University of Lausanne

New building for the humanities on the UNIL Campus.

CLIENT

State of Vaud

TEAM

Patriarche (Architecture, Interior architecture, Landscape, Environmental Building Quality [EBQ], and BIM, Ingenierie, General construction, Cost assessment)

KEYPOINTS

Timber construction.
Unique landscape setting.
Human scale.
Promoting well-being.

The Humanities building is located in the heart of the University of Lausanne campus.

Our aim is to integrate the new building for the humanities (nouveau bâtiment pour les Sciences Humaines [NBSH]) in a natural and obvious way, as a missing piece of the puzzle. The aim is to take advantage of a unique existing setting by providing a bioclimatic building adapted to the local climate. The hexagonal-shaped building dialogues with the rest of the campus to create a coherent whole.

Developed around a central atrium, the project houses teaching and learning spaces, collaborative work spaces dedicated to research, a meeting centre and a rooftop restaurant.

In a responsible and locally-oriented approach, the building has a timber post and beam construction system.

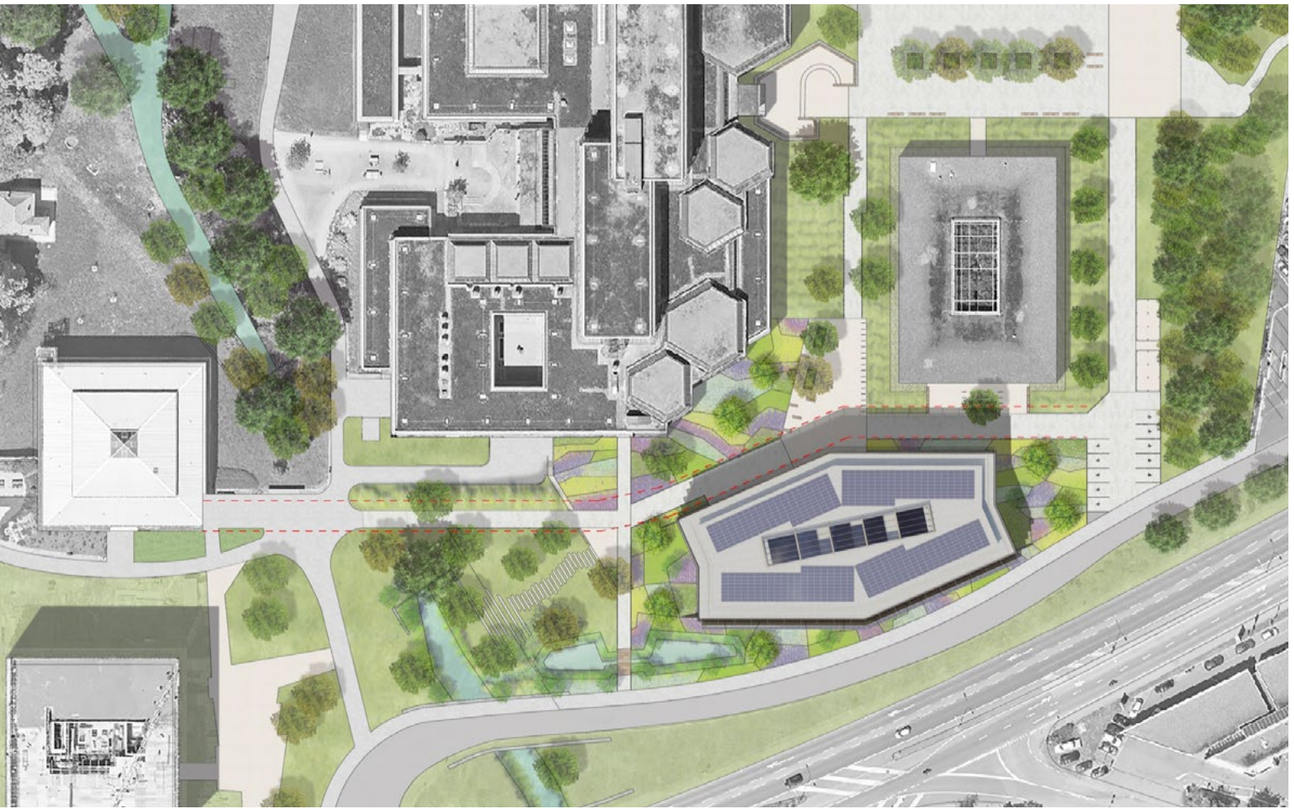
Typology **Education, International**	Construction cost **42 M€**	Status **Competition 2021**
Surface area **11 809 m²**	Location **Lausanne, Suisse**	Allocation mode **Public contract**

