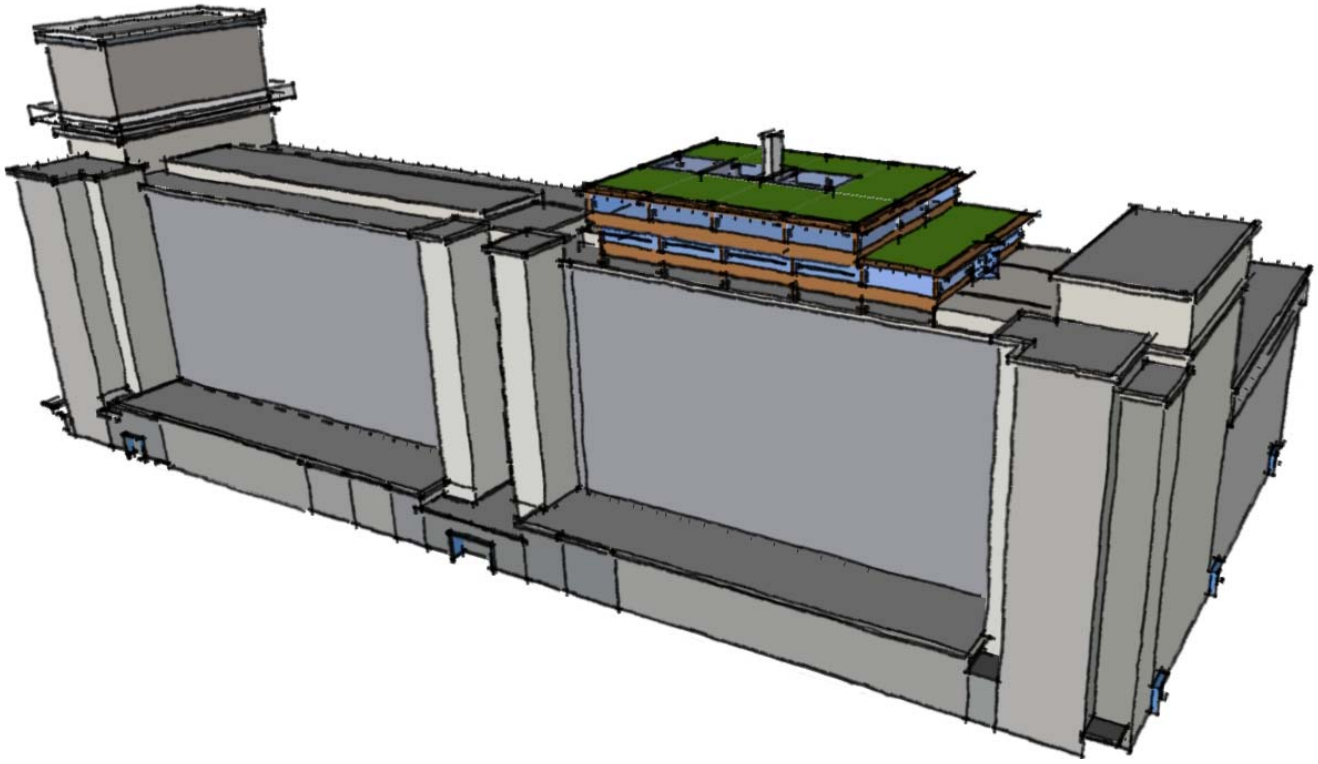
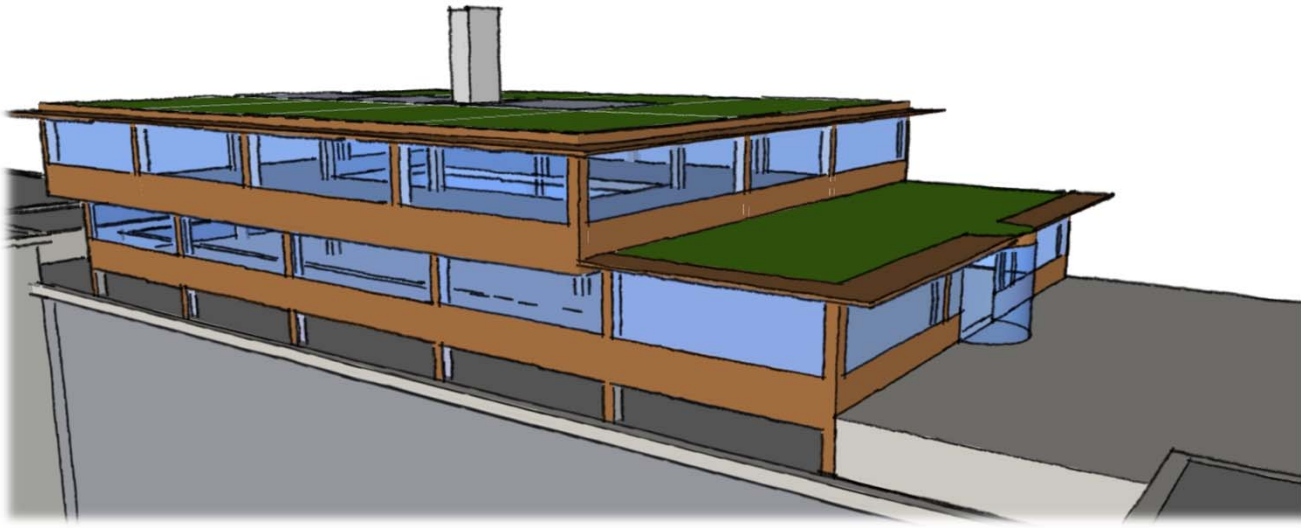
Final Design:
Klokgebouw



