

Cité du Design

Case study – Building Design studio



Krista Seppänen, Laura Raikamo

Info

Saint-Étienne, France

2009

LIN Architects Urbanists

Client – Saint-Étienne Métropole

Cost – 41,5 million €

Surface – 17 250 m² net area, 21 140 m² total surface area

Cité du Design (City of Design) is an international design center and institution for communication, research and education.

The project is located on the National Manufacture d'Armes, a site of former munitions factory.

France's only UNESCO City of Design

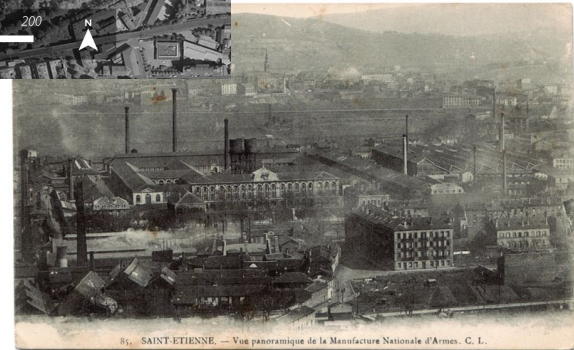
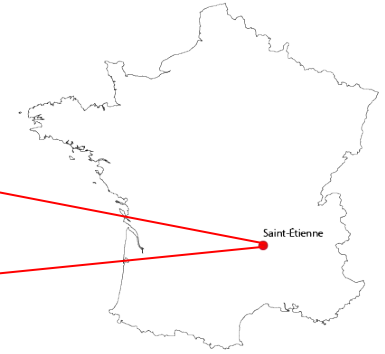
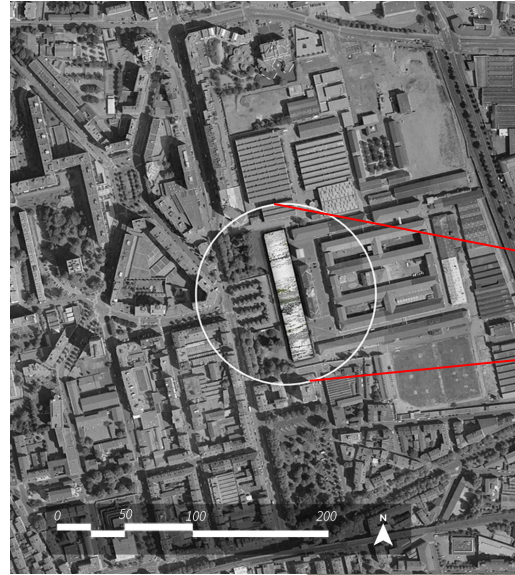


Context

The Cité du Design is a combination of historical buildings and new construction. The project involved the transformation of the Saint-Etienne Manufacture d'Armes, one of the major industrial spaces of the territory. It represented as a first step in the city's redevelopment.

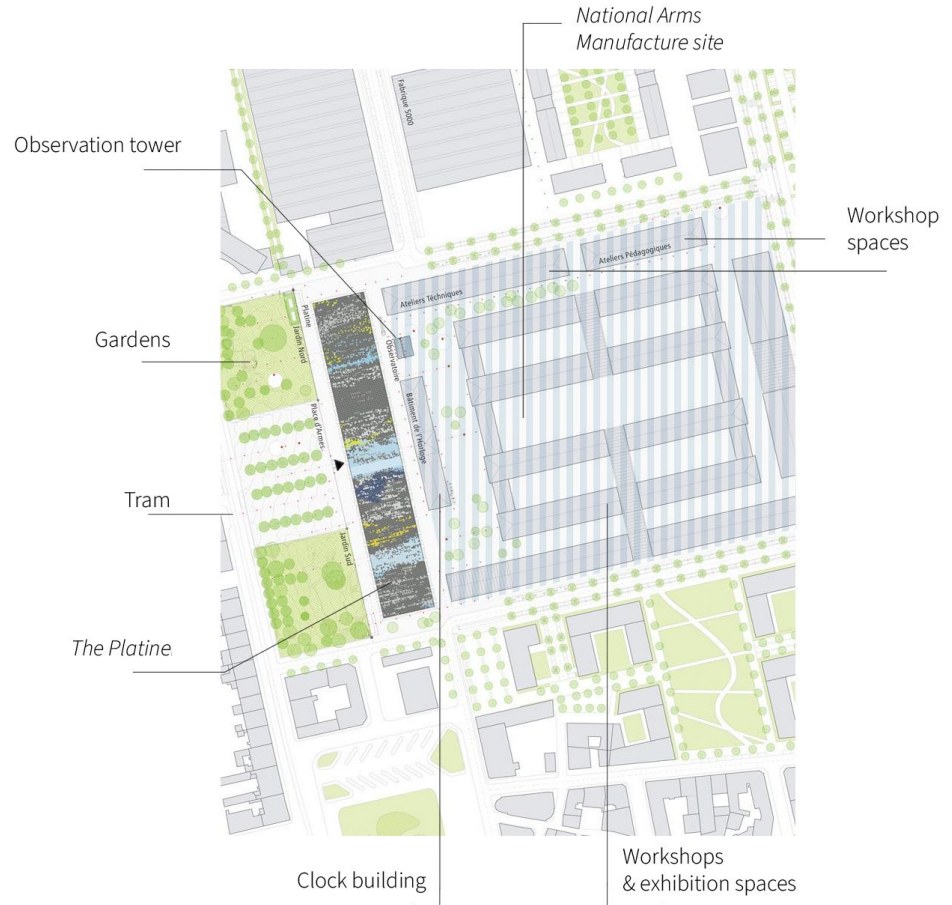
The main elements consist of the restoration of some of the buildings of the old Manufacture, a new building (La Platine), an observatory tower, two gardens, and a large public plaza.

