5G Innovation Regions Programme

North East Programme Impact Summary

Overview

The North East 5G Innovation Regions (5GIR) programme has demonstrated how advanced connectivity can enable innovation across multiple sectors including transport, ports, culture, agriculture and smart cities. Delivered through collaboration between North East local and regional authorities, universities, industry partners and technology providers, the 5GIR programme positioned the region as a leading testbed for real-world 5G innovation and the adoption and acceleration of these technologies.

Project Impacts

Five sector pilots successfully delivered across Connected Transport, Smart Ports, Creative Industries, Agritech and Smart Cities

5G Enabled Connected Intelligent Transport System (C-ITS) green light priority (GLP) for buses and emergency services most effective during peak hours. Business case developed for C-ITS GLP on strategically important logistics route from Nissan to Port of Tyne

City of Sunderland Smart

North East Combined Authority | Kim McGuinness North East Mayor

5G network at Port of Tyne enabling improved productivity, worker safety, site security and air quality through AI-enabled road condition monitoring, vehicle environmental tracking, personal protective equipment (PPE) compliance monitoring and autonomous drones for security patrols and infrastructure checks

Two large scale 5G-enabled digital installations in Keel Square, Sunderland contributed to 31% increase in footfall and 20% increased leisure spend during major city centre events that were enriched by the digital installations

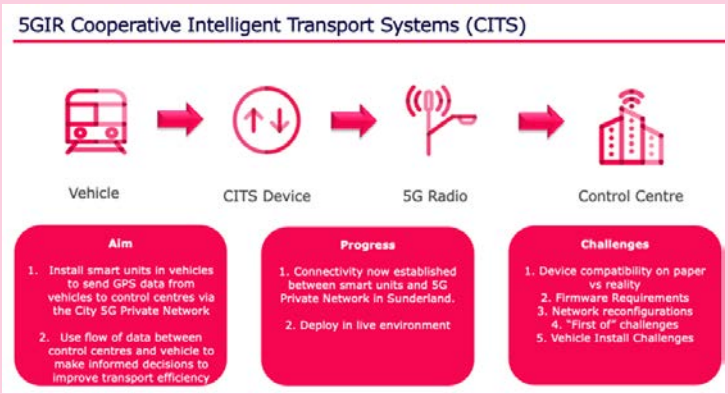
Two rural digital observatories established at Newcastle University research farms, using advanced wireless networks to deliver leading edge methane and soil sensors in real-world farm environments

11 next-generation 5G-enabled CCTV cameras deployed in Sunderland city centre delivering enhanced public safety between the city centre and the Stadium of Light, along with business case for deployment of 5G-enabled CCTV cameras to wider North East region

£145,000 additional investment leveraged through programme activity

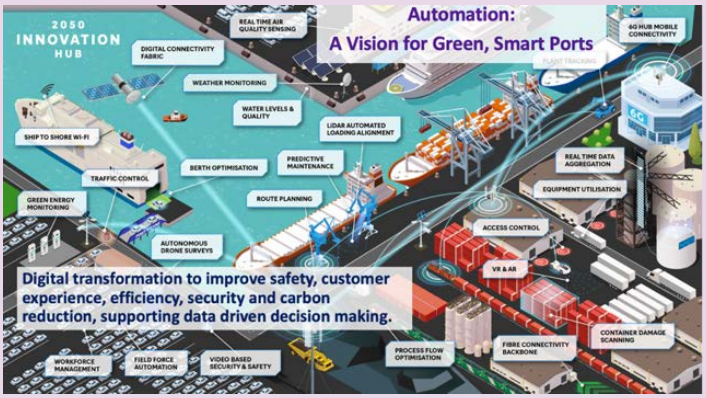
Key Projects

Connected Transport Trials



Testing of Connected Intelligent Transport Systems (C-ITS) including green traffic light priority for buses and business case for a connected logistics corridor linking Nissan and the Port of Tyne.

Smart Port – Port of Tyne

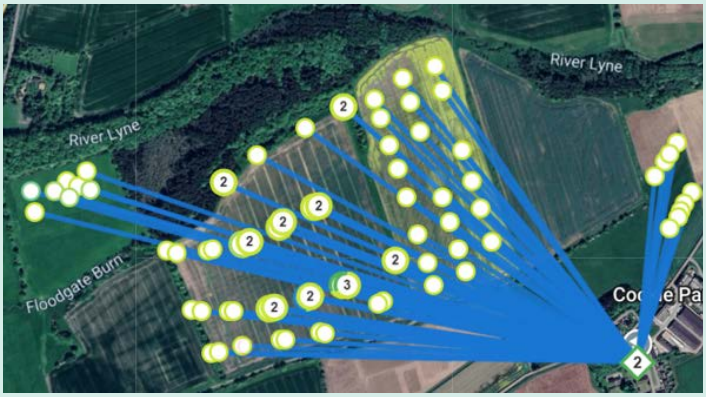


Expansion of the Port's private 5G network enabling AI-powered monitoring technologies for road infrastructure inspection, environmental sensing and safety compliance.

Creative and Cultural Innovation

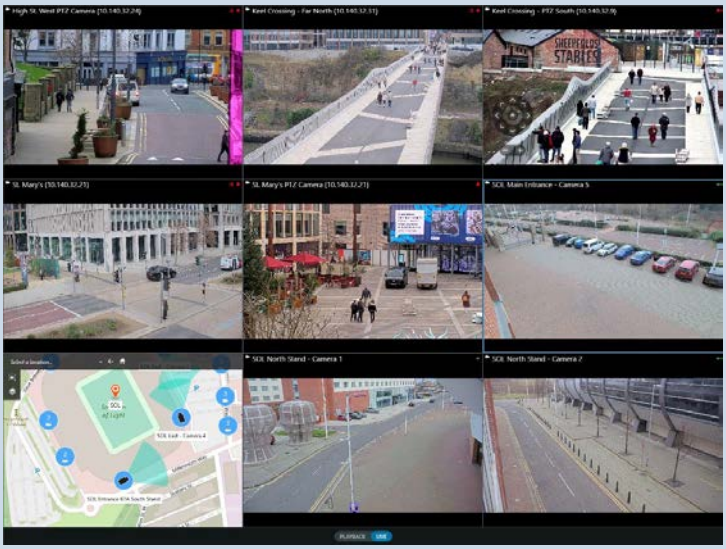
Large-scale digital screen and interactive installations in Sunderland's Keel Square enabling live broadcasts, digital art and major event screenings including international sporting events.

Agritech Innovation



Deployment of connected sensors across research farms in Northumberland to monitor soil conditions and methane emissions, supporting sustainable farming research.

Smart City Infrastructure



Deployment of 5G-enabled CCTV cameras and analytics in Sunderland to improve public safety monitoring, crowd management and city centre data insights.

Also development of a business case for the roll-out to other local authorities in the North East.

Programme Legacy

The programme has created lasting advanced network enabled infrastructure, partnerships and knowledge that will continue to support innovation across the North East. The physical installations of networks and connected devices are delivering significant value, data and research insights, and will continue to be operated beyond the end of the 5GIR project funding.

The pilots have demonstrated the practical value of advanced connectivity and created a foundation for future smart city, digital infrastructure and research initiatives.

The **North East 5G Innovation Regions programme** has been delivered with funding from the Department for Science, Innovation and Technology (DSIT), alongside the support of the North East Combined Authority (NECA) and a wide range of partners across local government, industry, academia and the technology sector.

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