CaseStudy

Echelon's Sustainable Construction Revolution:
Powered by Evercam's Reality Capture Technology

EVERCAM
CONSTRUCTION CAMERAS

Introduction

Evercam, a frontrunner in the construction technology space, has been instrumental in providing innovative solutions for ECHELON's ambitious DUB10 project in Dublin.
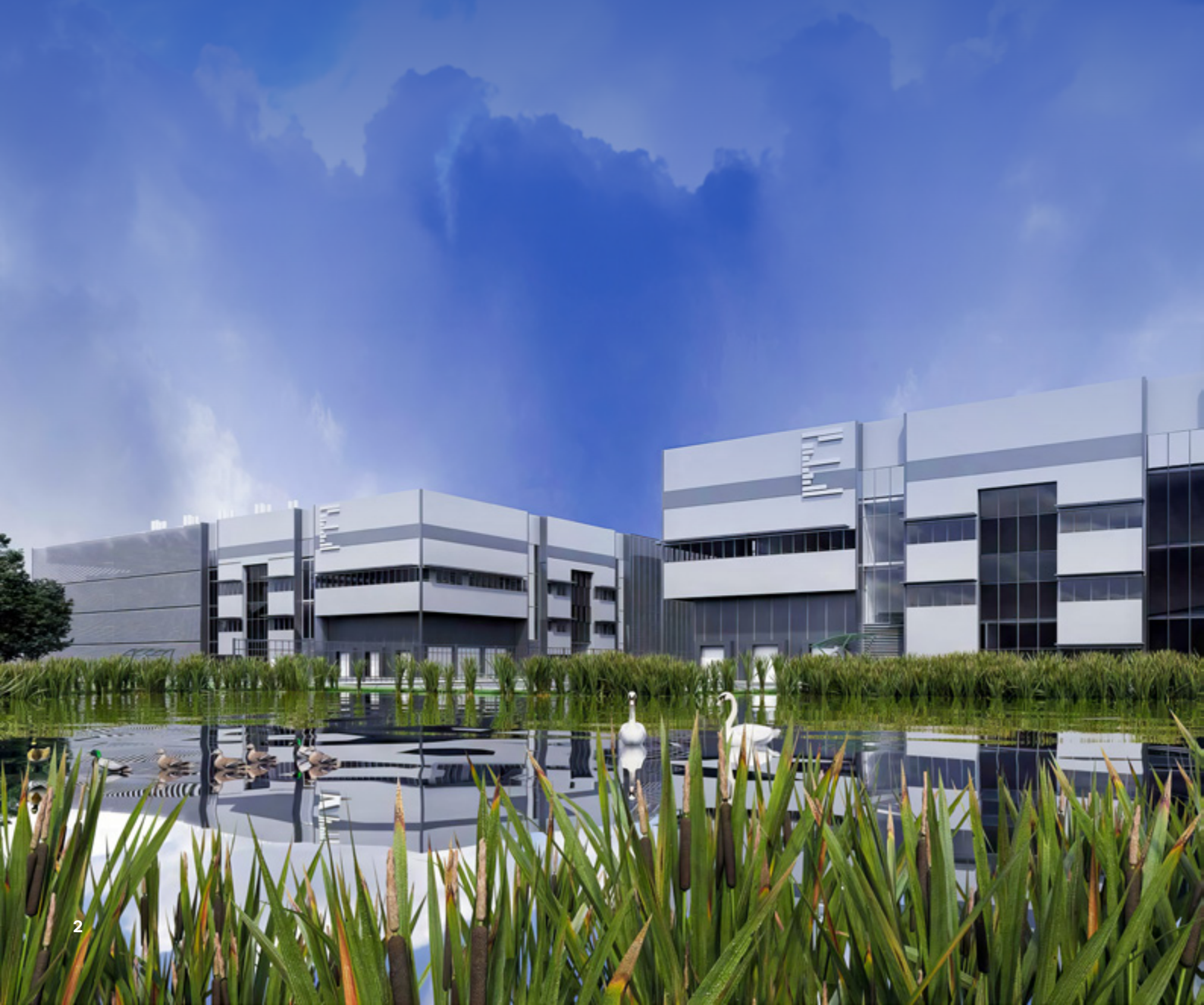This project commenced with land acquisition in 2018 and has since progressed through various stages such as permitting design, and construction that began in 2022.

The DUB10 project represents a significant development in Ireland's data center landscape. It is a two-story, high-capacity data centre, boasting 90MW+ of firm capacity. It is strategically positioned at the heart of Ireland's largest data center cluster, making it a prime location for data operations.

The project is designed to be scalable, with a fair and transparent model to meet clients' future scaling requirements. It also offers robust connectivity, with multiple dark fiber carriers available for onward connectivity to the UK, Europe, and the Rest of the World.

The site is a sprawling 35-acre area, exceptionally located on the M50 motorway, 20 minutes from Dublin Airport, and less than 5 minutes from Grange Castle, Profile Park, and Parkwest.
The project has full planning permission in place for a 60,758 sqm data center providing 90 MW+ of capacity.

The DUB10 project is carrier-neutral, with all major fiber networks in close proximity and four separate access points to the site. The project offers fully customizable solutions and the ability to expand as client requirements evolve, with the option of reserving future capacity.

The Challenge

Any construction project of this magnitude faces an inherent challenge – rework. Rework poses a significant issue as it results in both direct and indirect costs. Globally, rework accounts for about 5% of the average project value, amounting to an estimated impact of €530bn. Furthermore, rework contributes to about 5% of all construction emissions. The primary culprits behind rework are poor communication, inadequate data, and design errors or changes.

