CGI

CGI's 5G Private Network Showcase

Bringing technology to life to deliver business value with 5G mobile private networks

Transforming business operations with 5G Mobile Private Networks

We have been working with our clients to bring the technology to life and deliver the best possible business value, through the development of specific 5G use cases that deliver value across multiple industry sectors.

Public 5G networks (NSA) are now widely deployed in the UK, but they do not yet support features like low latency and privacy, in addition to the higher bandwidths available with 5G.

Our 5G Private Network showcase, built in partnership with Nokia, demonstrates how 5G mobile private networks can transform business operations.

Our 5G Standalone (SA) network enables us to showcase 5G features as they are standardised and built into vendor solutions, enabling you to develop business cases with confidence that they will work in a private network.

CGI in Communications

CGI has provided services to the telecoms industry for over 30 years.

- We serve 6 of the top 10 Communication Service Providers globally

- We have over 5,000 industry experts around the world helping clients drive profitable growth

- We have partnered with each of our top 10 clients for average of 26 years

Demonstrating complete business scenarios with our 5G Standalone Mobile Private Network

We have worked with Nokia to deliver a 5G Standalone (SA) mobile private network capability in our Fenchurch Street office using n77 spectrum, enabling us to demonstrate 5G features that are not yet available on public networks.

The 5G Standalone Mobile Private Network solution is built using Nokia's Digital Automation Cloud (DAC) products, where the Nokia DAC Edge Server provides a core network and radio interfaces, all connected back to the Nokia Cloud for ease of configuration and management. This is commercially available and is already being deployed in commercial applications in the UK and globally. CGI has deployed Nokia DAC into customer sites for live customer deployments in the UK.

Uniquely, we bring together the 5G Mobile Private Network capability with CGI's data capture tools and analytics expertise, enabling us to demonstrate complete business scenarios. We can combine static data feeds from external sources including weather, traffic conditions etc. with up to the second data from 5G connected sensors, enabling us to build a digital twin model of the real world. This lets you see how new ways of working can lead to positive business impacts. When combined with MEC (Multi-Access Edge Computation), this can accelerate automation and deliver further business value.
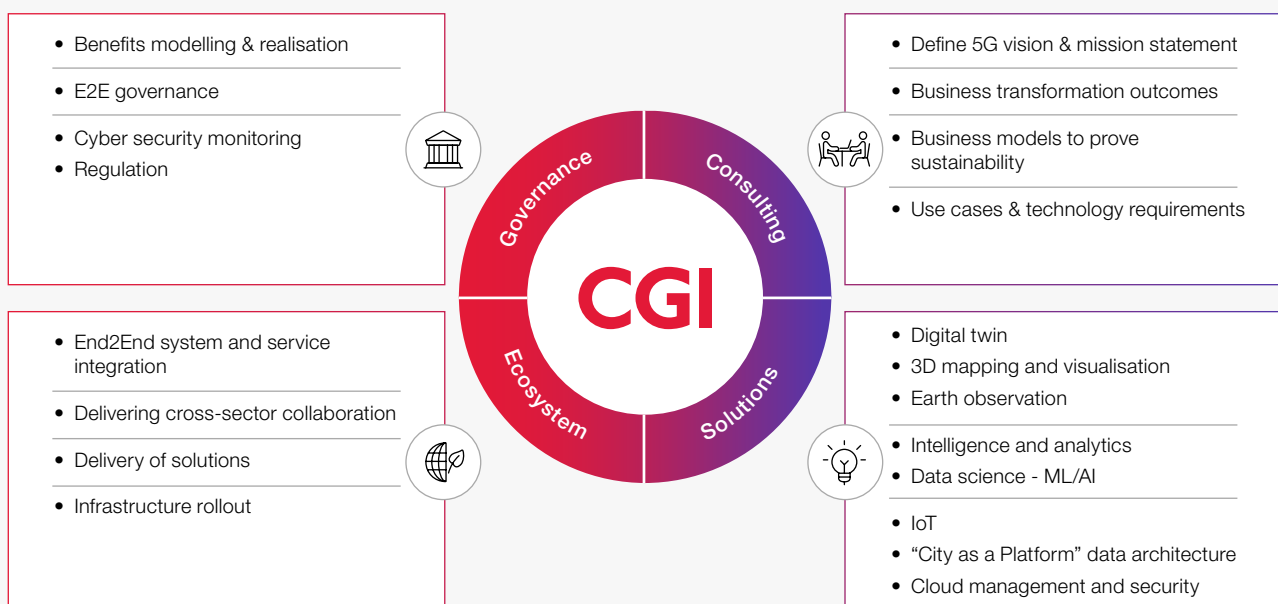
Our expertise includes:
- Business consulting
- System integration
- Digital transformation
- Business process outsourcing

