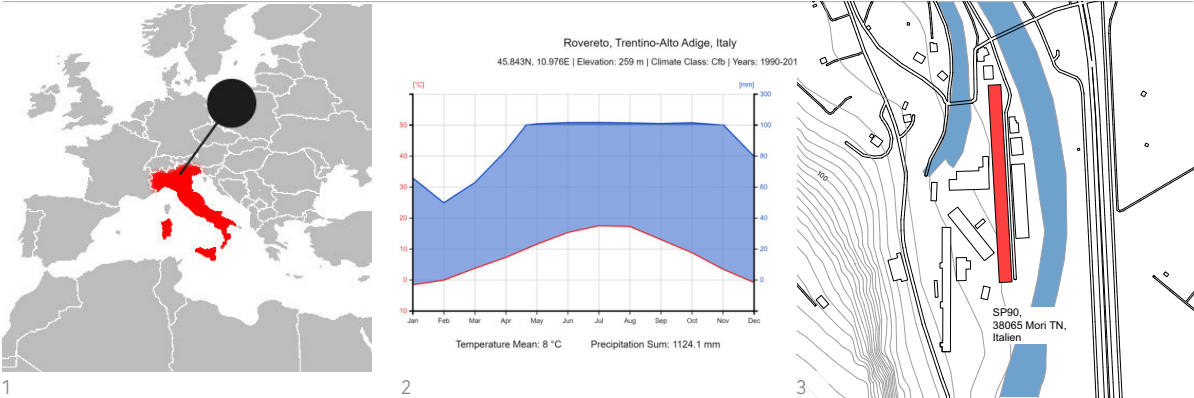
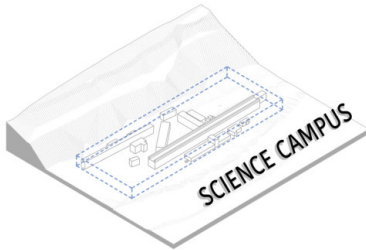


Educational Hub | Alumetal (Montecatini di Mori)

