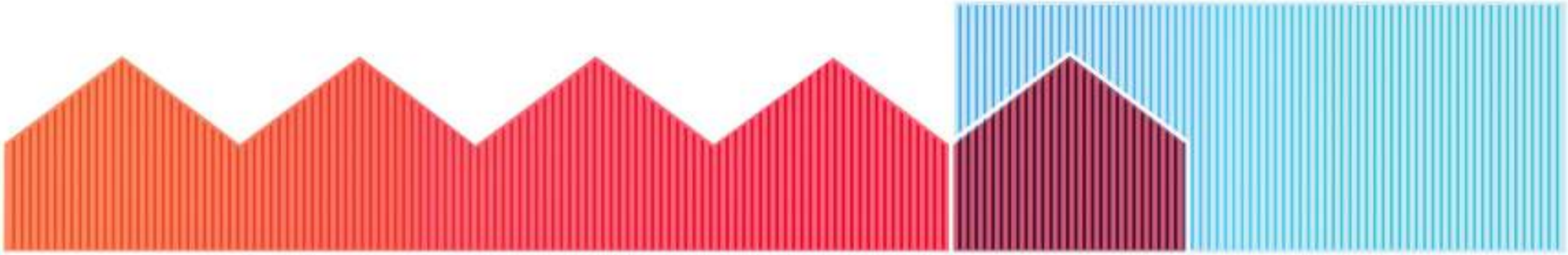


MAISON COIGNET URBAN PARK

SAINT-GOBAIN MULTI COMFORT STUDENT CONTEST 2020

G & S

GILMUTDINOVA
KAMILA

SEMENOVA
VALERIIA

95061

Tutor:
KOKORINA OLGA

5th year

Saint Petersburg State
University of Architecture and
Civil Engineering

LOCATION OF PROJECT SITE

- Existing roads
- Projected roads
- Projected pedestrian paths
- Bus routes
- Bus stops
- Railway
- Railway stations
- Metro stations
- Project site
- Historical buildings

S.W.O.T. ANALYSIS

STRENGTHS

- Water connection
- Historical context
- Natural landscape
- Visual characteristics

WEAKNESSES

- Isolated location between the river and the railway
- Functional insufficiency
- Industrial areas
- Lack of pedestrian connectivity

OPPORTUNITIES

- Connection to the embankment
- Proximity to the Olympic village and the new transport hub
- Adaptive use of industrial buildings

THREATS

- Close location of the railway
- Unfavorable criminal environment
- Road transit

PROBLEM

Saint-Denis is an uncomfortable area for living with an unfavorable criminal situation and a poor infrastructure.

These factors contribute to the outflow of the socially active segment of the population and contribute to the formation of the ghetto.

GOAL

Creating a favorable environment that promotes the "social improvement " of the existing population of the district and attracts new more affluent residents.

OBJECTIVES

- to form a cultural and educational center
- create different types of economical and sustainable housing
- create a friendly neighborhood
- create safe, accessible and functional public spaces
- provide access to water
- create a safe transit through the railway
- provide noise protection from the railway

