

Sector Expertise & Highlights

Data Centres



DATA CENTRES


We provide building services and main contractor solutions for your project.

Supporting the delivery of world class solutions.



We are focused on innovation and low energy design solutions.

Working with our clients to create environmentally resilient and sustainable built environments.



We offer specialist engineering services for data centres and critical schemes.

Providing technical project management and Principal Contractor services.



We set new standards for digital and virtual engineering.

In-house developers, technologies and digital tools that offer a sustainable pathway for data driven project delivery.

Supporting Zero Carbon initiatives

Energy compliance

WELL / LEED / BREEAM

Offsite Assembly

Sustainability Management

Building Structure & Fabric

MEP Services Installation

Commissioning Management

Aftercare

Digital Engineering

Point Cloud

BIM

Application Development

Visualisation & VR



Warren Bradshaw
Operations Director

Warren is responsible for our projects with the Technology & Data Centre sector.

He has over 30 years' industry experience working in both M&E contracting and consultancy roles focusing on design, CDM and commissioning services within new build and upgrade projects for Data Centres.

Warren has a practical approach to design solutions and a passion for pre-fabrication, Safety by Design and commissioning. Throughout his career, he has worked in a variety of sectors including Pharmaceutical, Retail, IT, Commercial, Industrial, Residential and Energy sector schemes.

OUR SKILLSET

Our skilled and professional teams deliver a proactive approach to project management, offering logical solutions that drive the construction period, and ensure commissioning and RFS dates are properly achieved.

- All Project Planning is carried out by our ESG team, typically using ASTA or P6 platforms.
- Offsite assembly is achieved through our own prefabrication facility, and along with strong supply chain relations ensures we are a team that considers DfMA opportunities across any scheme we are involved with.
- Our own expert modellers and CAD/BIM coordinators, including the technical design consultants we work with specialise in the Data Centre Sector.

Our CNet-trained sector leadership and management take pride in the work delivered by ESG and where change is inevitable, will work closely with our client to mitigate programme and advise on any impact from such changes.

We have several appointment models available.

1. Principal Contractor.
2. MEP Subcontractor.
3. MEP Partner (as part of a Joint Venture).

Our social strategy will always consider local employment opportunities, apprenticeships and charitable campaigns, and our environmental impact is extremely important to us, incorporating recycling programmes, material usage, and waste management in our calculations for embodied carbon.

In-house Planners (ASTA & P6)