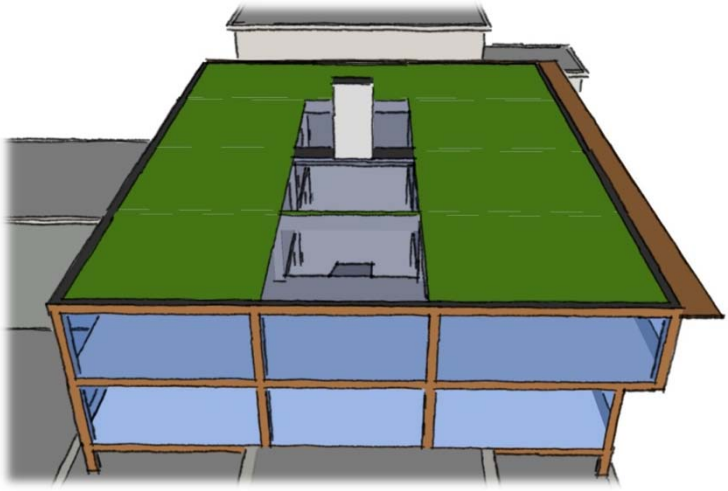
Stan van Dijck 0751895
Pim van de Bunt 0750890

KLOKGEBOUW



The new building on top of the klokgebouw. The entrance of the roof by a square that can be used for playground.

The entrance of the building is by a push tourniquet, no electric needed. The tourniquet functions as a heat buffer between the outside and inside air.



Atrium in the middle of the building for daylight, central plaza and natural ventilation. The atrium connects the offices or classrooms.

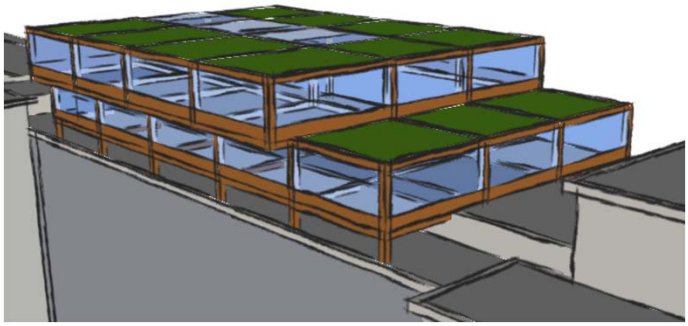
Sun is block on the southeast and southwest facade of the building by permanent slats.

