



simplified calculation method of the acoustic reverberation time

The Project

A new calculation model developed at the Fraunhofer Institute for Building Physics predicts the reverberation time in rectangular rooms, taking into account an uneven absorber distribution and a non-diffuse sound field.

Using the reverberate web app, civil engineers and architects can optimize room acoustics in conventional rectangular rooms, gymnasiums, classrooms, offices, or living spaces according to DIN and their specific requirements.

reverberate delivers a significantly better result than classical room acoustics calculations according to Sabine - without the high effort of a room acoustics simulation. Thus, there is a reliable planning security for the execution of the room acoustic measures in the building - high supplements and associated costs are a thing of the past.

The Team

Location: Fraunhofer Institute for Building Physics Stuttgart and Holzkirchen

Members: **Andre Thiel (patent manager)**, Benjamin Müller (research associate, psychoacoustics & cognitive ergonomics), Moritz Späh (group leader, room acoustics), Robert Köhler (student)

AHEAD Infos Batch: 3 / 2022 Phase: 1 Track: Licensing

The Business Model

Unique Selling Proposition: Easier handling, delivers reliable results, faster processing and lower costs

Unfair Advantage: The algorithm divides the sound field into three spatial directions and sums up all reverberation curves of the subsystems. The result is a visualization and evaluation of the reverberation time.

Revenue Model: Licensing of access to the pro version, services such as training, additional material packages and acoustic measurements and inclusion in the database

Venture Readiness Level



Technology Readiness Level



The Side Facts

Customer Focus: B2B

Searching For: End users (engineering offices), pilot customers, r&d partners, manufacturers of acoustic building products

Industry Tags: constructions & materials, software & services,

Technology Tags: Digital twin, building technology, acoustic ergonomics and well being