The surrounding old factory facilities include courtyards, internal streets, gardens and open spaces.

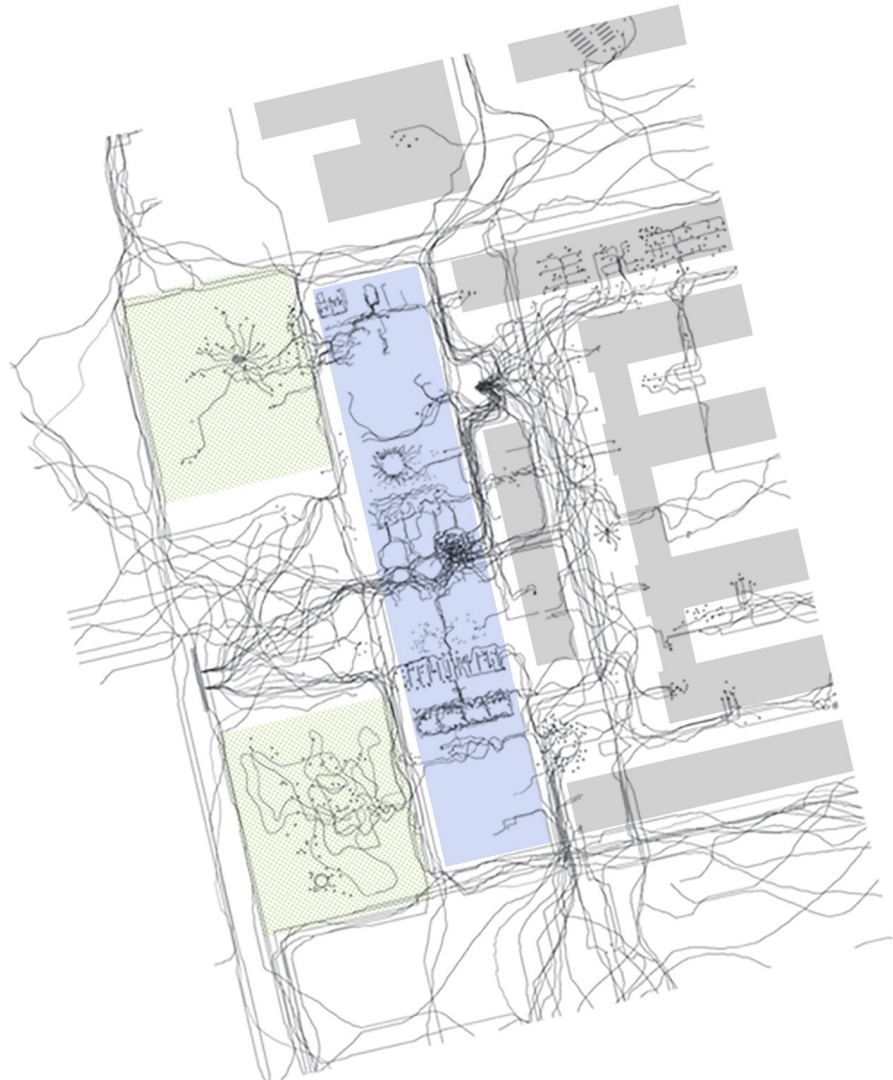


Cité du Design

Protected City of Design consists of old repaired industrial buildings, gardens and a new main building The Platine.



Map of movement



The PLATINE

The main building, entrance to the City of Design when you get of the tram.

Stands for continuity by the isolated and hierarchical buildings.

The appearance differs a lot from the other buildings, the only similarity is the long, slender, shape. It is 200 m long and 32 m wide.

A place of merging and irrigation for the site.



