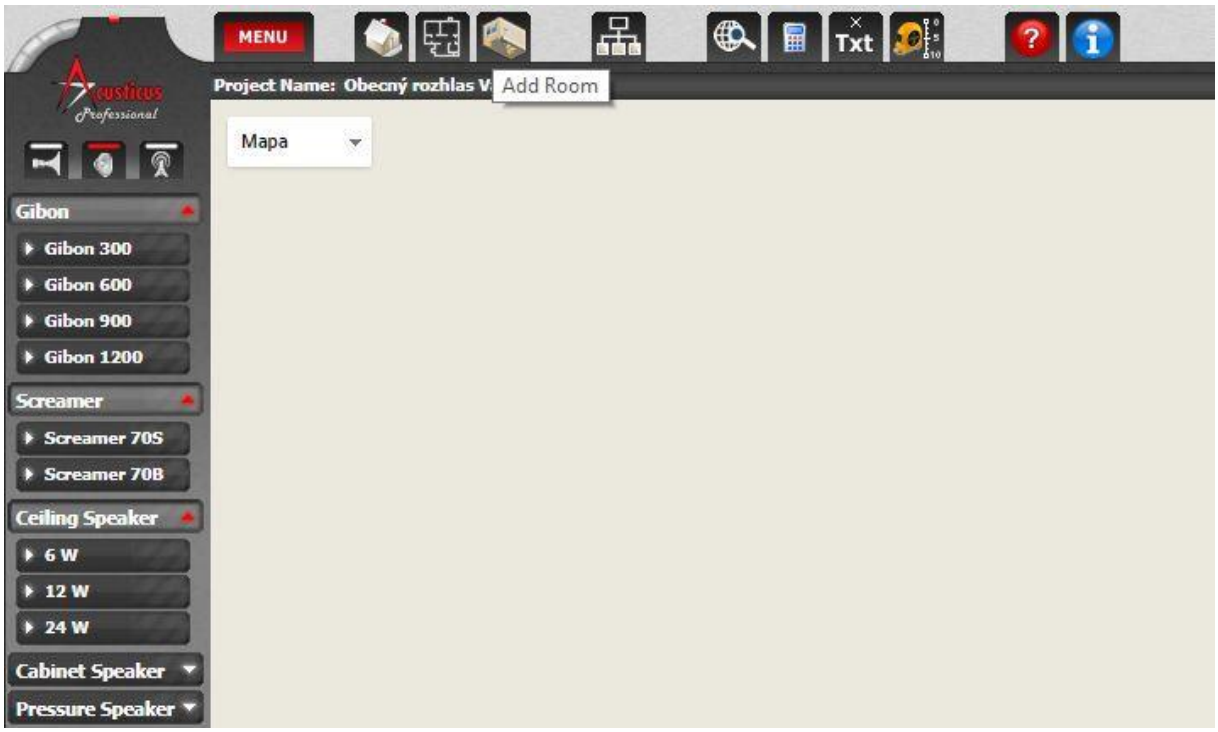
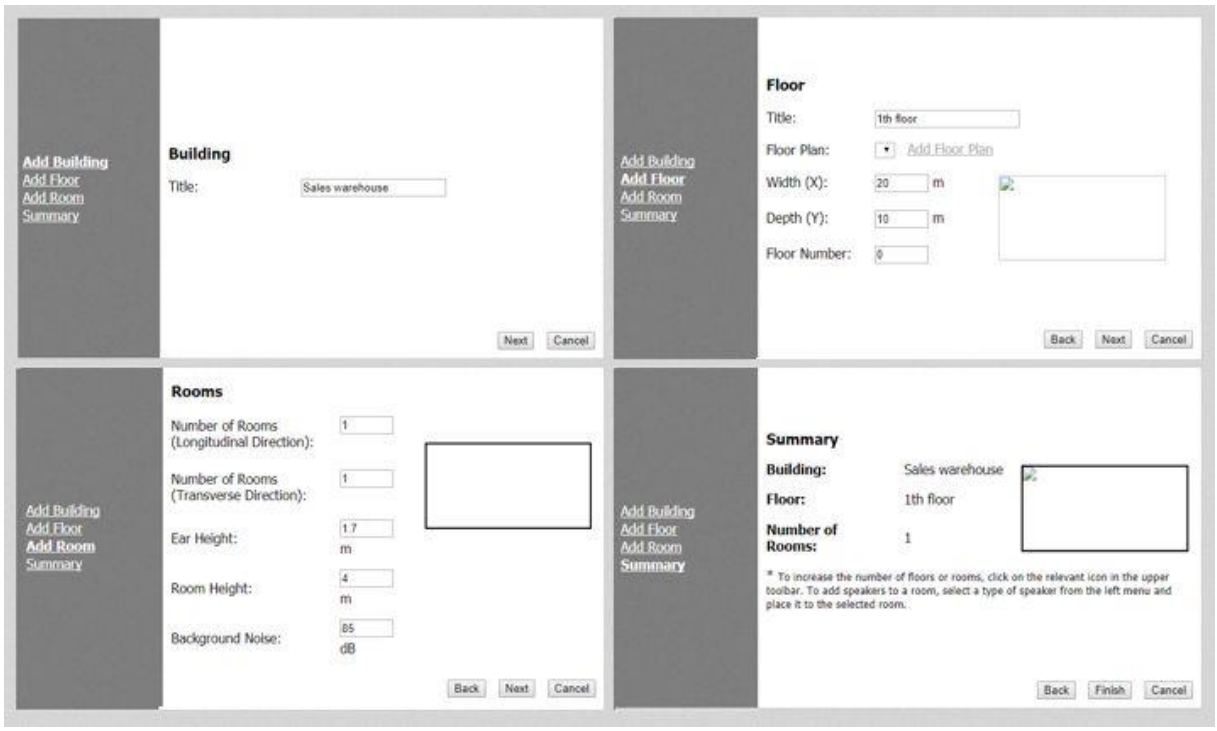
Interior Acoustic Project
Interior Sound Distribution