RELATING TO THE ENVIRONMENT

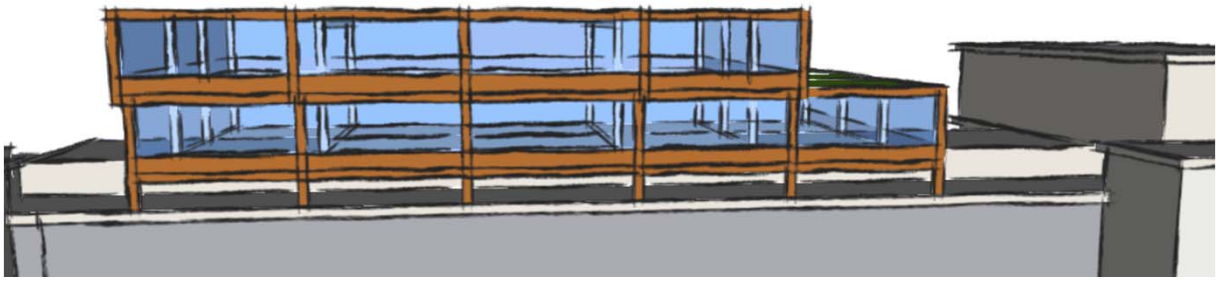
Public transport nearby

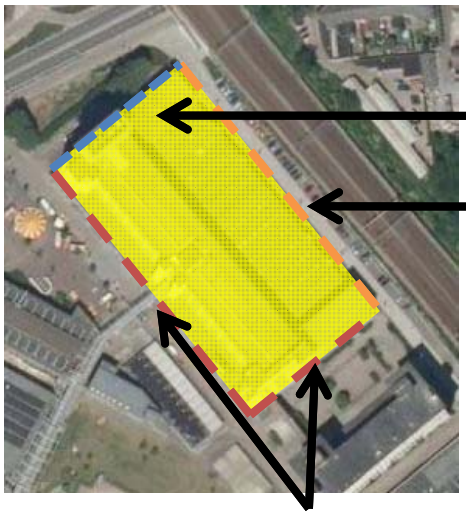
Station Eindhoven Beukenlaan

Different use of material in comparison with the rest of the environment



Big glass facades on the south: using the maximum sun potential