The PLATINE

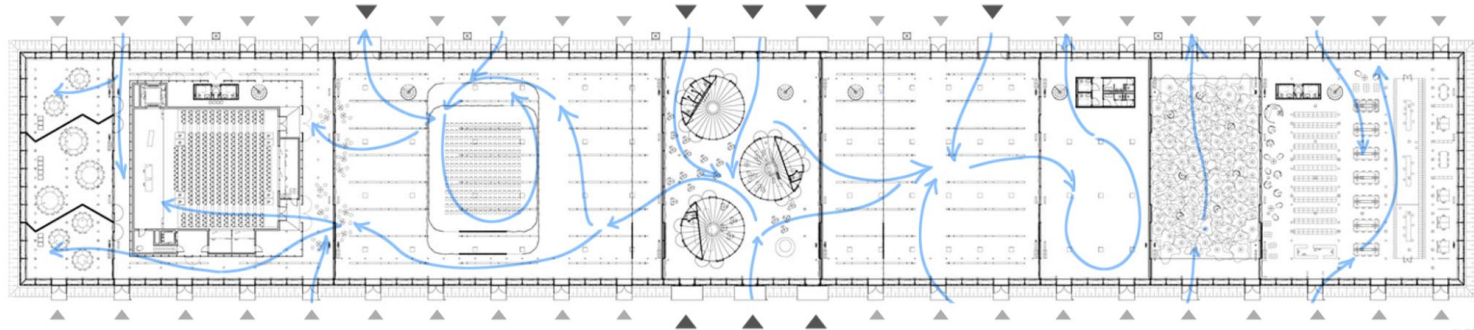
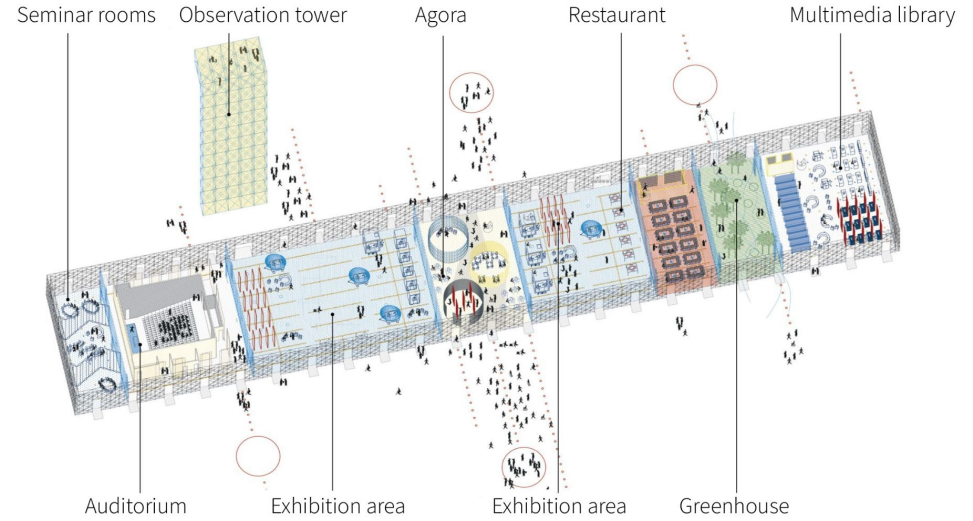


The PLATINE - floor plan

The building consists of open places for experiences and mutual research.

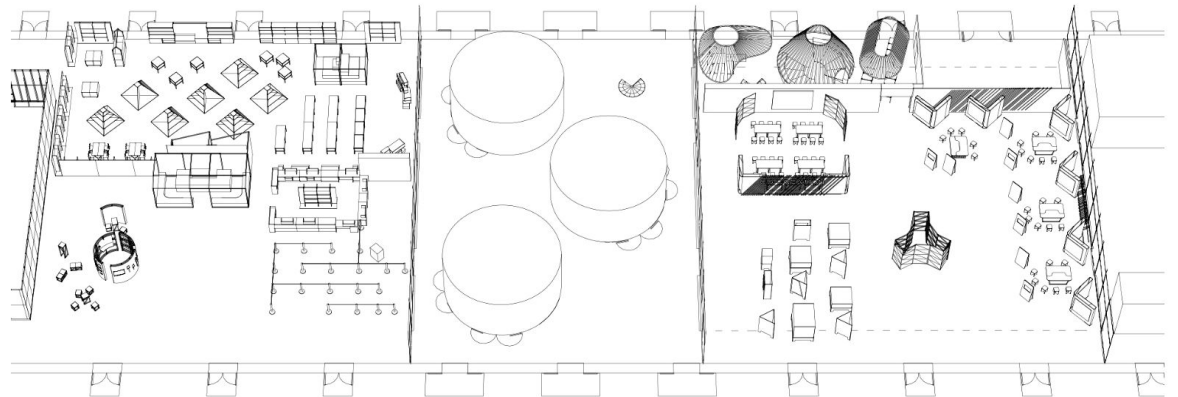
Agora is the center of the building and also a link of the City of Design.

The building has been divided into four sections and the spaces are convertible with glass wall elements based on different needs.