We specialise in:
- 5G – Standalone and Non Standalone Mobile Private Networks with Mobile Edge Computing capabilities
- 5G – Hybrid Networks
- 5G Networks – Assurance & Management
- Satellite Communications
- Secure Networks – Testing & Assurance
- Industry 4.0 Use Cases
- IoT solutions
- Robotic Process Automation
- Cyber Security

Delivering transformation with 5G

Governance
- Benefits modelling & realisation
- E2E governance
- Cyber security monitoring
- Regulation

Consulting
- Define 5G vision & mission statement
- Business transformation outcomes
- Business models to prove sustainability
- Use cases & technology requirements

Ecosystem
- End2End system and service integration
- Delivering cross-sector collaboration
- Delivery of solutions
- Infrastructure rollout

Solutions
- Digital twin
- 3D mapping and visualisation
- Earth observation
- Intelligence and analytics
- Data science - ML/AI
- IoT
- "City as a Platform" data architecture
- Cloud management and security

Demonstrating the value of Private 5G through use cases

While our lab houses a 5G network, availability of 5G devices is still limited. We have created our own devices using native 5G, as well as using 4G and Wi-Fi where these are not essential to the use case. These still connect to 5G but enable a much wider range of use cases to be demonstrated.

Low latency for robotic control – We have created a demonstration using direct 5G connectivity with low latency connectivity and MEC, enabling us to control a robot remotely, while simultaneously showcasing real-time video transmission over the high bandwidths available with 5G. By using this as the core of multiple industry specific use cases, we will be able to show how real business value can be delivered.

Using machine vision to monitor infrastructure and provide alerts – We have demonstrated using vision with MEC to monitor water levels in the Thames, enabling us to predict floods. We have also monitored infrastructure to identify where people have breached a barrier and created an unsafe situation, for example on bridges and railways. We can also detect fly-tipping by placing cameras in targeted crime hot-spots.

Exploiting high bandwidth and low latency to deliver Virtual Reality – VR requires massive bandwidth and very low latency, which the 5G mobile private network delivers. We can place you in a VR model of our Fenchurch Street office, and help you find your way around and meet the CGI staff team. We regularly use this as part of our induction programme for new members. We can demonstrate a scenario that places the VR wearer in a complex maintenance scenario, enabling the user to inspect multiple data layers in a VR environment, understanding the challenges that will be encountered and supporting a technician on-site.

"CGI is a leader in IT and business consulting services, so we're deligted to be leveraging our combined expertise to shine a light on the power and potential of 5G private wireless. This is a new and exciting partnership for both organisations and is built on years of industry knowledge and experience. It is a significant milestone as we look to turn the 5G private wireless potential into a reality for the UK market."

Phil Siveter,
CEO for UK&I at Nokia

Why should you visit the lab?

We are focusing on some of the most challenging industry verticals, demonstrating how technology can lead to business change, resulting in cost savings and increased flexibility. Our demonstrations help you to think through the specific ways that 5G mobile private networking can enable new business efficiency opportunities, like:

Health and care - from highly accurate real-time asset tracking to AR/VR enhanced remote robotic surgery, 5G mobile private networks can bring huge operational efficiencies, drive down OPEX, reduce waiting times and relieve bottlenecks

Energy and mining – enabling remote maintenance applications including Robotics and VR

Manufacturing – where robotic processes can be made more flexible with 5G connectivity, and automation can dramatically improve production efficiency and quality

Transport and logistics – where integrated end to end monitoring and data management can reduce waiting times, improve loading times and optimise maintenance and downtime scheduling

Local Authorities – where 5G technology can enable faster response to antisocial behaviour, as well as improving day to day efficiency by optimising multiple business processes from bin emptying, parking optimisation, facilities management to housing conditions.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 91,000 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

Find out more: cgi.com/uk/5g-connectivity-networks

For more information

Visit: cgi.com/uk/communications | Email us at: enquiry.UK@cgi.com