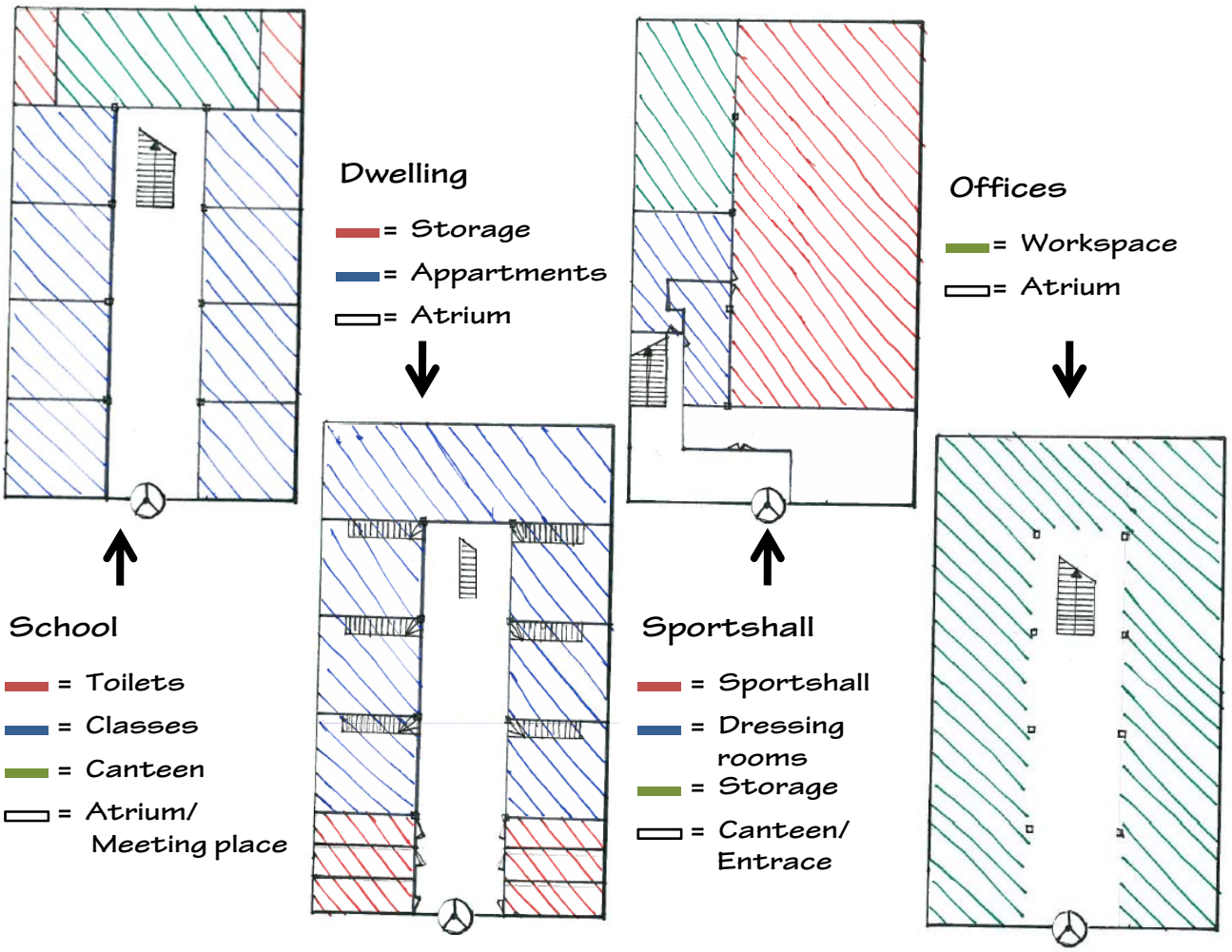


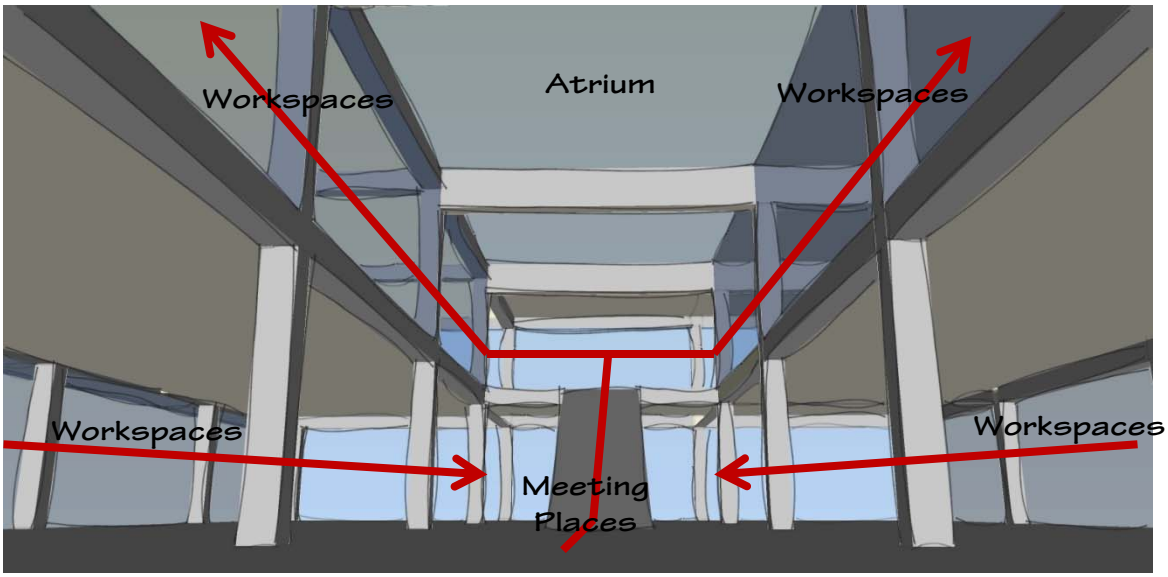
Maximum transparency for maximum daylight entrance

NE facade: low sun activity
Maximum transparency for maximum daylight entrance

SW and SE facade: Intense sun activity
Overhang and/or slats to prevent overheating in summer