Mori | Italy
Kornelia Mierzwa

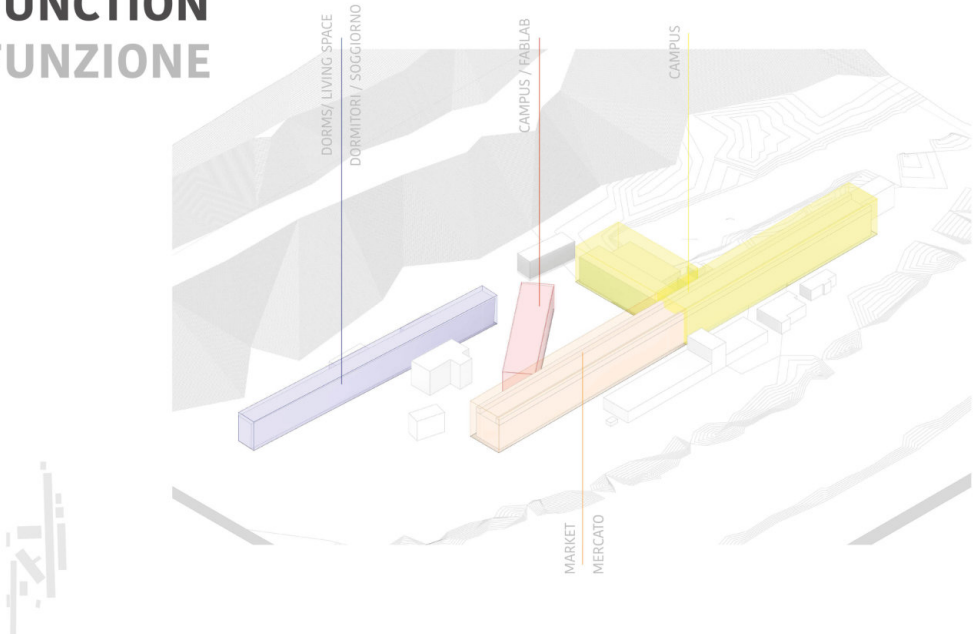


SITE LOCATION
POSIZIONE DEL LUOGO

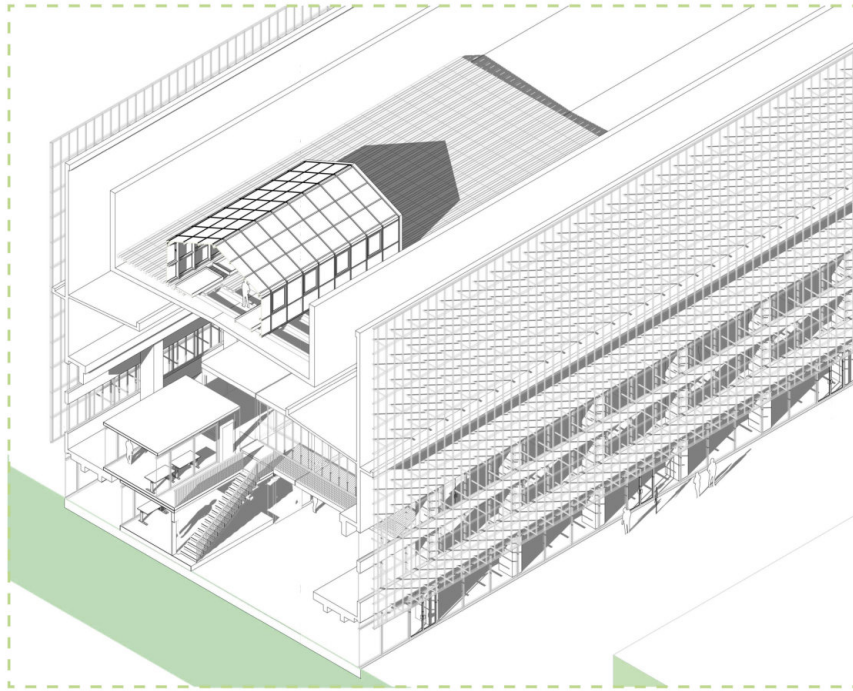


[4]

FUNCTION FUNZIONE

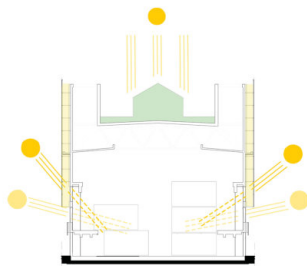


[5]



