Janet Ross
Digital Infrastructure Delivery Manager
North of Tyne Combined Authority

Spotlight On …
North East Combined Authority

5G & Future Connectivity Programme

UKTIN – 5G & Future Connectivity Programme
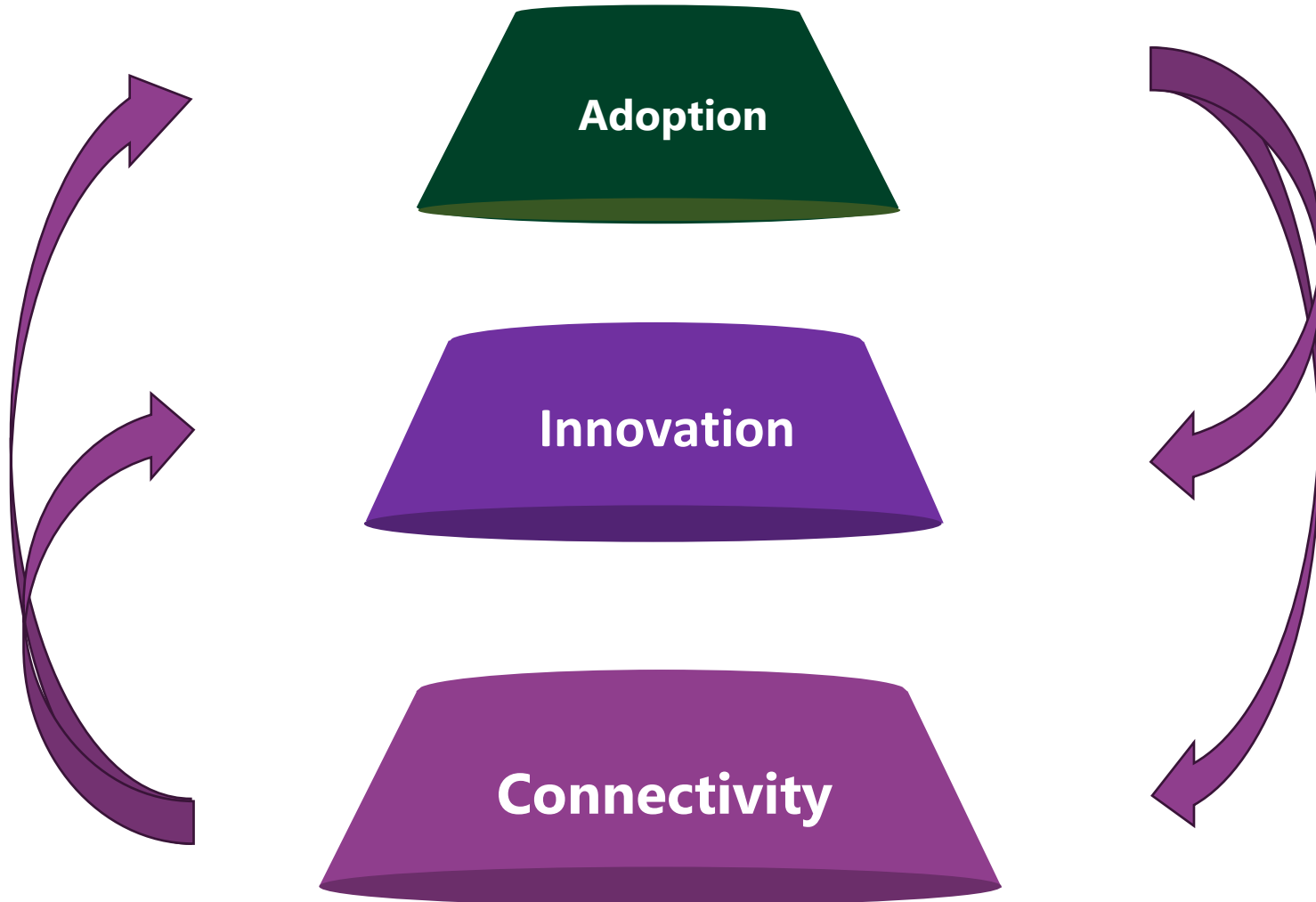
Janet Ross – Digital Infrastructure Delivery Lead

Regional Context

- Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside, Sunderland.

- NECA is the 2nd largest MCA by area and covers a diverse geography.

- 3 cities, many vibrant towns and extensive rural and coastal communities.

- Home to 2m people, 68k businesses which provide 887k jobs.