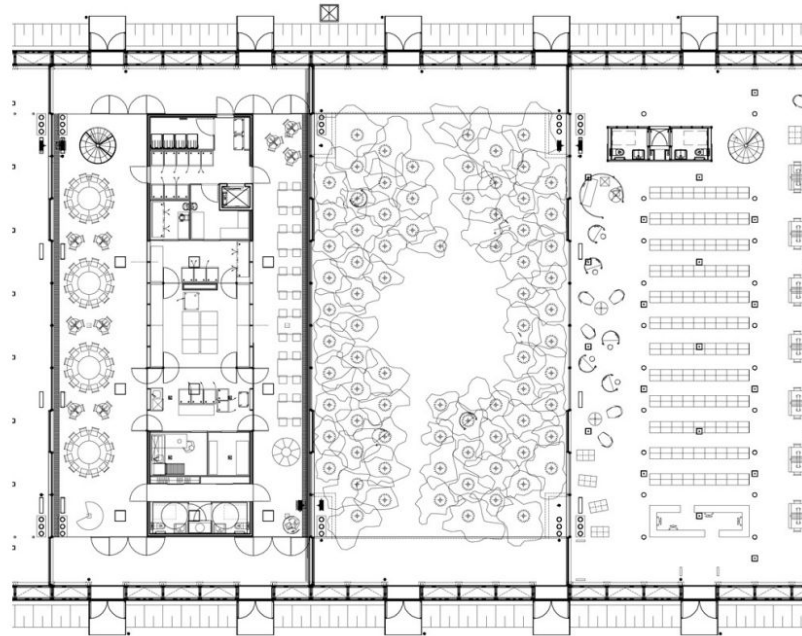


The PLATINE

A closer look of the Agora (in the middle) and exhibition places by its both sides.



The PLATINE - floor plan section 1:400



The restaurant, the Greenhouse and multimedia library

The PLATINE - exterior

Total of 14 000 equilateral triangles of 1,20m per side.

Modulation between opaque and clear. Open and closed play among the surfaces of the building.

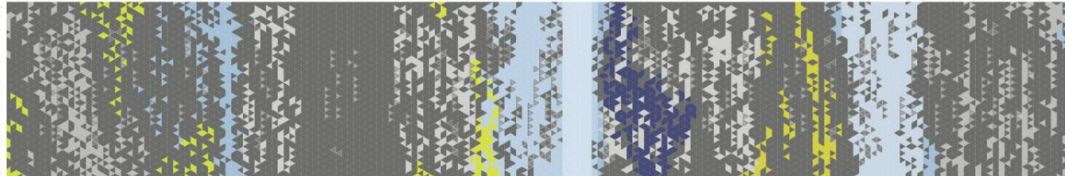
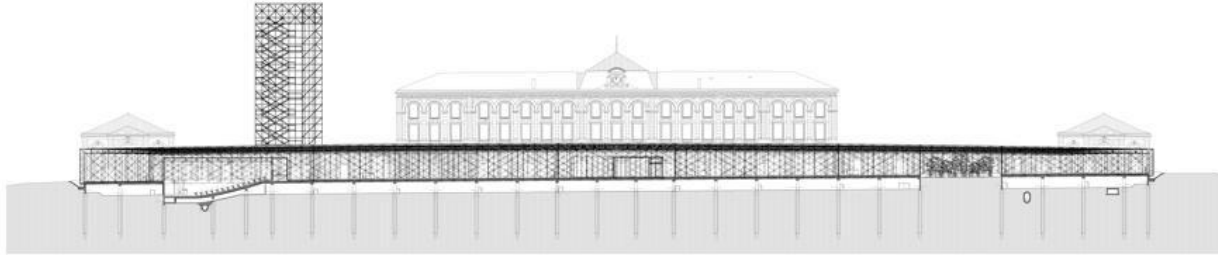
Simple form of the building, the architectural diversity happens on the surface.

Natural light and the changes of the climate are also part of the building materials.



The PLATINE - exterior

The building consists of only a few elements and its low appearance among other buildings is not that monumental apart from the tower Observatory. The colors of the roof change according to the light and climate.



The PLATINE - interior

Inside, the intensity of light are defined by public and semi-public spaces.

The triangle roof identifies strongly the atmosphere.

The architecture is quite industrial and the shades of steel form integrity with the hints of strong color spots.

The atmosphere changes according to the climate outside.

The lighting is in an important role since the need of lighting is relevantly different in different spaces, such as the Greenhouse and the Agora.



Agora



Multimedia library

The PLATINE - interior



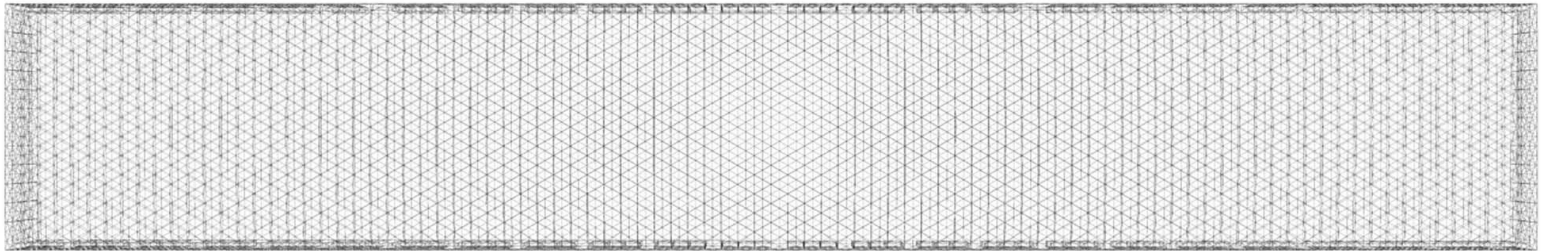
The Greenhouse

The PLATINE - structure

The materials consist of glass, steel and aluminium.

The main idea is the triangle structure that covers the functions inside of it. Some of the triangles can be lifted according to the climate and sun to adjust the right temperature and light into each space.