A demo project to show how to create an internal public address system for a building with a commercial warehouse and two offices. The goal is to arrange loudspeakers within the PA system in an appropriate way to ensure the coverage of the entire area with the sound of a required acoustic pressure.

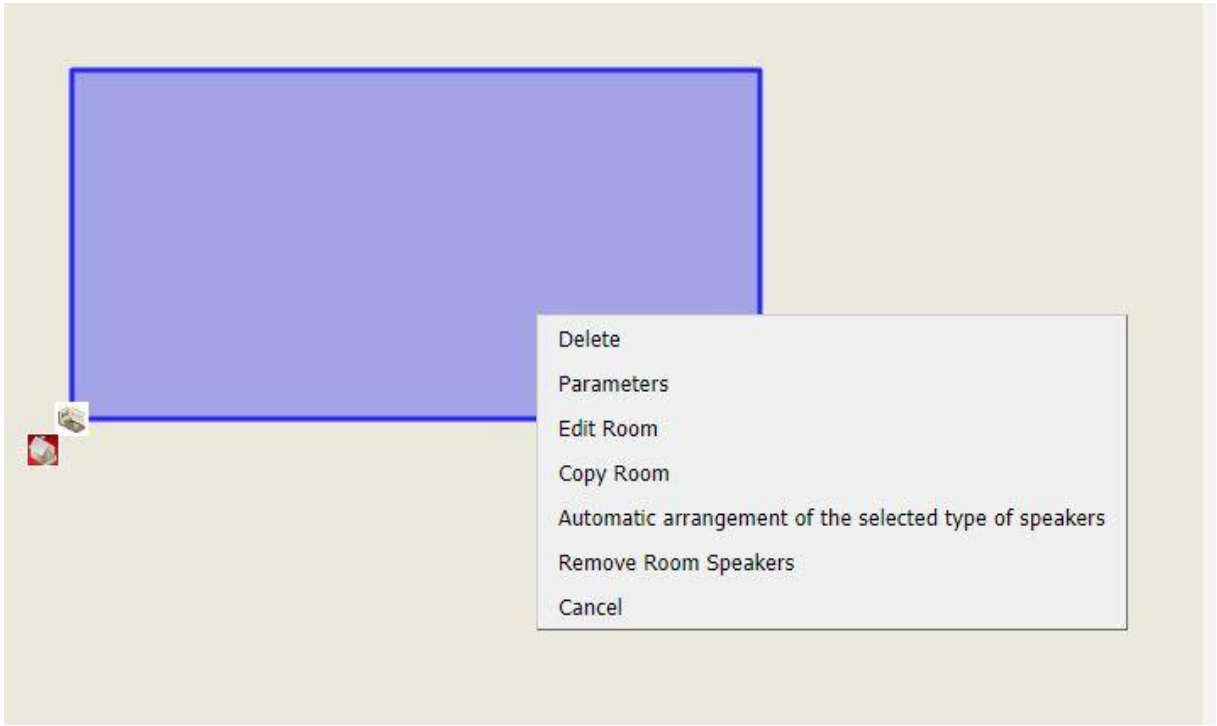
Click on the *"Interior"* icon in the Acusticus Professional application to switch to the work environment used for interior projects. A pull-down menu offering different types of loudspeakers designed for interior sound distribution will appear in the product box. By clicking on the *"Add building"* icon we can, at this point, create a building with storeys and rooms, to which we will add individual loudspeakers.



