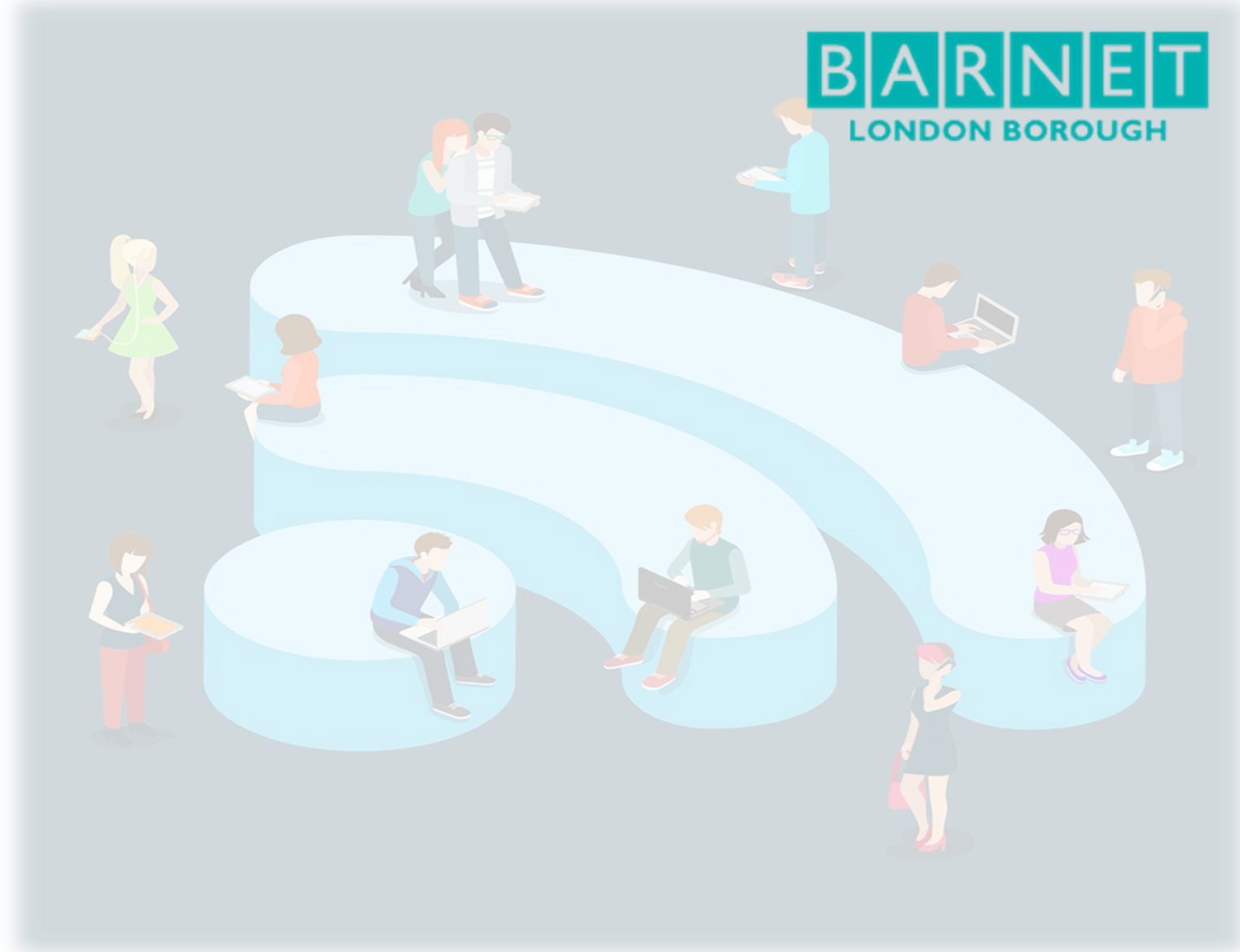
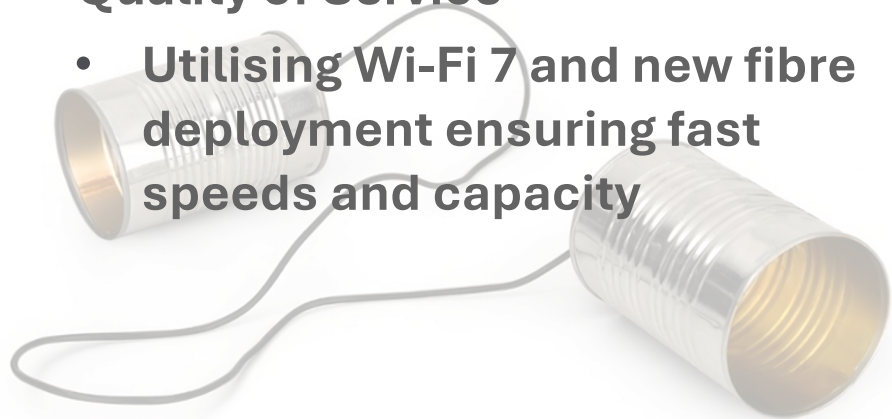


