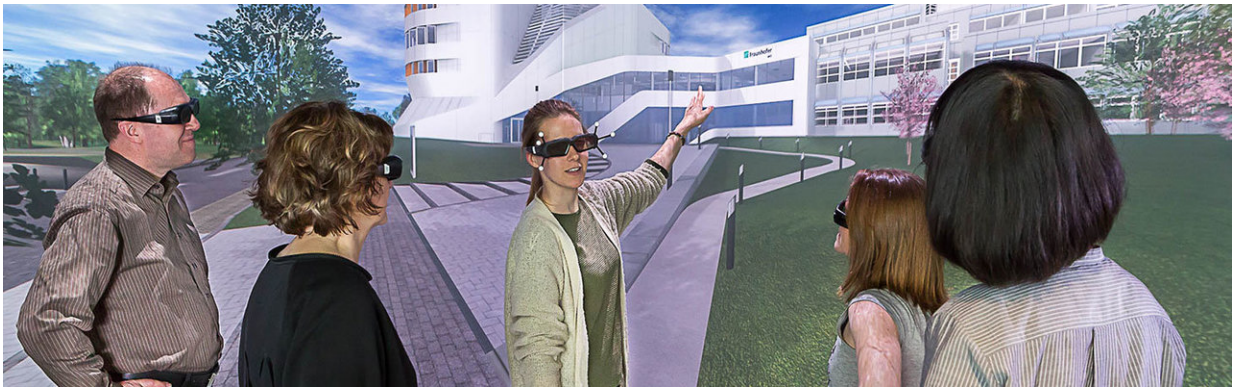


How virtual reality can defuse conflicts over building projects

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The Immersive Engineering Lab is a modern working and presentation environment that allows immersive 3D displays for realistic, detailed, accurately rendered real-time visualization. Furthermore, the laboratory's large media wall means it is ideally equipped for collaborative, multimedia work sessions. Credit: Uwe Voelkner / Fotoagentur FOX

Fun, effective and easy to understand: New digital visualization technologies offer an excellent opportunity to improve communication with citizens on large building projects. Titled "Visualizing Building Projects," the practical guidelines give planners, architects and public agencies advice on how to use virtual reality and similar innovations. The guidelines were developed jointly by Fraunhofer IAO and the University of Hohenheim in Stuttgart as part of the VisB+ research project.

Whenever there are plans to build a new hospital, renovate a bridge or erect a wind turbine, then engineers, planners and public officials all know one thing is inevitable: disagreements. This is because these kinds of projects raise all kinds of concerns among members of the public. Will that structure block out the sunlight in my home? Will I face a traffic jam every day? Won't that thing be a blight on the landscape? Communication on these projects often breaks down because the people responsible are unable to formulate clear, convincing answers to public concerns and to explain the plans in terms that everyone can understand.

This is where the digital transformation offers big opportunities. New visualization technologies bring projects to life before they are built. In virtual reality simulations, citizens can explore buildings, play out use scenarios, and inspect visual relationships – as if they were actually there on site. Comparing alternatives becomes child's play: one click and you can replace one façade with another, move the access road to a different location, or see what it looks like with new grass on the plaza. Moreover, planning criteria and environmental impediments finally become visible and easy to comprehend. "Virtual reality not only furthers the utility of public participation, but it also inspires citizens to get involved," says Prof. Frank Brettschneider, who heads up the University of Hohenheim's involvement in the "Visualization in Public Participation" (VisB+) project. Peter Steinhagen, Head of Business Development at Ed. Züblin AG, adds: "The combining of Building Information Modeling with new visualization techniques such as [virtual reality](#) is opening up fascinating new possibilities for stakeholder communication. The Visualizing Building Projects guidelines deserve praise for creating awareness of this potential."

The Visualizing Building Projects guidelines contain a summary of the VisB+ research project findings. Project developers, [public officials](#), planners, and key players in civil society all receive practical recommendations about how they can use suitable visualizations to

improve civic participation and communication. "The question of how to visualize building projects is more important than ever for architects and planners. Nowadays, the general public expects and demands a lot of information. Built on a strong empirical foundation, the Visualizing Building Projects guidelines show people how modern technology can be utilized to meet these expectations," says Stephan Weber, Vice President of the Chamber of Architects for Baden-Württemberg.

Dr. Brigitte Dahlbender, Chairwoman of Friends of the Earth (BUND) in Baden-Württemberg: "For the successful, effective participation of citizens, project developers must explain the effects of building projects in a transparent, easy-to-understand manner. This includes spatial visualizations of the planned project. The Visualizing Building Projects guidelines illustrate how to achieve this by means of very clear, well structured explanations."

However, the focus is not just on high-end visualizations, but also on traditional visualizations such as architectural models and renderings: "Because there is not one kind of visualization that suits everybody, we describe various use scenarios depending on the project and the planning phase," says Günter Wenzel, project manager for VisB+ at Fraunhofer IAO.

On October 25, 2017, the guidelines were officially unveiled at the "VisB+ Symposium 2017."

More information: www.bwstiftung.de/publikationen

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