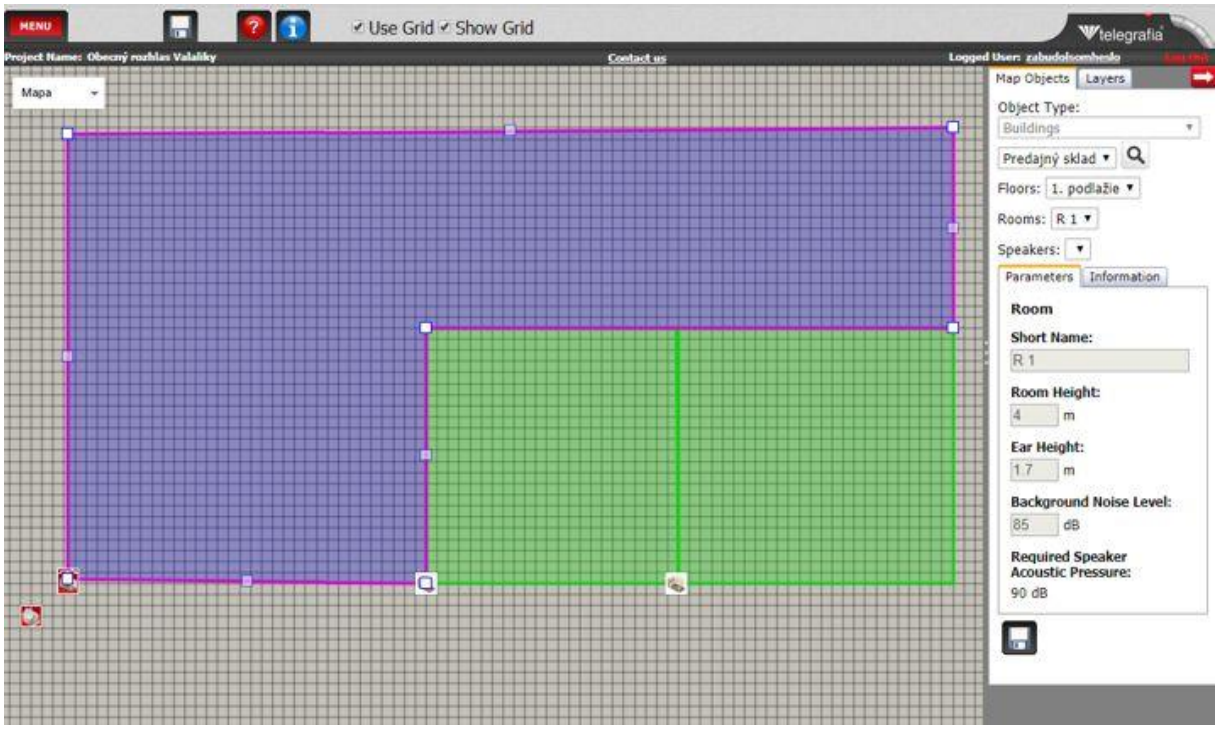
Throughout the process of building creation and storey and room adding we will be guided by a user-friendly wizard and it will be possible to additionally edit all the items.