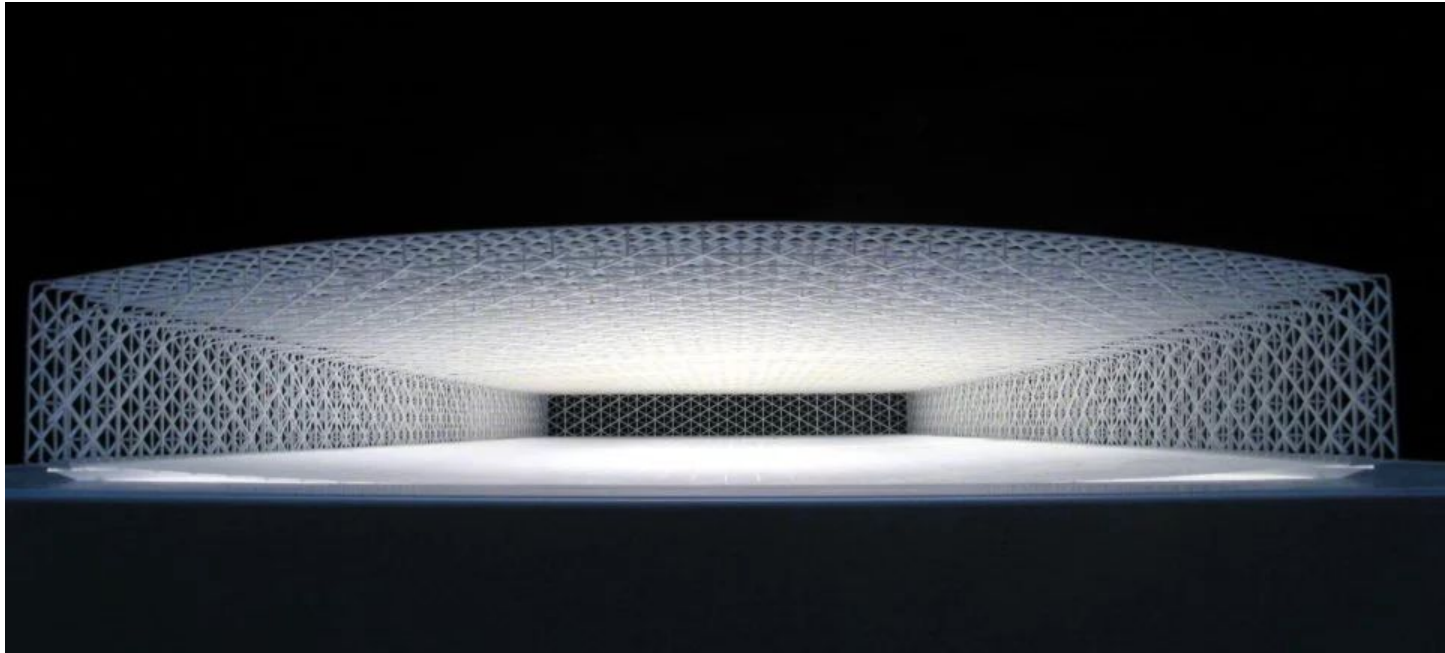
The panels have thermal qualities and it enables solar production. The building is energy efficient. The panels are easily replaced according to the different kinds of needs, for example these can be used as development elements and tested as innovative solar energy materials.



The roof structure and the structure on the side of the building

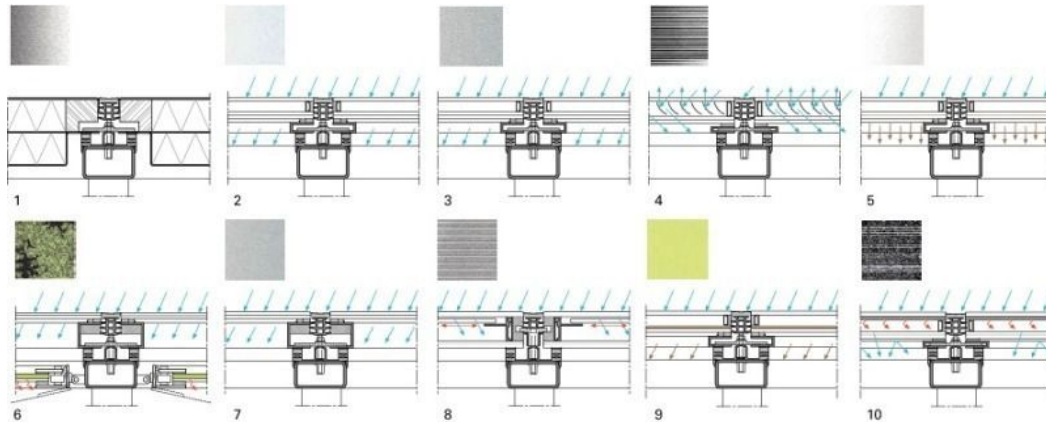
The PLATINE - structure

The distribution of forces in all directions creates a structure that enables a monospace that is free of any intermediate support.