CNet Trained Leadership

In-house DfMA Facility

Specialist MEP Consultants

Expert Change Management

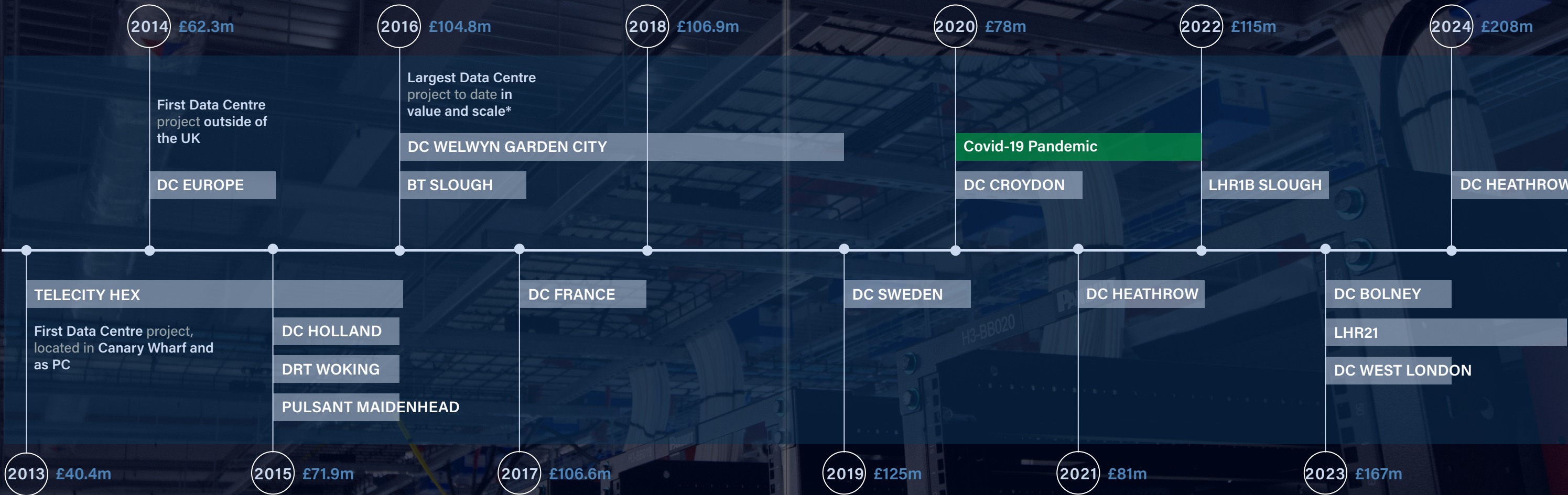
TIMELINE

2013



£215m

Projected Company
Turnover for 2025



10+
Years Of Sector
Experience



15+
Total Data
Centre Projects




£300m+
Total Sector Value
To Date



£77.5m*
Our Largest Value
Project To Date



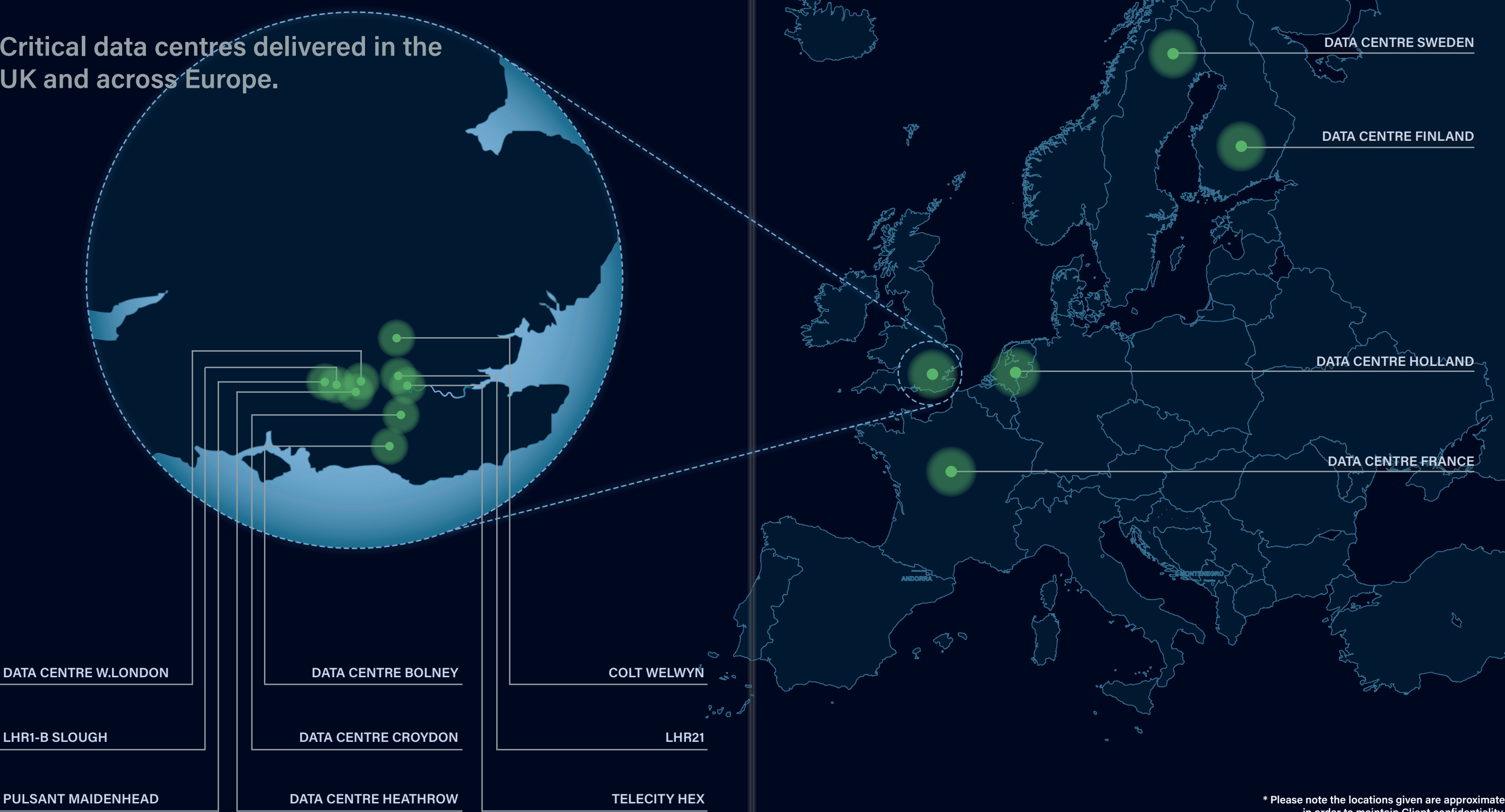
20MW
Our Largest Scale
Project To Date

 = ESG Principal Contractor
* Cumulative Total Over Several
Phases / Data Hall Pairs

2025

UK & MAINLAND EUROPE

Critical data centres delivered in the UK and across Europe.



* Please note the locations given are approximate in order to maintain Client confidentiality.

PROJECT INSIGHTS



Europe's largest immersion cooling project



BOLNEY DC

Global Tech & HPC / Geo Sciences

New HPC Hub

ESG Principal Contractor

Delivering the Client's new UK HPC (High-Performance Computing) Hub in South-East England. The initial capacity of the centre is 100 petaflops, bringing the company's global total to an industry-leading 500 petaflops.

The highly optimised environment features immersion cooling infrastructure, which, together with the Hub's use of 100% renewable energy, reflects the commitment to sustainably meet the massive and rapidly increasing demands of high-end scientific and AI applications.

ESG scope included the construction of a new mezzanine level, internal white walls, external plant yard and full fit-out of office space.



Extensive 11 kV upgrade works



WEST LONDON DC

DC & Colocation Provider

Upgrade & Fit-Out in Live Facility

ESG Principal Contractor

Installation of a 3-storey gantry and MEP infrastructure; consisting of the development of new power and cooling systems located between two existing data centres to support a 4.5 MW IT fit-out of a new data hall within one of them. Further works include the fit-out of 2no. 2MW data halls from existing infrastructure.



Increased load from 3.6 MW to 5.6 MW




LHR1B SLOUGH DC

Colocation & Interconnection

Live Data Floors

ESG Subcontractor

Expansion of the existing M&E infrastructure serving the ground and 1st floor technical, with a view to increasing the existing IT load from 3.6 MW to 5.6 MW.