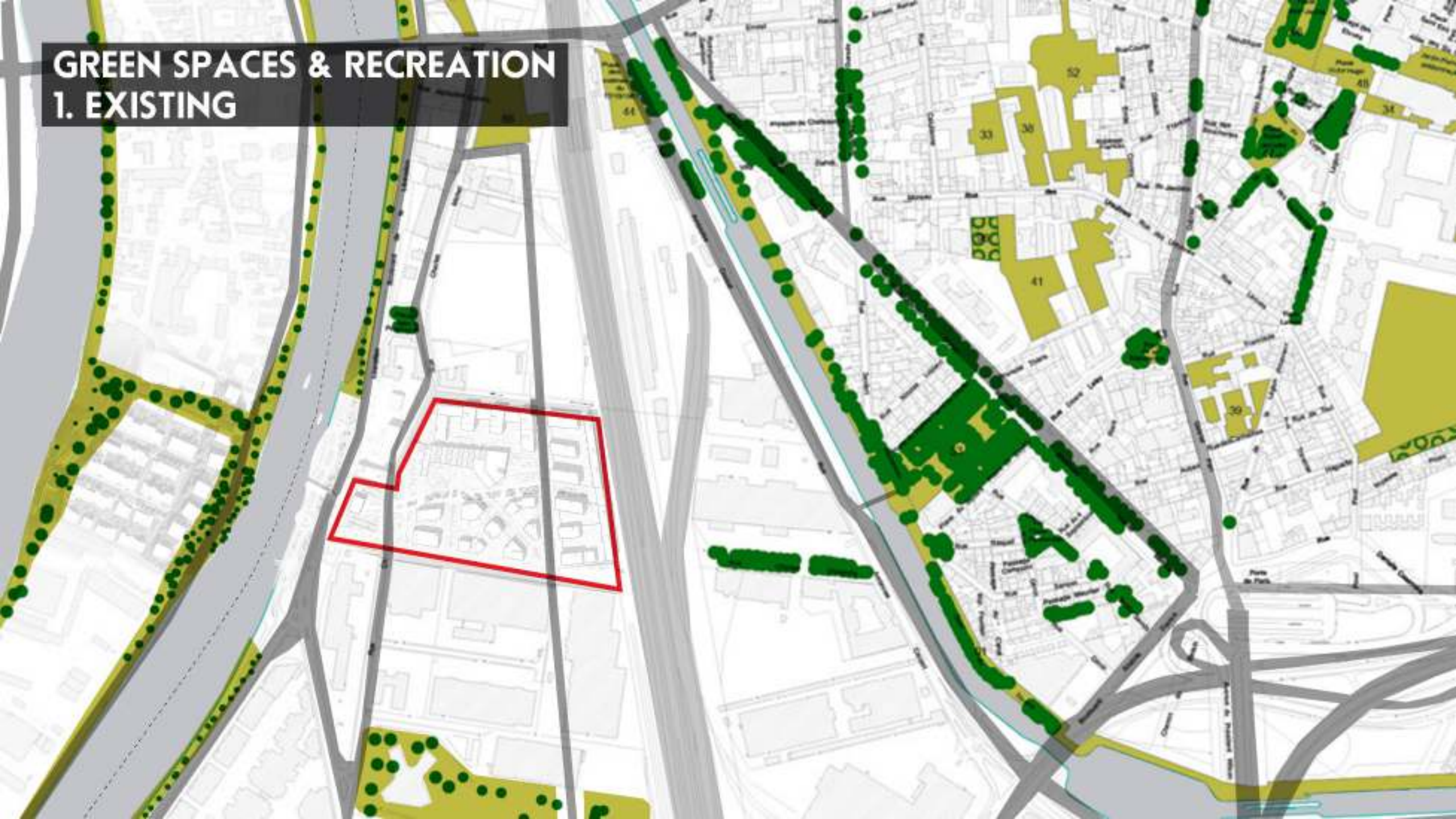
CUSTOMER JOURNEY MAP
THE CONSUMERS - WHO ARE THEY?

Gil (29) и Inez (25)
A young couple. The husband is a teacher at the school, the wife works the concrete museum