Urban Analytics Platform



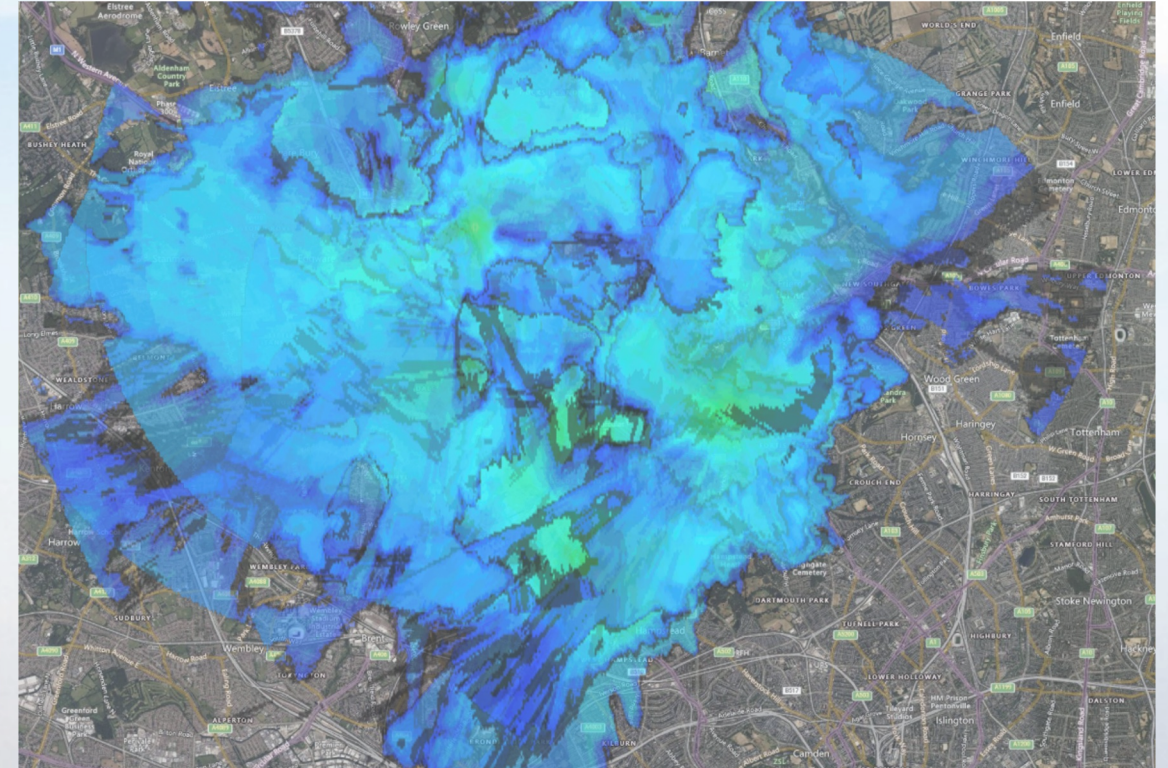
- **Integrated into Council's corporate data lake**
- **Working with our Insight & Intelligence team to create dashboards**
- **Will enable a range of use cases from our project pipeline across different service areas**

- Deployed on existing corporate network, new outdoor locations, and 3rd party sites
- Quality of Experience
 - Built on 'OpenRoaming' which is supported by Mayor of London
 - Seamless roaming across the Borough
 - Private and secure (encrypted)
- Quality of Service
 - Utilising Wi-Fi 7 and new fibre deployment ensuring fast speeds and capacity