- An extensive range of assets including:

  - Four universities and nine FE colleges

  - Strong representation from Catapult network – including Offshore Renewable Energy, Digital Catapult NE&TV, NE Satellite Applications Centre of Excellence, High Value Manufacturing Catapult

  - Several National Innovation Centres including: Rural Enterprise, Data, Aging, Agritech (excellence in Livestock & Digital Innovation applied to livestock), Crop health and protection.

  - Newcastle is the centre of one of the fastest growing tech clusters in the UK, including FTSE 100 company Sage PLC, Ubisoft's largest UK Games Studio and a new BBC Tech Hub.

  - Newcastle Helix, a flagship £350 million innovation quarter that brings together academia, the public sector, communities, business, and industry.

  - The North East has one of the largest and most important land-based and rural economies in the UK providing a large proportion of the UK's domestic food supply and timber produce

  - Creative and digital industries contribute over £3.5 billion to our economy, employing close to 35,000 people in over 3,500 businesses.

  - Newcastle University's Urban Observatory maintains the largest set of publicly available real time urban data in the UK and the NBS National BIM Library is the primary source of free-to-use building information modelling content in the UK

North East Combined Authority Digital Priorities

North East Combined Authority

Digital Inclusion

We will define a minimum digital living standard for residents in the NEMCA area and help them access the skills, equipment and support needed to use technology safely and confidently.

Digital Talent

Create a Digital Talent Engine to grow the tech-talent pipeline – raising aspirations and skills levels and creating clear pathways into the opportunities in digital for all.

Autonomous Transport

Establish the NE as an exemplar and major R&D Hub for autonomous logistics and passenger transport.

Digital Connectivity

Levelling up access to high-speed internet (fixed and wireless) for homes, businesses and visitors across the region.

Digital Economy

We will support the growth of the digital economy by creating and supporting initiatives to improve infrastructure, support cyber resilience and promoting growth.

5G Innovation Region

Create a 5G National Innovation Region of Excellence, attracting digital and tech companies to the area, accelerating digital innovation and boosting the adoption of 5G and emerging technologies by actively supporting and co-investing in industry led innovation and R&D.

Digital Innovation

North East Combined Authority

Regional Connectivity Profile

Fixed

LA Area	All Premises	Gigabit No. Premises	Gigabit %	<30Mbit/s No. Premises	<30Mbit/s %	<10Mbit/s No. Premises	<10Mbit/s %
SOUTH TYNESIDE	76,179	63,780	83.7%	1,371	1.8%	465	0.6%
NORTH TYNESIDE	103,460	87,790	84.9%	706	0.7%	373	0.4%
NEWCASTLE UPON TYNE	142,230	114,678	80.6%	3,564	2.5%	525	0.4%
SUNDERLAND	139,344	116,752	83.8%	2,933	2.1%	1,025	0.7%
GATESHEAD	101,970	74,782	73.3%	3,484	3.4%	1,088	1.1%
COUNTY DURHAM	263,660	141,415	53.6%	10,147	3.8%	3,029	1.1%
NORTHUMBERLAND	163,328	66,124	40.5%	8,385	5.1%	3,311	2.0%
COMBINED NECA View	**990,171**	**665,321**	**67%**	**30,590**	**3%**	**9,816**	**1%**

Mobile

Local Authority Area		4G At least 1 MNO	4G All MNOs
County Durham	Urban	100%	98%
	Rural	94%	70%
Gateshead	Urban	100%	99%
	Rural	100%	93%
NEWCASTLE UPON TYNE	Aggregated	100%	100%
NORTH TYNESIDE	Aggregated	100%	100%
NORTHUMBERLAND	Urban	100%	97%
	Rural	87%	63%
South Tyneside	Urban	100%	99%
	Rural	100%	98%
Sunderland	Aggregated	100%	100%