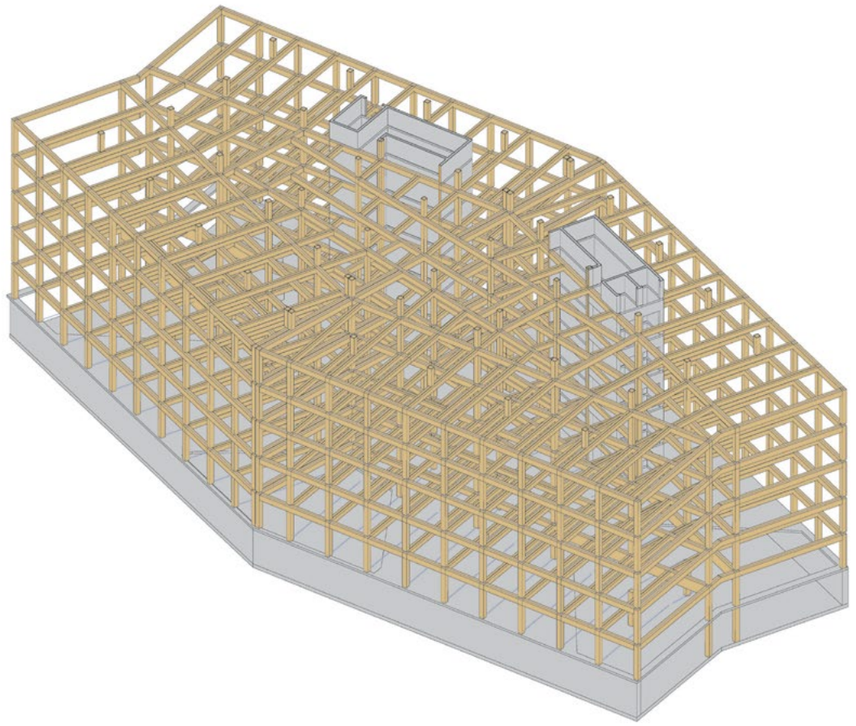
Intentions

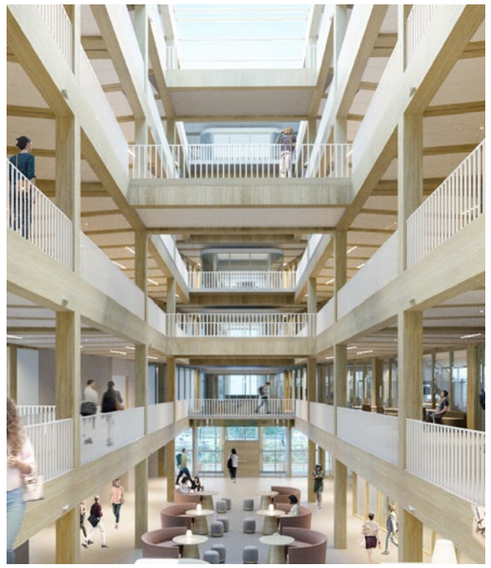
The trapezoidal plan proposed for the NBSH results from the super-position of two axes, that of the cantonal road and that of the existing buildings: Synathlon, Internef, Extranet.
This plan makes it possible to insert the programme into a relatively constrained space and to design fluid exterior circulation by relying on the existing facilities.

By positioning itself in the axis of the alley that separates Extranef and Internef, it clearly marks the southern end of the UNIL site and directs the flows by highlighting a pedestrian heart of the campus.
The landscape project aims to the same ambition. It is an extension of the existing facilities, both in terms of spatial composition and land-scaping vocabulary.

To enable current and future students to experience excellence in physical spaces designed to promote human well-being.







Construction system and materials

Wooden floors with a span of more than 10 metres represent a first challenge to which the mix of materials responds perfectly. The floor elements that are based on the glulam structure are developed and prefabricated in Switzerland in order to target techniques and habits that are consistent with local requirements.
The concepts of the right material in the right place and the right quantity guided the design of the timber structure.

