

**Client:**  
HELIKA d.o.o

**Country:**  
Czech Republic

**Duration:**  
September 2013 - April 2014

## QUADRIO PRAGUE - CALCULATION OF VIBRATIONS & AIRBORNE NOISE, DYNAMIC BUILDING SIMULATION

### Project objectives

Based on vibration measurements and FE-calculations, measures were defined to adhere to the thresholds set for vibrations and structure borne noise.

### Project description

Parts of the building were already finished, so the measures to reduce emissions had to be implemented on one of the upper levels. A dynamic building simulation was carried out, vibrations as well as structure borne noise were calculated and vibration protection was planned.

### Project data

- 16,400 m<sup>2</sup> office area spread across 6 floors
- 8,500 m<sup>2</sup> shopping areas
- Residential area of approximately 2,400 m<sup>2</sup>, distributed over several flats

### Services

- Vibration and re-radiated noise measurements were carried out to examine the level of imissions for the project state at the start of the project
- An FE-model was created based on the measurements and planning documents to make an imission forecast
- An adjustment frequency for the elastic bedding was defined
- The specific measures to comply with the thresholds set by the client in collaboration with the client



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