Aggregate	Urban	100%	99%
	Rural	96%	85%
	Total	97%	88%

Connectivity Activity

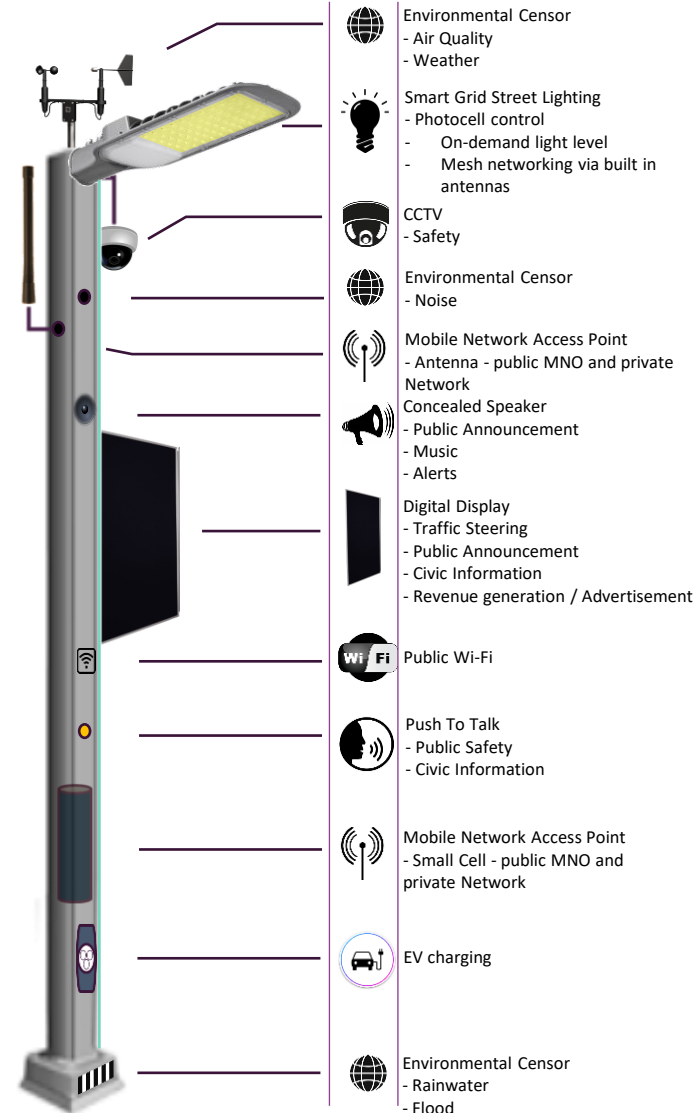Mobile Coverage - Street Wave / Dense Air – various locations

Craster Mast - POC

What's Left – Intervention Opportunities

Local Authority WAN Procurements

Commercial roll outs / Project Gigabit

OMR Data

Digital Connectivity Infrastructure Accelerator (DSIT)

Environmental Censor
- Air Quality
- Weather

Smart Grid Street Lighting
- Photocell control
    - On-demand light level
    - Mesh networking via built in antennas

CCTV
- Safety

Environmental Censor
- Noise

Mobile Network Access Point
- Antenna - public MNO and private Network

Concealed Speaker
- Public Announcement
- Music
- Alerts

Digital Display
- Traffic Steering
- Public Announcement
- Civic Information
- Revenue generation / Advertisement