The structure is divided into two large rafter-like elements arranged face to face, forming a diamond shape with a glazed ceiling in the centre. The stability of the two blocks is then ensured by two concrete stiffening cores running the full height of the building. The primary structure is based on a timber beam construction system. Circulation spaces are attached to the main structure on the inside.

Working, collaborating, teaching: the spaces of tomorrow

A university is a space for meetings, cultural mixing, exchanges and conviviality.

All of the functions are organised around a full-height atrium, bordered by informal spaces for exchange (lounges, coffee points, photocopying areas, etc.).

A “village square” tier

Vertical exchanges are encouraged thanks to informal bleachers that easily link the first two levels occupied by the learning spaces. One can settle down and check one's emails, give a lecture, wait for a class...

Teaching and learning spaces

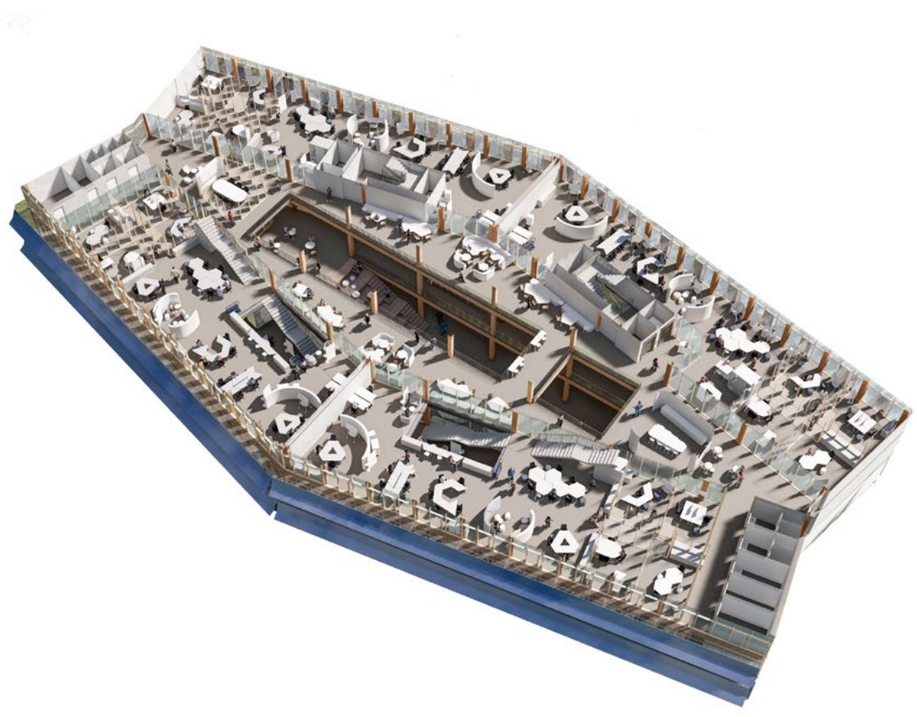
The first two levels house the teaching and learning spaces. This position avoids the noise pollution caused by a large flow of traffic. The classrooms can be organised in the traditional way but the relationship with the speaker changes. We offer a flexible layout where each class can be organised as a collaborative workshop with adapted, mobile furniture and high-performance digital equipment.

