



## TECHNOLOGY CENTER LEITAT

*Posted on November 9, 2015 by Urban UrbanNext*



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**Categories:** [Energy and sustainability](#), [Middle Density](#), [Picharchitects](#), [Project](#), [Technology and fabrication](#)

**Tags:** [Active Building](#), [Biotech](#), [Building](#), [Nanotech](#), [Project](#), [Sustainability](#), [Technological Approach](#), [Technology](#)



The building is devoted to applied research in the areas Biotech, Nanotech and new technologies.









In an approximation



where the building is located, there is an interest to activate the center island, linking it to the street and open space leading to the passage through the building to convert existing public space on a meeting room.



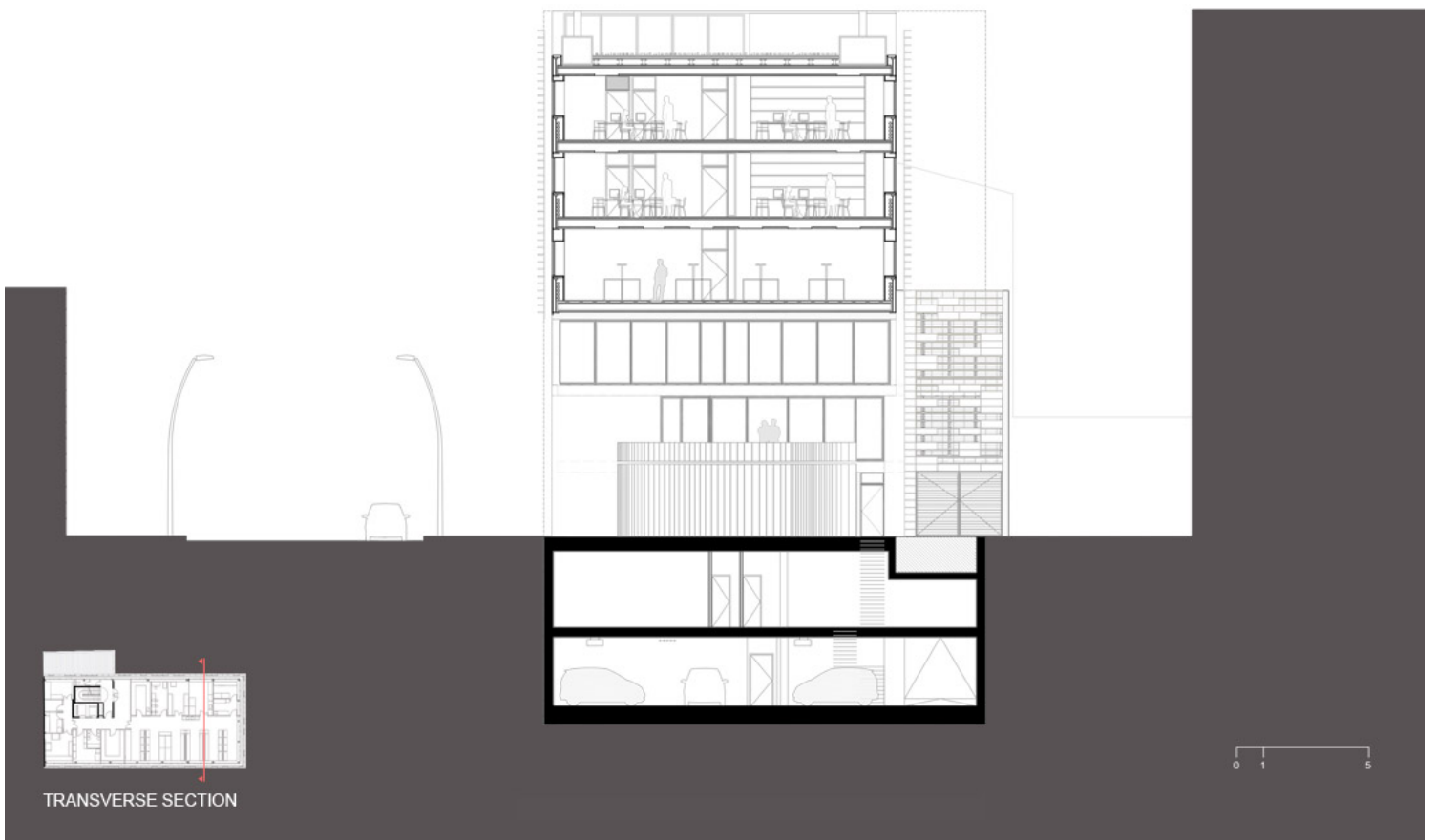


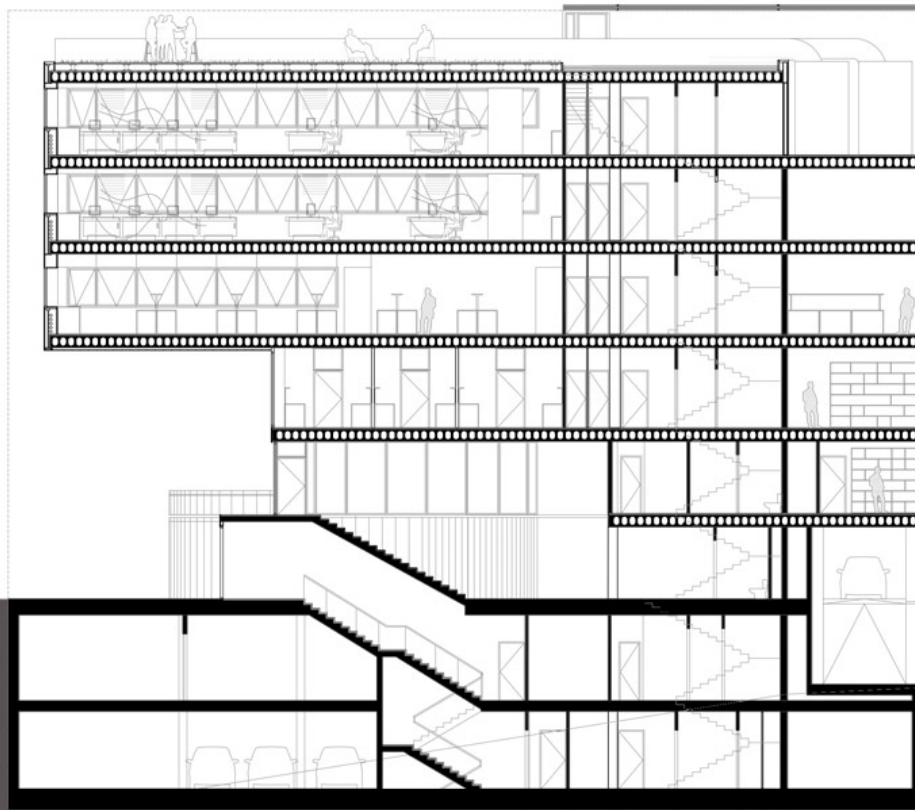






The presence of the building tries to connect, not in a figurative way, with the existing building, creating, abstractly, a continuity in the skin texture of the traditional city.















LONGITUDINAL SECTION




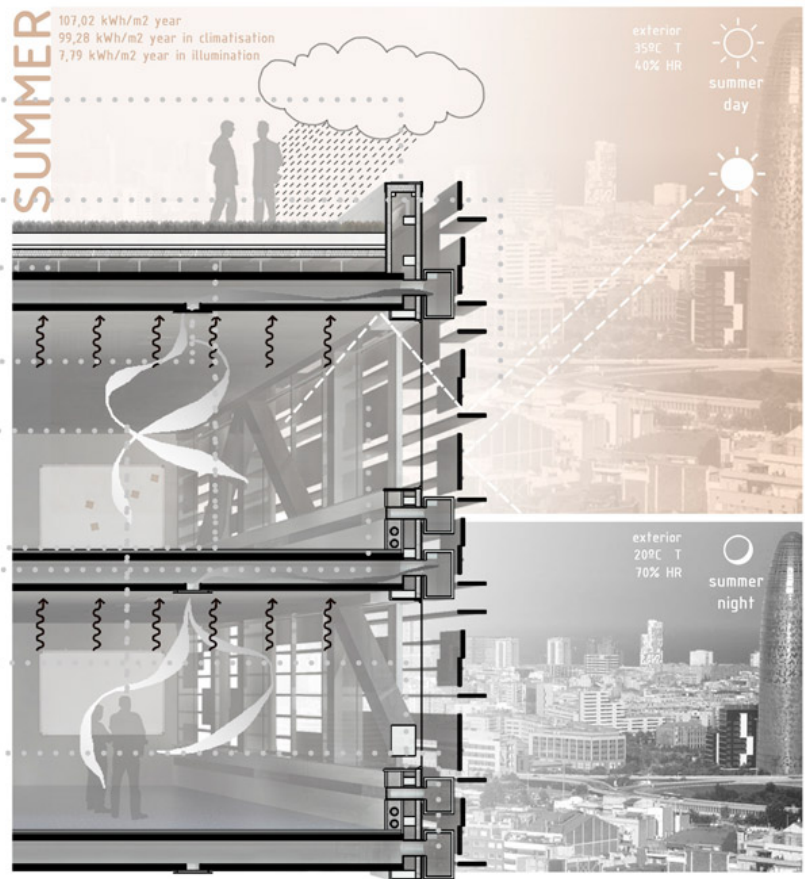
We propose a building designed with independent components that can be built industrially as well as assembled on site in order to get a very flexible building for later uses, even its deconstruction.



