

## case study

customer:



location:

One St. Paul's Churchyard  
London  
EC4M 8AP  
United Kingdom

the brief:

55,000 sq ft state-of-the-art headquarters designed to consolidate 3 existing sites across London into a high performance environment that would engender pride for its staff and create confidence for its customers.

market:

Oil & Gas

products:

**IcePack™**  
**OM3 Fibre**  
**Plug and Play**  
**Z-MAX™**  
**VersaPOD™**

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**Stephen Golliker**  
Global IT Director  
Genesis

# Siemon innovation equips landmark HQ of Genesis Oil and Gas



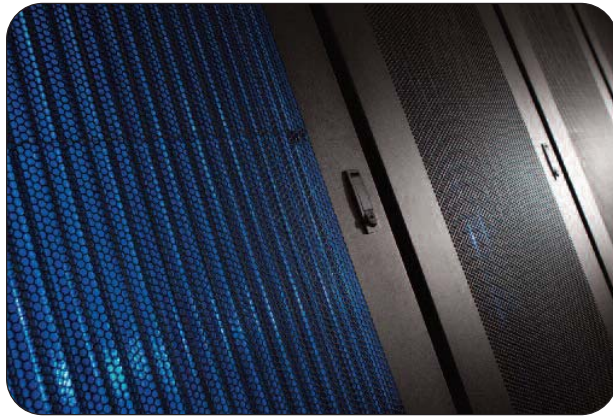
Genesis means 'the beginning or origin of anything' and this is a fitting title for the global oil and gas consultancy that recently created its landmark new headquarters overlooking St Paul's Cathedral in London. Described as 'the beginning of the future' for this 25-year-old energy industry specialist, these iconic offices will lead operations for its 16 sites around the world and provide innovative surroundings for up to 500 of its total global workforce of over 1,500.

For the upstream oil and gas industry, Genesis provides early phase engineering consultancy, full-lifecycle subsea engineering services and design of onshore and offshore projects. It helps its clients to maximise the financial return from their hydrocarbon assets by development of cutting-edge solutions, with complete support offered from cradle to grave. Whilst multi-national, the company works as one team from 16 offices that span the globe, from Aberdeen to Brisbane and from Kuala Lumpur to Rio de Janeiro.

The Genesis mantra is 'to think, to plan, to do' and this clearly structured approach was used to select and equip a single, technically-advanced facility to bring together staff from three locations across the capital. The company's expectations were high and they were uncompromising in choosing Siemon to deliver an innovative infrastructure that would provide the foundation for their future performance.

## To Think

Thinking for the new London offices began with selecting a prestigious site that would reflect the Genesis standard of operation. A shortlist of significant locations was considered, including the Shard. But the stature of the historic, six storey block at St Paul's Courtyard won out, with its potential to reflect both the strength and depth of expertise that the consultancy offers, together with the blank sheet opportunity to equip the new site to specifically meet the needs of this progressive global operator. Whilst the new building chosen was historic, internally it required a modern, purpose-built facility with state-of-the-art IT systems and inspiring aesthetic design. It aspired to a high performance environment that would engender pride for its staff and create confidence for its customers.



Not only bringing together and engaging its own teams from disparate London offices, the new 55,000 square foot headquarters was also chosen to provide inspiring accommodation for staff of Genesis customers that reside within the consultancy. This major office move offered the opportunity for a complete technology update and yet with clients on site and offices consolidating, the brief was for it to be executed with zero downtime.

Genesis' thinking included scoping the demands for its new infrastructure: Firstly it required resilience, as the nature of its work means that any loss of service immediately impacts earnings and delivery. Flexibility and scalability were essential requirements, with Gigabit Ethernet to the desktop from day one, plus capability to run 10GBASE-T in the future. Data throughput and capacity were also carefully considered, given the considerable file sizes of engineering drawings and plans routinely transferred. VoIP and video were priority applications to be supported with full tele-presence on site, plus HD video and VoIP to the desk. Finally, it was clear that

the IT network should integrate seamlessly with other systems, such as the building management system (BMS), and also to support other site services, such as CCTV.