The University

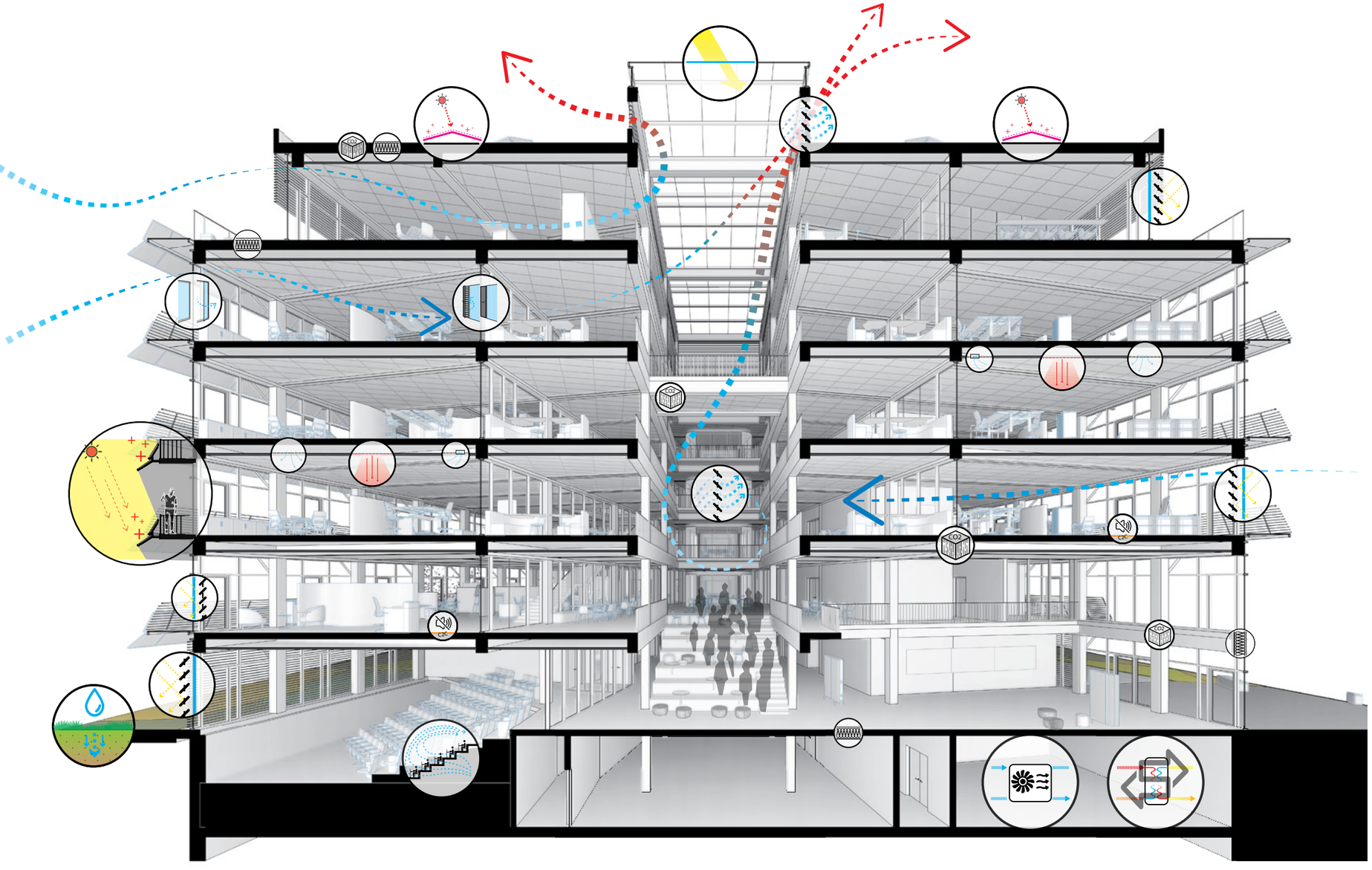
The university is essentially organised on three levels, with four trays, each of which accommodates a working group. The platform, free of posts, provides a flexible co-working environment. The platform offers a variety of spaces ranging from closed offices for isolation to much more open spaces. The partitioning is modular and can be easily modified.

Catering / meeting centre / a roof top organisation

The roof top is the second strategic attraction of the building. Five meeting rooms of the faculty form a meeting centre on the top level.
It is an ideal location for workshops and the development of ideas.
The views over the large landscape are exceptional. It is an invitation to creativity.



Climate and energy



Studies were carried out to optimise the morphology of the building to the path of the sun and the prevailing winds.

Light and temperature

The facades with walkways allow for the generation of a shade that reduces solar gain in hot weather. The concept designed for the south facade boosts solar production in all seasons thanks to the presence of photovoltaic solar panels located on the nose of the slab. Large bay windows allow generous light to enter.

Natural ventilation

The strategy for the treatment of the atrium has been the subject of conceptual consideration since the definition of the building's morphology. The gables are bevelled in order to generate an aeraulic funnel effect.

Reducing energy needs

Energy systems are simple, efficient and require little maintenance. The building is based on a passive design, allowing to limit the need for energy. Thus, the thermal performance of the building envelope meets the MINERGIE-P ECO energy level.

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