

Queensferry Crossing - realized with Allplan software

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Building Bridges, Not Fences

Matt Wheelis, VP Industry Strategy at the Build & Construct Division of the Nemetschek Group about the importance of open standards for the construction industry.

The construction industry accounts for approximately 13% of the world's GDP. However, it is an even bigger contributor to climate change, with the building sector estimated to generate over 40% of the world's total carbon emissions. With this figure more than triple of its GDP contribution, it is clear that the construction industry needs to change in order to become a more eco-friendly sector. Yet with productivity growth lagging far behind other industries – such as manufacturing and utilities – achieving the efficiency

levels needed to drive down carbon emissions and reduce waste is difficult at best.

To meet these goals, the construction industry needs to adopt new technologies and find ways to work smarter. There are many answers to be found in digitalization – using digital methods and technologies to remove manual, error-prone, and wasteful activities. According to McKinsey, whether through employing rapid, higher-definition surveying techniques, using advanced, 5D Building Information Modeling (BIM), implementing digital collaboration and mobility tools, improving asset management with Internet of Things (IoT) sensors and advanced analytics, or using ground-breaking new construction materials and methods, digital solutions can make a significant impact on construction productivity.

Many of these solutions have begun to be incorporated into existing processes. However, often they are implemented ineffectively, keeping work activities in silos rather than sharing information amongst the project team. For example, Building Information Modeling (BIM) software often aims to keep the modeling and analysis within a proprietary ecosystem, or IoT-enabled equipment is disconnected from broader workflows. This siloed approach makes collaboration and information exchange incredibly difficult.

One of the biggest challenges to progress in this area has been the inherent conflict between proprietary software – which focuses on the task of a single project participant – and the dynamic nature of construction – where all professionals and trades must work together temporarily to deliver the end product. This requires software that supports open data and communication interfaces that prioritize interoperability and supply chain flexibility over protecting one software provider's competitive advantage. An open approach enables accelerated innovation by allowing specialized software to do a task exceptionally well and feed the result back into the whole – it is about building bridges, not fences.

We believe that open standards are key to the AEC industry successfully adopting BIM, and to improving workflows and collaboration for all those engaged in the building process. The transparent communication and data exchange that open standards provide are critical for teams to work together effectively and innovatively, enabling them to address the sustainability challenges that face the industry. This approach implies building bridges between our own solutions, but also across the entire design and construction ecosystem, including established rivals and start-ups.

About the Nemetschek Group

The Nemetschek Group is a globally leading software provider for the digital transformation in the AEC/O and media industries. Its intelligent software solutions cover the entire lifecycle of construction and infrastructure projects and allow creatives to optimize their workflows. Customers can plan, construct, and manage construction projects more efficiently and sustainably, and develop digital content such as visualizations, films, and computer games in a creative way. The software company drives new technologies such as artificial intelligence, digital twins, and open standards (OPEN BIM) in the AEC/O industries to increase productivity and sustainability and continuously expands its portfolio, including through acquisitions and investments in innovative start-ups. More than 7 million users are currently using the customer-focused solutions. Founded by Prof. Georg Nemetschek in 1963, the Nemetschek Group today employs more around 4,000 experts.

The company, which has been listed in the MDAX and TecDAX since 1999, achieved a revenue of EUR 995.6 million and an EBITDA of EUR 301.0 million in 2024. Since the end of 2024, the Nemetschek Group is certified in accordance with ISO 27001, the internationally recognized standard for information security management systems (ISMS).

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