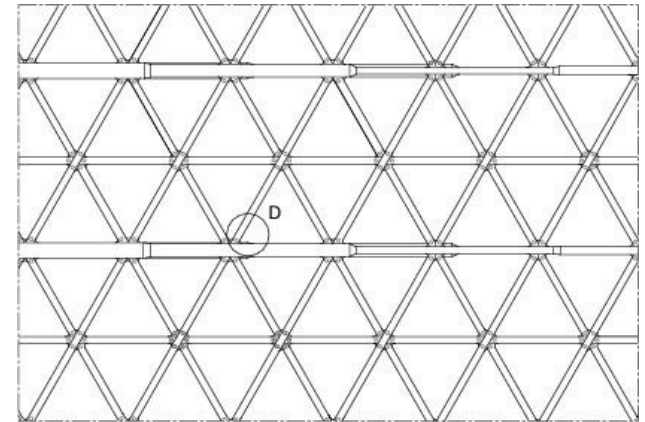


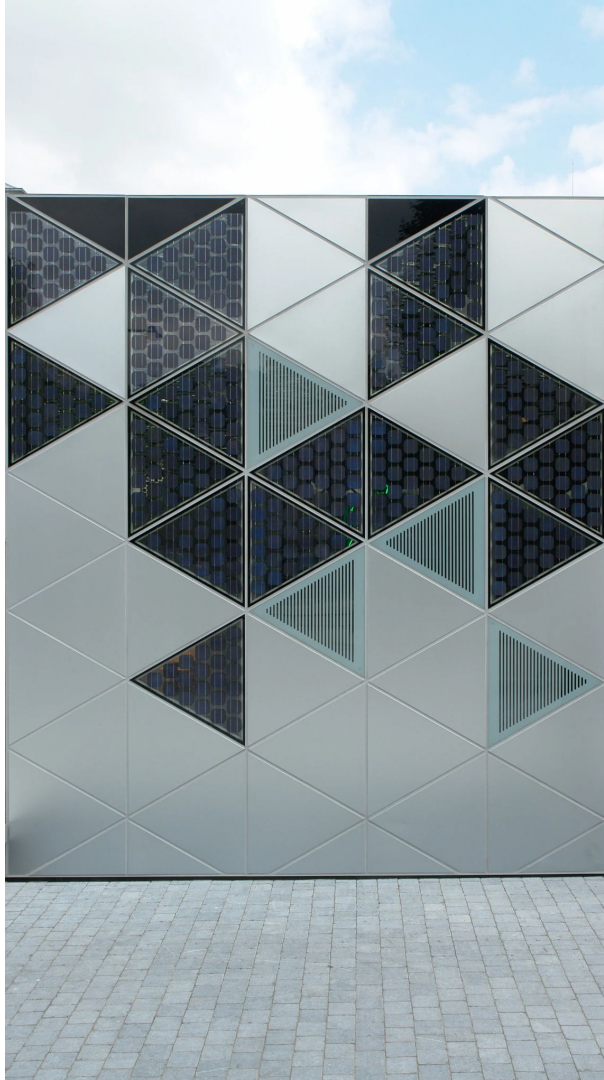
The PLATINE - structural details

The building programs differ so much that there are 10 different kinds of glazing types used that are necessary for the variance in lighting and thermal needs. The modules exhibit properties that are opaque or transparent, insulated or interclimatic, operable or inoperable, even power generating.