Live environment project - live data floors



CROYDON DC

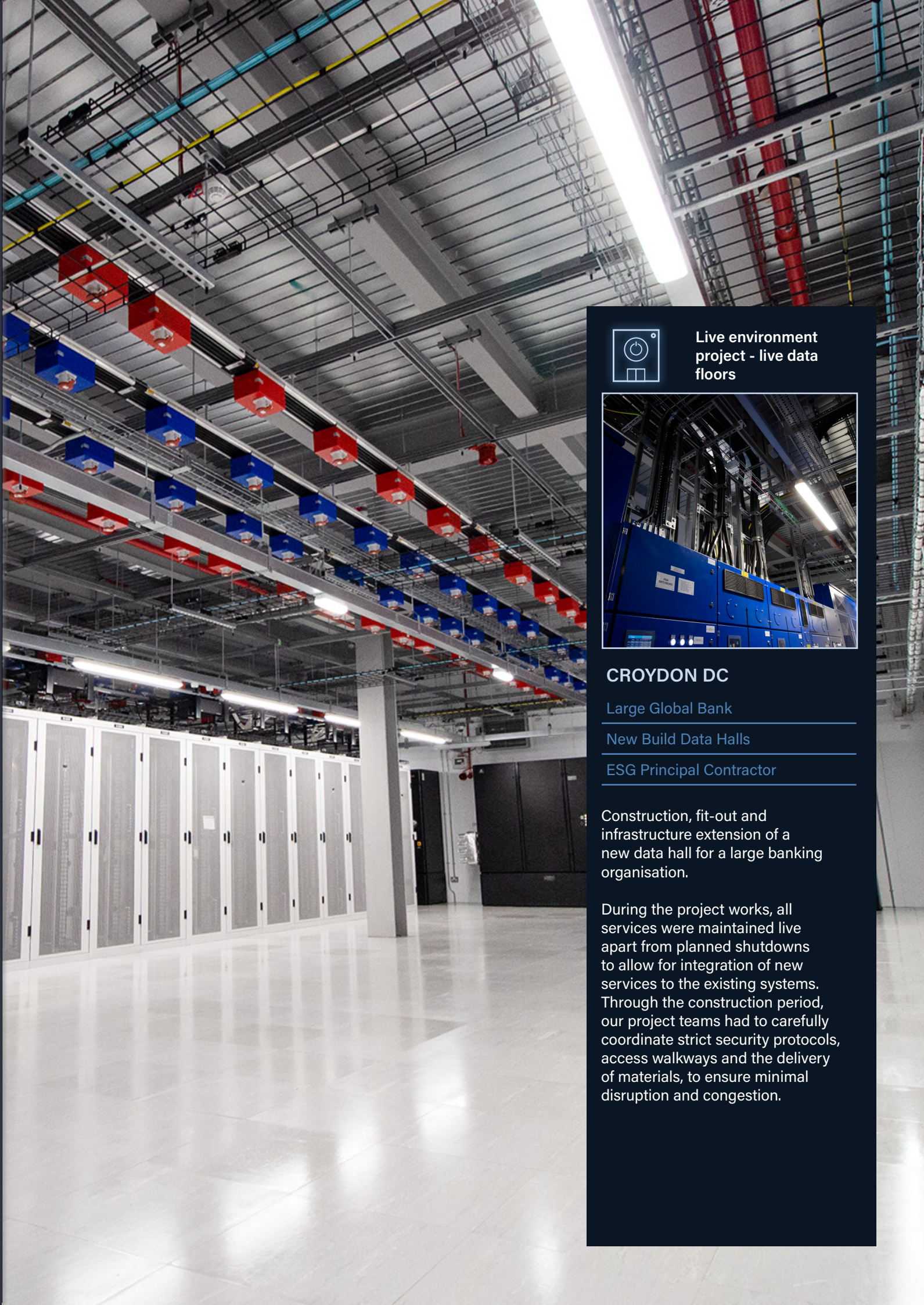
Large Global Bank

New Build Data Halls


ESG Principal Contractor

Construction, fit-out and infrastructure extension of a new data hall for a large banking organisation.

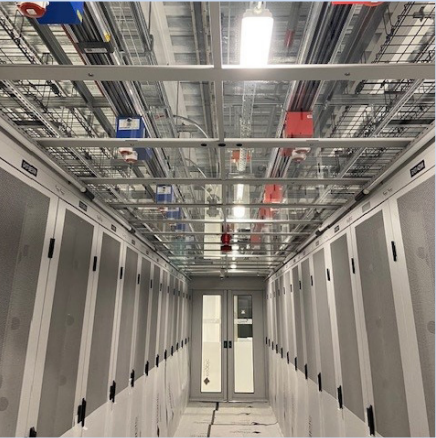
During the project works, all services were maintained live apart from planned shutdowns to allow for integration of new services to the existing systems. Through the construction period, our project teams had to carefully coordinate strict security protocols, access walkways and the delivery of materials, to ensure minimal disruption and congestion.



