

Building

A CONNECTED BRITAIN THROUGH LOCATION DATA

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FOR THE UK'S TELECOMS SECTOR, ENSURING THAT EVERY CORNER OF BRITAIN IS CONNECTED HAS PROVED TO BE A CHALLENGE. AS REPORTED EARLIER THIS YEAR, THE UNITED KINGDOM TRAILS BEHIND MOST OF THE EU IN TERMS OF 5G MOBILE AVAILABILITY. WHILE THIS IS UNDERWHELMING CONSIDERING THE UK WAS ONCE A LEADER IN EARLY 5G DEPLOYMENT AND PERFORMANCE, THE UK'S NEW LABOUR GOVERNMENT IS PLANNING TO CHANGE THE TIDE.



Project Gigabit – an ambitious £5 billion programme – aims to provide hard-to-reach areas of the UK with high-speed, gigabit broadband and 5G access, transforming nationwide connectivity. As we progress towards a fully connected Britain, the role of precise location data has become increasingly apparent. Accurate geospatial data is crucial to help extend infrastructure into previously underserved areas, and enables telecoms companies to make smarter decisions about where to establish or expand their networks, ensuring maximum efficiency and profit in a hyper-connected future.

BRIDGING THE DIGITAL DIVIDE

Rural connectivity has historically presented challenges for telecoms providers, which in turn is reinforcing a digital divide between those in urban and rural areas of the UK. The lack of high-speed broadband or 5G coverage available to those living in remote locations has potential to limit access to educational or work opportunities, or to restrict access to online healthcare, leading to digital isolation. Recognising this divide and the need for improvement, the UK government launched Project Gigabit to ensure digital inclusivity regardless of location.

Earlier this year, the Department for Science, Innovation and Technology (DSIT) awarded over £289 million worth of contracts to BT's networks arm, Openreach. These new contracts form part of the £800 million Project Gigabit

funding earmarked by DSIT specifically to connect 312,400 of the UK's hardest-to-reach homes and businesses. While this progress is encouraging, delivering a fully connected Britain requires coordination, underpinned by authoritative location data to enable companies to identify, prioritise, and efficiently connect every addressable location in the UK.

THE CRITICAL ROLE OF LOCATION DATA

The success of Project Gigabit hinges on understanding exactly where infrastructure is needed and how best to deploy it. Accurate location data enables providers to evaluate existing coverage, identify growth areas, and plan the most efficient routes for new infrastructure—minimising costs while maximising value. This infrastructure planning also addresses the risk of overbuild, where multiple providers may duplicate infrastructure in already-served areas while leaving others unconnected. As the UK's National Mapping Service, at Ordnance Survey (OS), we see key decisions being made every day on infrastructure and assets using authoritative location and addressing data.

For telecoms providers delivering on Project Gigabit's ambitious targets, precise location data is pertinent. Unique Property Reference Numbers (UPRNs) ensure that every addressable location in Great Britain can be uniquely identified accurately without uncertainties. UPRNs can be cross-referenced with additional datasets like broadband speed data, enabling providers to identify precisely which properties require improved connectivity—particularly crucial in rural areas where traditional addressing can be ambiguous.

Additionally, themes from the OS National Geographic Database (NGD) can deliver detailed insights like buildings, vegetation, road networks and street lights allowing for the creation of digital twins of networks that can inform providers on whether or not a location would be ideal for asset deployment. By anticipating costly setbacks or issues before they are a problem, location data can assist in accelerating the nationwide transition to gigabit connectivity.

OS data not only plays a crucial role in the rollout of Project Gigabit, but also offers long-term value for telecoms and engineering companies which use location data to support planning, infrastructure projects and the running of services. By leveraging OS data, service providers and operators can enhance their understanding of network demand and predict risks to service (by analysing tree growth and high-risk flood areas for instance). This data can provide accurate, detailed coverage maps showing network improvements and expansions over time, helping to support planning and, in turn, improving connectivity, as well as customer services and experiences in the long term.

THE NEXT DECADE: A HYPER-CONNECTED BRITAIN

Looking forward to the next ten years, I believe the UK will be widely connected, with Project Gigabit representing just the beginning of the journey. We can expect 6G technology to become widely available in the coming years, with anticipated speeds approximately 100 times faster than current 5G networks. This next-generation technology will not only deliver advanced connectivity performance but also feature systematic AI integration at its core, unlocking improved services and experiences for customers. Moreover, satellite communications will become increasingly accessible and affordable, serving as the critical bridge to enabling seamless, ubiquitous connectivity between terrestrial and space-based networks.

Gigabit-speed broadband and 6G networks have the potential to not only make the UK a global leader in connectivity, but will unlock communications that will greatly impact our lives. The potential 6G unlocks in terms of AI advancement alone will adapt and change how we work and live in ways that seem somewhat far-fetched right now. The possibilities continue to unfold, poised the next decade of telecoms to be a truly exciting time.

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