As a market-leading oil and gas consultancy, with strong commercial reasoning, Genesis describes itself as having 'techno-economic skills'; it embraces the latest technical innovation, but only when it represents a sound financial investment. This attitude guided its planning, its selection and its ultimate specification.

## To Plan

With a demanding set of requirements for its IT investment to deliver, the first consideration was selection of suitable systems and suppliers. Siemon came highly recommended and, thanks to its complete

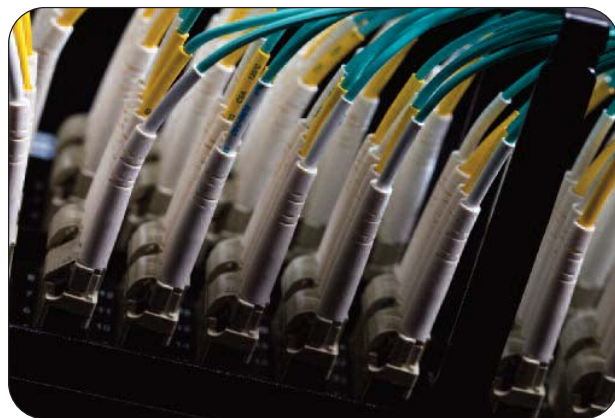


high performance end-to-end offering, it won the competitive tender to supply the complete network infrastructure for Genesis. As global IT director, Stephen Golliker, explains, "Siemon offered a complete, best-in-class infrastructure, from the backbone to the desktop, with the best data centre products, including an exciting innovation in cooling. With network design experts ready to support us and a comprehensive 20 year warranty, it was clear that the value offered by Siemon went far beyond the superior performance of our chosen system."

The Genesis building is organised over six floors and so its network plan included five server rooms and one data centre/communications room, connected by Siemon's high quality OM3 fibre optic cable in the backbone. Given the challenging installation schedule, the fibre selected for the data centre was MTP plug-and-play, which guarantees maximum channel throughput and offers 75 per cent faster installation than on-site termination. With the requirement to support 10Gb/s, Siemon's Z-MAX® category 6A F/UTP copper system was chosen. This system combines

consistent best-in-class performance, unparalleled usability and speed of termination, with security and robust noise immunity. It provides the highest margins on all performance requirements for category 6A/class EA, including critical alien crosstalk parameters.

For its data centre Genesis ordered four thermally efficient VersaPOD® cabinets, which uniquely offer Zero-U patching capability to optimise space usage and air flow. As a company that innovates and embraces innovation, it chose to equip each VersaPOD with Siemon's new IcePack™ cooling doors. These rear door heat exchangers use passive liquid cooling technology and deliver a cooling capacity of up to 33kW per cabinet. The close-coupled cooling system uses a specialised fin-and-tube coil which absorbs and cools heat exhaust from networking equipment and dramatically reduces the requirement for other, more energy hungry, air cooling methods. The energy consumption of the IcePack system can reduce the cost of cooling by up to 80 per cent over traditional CRAC systems. Compared to most air-based cooling systems, they reduce noise levels as well.



For Genesis lower capacity IcePack doors were chosen to deliver a cooling capacity of up to 12kW per cabinet and operate unsupported in most instances. The data centre therefore has minimal air conditioning provisioned which is set to kick-in only if the room temperature rises to 24 degrees Celsius (as yet unseen). The air conditioning is therefore currently only turned on for a short time once a week, under the control of the BMS, to confirm its availability in case it is required rather than to manage temperature. Importantly, the IcePack system is designed to automatically and continually operate above the dew point, to avoid the risk of condensation on associated pipework.

Whilst this approach to cooling requires a higher up-front expenditure, it offers cost savings in energy

consumption and associated operational expense in the longer term. The design conditions for Genesis mean that the company will enjoy a rapid payback on the IcePack installation, potentially in as little as 14-18 months, including outlay for the two rack mount cooling distribution units and all pipework.

Whilst the payback for IcePack is rapid, the lifetime is much longer and this cooling technology is designed to match the operational lifetime of the data centre and to outlast active equipment. This completely sealed, low pressure system has very few moving parts, so it has a very low risk of failure and it is exceptionally low maintenance.