DEFINING SPACE





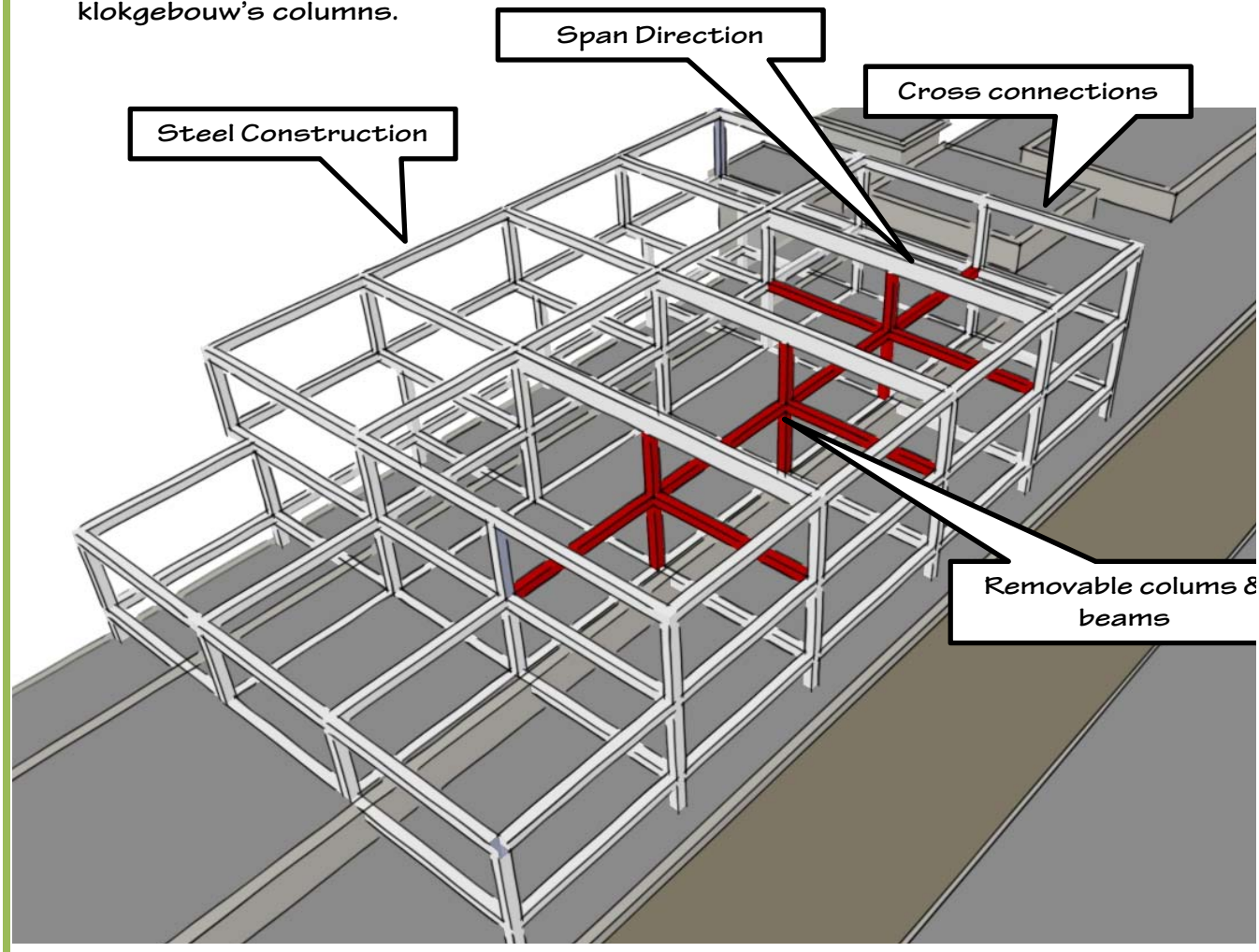
The building is a flexible building with a column structure. The building can easily be used for different functions as: School, Dwelling, Sportshall and offices

This sketch gives you an impression of the building used as an office building, with the atrium in the middle and offices an flex-workspaces on the sides.