Wi-Fi Public Wi-Fi

Push To Talk
- Public Safety
- Civic Information

Mobile Network Access Point
- Small Cell - public MNO and private Network

EV charging

Environmental Censor
- Rainwater
- Flood

Innovation Activity

5G Innovation Acceleration – Port of Blyth

5G Innovation Acceleration – 5G Immersive Lab

5G Innovation Acceleration – 5G Health Lab

5G Innovation Regions: Agritech, Ports, CITS, Creative Industries

North'land Line & the Economic Corridor

Digital Twinning for Transport, micro-mobility, connected stadia, Green Superport
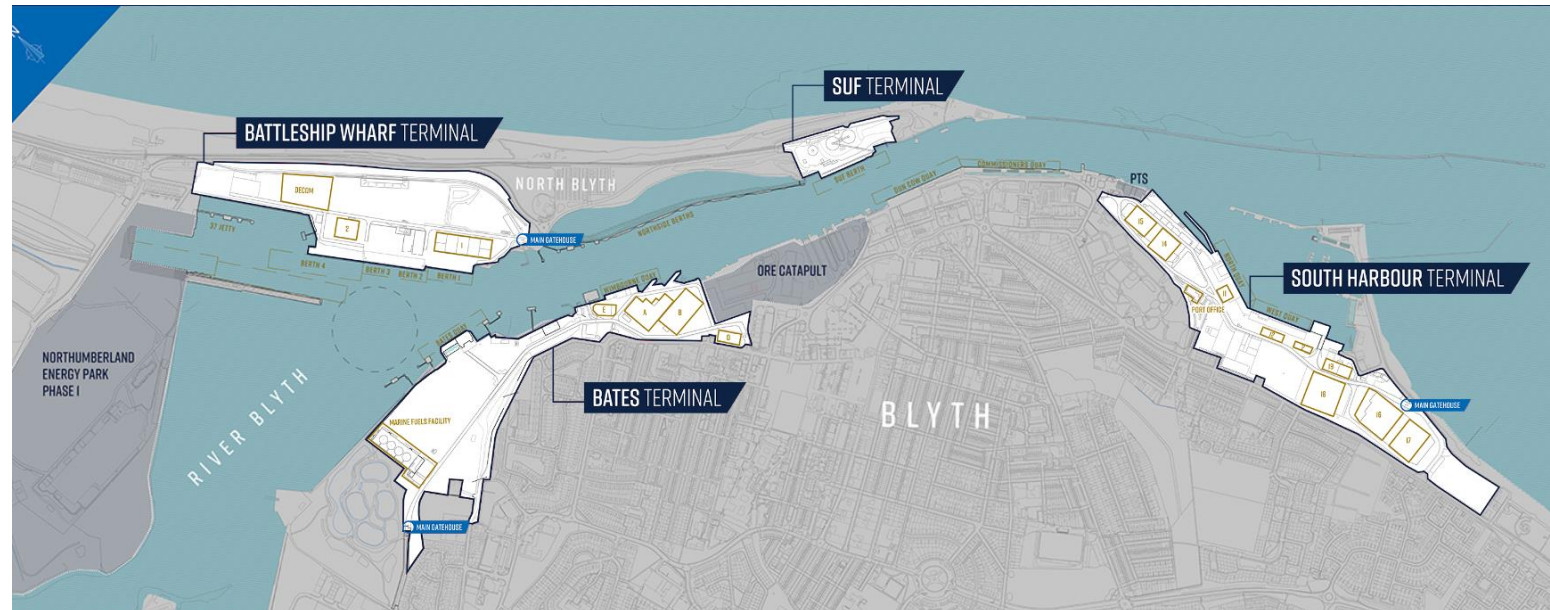
Port of Blyth 5G Innovation Lab

This project will provide a Private 5G "Living Lab" allowing businesses based in and around the port and wider value chain to work on 5G tech.

Allows businesses to explore 5G enabled tech that would otherwise not be afforded to them and de-risks innovation at mid to high TRL levels.

Primarily focused on removing barriers to accessing, testing, and piloting solutions over a 5G network for the entire ORE sector eco-system of manufacturing and services companies.

It will offer the opportunities to explore use cases for:

- Connected workers
- Connected assets
- Digital Twin
- Situational awareness
- Safety & Security

5G Immersive Lab – Eldon Square

Providing local companies and residents with access to the latest 5G innovation and immersive technologies.

Offering state-of-art digital technology equipment and a versatile workspace comprised of co-working areas, meeting rooms and event spaces.

Delivering hands-on technology workshops and expert-led demonstrations in creative, tourism, retail, advance manufacturing, agriculture and energy.

High-speed connectivity to the Advanced Media Production studio at PROTO in Gateshead, creating a robust testing ground for solutions in a real-world environment, accelerating the development and deployment of products or services.

5G Healthcare Living Lab

This project offers the opportunity for the North East to lead the way for digital solutions to support Patient Flow and Discharge at a national level.

Innovations developed will significantly contribute to our local economy and society but provide the opportunity to be scaled across the 42 other integrated care boards across the country.

Provision of a 5G Healthcare Innovation Lab in a real-world environment within a regional NHS healthcare setting to support late-stage R&D, commercialisation of proven 5G use-cases and deployment at scale.

Through a series of workshops and Open Call processes, the project will link cutting-edge late-stage R&D developed by SMEs with innovation expertise, CPIs sandbox / testbed environments and a 5G Healthcare Innovation lab in a real-world environment - showcasing an accelerated adoption pathway from concept to market.

Northumberland Line Economic Corridor

The reinstatement of passenger trains between Ashington and Newcastle

Provides opportunity to explore a potential 5G / AWI pilot aligned to the rail corridor and business clusters along the route.

Potential 5G test bed to deploy and develop use cases for:
- Smart Stations
- Connected transport
- Freight Logistics
- Immersive Tourism
- Improved journey experience

Adoption Activity

Minimum Digital Living Standard

Social Tariff Campaign

Digital Village Halls / Community Hubs

Close and Contact Details

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