Liverpool 5G Create – Developing a Private Network for Public Services

Providing the infrastructure to support innovation in health and care services

May 2023

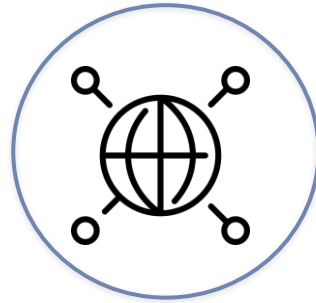Rosemary Kay, Liverpool 5G Project Director

Why are we doing this?

Driven by the **need** in Adult Social Care:

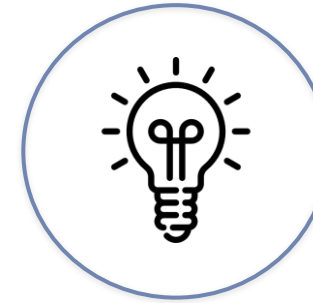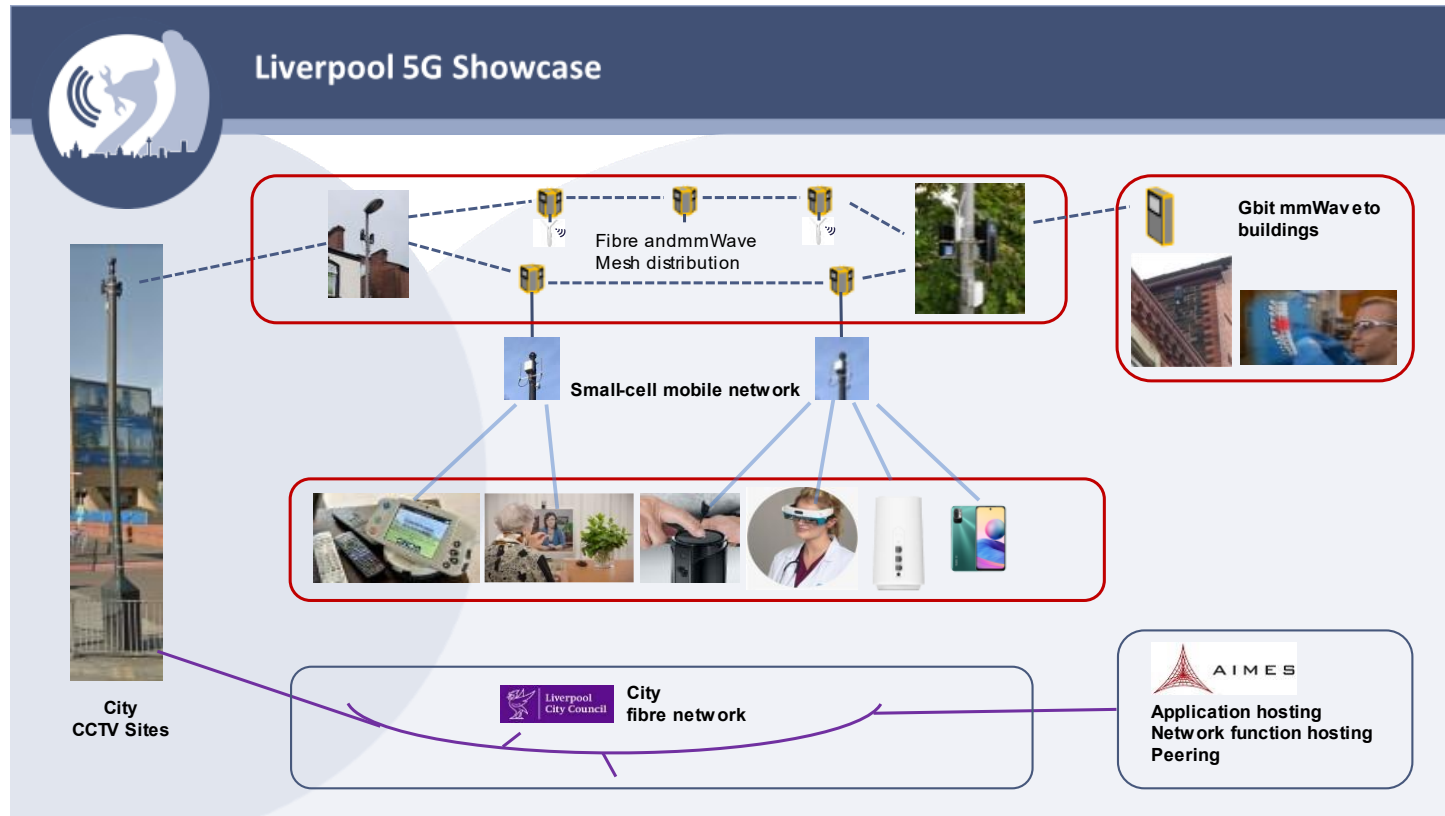|					
Many existing Telecare solutions depend on analogue systems, due to be switched off in 2025	Many households have no access to affordable, reliable connectivity. Impact on isolation, education, health and social care	The digital divide has increased exponentially during COVID-19. Impact of Digital Poverty is widely recognised	The Liverpool City Region faces vast, complex health challenges, increasing health inequalities	Service Level Agreements to support tech solutions in the community are not available or cost prohibitive	Increasing amount of NHS and LA budget spent on connectivity

What have we done?