Stan van Dijck & Pim van de Bunt

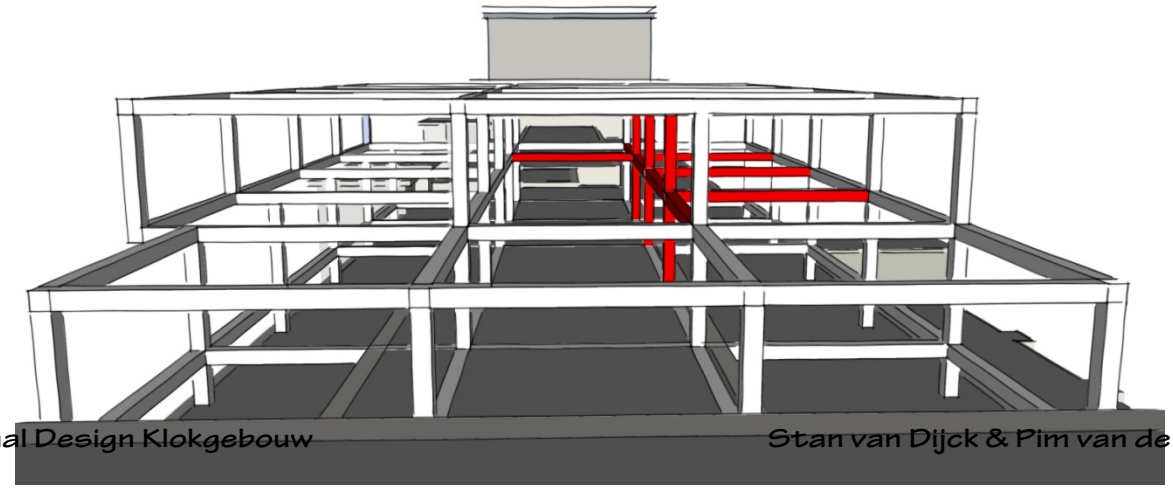
STRENGTH & STABILITY

As shown in the sketch below, the stability and strenght is gained by a steel construction. The construction is situated on top of the klokgebouw's columns.

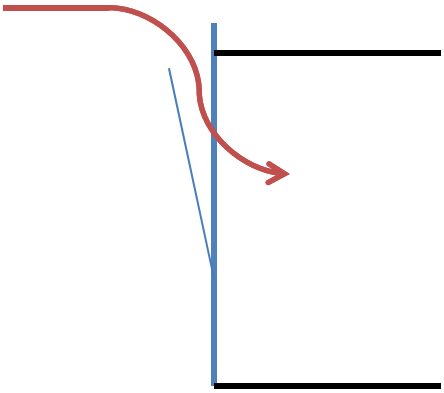


The construction is based on a grid of 7,2 meter by 7 meter, the same as the construction of the Klokgebouw. These sizes can be used for offices, dwelling and classrooms. The building is 36 x 21,5 meter.

The construction is partly removable (red colums & beams). This makes the building adaptable to transform into a sportshal.

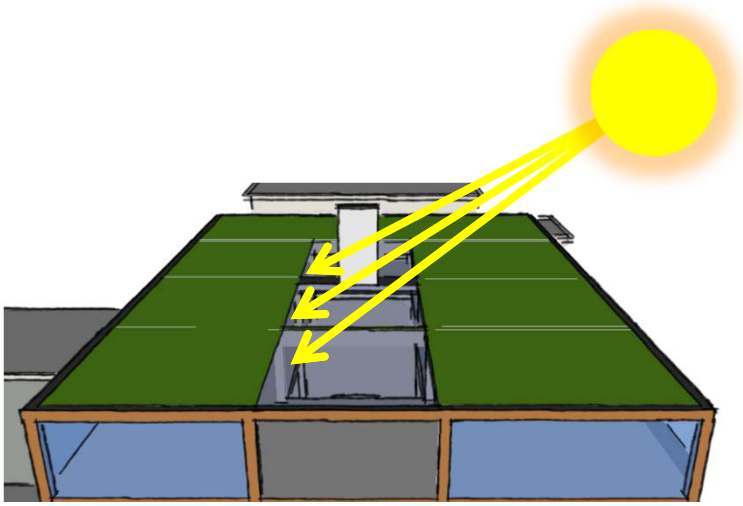


COMFORT



Employees are able to open the windows, to allow natural ventilation

Daylight is able to come through the roof of the atrium, which will light up the offices/ connected to the atrium. This way, the offices will have light from both the atrium and the facade.

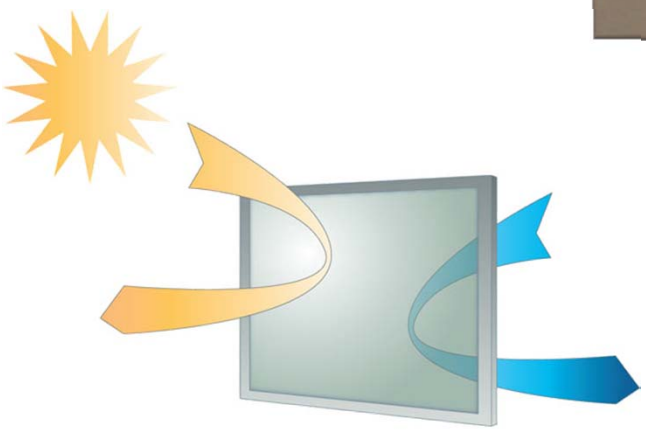


High quality isolated windows allow the interior rooms to catch a lot of light, without seeing the building getting overheated.