MICROCLIMATE MICROCLIMA

GARDENS ON THE ROOF- REDUCING
OVERHEATING/ ABSORB SOUTH SUN RADIATION

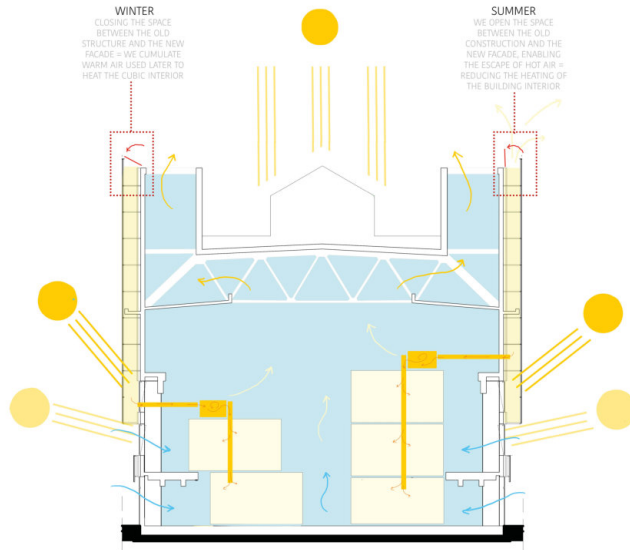


DOUBLE SKIN WALL
- SUPPORT NATURAL
VENTILATION/
ABSORB EAST AND
WEST SUN RADIATION



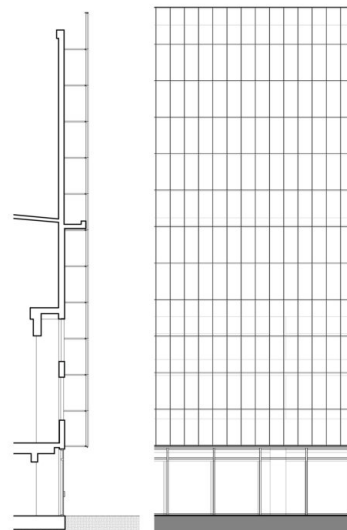
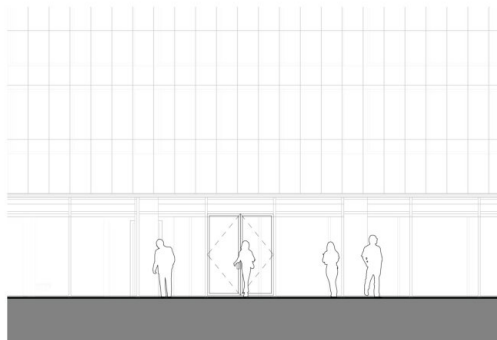
WINTER
CLOSING THE SPACE
BETWEEN THE OLD
STRUCTURE AND THE NEW
FAÇADE = WE CLIMULATE.
WARM AIR USED LATER TO
HEAT THE CUBIC INTERIOR

SUMMER
WE OPEN THE SPACE
BETWEEN THE OLD
CONSTRUCTION AND THE
NEW FAÇADE, ENABLING
THE ESCAPE OF HOT AIR =
REDUCING THE HEATING OF
THE BUILDING INTERIOR



DOUBLE SKIN WALL
- SUPPORT NATURAL
VENTILATION/
ABSORB EAST AND
WEST SUN RADIATION

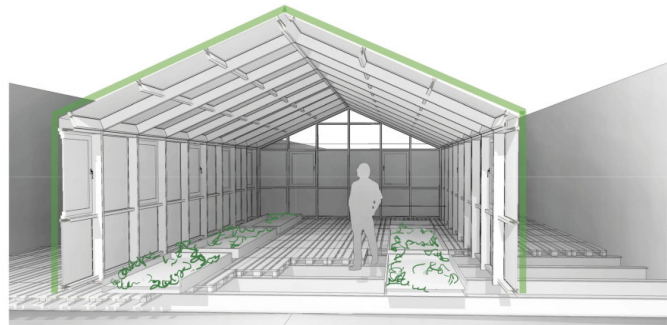
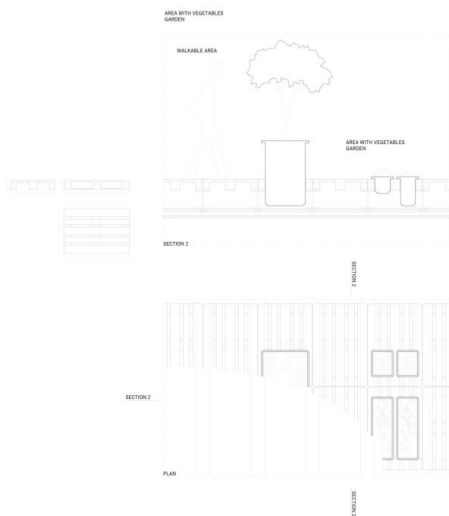
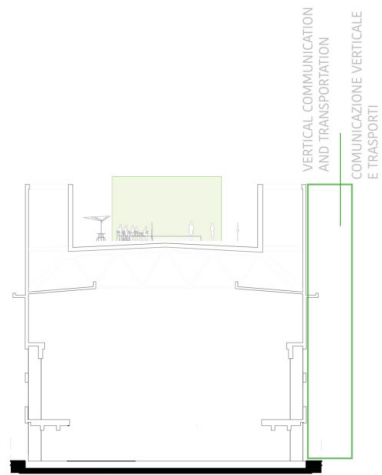
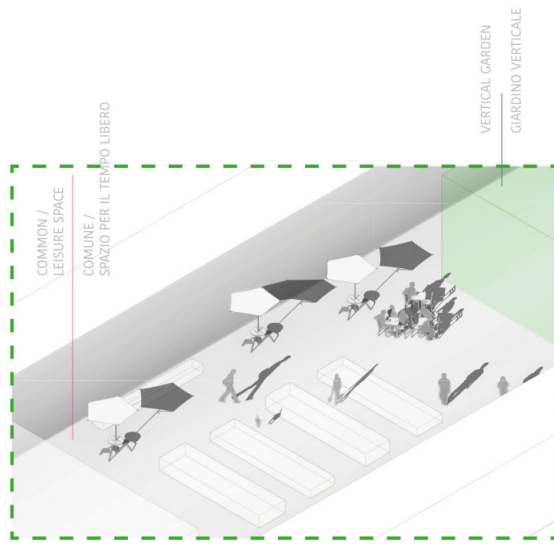
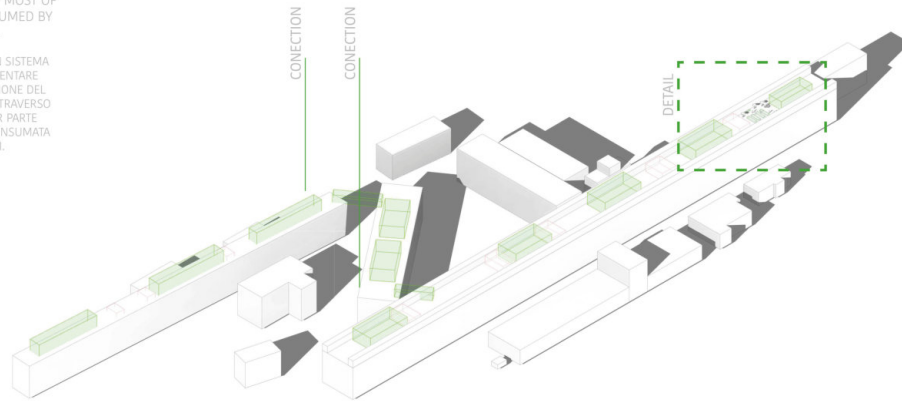
DOPPIA PARETE
DELLA PELLE -
SUPPORTA LA
VENTILAZIONE
NATURALE / ASSORBE
LA RADIAZIONE
SOLARE EST E OVEST



