

Nominee: CBRE Data Centre Solutions

Nomination title: Global Collaboration and Innovative Solutions Proves Successful in Generator Control Panel Replacement at an Ageing Enterprise Data Centre

On behalf of a global professional services firm, CBRE Data Centre Solutions completed a large-scale generator control panel replacement project for an ageing enterprise data centre. The team flawlessly executed the project with no downtime, demonstrating world-class technical expertise, global collaboration, and innovative solutioning.

Why nominee should win

- **Global working partnership**

CBRE maintained a global working partnership with all stakeholders throughout the duration of the project. The CBRE team managed communications, expectations, and the project schedule from a large group of stakeholders including the client, the client's technical consultant, CBRE, and the OEM which were based in the UK, US, and France. Despite the many variables associated with the project, including the varying operational philosophies from the global stakeholders located across several time zones, the CBRE team put a project plan together that received full buy-in from all parties.

- **Demonstrating world-class technical capability**

The project's greatest challenge was working in a live enterprise data centre without any service interruptions or downtime. CBRE's world-class technical capabilities enabled the team to execute the project by controlling all potential risks, resulting in the CBRE team switching out the house generators and replacing them with two 2N temporary generator systems (one for each utility supply) without downtime.

- **Innovative thinking & flexibility of approach**

Given the complex nature of managing stakeholders located in multiple countries, and the client's requirement to maintain service without interruptions or downtime during the project, the CBRE team were required to think creatively and innovatively to achieve the client's goals. Through global collaboration, the team came up with the idea to replace the existing generator control system with a dual redundant "A" and "B" PLC based control system and associated synchronisation system within the live operational data centre. The team's plan also included a comprehensive service and replacement of components on the existing and retained generator sets.

- **Complete engagement of all stakeholders throughout the project life.**

To overcome the significant challenges involved with the project, and to further gain the confidence of a highly risk adverse culture, the CBRE project team engaged fully with leadership representing the client, the client's technical consultant, CBRE, and the OEM by collaborating and communicating all

stages of the project plan. Through open and honest communications, the client's leadership gained trust in the CBRE team to create an innovate project plan.

- **Tireless dedication & focus successful client outcomes**

The client was completely satisfied with the CBRE project team's results, having maintained uptime throughout the duration of the project. The client has seen immediate benefits resulting from the project through the advantage of greater infrastructure resilience. The new panel has 2N control, which is also viewed remotely by the dedicated maintenance and engineering site team in their control room. Most recently, the client required the use of the new generator panel system following a utility power failure. The system maintained power with zero interruptions and worked perfectly per design function. Lastly, the CBRE team ensured that the project was delivered on time, on budget, and as request, completed within the client's fiscal year.

What was the driving force behind the project - what business or technology challenge needed to be addressed?

Like many ageing enterprise data centres, the driving force behind the project was the legacy infrastructure within this client's facility had started to reach the end of life and maintenance is often no longer supported by the original equipment manufacturer (OEM). In 2016, it was determined that the existing generator control panel had reached its end of life and would be replaced with a new OEM product. The client mandated that resilience had to be maintained at all times, whilst a new OEM product was seamlessly integrated in a phased programme.

How did the solution address the challenges and were there any particularly innovative aspects that made it stand out?

The CBRE team managed all stakeholder communications and expectations to create a project plan based on the CBRE's proprietary Critical Environment Risk Management (CERM™) methodology that helped to reduce human factor related risk by 80%. The final project plan consisted of replacing the existing generator control system with a dual redundant "A" and "B" PLC based control system and associated synchronisation system within a live operational data centre. It also included a comprehensive service and replacement of components on the existing and retained generator sets. The team credits the successful execution of the complex project plan through the strict adherence to risk management and mitigation practices set forth at the beginning of the project. It was through these methodologies that the CBRE team was able to complete the project without any downtime.

What major challenges were faced during the project and how were they overcome?

The project's greatest challenge was working in a live enterprise data centre without any service interruptions or downtime. By managing all stakeholders, communicating frequently, adhering to the project plan, and maintaining risk management protocols, the team successfully completed the project on time, on budget, and as requested, completed within the client's fiscal year.



What tangible benefits has the organisation seen as a result of the project's implementation?

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