Green Gown Awards 2014
AWARDING SUSTAINABILITY EXCELLENCE FOR 10 YEARS
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finalist's case study
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University of Portsmouth
Construction and Refurbishment
The University of Portsmouth Data Centre

University of Portsmouth

Section 1 About the project

Summary
The University required a purpose built, highly efficient, high density data centre to be commissioned ready for the start of academic year 2013/14.

Project partners
Data centre specialists Sudlows were awarded the contract to design and build the new data centre.

Profile
- HEI
- >21,000 students
- 2,500 staff
- Waterfront city location
- A world top 400 University

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Section 2 The results

The problem
Due to the need to vacate an existing building the University required a purpose built data centre to be constructed and commissioned within 13 months ready for the start of the new academic year when it would support the IT needs of around 21,000 students and 2,500 staff.

The approach
This project included a conservation area planning application, implementing off-site construction processes to deliver the project within an accelerated programme, plus the delivery of an innovative cooling system to provide for adaptive and optimised free cooling, boosting the project's green credentials.

Our goals
1. The successful migration from the existing data centre to the new, purpose built facility.
2. To improve environmental credentials and energy efficiency.
3. To reduce operational costs.

Obstacles and solutions

Planning Application Required	Employed planning consultant to work with local planning department
Timescale	Empowerment of the team to make decisions
Number of activities	Set up as a programme of works with multiple workstreams
Lead-times	Off-site construction to accelerate programme

Performance and results

The real long term energy efficiency of the project is centred on an innovative control system which looks to advanced data centre systems from static set points to envelope based, dynamic operation.

Section 3 The future

Lessons learned

IT Equipment - During the project a total over 3.3 tons of old inefficient IT equipment was sent for recycling and replaced with virtual servers thus reducing the IT power requirement and in turn the environmental impact.

Team Work - The Data Centre project set a precedent for subsequent projects proving that the University can run a successful project with a demanding timescale and still deliver a high quality, sustainable solution within budget. This success was achieved by forming a cross departmental team with the right mind-set who were empowered to make decisions and work together to achieve the milestones required.

Design & Supplier Selection - Working with the right suppliers and designers enabled the University to significantly eliminate the use of refrigerant gases within the data centre by utilising innovative technologies. This commitment to sustainability has ensured that none of the 410A refrigerant gases installed have any impact on the ozone.

Sharing our project

The project has received a lot of interest both internally and externally.

On the academic side course tutors have used the project as a case study of the 'successful management of a complex project' whilst others running technology courses are interested in the actual IT elements and students have been given guided tours of the facility.

Staff from other institutions within the sector as well as commercial companies who are embarking on similar projects have visited the University to discuss the project and have a tour of the data centre.

What has it meant to your institution to be a Green Gown Award finalist?

"We set ourselves challenging targets in respect of timescale and power efficiency, so it's absolutely fantastic that we've been shortlisted as a finalist. Winning would recognise the importance of team commitment and celebrate the fact that neither speed of implementation nor economic constraint need compromise sustainability and social responsibility."
Professor Graham Galbraith, Vice-Chancellor, University of Portsmouth

Further information

Contact: james.holland@port.ac.uk
Web: www.port.ac.uk
Twitter: portsmouthuni
Facebook: Portsmouth.uni
LinkedIn: University of Portsmouth