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Nemetschek Group Partners with Iowa State University to Deliver dTwin Technology for Innovative Housing Project

Munich, Germany and Ames, Iowa, USA, 17 June 2025 – The [Nemetschek Group](#), a leading global provider of software solutions for the AEC/O (architecture, engineering, construction, and operations) and media industries, today announced its partnership with Iowa State University's [Iowa Innovative Housing Project](#) (also known as the 3D Affordable Innovative Technologies Housing Project). The project aims to address the shortage of affordable housing in Iowa by utilizing 3D construction printing and other

innovative approaches to lower construction risks, reduce material usage and waste, and ultimately deliver cost-effective, resilient, and sustainable housing options.

In the current pilot phase, the university is utilizing Nemetschek's innovative [dTwin solution](#) to create a dynamic and interactive build environment using digital twins of each planned structure, with dashboard visualizations for monitoring and data analysis. The project's use of dTwin will progress with the construction of a 3D-printed shed incorporating live sensors that will provide real-time data about air quality and energy consumption.

More Efficient Construction with Digital Twin Technology

From planning through construction to the operation of a building, enormous amounts of data are created by multiple stakeholders in different isolated systems. This results in major inefficiencies as well as error-prone decisions. The use of a digital twin, a digital replica of a physical asset, allows designers, engineers, and builders to see every aspect of a building. Before work begins, they can test various changes in the design through analysis, simulations, and optimizations. Once a structure is built, the virtual replica is continuously fed with real-time information from the physical object, reflecting its current state, thus bridging the gap between Design, Construction, and Operations. Unlike other solutions, dTwin is an open platform fusing various data sources that complement each other without dictating to the user any special kind of format.

“Nemetschek's dTwin solution has changed how we approach every new home in this project. We're able to visualize every aspect of a planned structure in one seamless view. We can monitor air quality and energy consumption and compare this with buildings constructed traditionally, giving us incredibly valuable insights. We hope to use the dTwin platform extensively across every stage — design, construction, and property management — as we work to solve rural housing issues in an affordable and sustainable way,” says Pete Evans, assistant professor of industrial design at Iowa State.

The state of Iowa is facing challenges regarding housing affordability. For every 100 low-income renter households, there are 85 units available that are affordable to them. The median household income in the state is \$37,573 per year whereas the median rent in the state is \$689 per month. Currently,

the state is short over 13,147 low-income housing units^[1].

“Put simply, the usage of dTwin allows for more efficient construction and operation. By fusing all data sources of a building in one overarching view, decision makers can efficiently track, filter, and query all relevant information and derive purpose-tailored insights. Opportunities and challenges are seen in the digital twin of a build before they can manifest in the real world,” said Dr Jimmy Abualdenien, Head of Digital Twin Product at Nemetschek Group. “The team at Iowa State has a true vision to help ease the housing crisis, and we are proud to be a part of such an important project.”

^[1]<https://www.builderspatch.com/housingcount/us-states/iowa>

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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