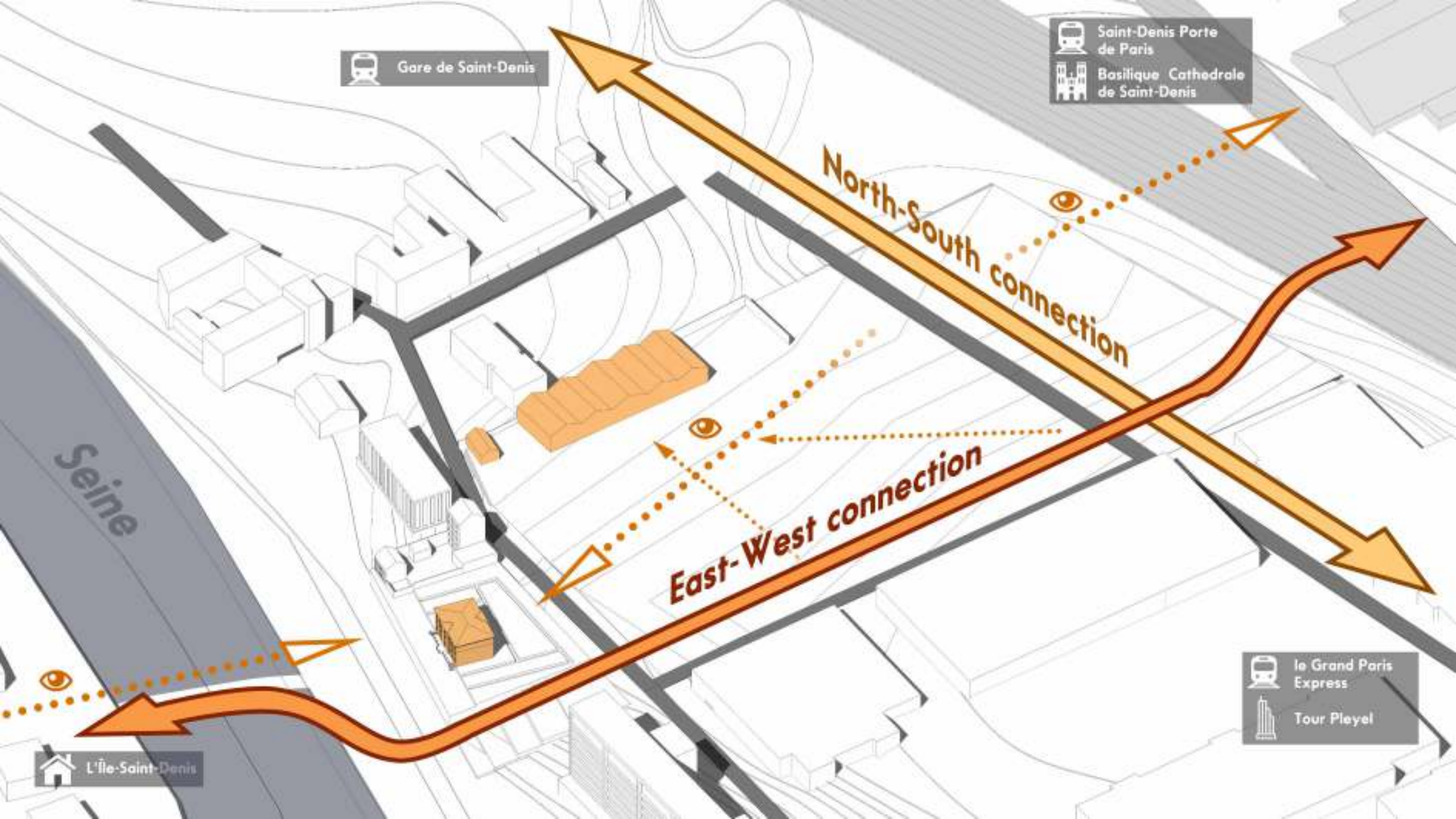
Samuel (36), и Kristin (34), daughter Gloria (8)
A young family with a child. Husband, IT professional, wife is a fitness trainer

