

Accelerating the roll-out of 5G

CGI CarnotSat enables accelerated delivery of 5G, reduces the costs of rolling out large scale and rural networks and enables the introduction of new hybrid applications for example connected cars or IoT.

Planning and deployment of heterogeneous terrestrial/satellite networks

CGI CarnotSat enables network operators to carry out scenario based modelling and to explore use cases across vertical markets. The tool will show where bringing satellite communications into an existing/or 5G network will provide wider geographical coverage, at a lower cost and improve network performance.

Client challenges

Mobile Network Operators (MNOs)

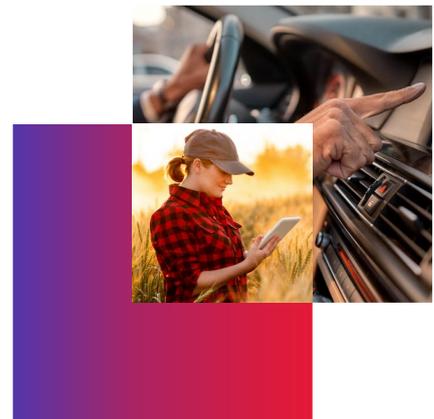
- Provide wider geographical coverage at the lowest cost.
- Predict network performance.
- Need to be able to buy flexibly to meet pressures of connectivity being a commodity.
- Need to manage the end-to-end quality of service.

Neutral Host Network Operators (NHNOs)

- Meet customer expectations of WiFi, connectivity and reliability.

Satellite Operators

- Need to capitalise on new 5G revenue streams with a premium offering focussed on long term large customer relationships.
- Increase awareness of satcom capabilities.



5G roll-out challenge

CGI CarnotSat was developed after talking to mobile network operators and other key stakeholders for 5G. It was clear that one of the initial challenges for 5G is efficiently rolling out networks. There are many locations both in the UK and globally that don't have sufficient access to terrestrial connectivity in order to support 100% 5G coverage, Using the global connectivity capabilities available from satellite communications in an efficient and integrated manner can be the solution. CGI CarnotSat provides 5G planners with the tool-set they need to achieve it.

CGI CarnotSat

The CGI CarnotSat toolset will allow satellite and network operators to evaluate and design hybrid networks, optimising for cost and performance against emerging use cases.

CGI CarnotSat enables the planning and deployment of heterogeneous terrestrial/satellite networks including:

- Location based optimisation.
- Interoperability.
- Input to network orchestration.
- Scenario modelling for network implications of applications in different vertical markets.

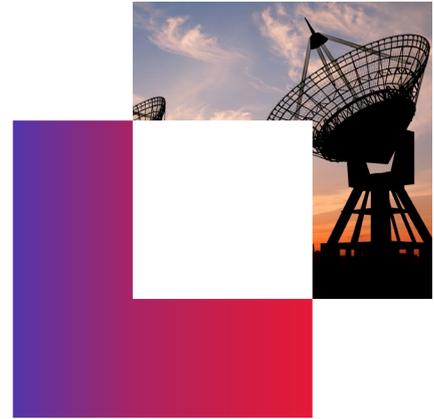
Benefits of using CGI CarnotSat

CGI CarnotSat is a computer aided radio network optimisation tool. It can help you:

- Deliver a single source of backhaul options.
- Identify where satellite backhaul could lower costs and improve coverage.
- Contribute to new differentiated services.
- Support network optimisation using satellites.
- Support the development of new use case solutions.
- Create a more responsive service delivery model.
- Demonstrate at scale how satellite connectivity could increase revenues for network operators.

“Space for 5G is a matter of strategic importance for the European Space Agency”

Georgios Ziaragkas,
Technical Officer for CarnotSat at ESA



Within the ARTES Core Competitiveness programme, ESA is supporting CGI to develop effective tools enabling the satellite integration into 5G networks.

About CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. We are an IT Systems Integrator working to advise, build and operate bespoke, technically complex, mission-critical information systems. Bringing innovation to our clients using proven and emerging technologies, agile delivery processes and our expertise across space, defence, intelligence, aerospace and maritime, all underpinned by our end-to-end cyber capability.

For more information about CGI, visit cgi.com/uk/space, or email us at enquiry.UK@cgi.com