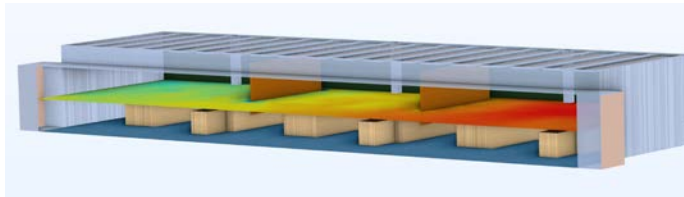
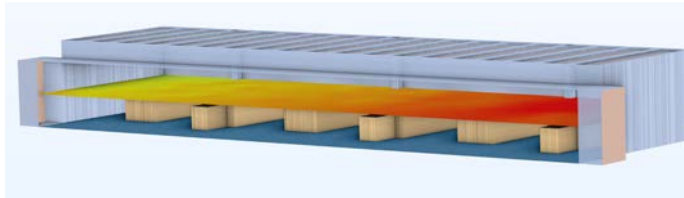


INNOVATION AT Zeugin
Bauberatungen

Acoustics in Open-Plan Offices

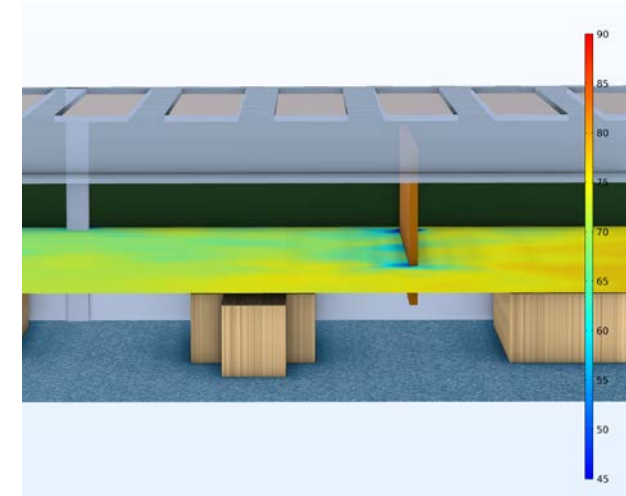
Modern open-plan office designs have minimal physical separation between workspaces, so sound from conversations and calls can be a distraction. To improve employees' work experience, Zeugin used acoustics simulation to guide interior design decisions.

The Zeugin Bauberatungen team constructed 3D models from the detailed architectural plans of interior designs and then used ray acoustics calculations and the acoustic diffusion equation to calculate how room partitioning components influence acoustic conditions.



In one office space, simulation results placed the room's acoustics in the poor-moderate categories, with distracting levels of speech carrying up to 12 meters. Calculating secondary sound path transmissions and the sound insulation values of room partitioning components in various placement scenarios determined the most strategic way to optimize acoustical conditions.

The largest benefit was seen when placing high-mounted barriers that directly interrupt the paths of sound waves.



"Large sound-absorbing barriers may contradict the interior design concept by visually cluttering the space. Our simulations help us propose optimization methods that harmonize with the architects' vision, along with improving employees' acoustical work environment."
— Thomas Zeugin, founder and managing director of Zeugin

By providing data-driven analyses to counteract popular misconceptions about sound, simulation can help guide Zeugin's clients toward more acoustically effective interior designs.