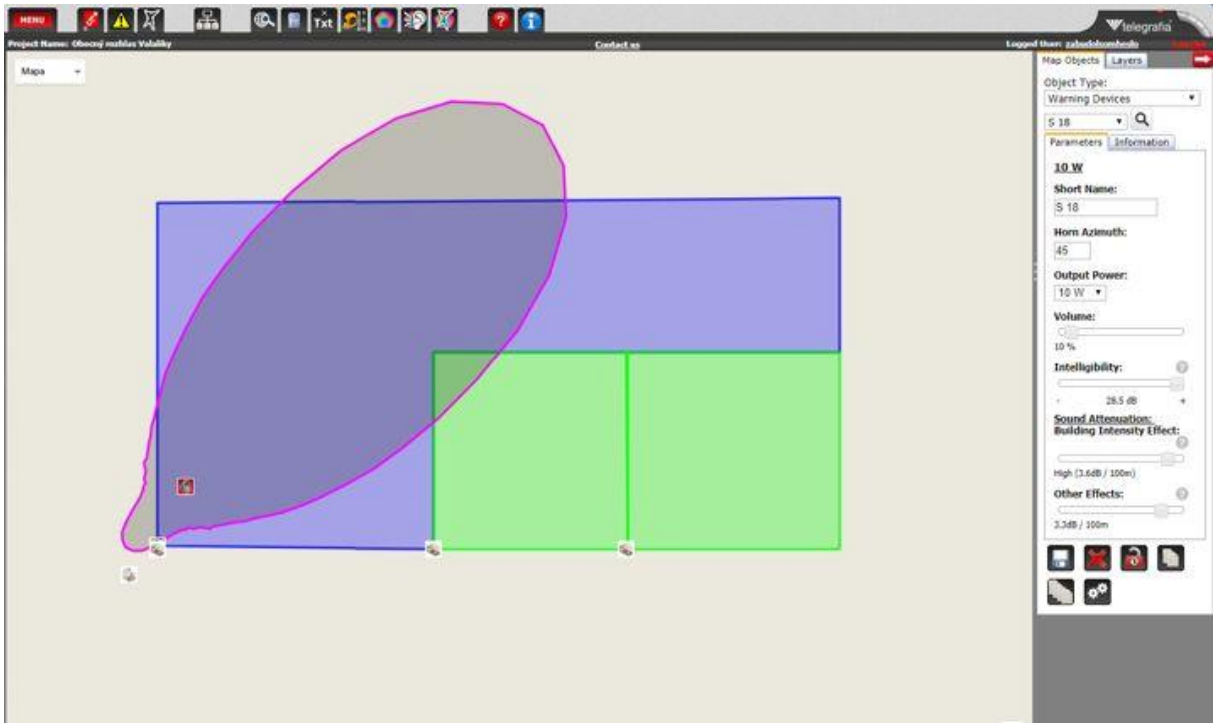
The best for this particular project is to create just one room over the entire interior of the building, and then adjust this room to a shape required and add two remaining rooms. To modify the project, we need to click on a room first so that the selection function is activated. At this point, we can call up the context menu by pressing the right button of the mouse, and select the *"Edit room"* item or click on the *"Edit room"* icon in the characteristics box on the left side of the screen.



The application will activate the drawing mode. This will automatically turn on the grid at a maximum resolution (one square represents an area with a side 25 cm in length), and the entered corners of the room will be attached to the grid. Both functions can be switched off in the toolbox. Logged-in users can upload the map and the ground plan of the building to make their work easier. Once we are satisfied with the shape of the room, we save the changes by clicking on the *"Save"* icon  . New rooms can be added by clicking on the *"Add Room"*  icon only upon saving the previous changes and closing the drawing mode. This way we can add all required rooms.



The next step is to add and create a layout of loudspeakers, which can be done either automatically or manually. As our project covers quite a small area we can add loudspeakers manually. From the list of available types of loudspeakers appearing on the left side of the screen we select the desired type and it will be then added to the room by pressing the left button of the mouse. Loudspeakers can only be added to the active (selected) room. Each loudspeaker can be subsequently moved and can have its characteristics changed in the characteristics box appearing on the right side of the screen. If we want to prepare a project for external sound distribution, i.e. distribution outside the building, we have to switch the work environment to *"Exterior"* in the product box and select an external loudspeaker.



Once all the desired loudspeakers are added and their layout is optimised, the acoustic project is completed. The completed project is then used as the basis for the preparation of an interior sound distribution and public address system project.