GREEN ROOF

WE ARE GAINING A SYSTEM OF FOOD PRODUCTION BUT ALSO REDUCTION OF OVER-HEATING THROUGH THE ROOF - MOST OF THE ENERGY IS CONSUMED BY THE PLANTS.

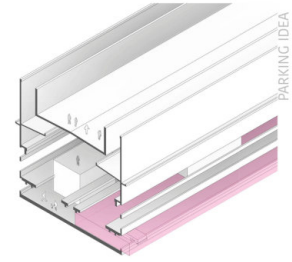
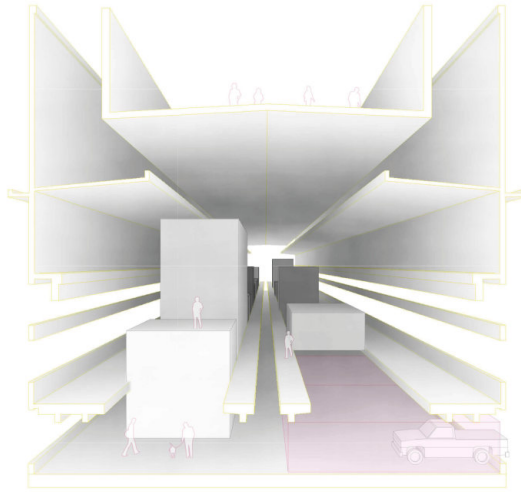
STIAMO OTTENENDO UN SISTEMA DI PRODUZIONE ALIMENTARE MA ANCHE UNA RIDUZIONE DEL SURRISCALDAMENTO ATTRAVERSO IL TETTO: LA MAGGIOR PARTE DELL'ENERGIA VIENE CONSUMATA DAGLI IMPIANTI.



