

THE NEST 2022 - 2023

Competition: Construction of a benchmark 'Next-Gen' office building, integrating biophilic design, wood construction, occupant well-being, energy neutrality, and a minimal ecological footprint.



Site

Luxemburg

Client

Eaglestone Luxembourg

Structural engineer

Ney Wow

Services engineer

Greisch

Budget

n/c EUR htva

Landscaping

Taktyk

The Nest is located in a densely urbanized area surrounded by agricultural and forested land. The proposal seeks to connect this urban site with the surrounding natural environment, by reintroducing natural elements into the built environment and creating a shared emotional experience. The natural landscape influences both the architectural structure and user experience, allowing for a unique project identity that celebrates the harmony between human-made structures and the environment.

The site, currently covered in asphalt, will be revitalized into a nourishing landscape by improving soil conditions (through proper aeration, substrates, and water management).

The architectural design is inspired by the structure of flowers and trees. The building's supports, resembling mushroom columns or flower calices, "live lightly on the land", and lift the structure above the ground. This approach allows nature to thrive around and beneath the building, while allowing for flexible and modular organisation of the space. The central atrium, visible from the street and filled with natural light, serves as a communal heart of the building, connecting the interior with the external environment. The building's design encourages fluidity between indoor and outdoor spaces, using large windows and doors to enhance visual and physical connections with the surrounding landscape.

The project aims to create a strong sensory connection between its occupants and the environment. Roof gardens, water retention basins, and green areas throughout the project allow users to interact with nature, promoting well-being and sustainability. Seasonal and climatic changes are taken into account, adapting the building's environment to enhance comfort, well-being, and energy efficiency. Natural ventilation systems will cool the atrium, while water basins will provide evaporative cooling.

By focusing on flexibility, The Nest aims to avoid obsolescence. The building is designed to adapt over time to various functions, such as offices, residences, or educational spaces, without needing significant structural modifications. The simplicity of the form (a rectangle) allows for greater adaptability, ensuring the building remains functional and relevant for decades. Structural design choices, such as high ceilings, modular facades, and efficient placement of technical systems allow for easy reconfiguration and modernization without costly or invasive interventions.

The Nest embodies a commitment to sustainability through both design and material selection, by promoting the use of low-carbon, locally sourced materials, including structural wood (spruce) and natural insulation materials like cork and wood fibers. The use of prefabricated elements will also minimize waste during construction. In addition to using sustainable materials, NEST emphasizes the importance of the circular economy by designing for disassembly and reuse.

The building uses natural ventilation and passive solar heating and cooling systems, to reduce reliance on mechanical systems. The high-performance facade will optimize thermal performance, while the rooftop gardens and terraces will provide additional insulation and contribute to the overall energy efficiency of the structure.

In conclusion, The Nest is designed to be more than just a building. It is a dynamic, flexible, and environmentally integrated structure that supports well-being, sustainability, and a deep connection to the natural world. Through thoughtful design and sustainable practices, The Nest aims to create a lasting positive impact on both its occupants and the environment.

