

STUDENTS PRIZE

INNOVATE FOR THE CITY OF TOMORROW

AN ECOLOGICAL BUILDING USING 100% BIO-SOURCED MATERIALS

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HEAD OF PROJECT

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THEME

In the digital era, what would the city
of your dreams look like?

PARIS REGION

Context

At the current rate of world population growth, the non-renewable natural resources currently used for construction, such as marine sand, will soon be exhausted. Fossil energy sources, over-exploited, are also set to disappear one day. It is therefore vital that we start now to design structures using renewable materials and energies.

Description

A team of recent graduates decided to design a low-carbon, energy self-sufficient building. Most of the materials used are either bio-sourced or recycled. The framework is built from HP2A clay cement blocks, while the partitions are made from bricks grown from mycelium, the root-like fibres of fungi, and recycled plastic. Its energy comes from a network of optical fibres installed across the building that capture solar energy and route it to photovoltaic panels.

Benefits

This ecological building constructed from existing but still little-used materials is a perfect demonstration of cutting-edge trends. In particular, it anticipates future environmental regulations that will give priority to low-carbon, energy-efficient buildings. By showing that it is possible to build better using fewer resources, it could allow a group like VINCI to invest in the future and burnish its brand image.

- 1 This building is energy self-sufficient, with a low carbon footprint thanks to use of different renewable energies and materials sourced from the circular economy.
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