


## BYOASIS acoustic simulation software



### Aim 6: Ensure that our businesses respect the environment

- > Action 6.8: Implement an action plan to minimize the disturbance for local residents

 **Entity:** Bouygues Travaux Publics

 **Operational Units:** All

## Overview of the initiative

- > **Objective:** To prevent and reduce noise pollution.

- > **Description:**




BYOASIS (Outil Acoustique de Simulation Interactive de Sites - acoustic tool for interactive simulation of sites), 3D acoustic simulation and noise reproduction software for an exterior location, is the fruit of a two-year collaboration between Bouygues Travaux Publics (Public Works) and CSTB (Centre Scientifique et Technique du Bâtiment - scientific and technical building centre). The objectives in developing this tool were as follows:

- predicting and controlling the noise level created by construction sites relative to local residents, as well as limiting the noise exposure to employees;
- aiding project design: optimisation and implementation of acoustic walls or screens and phasing of construction to minimise noise pollution;
- demonstrating to our customers, by way of proof, the appropriateness of our solutions in terms of their noise impact.


The application models all conditions that may generate noise on the construction site. It reproduces the topography of the area, the buildings and acoustic protection. It incorporates all sources of noise corresponding to the various work stations on the site as well as to the site's environment. The innovation of BYOASIS lies in its realistic and interactive visualisation of the project in its environment and the simulation and reproduction of noise that enables noise mapping to be generated. It is therefore possible to browse the website of the construction site to assess noise pollution. BYOASIS can be used very effectively as a tool for consultation with local residents.


This software has already been tested on the A41 motorway. Its ease of use is currently being validated.

BYOASIS has already received two awards. The first time was in April at Virtual Laval, an exhibition devoted to virtual reality; the second occasion was the Bouygues Construction Innovation Contest where it was awarded the special prize for "Sustainable Development" in the "Technology & Works" category.

 **Partner:** CSTB (French scientific and technic center for construction)

 **Launch date:** Not given

 **Cost of the initiative:** Not given

 **Indicator(s):** Not given

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