PROJECT INSIGHTS



Live environment project - live data floors




HEATHROW DC

- Large Global Bank
- Live Data Floors
- ESG Principal Contractor

A mission critical, live environment upgrade including site infrastructure, UPS systems, switchgear, cooling units and UPS rooms, for a large banking organisation.

The project required swapping out of old busbar system for new in live data halls. As a result, all works were done during out of hours operations and all data halls energised and operational by the beginning of each morning shift.

The key risk in daily energisation, was potential unforeseen errors and our project team had to ensure stand by plans we made for every eventuality. Even if this meant returning the service back to its original state to ensure operation for the Client by the start of the day shift.



Live environment project - adjacent data halls occupied



HARBOUR EXCHANGE DC

- DC & Colocation Provider
- Adjacent Halls Occupied
- ESG Principal Contractor

ESG were proud to be associated with a valued client and delivered the second phase of their six and seven Harbour Exchange sites within London's Canary Wharf estate.

Work included the complete electrical services fit-out of levels 3 and 4 supplying sensitive areas such as the data hall floors. In addition to new plant and equipment within the adjacent energy centre the project included electrical infrastructure installation to new floors, power distribution units and floor fit-out, all in-line with the client's requirements.




EUROPE DC

- Industry Leader
- New Build
- ESG Subcontractor

Electrical services package delivered by ESG in one of the worlds most digitally connected economies including HV, MV, LV cabling, MV, LV switching, generator, UPS and battery interfacing.

Full mechanical services delivery including chilled water installation, boosted and treated water, ventilation and air conditioning. All coordination and design elements were achieved through the creation and management of our 3D model, issued as part of our operations procedures.



12,500 sq m data centre space, 8 pairs of hall space.



COLT WELWYN DC

- Large Global Bank
- Large Scale Infrastructure
- ESG Principal Contractor

As part of our work within the growing technology solutions sector and for one of the industry's leading clients, Colt Data Centre at Welwyn Garden Centre demonstrates our capability for delivering large-scale infrastructure projects. As main contractor, ESG completed eight pairs of hall space, measuring approximately 500 sq. m each.

Delivering 1600 watts per square metre, each hall includes the introduction of two hundred and forty tons of steel and benefits heavily from our experienced technology sector team. Ensuring construction milestones were achieved, we engaged with the client team and FM provider throughout for comprehensive client training and project handover.



BIM

Delivering different levels of BIM maturity for almost two decades.

Background

During the steady increase of project deliverables, the group has evolved with new technology, embracing advancements made in the BIM process for end-user benefit and for achieving a successful outcome.