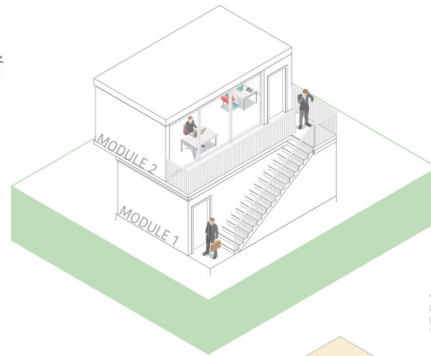
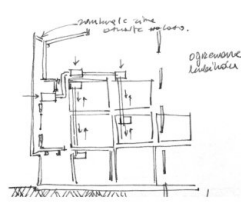
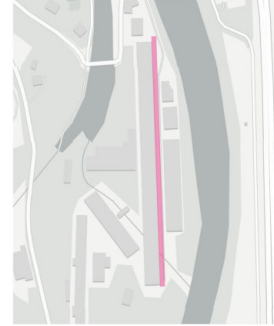
MODULES MODULI

MODULES FOR CLASSES
LECTURES, SOME OF THEM
CONSIST ALSO SPACE FOR
COOKING AND RESTROOMS

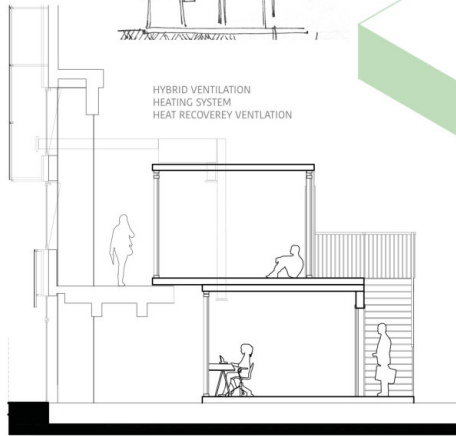
MODULI PER LEZIONI DEL
CORSO, ALCUNI COMPREN-
DONO ANCHE SPAZIO PER
CUCINA E LOCALI



WHILE HIDING CAR UNDER THE BUILDING WE REDUCING ITS OVERHEATING



HYBRID VENTILATION
HEATING SYSTEM
HEAT RECOVERY VENTILATION



* MODULES MATERIALS
PREFABRICATED
ELEMENTS - WOOD +
TRANSPARENT MATERIAL

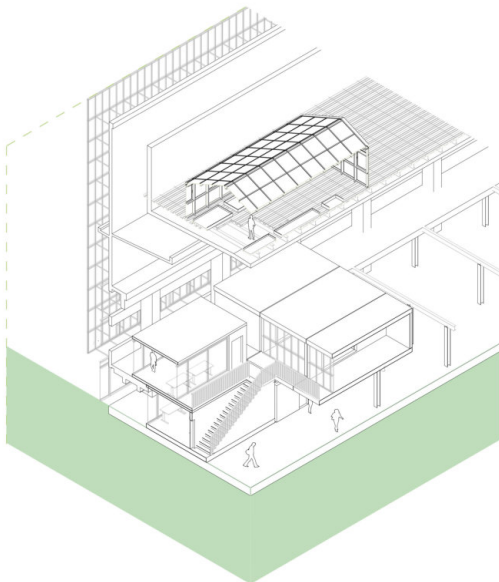
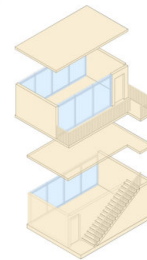
POLYCARBONATE



+

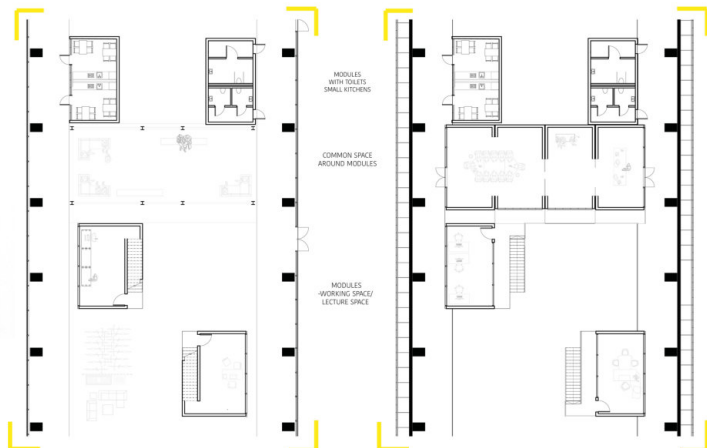


CLT / TIMBER



GROUND FLOOR

FIRST FLOOR



MODULES WITH TOILETS
SMALL KITCHENS

COMMON SPACE
AROUND MODULES

MODULES
WORKING SPACE/
LECTURE SPACE



Geography | Topography | Vegetation

Mori is on east from Riva del Garda (at the north-east corner of Lake Garda). The town is located at the southern edge of the Italian Alps, near the Dolomites with moderate climate. [1]