The architecture has been designed to act as an interface between the weather conditions outside and inside, not as a watertight barrier, but as a membrane that filters and shares the conditions of the environment. The front has an enclosure that efficiently meets all physical requirements of the building - structure, filtering natural light, privacy and service-provider.

-  **Renewable energies**  
90% of the production
-  **118 photovoltaic panels**  
Size: 50\*990\*1645 mm  
Power: 222 W  
Production: 12 kWh/m<sup>2</sup> year (100% of lightning consumption)
-  **Natural lightning and solar radiation control**  
ext. 1000 lx / int. 500 lx
-  **Water tank roof**  
Rainwater captation surface: 172,80 m<sup>2</sup>  
Tank volume: 1731,80 m<sup>3</sup>  
This system uses rainwater for the green roof's irrigation
-  **Natural extraction**  
7% of air renovation through the alveolar slabs
-  **Comfort**  
40-45% radiation  
30-35 % evaporation  
15-20 % convection  
12-15 % conduction
-  **Uroof = 0,29 W/m<sup>2</sup> K**  
**Uwindow = 2,10 W/m<sup>2</sup> K**  
Uframe = 3,10 W/m<sup>2</sup> K  
Uglass = 1,80 W/m<sup>2</sup> K  
solar factor = 0,6
-  **Cooling production**  
95%- District Heating and Cooling  
5%- Fancoils
-  **Efficient heat recovery conduction**
-  **VERDE**  
Environmental Evaluation


Energy performance: A



The metal structure acts as an integrated beam lattice, which support the floors composed of a single span that embraces from facade to façade.