For this project, the goal was to achieve sustainability and operational excellence. Recognizing the negative impact of rework on both costs and the environment, Echelon prioritized reality capture for site monitoring as a means to minimize rework. Reality capture enabled close monitoring of site activities and capture accurate data. By comparing this data with the original design plans, Echelon could detect discrepancies early on and make prompt adjustments, thereby avoiding costly rework. By minimizing rework, Echelon aims to reduce waste, lower costs, and contribute to a more sustainable and efficient construction process for the Echelon Data Centre project.

The Solutions

Evercam's comprehensive suite of technology solutions for site progress monitoring and project management was brought on board to tackle the challenges of the DUB10 project. These solutions spanned various aspects of the construction process, each addressing a specific challenge.

Site Visibility and Team Communication

Evercam's platform was instrumental in providing live remote access to all projects. This feature greatly improved site visibility and streamlined communication among the team. By unifying all visual construction data, travel time and costs were significantly reduced, and communication was enhanced with clear visual references.

With full-frame-rate 24/7 recording, this ensured comprehensive documentation of the project, capturing every second in high frame rate 4K footage.

Unlike traditional CCTV systems, this solution was designed to provide a complete record of project progress, enabling teams to swiftly resolve any site incidents. By providing the ability to review any moment in time, it eliminated disputes and streamlined decision-making, ensuring that the focus remained firmly on progress and productivity.

But the utility of this solution went beyond just incident management. The 24/7 recording also served as a valuable resource for health and safety training. By leveraging near-miss footage, project leaders could create effective training materials to highlight potential hazards and reinforce safety protocols. This proactive approach to safety training fostered a safer working environment, while also supporting continuous learning and improvement among team members.

Gate Report and Traffic Control

Evercam also provided a gate report and traffic control system. This sophisticated solution helped avoid disputes, eliminate overcharging, and optimize vehicle movements and logistics. The outcome was a significant reduction in the carbon footprint of vehicles arriving at and leaving the construction site.
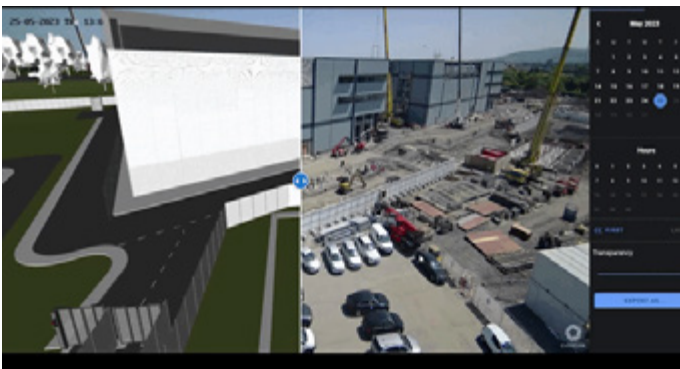
4D BIM

Evercam's 4D BIM solution tool provided planning vs. reality comparisons, making the BIM model available to the entire team with a single license. It enabled the team to measure distances remotely, adding another layer of flexibility and efficiency to the process.

Drone View

This feature allowed users to visualize the construction site in 3D using drone mapping. It offered an immersive experience where users could access and interact with the 3D reconstruction of the site. This not only brought the project to life but also enabled a comparative view with the live camera view and the 4D BIM model.

With Evercam's Drone View, team members were able to accurately measure distances, heights, perimeters, and areas, which greatly aided in precise planning and execution. This advanced tool helped users monitor project progress in real-time, identify potential delays, and understand external factors that might impact the project. This led to improved communication within the team and a more efficient workflow.

Marketing

Beyond its role in operational efficiency, Echelon leveraged Evercam's resources, including [professionally edited time-lapse videos](#), to showcase the ongoing progress of the DUB10 project. These meticulously crafted clips condensed months of construction work into compelling, short clips, effectively capturing the project's magnitude and precision. The professionally edited time-lapse videos obtained by Echelon served as a potent marketing tool, highlighting the DUB10 project's progress and appealing to a wider audience.

The Benefits

The successful implementation of Evercam's solutions in the DUB10 project has offered substantial benefits. The project teams report a substancial reduction in rework. The solutions have also played a pivotal role in reducing the carbon footprint of vehicles at the construction site and in improving overall efficiency.

Furthermore, the technology has supported the project in meeting local environmental planning commitments. The ability to make remote decisions has been another significant advantage, which has reduced site visits, resulting in less idle time for heavy machinery and concrete trucks.

Conclusion

The DUB10 project, serves as a powerful testament to the successful incorporation of advanced technology in construction, particularly in data centre projects. Evercam's innovative solutions have been instrumental in driving the project's success, with tangible benefits being realized at every stage of the construction process.

Evercam's strategic application of technology, from full-frame-rate recording to sophisticated 3D visualizations, has redefined the standards for efficiency, communication, and safety in data centre construction. Our contribution extends beyond this single project, laying a blueprint for the integration of digital solutions in future data centre projects.

As the DUB10 project approaches its final stages, Evercam's impact is clear – our solutions have not only enhanced the construction process but also set a new benchmark for the industry. The success of the DUB10 project underscores the transformative potential of technology in data centre construction, positioning Evercam as a key partner for future advancements in the field.

Whether you want to tell us
about your project or find out
more about our company,
get in touch today and a
member of our team will
get back to you shortly.

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