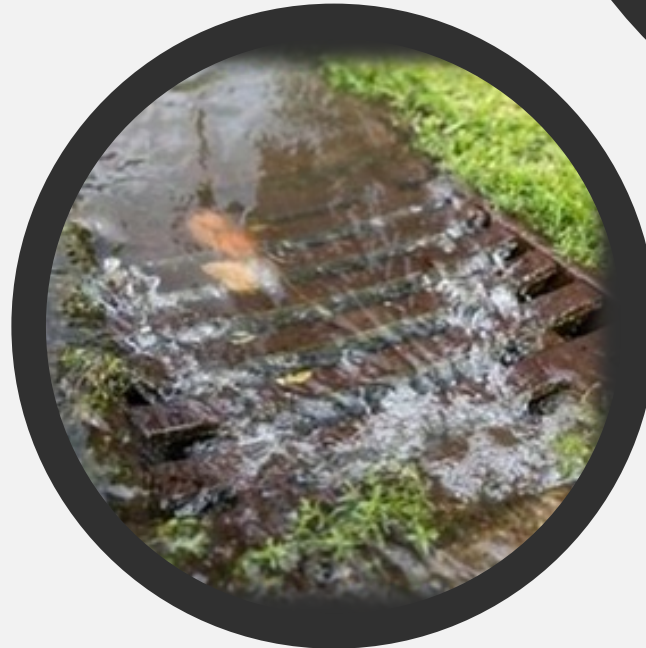
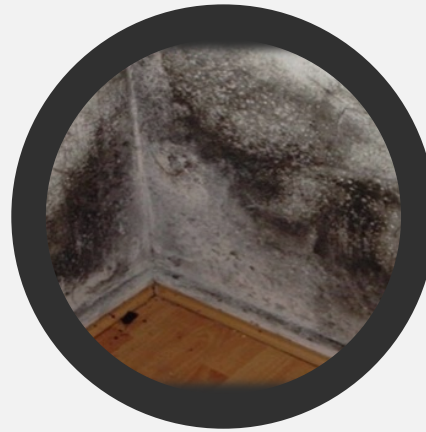
Lattice *The living lab*

- Utilising LoRaWAN technology
- Deployed on rooftops and street furniture
- Borough-wide coverage
- Allows us to explore and pilot use cases at pace and low cost
- Provides backhaul connectivity for other Council infrastructure such as solar panels
- Opening the Borough for Research and Innovation
 - Middx University
 - West London Alliance - Imperial College
 - Utility companies



LoRaWAN Projects

- Water Metering
- Damp and Mould
- Smart Waste
- Gully/Drainage
- Adult Social care
- Winter road maintenance
- Energy monitoring
- Air quality monitoring



BARNET
LONDON BOROUGH

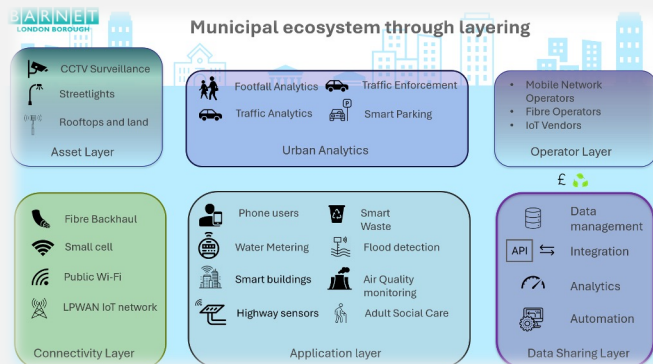
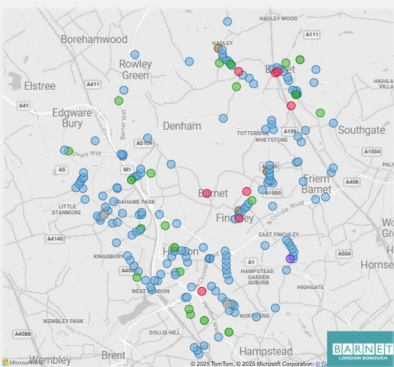
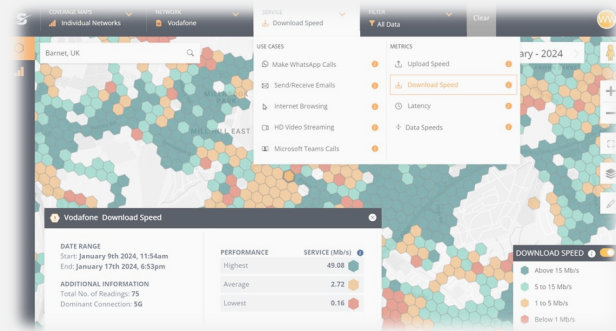


Colindale Pilot - July 2025

- Network deployment using Signify 'Brightsites' luminaires
- Small cells
- Trusted Wi-Fi
- Wireless cameras
- LoRaWAN
- Innovation trial
 - Dynamic dimming via Urban analytics
 - Sensor detecting tree canopy growth
- Prove deployment can be completed in days
- Better outcomes vs Macro sites

 **signify**

 **Borough-Fi**



Summary

- Identifying and understand connectivity challenges
- Building a strategy
 - Engagement with Telcos
- Fibre foundation
 - Creating an ‘oven ready’ environment for deployment
- Creating value through ‘layering’ of infrastructure and business cases

Caring for **people**, our **places** and the **planet**

Thank you

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