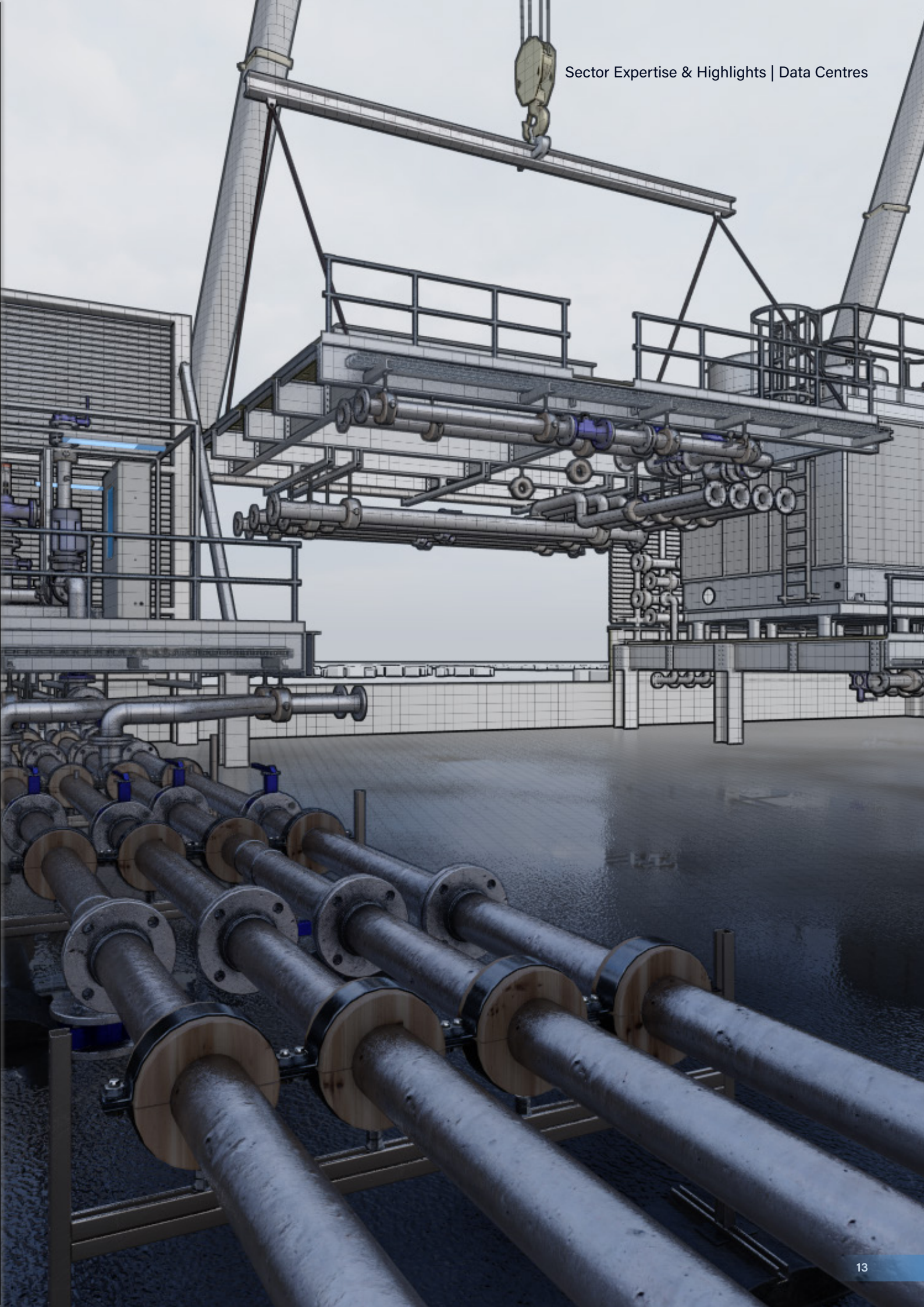
Each project delivery team, trained to a minimum digital standard is equipped with the necessary resources to work within the BIM process, typically making use of Revit MEP, AutoCAD and Navisworks as a minimum with almost every project undertaken now including some element of BIM. We have varied experience with 4D, 5D and 6D delivery and can work with each where applicable, subject to project requirements.

We believe the process needs clear communication, well thought out planning and committed execution. A clearly defined responsibility matrix works alongside the project Execution Plan, ensuring we provide only what is beneficial to the project and end-user.

The group has experience of delivering BIM to Level 2 standard across a diverse range of industry sectors where projects have required high levels of modelled data and attributed information provided in Excel and COBie formats.

BIM delivery has been successful because of the following key elements:

- We have skilled engineering coordinators, capable of delivering BIM to level 2 standards and continually monitor progress to target areas for improvement.
- We embrace the key elements of BIM by working in an open and collaborative manner, working together to achieve the correct result.
- We can deliver expectations, in line with the projects BIM Execution Plan, providing modelled data in compatible open-source formats.
- We work within shared data environments, assigning the required asset data to our model files and associated documentation, providing the very latest information to our site teams.
- We continually pursue the use of BIM where it offers true benefit, not simply because we can.



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