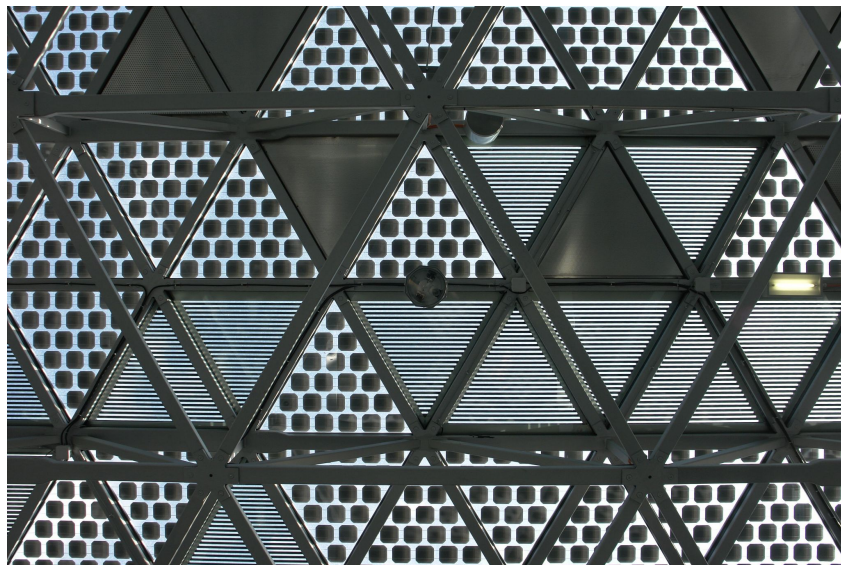


Construction details, panel joints





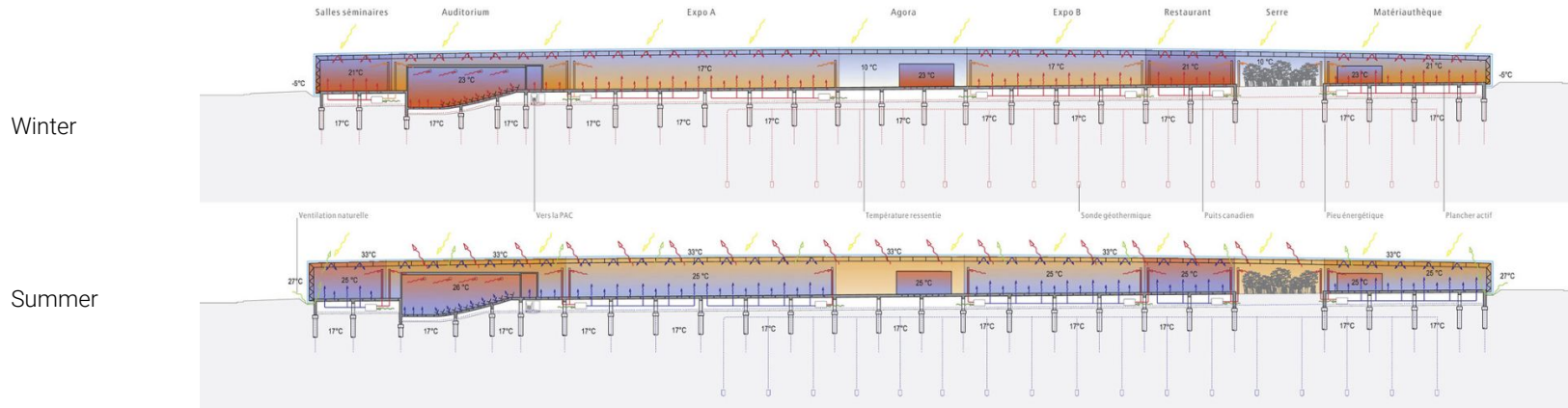
Facade



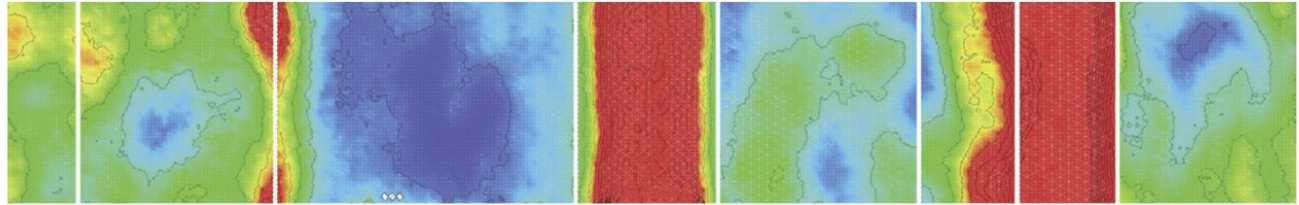
Ceiling

The PLATINE - Interclimactic design

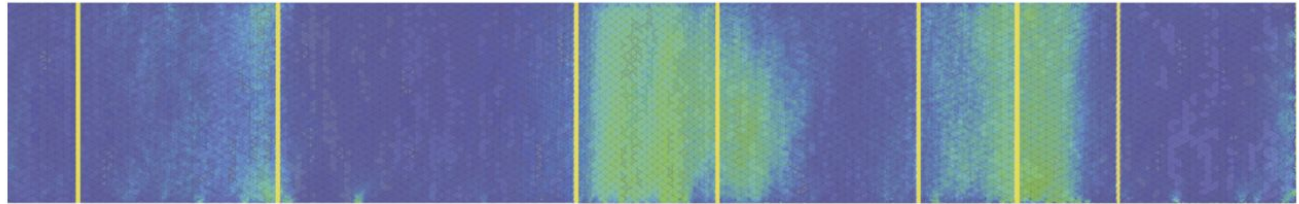
The Platine's climatic design varies according to the area. This regulation allows interior conditions to be adapted to needs without having to treat the entire volume of the Platine.



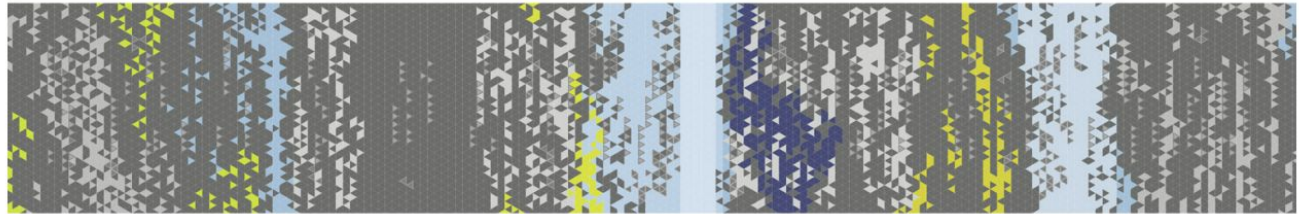
Daylight factor



Sun hours



Panel distribution



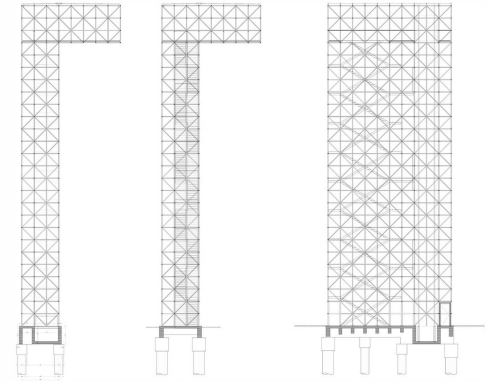
The PLATINE - Observatory

First element, established 2006.

