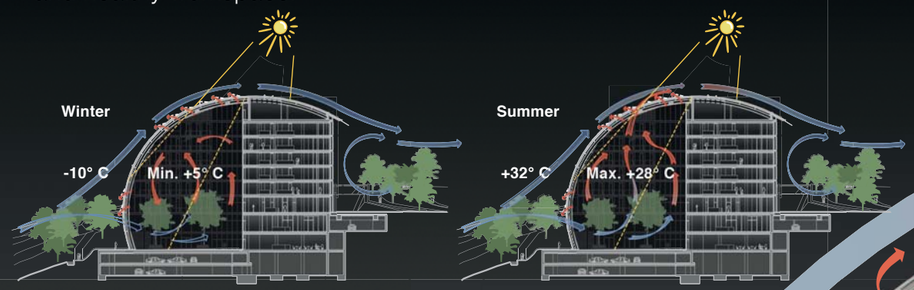
ingenhoven

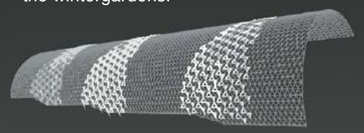
european investment bank, luxembourg • smart passive house

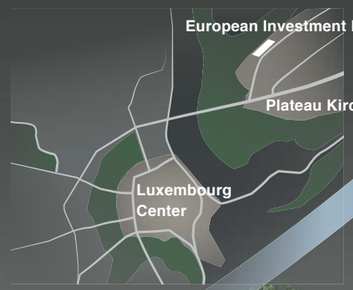
The European Investment Bank in Luxembourg was the first building in continental Europe to be awarded BREEAM excellent. The certification awards the responsible use of resources, the highly energy efficient systems, the outstanding indoor environmental quality and the communicative, flexible and healthy workspace.



Intelligent Skin

Automatically operated glass flaps within the outer skin ensure comfortable temperatures and air flow in the wintergardens.





Building shape enhances venturi effect and supporting hot air exhaust on top of the grid shell

Balcony workspaces and meeting places

Natural ventilated offices

View to the historic centre of Luxembourg city

Cool air from green vally

The use of timber for the facade reduces the amount of embedded energy by 98%

Glass lifts

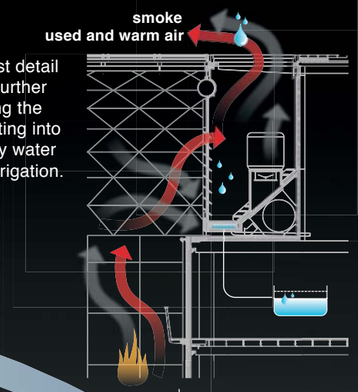
Atrium space serves as gathering place for up to 600 people

Restaurant

Reception

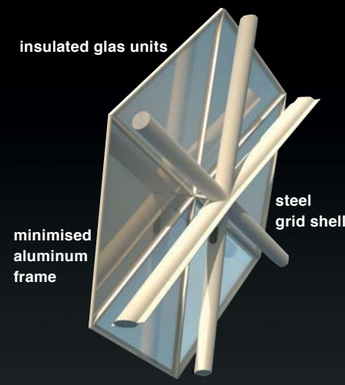
Smoke Exhaust

The integrated smoke exhaust detail at the top of the grid shell is further used for hot air exhaust during the summer, while rain water getting into the space is collected for grey water uses like toilet flushing and irrigation.



Rain Water Harvesting

Collected for irrigation and grey water use



Efficient Construction

The construction has been reduced to minimize the amount of material used (embedded energy) and in the case of the facades to optimise daylight access.

Sustainable Materials

Materials have been selected with life cycle considerations of recycling, embedded energy and transportation.

Natural ventilation

All offices can be naturally ventilated through the atria and wintergardens that act as thermal buffers in winter, ensuring comfortable air temperatures and reducing energy demands for heating.

Boulevard

Well Connected

Bus stops and a direct connection to the bicycle network of Luxembourg reduce individual traffic

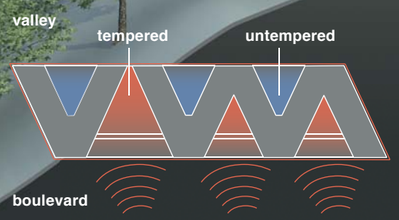
Bicycle Parking

End of Trip Facilities

Showers and lockers for cyclists, promoting carbon neutral travel

Atrium/Winter Garden

Atria and wintergardens reduce traffic noise and act as thermal buffers.



Geothermal

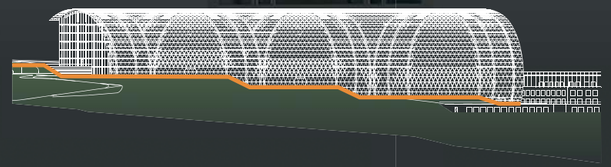
Passive heating and cooling by thermal activated slabs

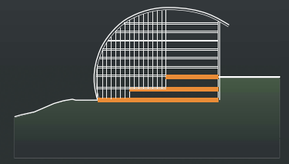
Terraced Public Space

The building houses all common facilities for the EIB including those of the old building. The sloping profile of the site has been utilized to create a stepped landscape of restaurants, cafes, gardens, meeting rooms and informal meeting points, making best use of areas that are partly under ground.

District Heating

The heating energy provided from a central bio-gas co-generation plant is 2x more efficient than energy from a conventional power plant.





The highly flexible office floors are located above the common facilities and enjoy natural daylight from all sides.