The system at Genesis has been designed with future capacity built in, as explained by Siemon's product manager for IcePack, Stuart Gray, "Day one conditions are about 50 per cent of capacity, which gives them a 100 per cent upgrade path without making further changes, other than adjustments to the CDU settings. Therefore their current cooling requirement can be doubled without further capital expense."

Genesis has a strong green agenda and is currently applying for BREEAM status for the building. With a clear focus on energy efficiency, Siemon's intelligent PDUs were also specified to provide real-time energy consumption data and control, whilst reliably delivering power to critical IT equipment.

### To Do

Genesis' work is described as cutting edge and it expected the same innovative advantage from both the IT provisioned and the quality of installation. As a Siemon Certified Installer, with proven success working for Genesis, Xtreme Business Solutions were the trusted partner chosen to lead the installation of the complete network.

Delivery of the new infrastructure was to a tightly time-controlled schedule that demanded complete transformation from an impressive shell to a finished, fully operational state in just five months - all with a zero downtime imperative. This meant that Siemon and Xtreme were amongst the first companies to send engineers to St Paul's in order to pull the 72km of cable required to support the site.

With network resilience front of mind, Xtreme ensured that backbone and inter-floor links were run by a variety of routes for failsafe operation. This included the 12-core fibre optic backbone and copper links from the data centre on the third floor to the server rooms on each of the remaining five floors.

# case study

for further  
information please  
contact:

## North America World Headquarters

Siemon  
Watertown  
United States of America

E: [customer\\_service@siemon.com](mailto:customer_service@siemon.com)

## Central America & South America

Siemon  
Bogota  
Columbia

E: [info\\_latam@siemon.com](mailto:info_latam@siemon.com)

## Europe, Middle East & Africa (EMEA)

Siemon EMEA HQ & UK  
Chertsey  
United Kingdom

E: [info\\_uk@siemon.com](mailto:info_uk@siemon.com)

## Asia Pacific China

Siemon  
Shanghai  
China

E: [info\\_china@siemon.com](mailto:info_china@siemon.com)

The Xtreme approach was to work extended hours and to operate a shift system that saw 1400 horizontal cables coiled and terminated on every floor in under three weeks. From this first fix stage they then ran cables from cabinets to zone distribution enclosures, awaiting the furniture before finally running cabling to each desk. The installer prepared a patching schedule that saved time for Genesis in the final stages of the installation and provided an engineer on site to support the move.

With just five months in total to prepare the building, there were many different parties involved on site at all times and so it was essential for the Xtreme team to fit and work alongside other contractors. This was supported by weekly meetings with Genesis where any issues could be raised, discussed and fixed quickly. Siemon took an active role in the project management of the infrastructure install and ensured that technical expertise was on call at all times. This transparent and collaborative approach allowed best practice to be shared between the teams and learning for all involved on the project.

Cameron Murray, director at Xtreme, recalls his experience, "For us hitting the handover date with zero downtime was essential," he said. "The quality and ease of installation of Siemon's systems meant that we could work rapidly and confidently. Our strategy was to get ahead of the scheduled programme in order to allow capacity for any additional requirements that might be needed. We wanted to provide the best service without any compromise."

Xtreme were not only time efficient on site, but Siemon reports that the quality of the installer's work is evident; not only with a handover entirely to plan, but the installation has, the manufacturer says, incurred no port failures whatsoever.

## To Review

"Visitors to Genesis immediately appreciate the standard of our IT visible to them," said Stephen Golliker. "We have dual screens for all staff, we have a full tele-presence suite, HD video, electronic meeting room booking system and signage, a fully intelligent BMS system and VoIP to every desk," he boasts. "What they don't all see, but do experience, is the benefit of continuous and reliable service, responsible and sustainable energy efficiency, plus future-proofed provision."

Summing up the impact of the new infrastructure for Genesis, Stephen Golliker concludes, "Our IT is a showcase of quality and innovation that I'm very proud of – it allows us to work smarter and to consistently deliver world-leading service to our customers. This office is a considerable asset and will prove to be a big part of the Genesis story - it is the next step of our development as a company."