31m high, metal structure.

Directs the interaction between the site potential, but most importantly architecture, future programs and public reception.

Catches the attention by offering a perspective, an identifiable landmark of the City of Design.

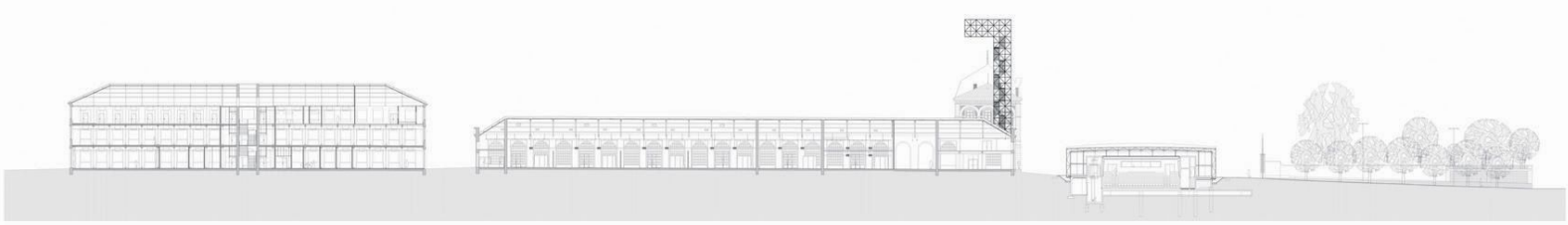


Relationship with the surrounding buildings

Low appearance with the surprisingly high observatory

Also gives glory to the other buildings, even though it is a very glorious building itself, too

It is a very modern, yet the industrial appearance greets the history of the site in a modern way



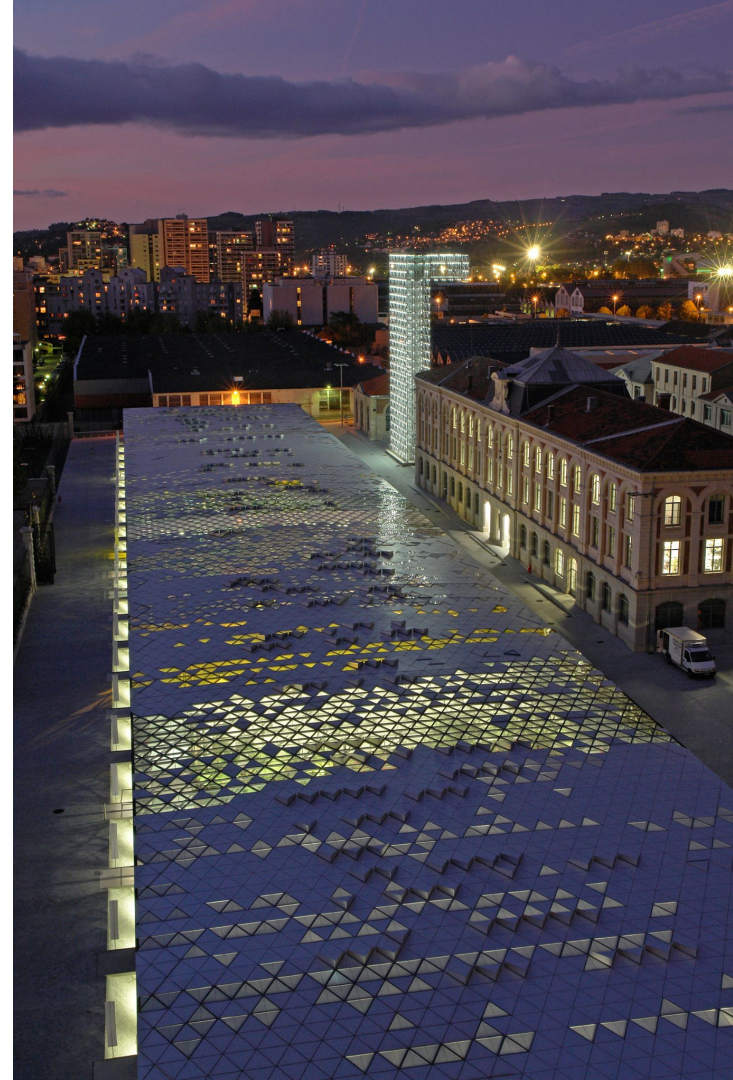
What can we learn?

Facade can be a multifunctional element, that regulates conditions inside the space and even generates energy.

A new building can contrast the surrounding style of architecture but still respects the existing buildings.

Simple forms can also be interesting and functional.

Natural light can be used as a building material.





Thank you!

References

Information

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Images

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