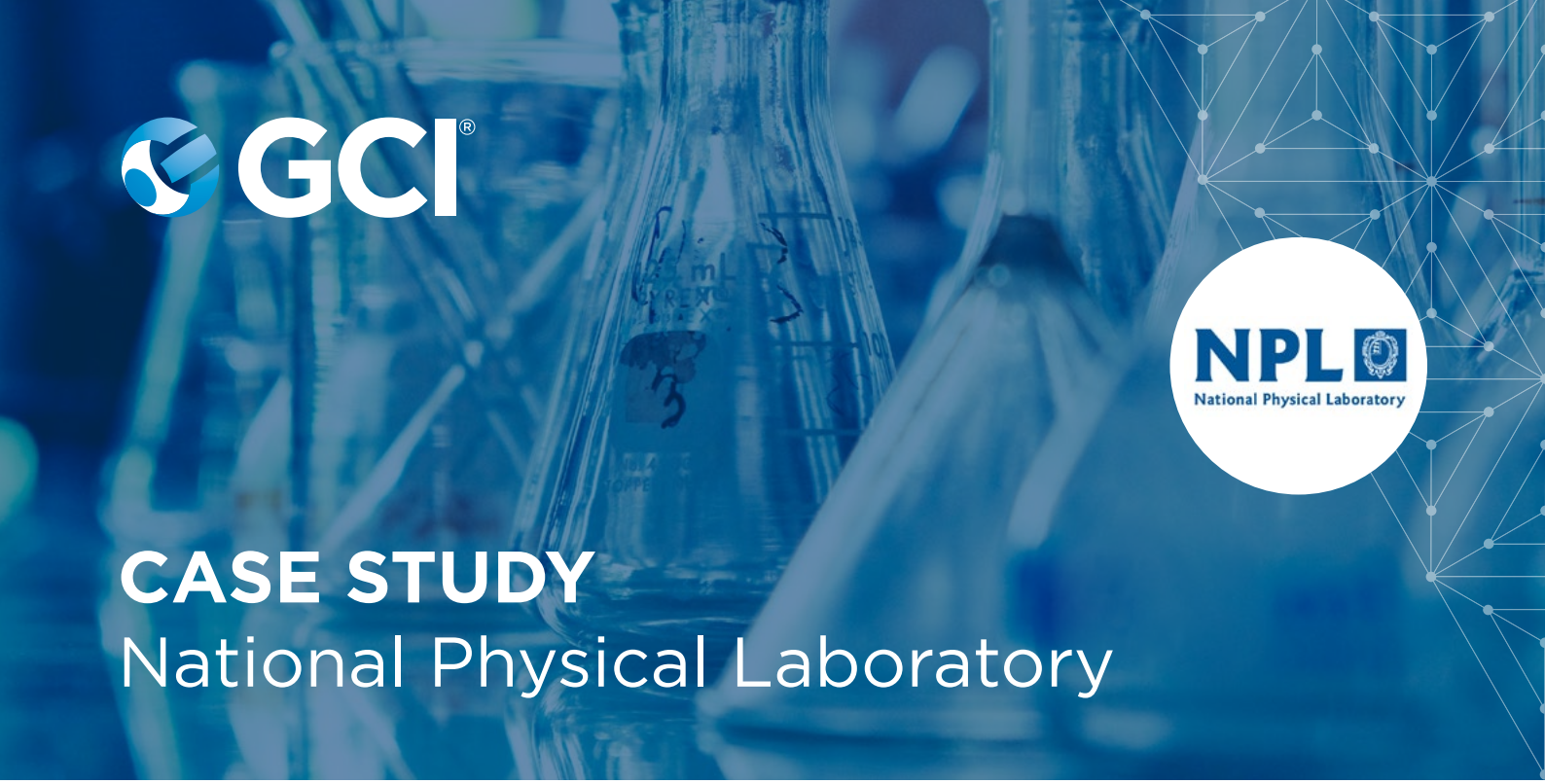

CASE STUDY
National Physical Laboratory

Data Networking solutions for the Public Sector from GCI, including installation of a LAN and Wireless infrastructure providing stability for large data transfers.

THE OVERVIEW

The National Physical Laboratory (NPL) is an internationally respected centre of scientific research and development into the measurement used in science – specifically on the uncertainty and conformity of measurement standards used across the world.

Its roster of ground-breaking discoveries and elite scientists include the invention of radar, the world's first caesium atomic clock, packet switching technology and Alan Turing, the man credited with cracking the codes of the enigma machine, who produced one of the first designs for a stored-programme computer whilst at NPL.

It was established in 1900 and now more than one hundred years on, the laboratory is still growing in size and plans to take on at least another 150 extra scientists over the next couple of years. It is not just staff numbers that are growing at NPL either, the size of files involved in the research undertaken are getting larger, meaning that a faster, more reliable and 'state of the art' network was required.

THE CHALLENGE

Infrastructure needed a new lease of life

NPL employs around 700 people across 388 laboratories at the site in Teddington, Middlesex. Between them, they are using 3,500 end points, and this large amount of bandwidth-hungry data requires a high performance network to hold it.

NPL realised that if it was to remain on the cutting edge of precision-based research then it needed to upgrade to a 'future-proof' network which was able to handle the large amounts of data involved in the scientific discoveries that the organisation is famous for. The existing system was nearing its end of life, and so in order to be prepared for the research of the future, NPL had to upgrade its network to handle the data of the 21st Century.

THE SOLUTION

Even bigger big data

NPL needed a solution which would allow it to tackle tomorrow's research issues, and provide stability for the large amount of data it transports around the network. The solution had to provide the site with technology suited to the modern age such as Wi-Fi in communal areas, as well as technology that was able to take into account the special nature of NPL's work including, for example, the risk of electromagnetic interference.

NPL implemented a LAN and Wireless infrastructure solution which included 50 access points and controllers. The existing infrastructure was also enhanced to allow for a 10GB backbone, and in time, NPL also hopes to add VoIP phones. The switches also have Power over Ethernet (PoE) capability which helps to ease the burden of the power-hungry computers on power supplies. The new solution supports the needs of the scientists at NPL, future-proofing the network that will be needed to store the large files of the future.

THE BENEFITS

Designed for the future

The solution was implemented specifically for NPL by GCI, who hold extensive expertise in Unified Communications, IP Telephony, Voice, Contact Centre and Converged Voice and Data Services. The solution was implemented over a series of weekends, which limited disruption to an absolute minimum.

NPL has seen immediate benefits including the safe availability of Wi-Fi in communal areas and an easier-to-use interface, but the majority of benefits are still to come as this was a project designed for the future needs of research.

"This new network is setting up the National Physical Laboratory for the future, by providing capacity for the large amounts of data produced in the research we undertake. We now have a more reliable network which includes over 3,000 end points for use by 700 staff. We will see even more benefits as time goes on, as this is a project completed with the needs of future research in mind."

Claire Moore
Head of IT

For more information regarding our services please contact us at:

01332 483 933 | marketing@gcicom.net | gcicom.net