



The Puskás Aréna in Budapest, Hungary. Image provided by KÖZTI Architects & Engineers, (c) György Palkó

Oct 26, 2021 09:28 UTC

## KÖZTI Architects & Engineers leverage benefits of BIM with Software from the Nemetschek Group

**Munich, 26. October 2021:**KÖZTI Architects & Engineers are embracing the digital way of working with software solutions from the Nemetschek Group. The company, one of the most established design firms in Hungary, has had innovation in their DNA right from the very beginning. Today they are designing stadiums and other large scale construction projects using BIM.

The designers from Hungary started thinking along the lines of Building Information Modeling (BIM) long before it became an industry trend. With the

construction of the iconic Puskás Aréna in Budapest, Hungary in 2013, [KÖZTI](#) took the next step toward a digital way of designing with software solutions including [Allplan](#), [Graphisoft](#), and [Solibri](#).

The scale of the project – with 30 contractors, more than 200 people involved, and over 65,000 seats to be placed – and the challenge of combining the historic structure with the new building created a huge amount of data; a challenge KÖZTI and all project stakeholders had to deal with. To communicate clearly, share all relevant information with every sub-discipline involved, and ensure that the design intent was easily communicated and understood by everyone who interacted with the project turned out to be some of the major challenges with regards to choosing software solutions.

The aim was to fully embrace the digital way of working and designing for a better project outcome. Although the use of BIM was mandatory on that project, the decision about the software tools was left to the designers. This democratic approach was a first for KÖZTI and the decision fell on Nemetschek software solutions, as – for KÖZTI – they stand out for the strong synergy and seamless interoperability between the Group's brands, their track record of innovation, and the inherent support of OPEN BIM, as well as the fact that the solutions of the Nemetschek Group cover the entire building lifecycle.

“With constant communication required between KÖZTI and the external structural engineers, there were many changes to accommodate quickly, particularly when the project needed to be completely re-designed due to both budgetary and structural constraints,” says Dávid Petri, BIM Lead Manager and Architect at KÖZTI. These constraints led to a switch from 2D to 3D modeling, making collision checks and changes between the different models of each sub-discipline easier and more accurate. The software solutions of Nemetschek facilitated this. The reinforcement design was carried out in *Allplan*, 3D modeling was executed with Graphisoft's *Archicad*, the models were merged and checked with *Solibri* and presented with Graphisoft's *BIMx*. The communication with open standards and via IFC enhanced the collaboration between all involved project stakeholders in every project phase.

“We learn a lot from customers like KÖZTI, about how they deploy the software, where they might struggle, and how they benefit,” says Viktor

Várkonyi, Chief Division Officer of the Planning & Design Division and Member of the Executive Board of the Nemetschek Group. “KÖZTI made extensive digital simulations from the initial survey through the evacuation up to the final design of the seat row slope to optimize the view of the full field. A great example of leveraging the full range of advantages that working with a digital twin generates.”

After experiencing the value and benefits of OPEN BIM and 3D modeling, KÖZTI Architects & Engineers decided to switch completely to its use, independent from the project size or the contractual requirements. Their following projects, a residential tower in a former industrialized zone of Budapest, Hungary, with more than 4,000 apartments, office and retail space, and a sports center in Budapest with six stories, two swimming pools, a fitness center, wellness and spa areas, a rooftop terrace, a lobby, and conference rooms in a small urban plot, also consequently used OPEN BIM and 3D modeling. The density of the facilities in both projects required a high degree of precision, particularly with respect to the building services layout. With the modern fully digital approach, however, these challenges were much easier to overcome thanks to the enhanced visualization, improved accuracy, and seamless communication.

What started as a necessity has now become the starting point for each of KÖZTI's projects. And the innovation journey doesn't end here. Next steps are the definition and refining of project standards and workflows as well as the adoption of new trends, such as a 3D as-built model for facilities management, modeling rainwater, creating landscapes with architectural parameters, and designing passive shading. In any case, the software solutions from the Nemetschek Group help KÖZTI to achieve better results and continue to shape the world.

## **About the Nemetschek Group**

The Nemetschek Group is a pioneer for digital transformation in the AEC/O industry. With its intelligent software solutions, it covers the entire lifecycle of building and infrastructure projects and guides its customers into the future of digitalization. As one of the leading corporate groups worldwide in this sector, the Nemetschek Group increases quality in the building process and improves the digital workflow of all those involved in the building process. Customers can design, build and manage buildings more efficiently,

sustainably and resource-saving. The focus is on the use of open standards (OPEN BIM). The portfolio also includes digital solutions for visualization, 3D modeling, and animation. The innovative products of the 15 brands of the Nemetschek Group in the four customer-oriented segments are used by approximately six million users worldwide. Founded by Prof. Georg Nemetschek in 1963, the Nemetschek Group today employs more than 3,000 experts.

Publicly listed since 1999 and quoted on the MDAX and TecDAX, the company achieved revenue amounting to EUR 596.9 million and an EBITDA of EUR 172.3 million in 2020.

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