

SILENCIONS

ACOUSTIC LABORATORY

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SILENCIONS FOR ARCHITECTS

We invite you to explore the full scope of our services!

We specialize in comprehensive acoustic measurements, simulations, and the development of official reports and acoustic analyses. Our services are tailored to a wide range of projects, including residential buildings, office spaces, public facilities, as well as concert halls, theaters, cinemas, and recording studios.





FOCUSED ON COMFORT

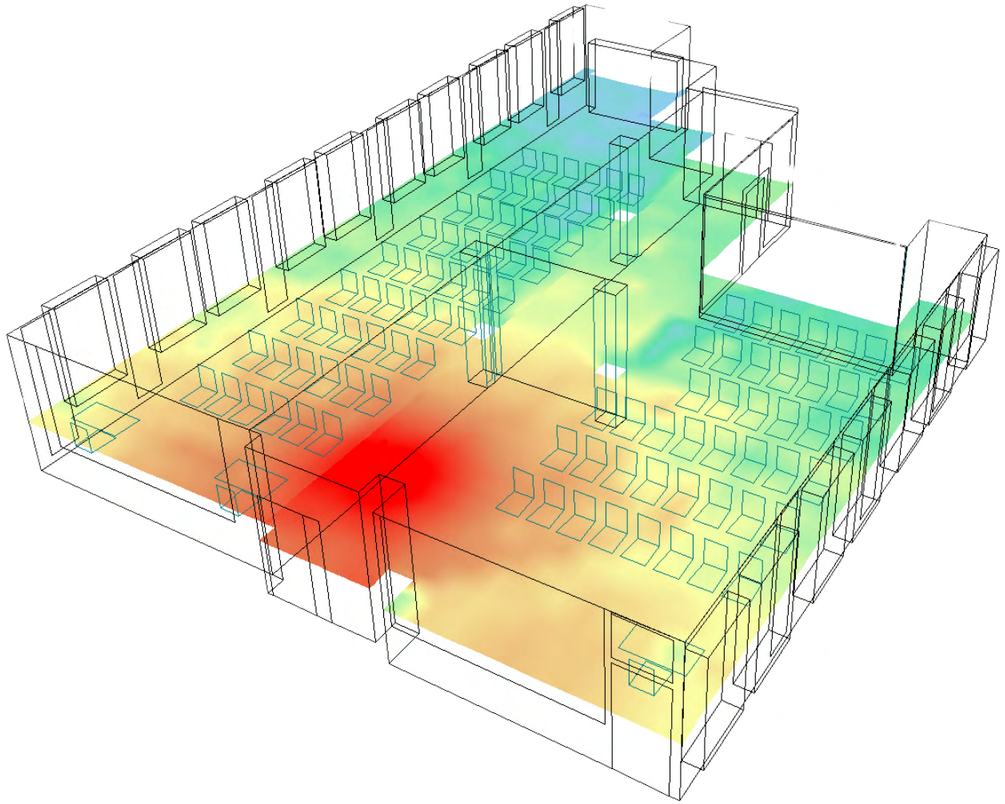
Our goal is to eliminate unwanted acoustic effects in various types of spaces. We design interior acoustics tailored to each space's function, combining functionality with aesthetics to ensure acoustic comfort. Thanks to our work, interiors become more user-friendly and acoustically pleasant. We provide comprehensive services including acoustic measurements, simulations, official reports, and interior acoustic design. This allows us to offer full support in managing a building's acoustic performance — from sound insulation of partitions to ensuring peace and quiet in its surroundings.

ACOUSTIC MEASUREMENTS

We identify our clients' needs and conduct measurements in accordance with current standards and relevant legal regulations. We offer professional measurement services in the fields of building acoustics and environmental acoustics. Our tests are conducted using advanced measurement equipment that meets Class 1 requirements as specified in the IEC 61672-1:2013 standard, and are supported by valid calibration certificates.

- reverberation time and speech intelligibility measurements
- noise from building technical systems
- sound insulation measurements
- A-weighted sound pressure level in rooms
- environmental noise measurements
- vibration and structural noise measurements





ACOUSTIC SIMULATIONS

In our computer simulations of interior acoustics, we closely examine every element that affects sound propagation. We carefully select construction and finishing materials to meet the project assumptions and deliver optimal acoustic performance. We also simulate the sound insulation properties of partitions and other structural components as early as the design phase. Additionally, we carry out environmental noise level simulations to assess the acoustic impact on surrounding areas.

Advanced simulation tools, including Odeon Room Acoustics Software, SoundPLAN, Ansys, and Insul support our work.

ACOUSTIC REPORTS

An acoustic report is a formal document that defines the acoustic requirements for a planned project and assesses the adequacy of the proposed solutions. We offer the preparation of such reports for a wide range of buildings, including:
– residential,
– cultural (such as concert halls, cinemas, cultural centers),
– public utility (schools, kindergartens, offices, government buildings, courts, hospitals),
– and industrial facilities.
Each acoustic analysis is tailored to the specific needs of the client, with a focus on delivering the most effective solutions. The scope of the acoustic report is always tailored to the nature of the project and the investor's requirements.







ACOUSTIC DESIGN PROJECTS

The goal of interior acoustic adaptation is to enhance acoustic conditions, ensuring improvements in reverberation time and speech intelligibility within the designed space. We achieve this through the careful selection and placement of acoustic materials. Throughout the design process, we use advanced acoustic modeling software such as Odeon Room Acoustic Software. Interior acoustic adaptation is essential wherever the quality of sound, music, or speech reception is critical. This applies especially to conference rooms, office spaces (including open-plan layouts), as well as cinemas, theaters, multi-purpose halls, classrooms, and medical offices.

VIBROACOUSTIC SOLUTION DESIGN

We offer advanced consulting in the following areas:

- ACOUSTICS – noise source modeling and analysis
- VIBROACOUSTICS – design of solutions for vibration and noise reduction
- AEROACOUSTICS – design of acoustic silencers for noise reduction in ventilation systems

We specialize in both analytical and numerical calculations, as well as the design of effective noise and vibration reduction systems for structural and industrial applications. Our solutions are defined by a modern approach — lightweight, compact, and tailored to specific client requirements. We collaborate on equipment optimization by developing acoustic systems that reduce noise emissions, enhance structural and functional performance, and improve overall user comfort.



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