Building volume | Zoning

Quite a massive and long abandoned building, formerly a factory. The building is part of a complex located right on the river Adige and next to the A22 motorway.

Building shell | Shadow | Ventilation

The building is part of a larger former factory complex. An oblong concrete form with a rectangular shape lies right next to the river and not far from the A22 motorway. The form of the building is adapted to ensure adequate natural ventilation inside. Windows located on both sides of the building. At the top of the building, there are also lightening openings as well as the escape of warm humid air. Thanks to the location in relation to the sides of the world - north south - the building does not overheat from the south sun. On the other hand, you can observe overheating of the interior from the west and east when the sun is at its lowest.

Material | Construction | Building techniques

The building is mainly made of concrete, steel and glass. The proposed solutions illustrate the adaptation of the interior for educational purposes using glued laminated timber / clt modules, steel as well as a polycarbonate external facade.

Sustainability | Energy | Ecology

Thanks to the existing building structure, it provides adequate vertical ventilation, which significantly reduces energy consumption for cooling the interior. The polycarbonate second skin of the building in summer reduces overheating of the main structure of the building and accumulates heat during winter.

Utilities

former factory building, future function unknown. the project proposal illustrates the educational hub

Additional text

The revitalization project also offers a car park - hidden under the structure of the building, along the eastern side of the building.

On the roof there is a proposal of „Green Path” which, thanks to the combination of all remaining roofs, is to be a green path full of gardens and places to relax. In addition, plants are designed to absorb some solar radiation.

[1] https://en.wikipedia.org/wiki/Mori,_Trentino

Picture Credits

[1] Robinson. Map of the World - single color. Available from: <https://freevectormaps.com/world-maps?ref=top-nav> [26.06.2020]

[2] <https://climatecharts.net/>

[3] source unknown

[4] illustration by Kornelia Mierzwa;

pictures from Google Maps: [https://www.google.pl/maps/place/Alumetal+\(Montecatini+di+Mori\)/@45.8362761,10.9995105,3a,75y,320h,90t/data=!3m8!1e1!3m6!1sAF1QipMg3wqR_SN-ZyTWtgS1B2ZPqHFWUERMwW_rjEfx!2e10!3e11!6shhttps:%2F%2Flh5.googleusercontent.com%2Fp%2FAF1QipMg3wqR_SNZyTWtgS1B2ZPqHFWUERMwW_rjEfx%3Dw86-h86-k-no-pi-10-ya-320-ro-0-fo100!7i7032!8i3516!4m5!3m4!1s0x47820f6478f24d5f:0x2429f920dfd5b72d!8m2!3d45.8364779!4d11.0004023](https://www.google.pl/maps/place/Alumetal+(Montecatini+di+Mori)/@45.8362761,10.9995105,3a,75y,320h,90t/data=!3m8!1e1!3m6!1sAF1QipMg3wqR_SN-ZyTWtgS1B2ZPqHFWUERMwW_rjEfx!2e10!3e11!6shhttps:%2F%2Flh5.googleusercontent.com%2Fp%2FAF1QipMg3wqR_SNZyTWtgS1B2ZPqHFWUERMwW_rjEfx%3Dw86-h86-k-no-pi-10-ya-320-ro-0-fo100!7i7032!8i3516!4m5!3m4!1s0x47820f6478f24d5f:0x2429f920dfd5b72d!8m2!3d45.8364779!4d11.0004023)

„landmark” archive photo: https://www.youtube.com/watch?v=9fYRu_FUPhk&t=195s&ab_channel=ArchivioNazionaleCinemas%27Impresa

[5] illustration by Kornelia Mierzwa

sites 2-5: illustrations by Kornelia Mierzwa