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BIM
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GLT Prefabricated Solutions: Pioneering new Mechanical Constructions Methods

The integration of BIM, building engineering, and contemporary construction practices presents significant opportunities for the construction industry in Europe to minimise expenses, reduce project durations, and enhance the quality of building projects. This convergence allows construction companies to prefabricate building components in advance, optimising the construction process.

Leading this transformation is GLT Delta, which specialises in prefabricating mechanical systems, expediting construction and reducing labour necessities by leveraging state-of-the-art BIM practices.

Through its pioneering construction methodology, GLT Delta fabricates prefabricated mechanical systems utilising superior quality materials in a fraction of the time and at considerably lower costs than traditional methods. Employing point cloud laser scanning, GLT Delta constructs models with millimetre precision by measuring buildings and conducting connection and collision tests to detect and circumvent potential obstacles. The company utilises BIM at LOD 400, generating accurate models that facilitate the construction of systems without disturbing existing ones.

Each system component is bespoke, designed for individual clients, and manufactured in a factory setting. Pipe systems and metal structures undergo robotic welding, cutting, and painting, which leads to reduced material waste and cost savings for clients.

System components are marked with labels and colours corresponding to their positions in the modelled plan, simplifying on-site assembly. Due to prefabrication, only few workers are needed on-site, minimising labour requirements and streamlining the construction process. Upon assembly completion, GLT Delta conducts regular maintenance and guarantees prompt systems repairs in case of malfunctions, irrespective of warranty status.

“We are transforming the vision of our clients into projects every day and executing it with precision, from beginning to end,” says András Cserkúthy, CEO of GLT Delta.

The construction process is digitalised, enabling workers to access BIMs via a cloud platform on mobile devices, accelerating construction. This platform allows clients to monitor their projects’ progress and remotely inspect equipment conditions. Each cloud-based model is colour-



coded to represent the project’s completion level, offering a comprehensive understanding of updates.

A case study showcasing GLT Delta’s service competence is a collaboration with a German hospital. The project involved planning, prefabricating, and installing a 7 MW cooling system comprising approximately 27,000 distinct parts and a one-kilometre pipe. Initially the construction time scheduled for completion in nine months, the firm accomplished the task in seven weeks on the construction site.

GLT Delta’s expertise is acknowledged throughout Europe and UK. Its extensive geographical proficiency and 30 years of experience are evident in the calibre of its services and numerous satisfied clients.

Ultimately, GLT Delta’s offerings revolutionise the industry by streamlining construction processes. The company reduces labour demands, simplifies system assembly, and ensures components are built with precision. GLT Delta’s cost-effective and efficient services will persist in serving Europe’s construction sector for years to come. **IT**



The annual listing of 10 companies in Europe that are at the forefront of providing Building Information Modeling services and impacting the marketplace