In Kensington, Liverpool, one of the most deprived areas in the UK, we have built the largest 5G Stand Alone street level network in Europe:
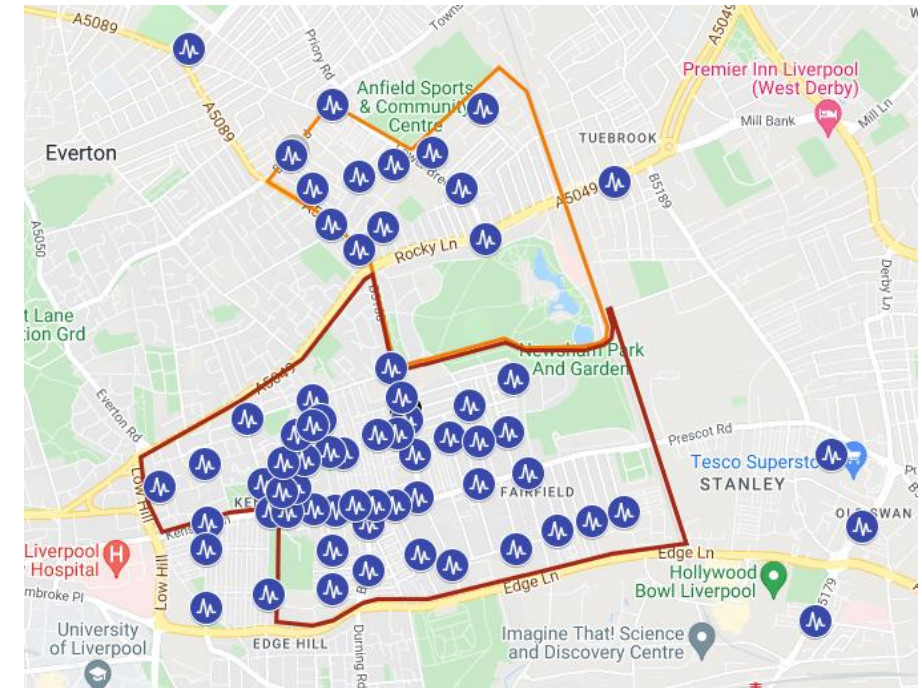
What have we done?

The existing network deployment:

The map above shows the small cell distribution. This places as many cells as possible in the denser residential streets and where this is impractical along the nearest more major roads making use of taller street lamps.

What impact have we demonstrated?

Through specific use cases trialled in the project:

Phase 1 (mmWave and Wi-Fi) project demonstrated potential cost savings to services of **£248K per 100 users per year.** (Remote medication management, sensors in homes, measures to address loneliness)

Phase 2 project (cellular connectivity) demonstrated potential costs savings:
- GP surgeries across Liverpool - **£174,236 per year in connectivity costs**
- Falls monitoring - **£7,737 per user per year**
- Provided connectivity to school children at home

Cost modelling of future telehealth, telecare and mobile working across Liverpool is predicting that over an 8 year period **£44 million** will be spent in mobile connectivity costs to support these services alone.

www.liverpool5g.org.uk
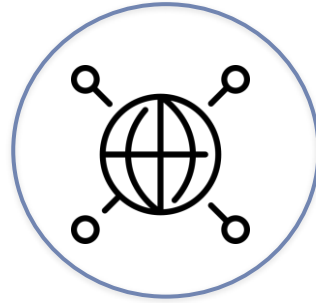
Where are we now?

Challenges going forward:

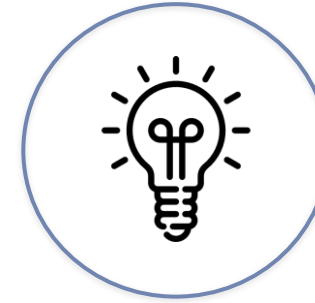|					
In the limited time available, we have demonstrated impact in health, social care and education. Now need to consider wider applications e.g. Housing, transport	Innovative CAPEX costs are high. As products are brought to market costs will come down and performance will improve	We have shown a private network for public services will reduce revenue costs improve outcomes for citizens	The DCMS 5GTT programme has shown that stackable use cases are needed to justify building a private network	To implement stackable use cases we need stackable business cases and shared outcomes that cut across public services	The Green Book business case does not reflect the level of innovation and Social Value

Contact us

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Liverpool 5G Create
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