EFFICIENT & EFFECTIVE USE OF MATERIAL

Using re-used wood as facade and re-used vegetation grass on the roof

The building is located on a site where lots of buildings are demolished. The construction can be made out of re-used steel from those demolished buildings.

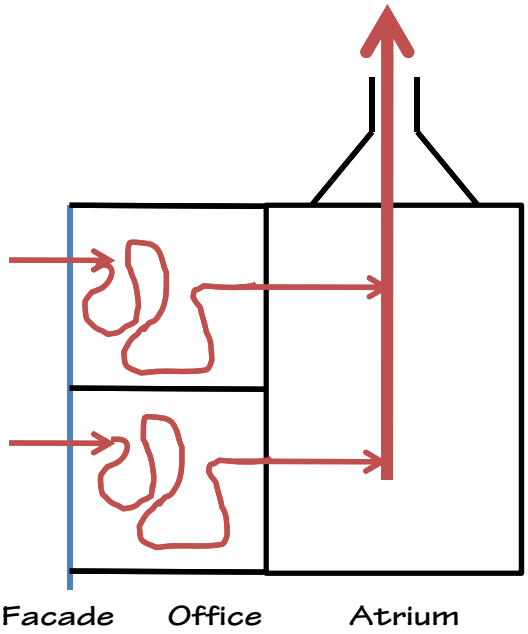


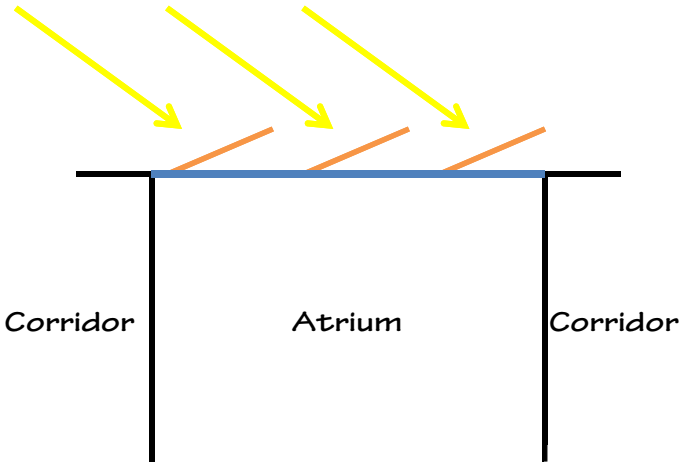
Sun averting glass

EFFICIENT & EFFECTIVE USE OF ENERGY

By using an exhaust pipe and winddependent-ventilation shutters, the building is naturally ventilated.

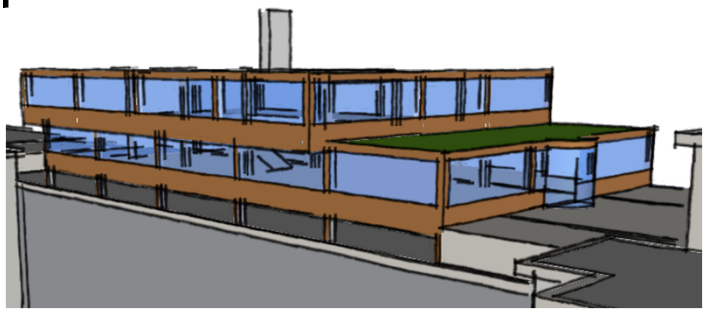
Fresh air enters the building via the ventilation shutters, via shafts it enters the atrium and leaves the building via the exhaust pipe.

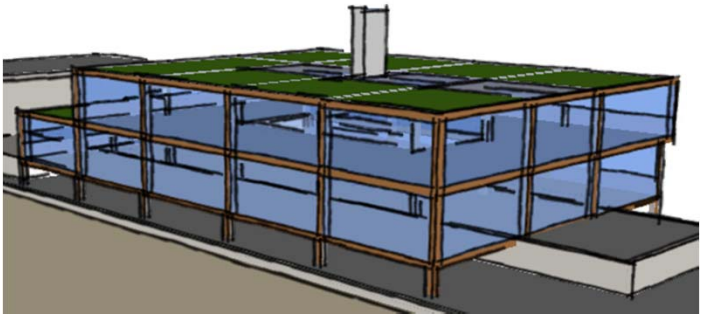




Sun collectors are placed over the entire roof *(this is used for heating up boilers in the dressing rooms and/or dwellings)*

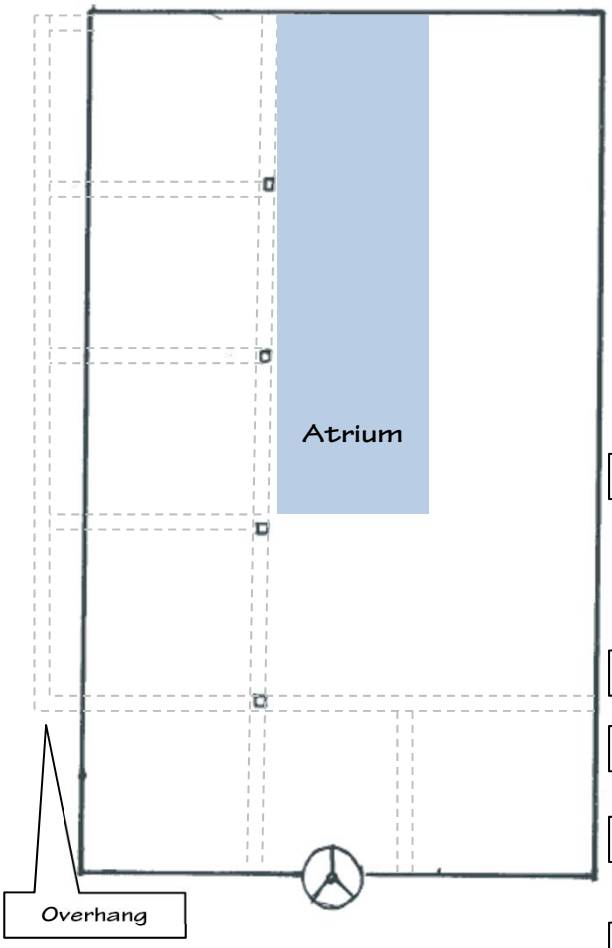
By the atrium roof, the sun collectors also function as shaders in the summer to prevent the building from overheating.





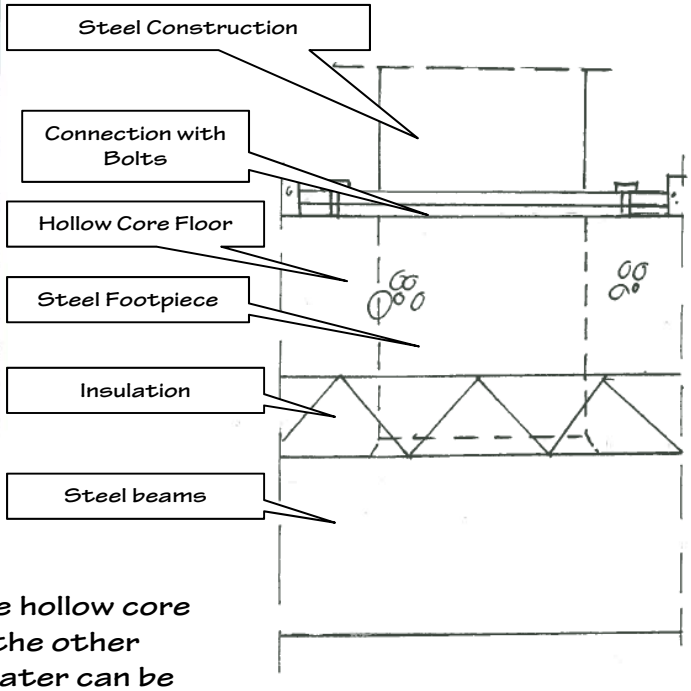
Optimal building situation: complete transparent north facade and heat-exclusion measures for the south facade, to prevent overheating in the summer.

FLEXIBILITY & ADAPTABILITY



The building is very flexible, the construction is based on columns and beams. The columns are placed in front of the facades. Four columns are permanently placed inside the building. They have to carry the first floor.

Because of the height of 7 meters the building can also be used as a sports hall. If they remove the columns and beams. The removable columns and beams are bolted on a standard.



To make the building more flexible the hollow core floor elements have space between the other floor elements. The electricity and water can be transported through this space.

The function of the building is a free choice. If the building will be used for offices flex workspaces will be used. In this way the space is optimal used.

SPIDERDIAGRAM