Malik (47)
Businessman.
Owner of an oriental sweet shop

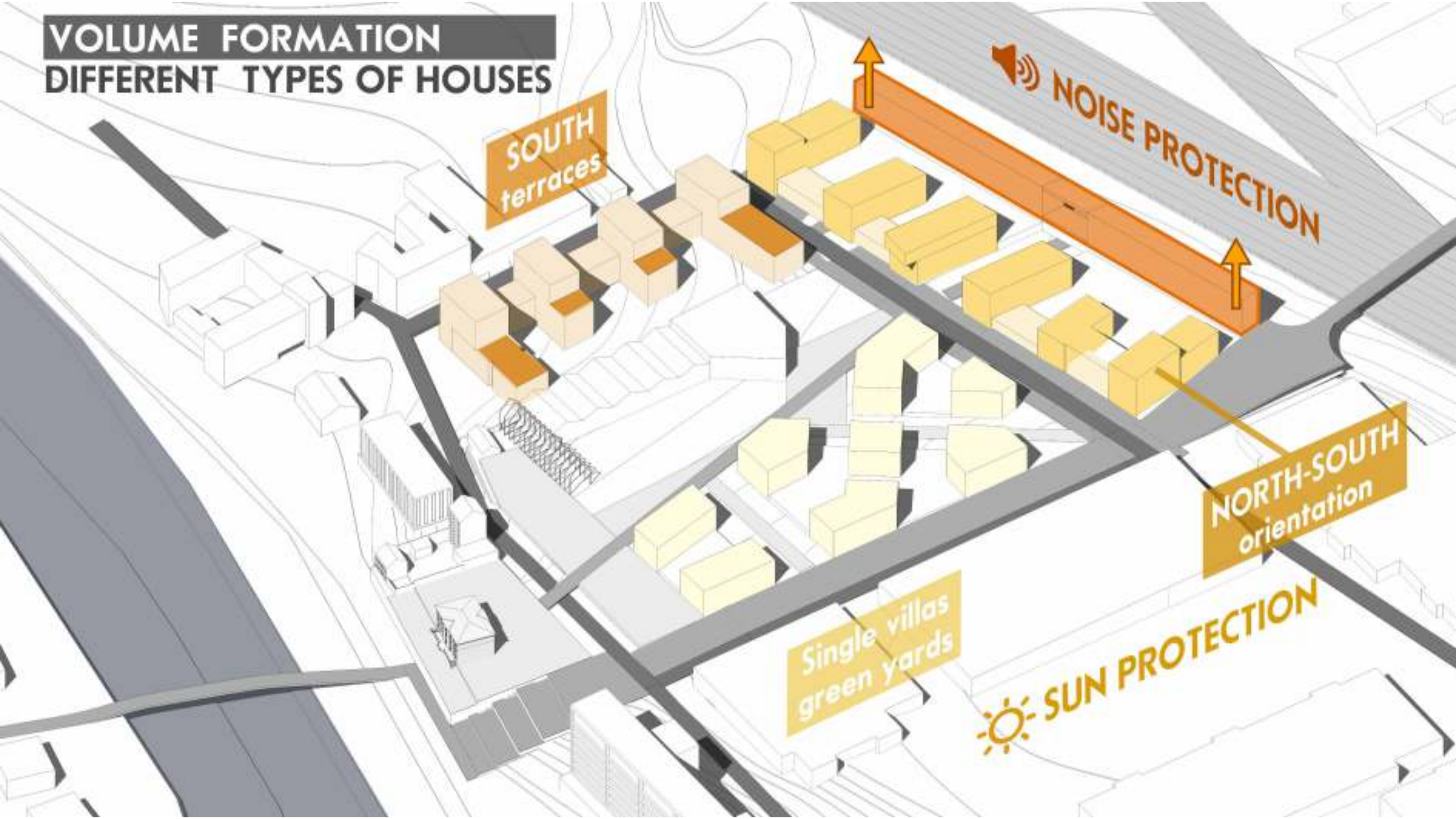
GREEN SPACES & RECREATION
1. EXISTING

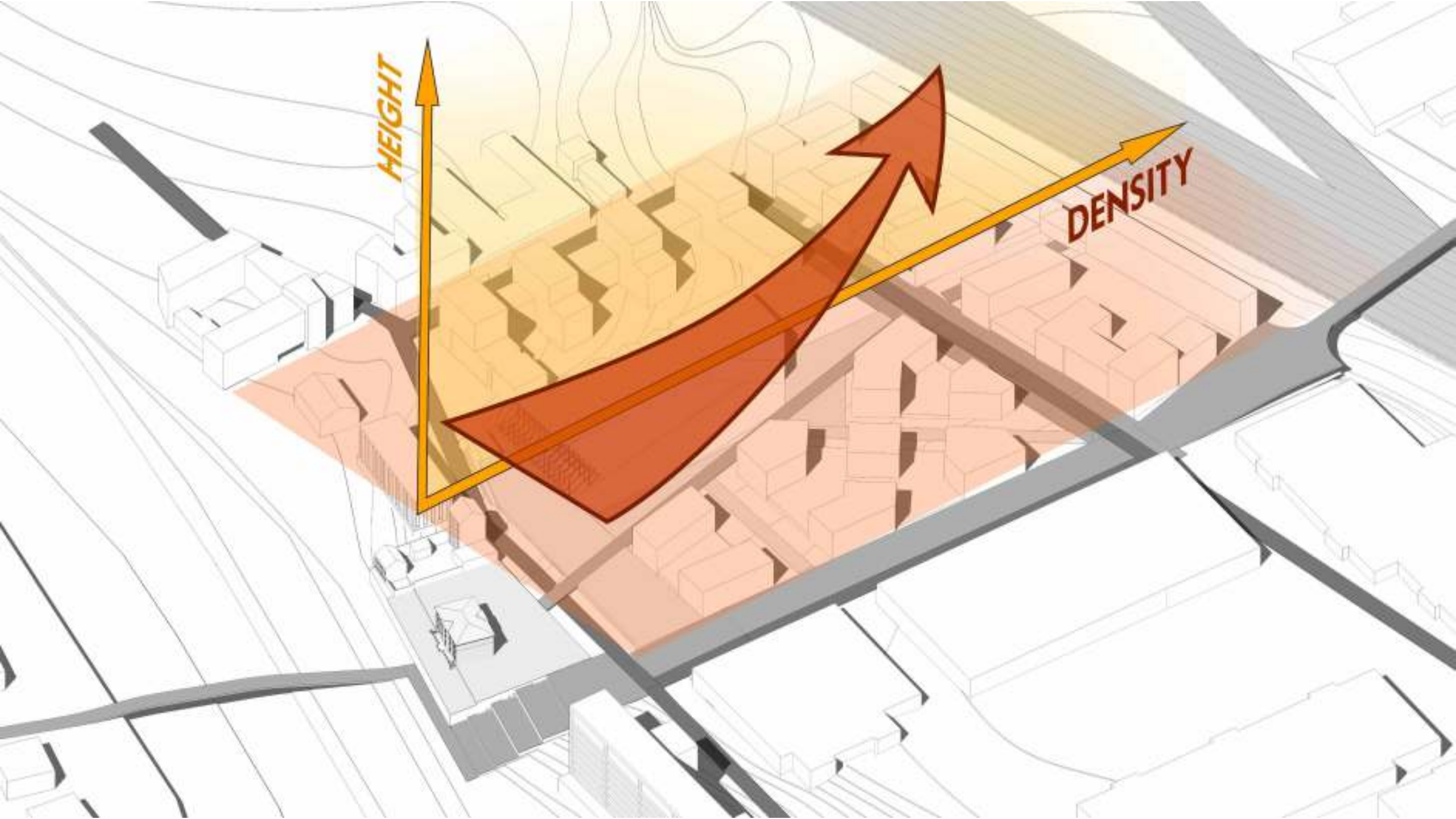


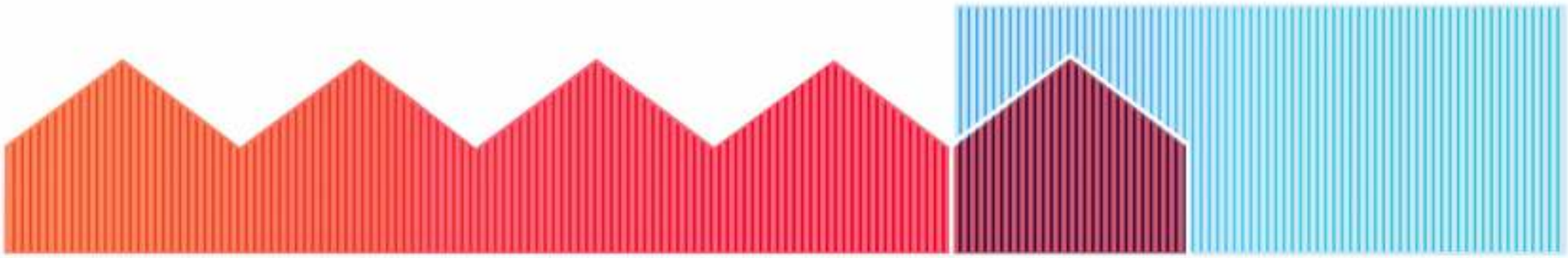
GREEN SPACES & RECREATION
2. PROJECTED


Gare de Saint-Denis
Saint-Denis Porte de Paris
Basilique Cathedrale de Saint-Denis
North-South connection
East-West connection
Seine
le Grand Paris Express
Tour Pleyel
L'Île-Saint-Denis

VOLUME FORMATION
DIFFERENT TYPES OF HOUSES




HEIGHT
DENSITY

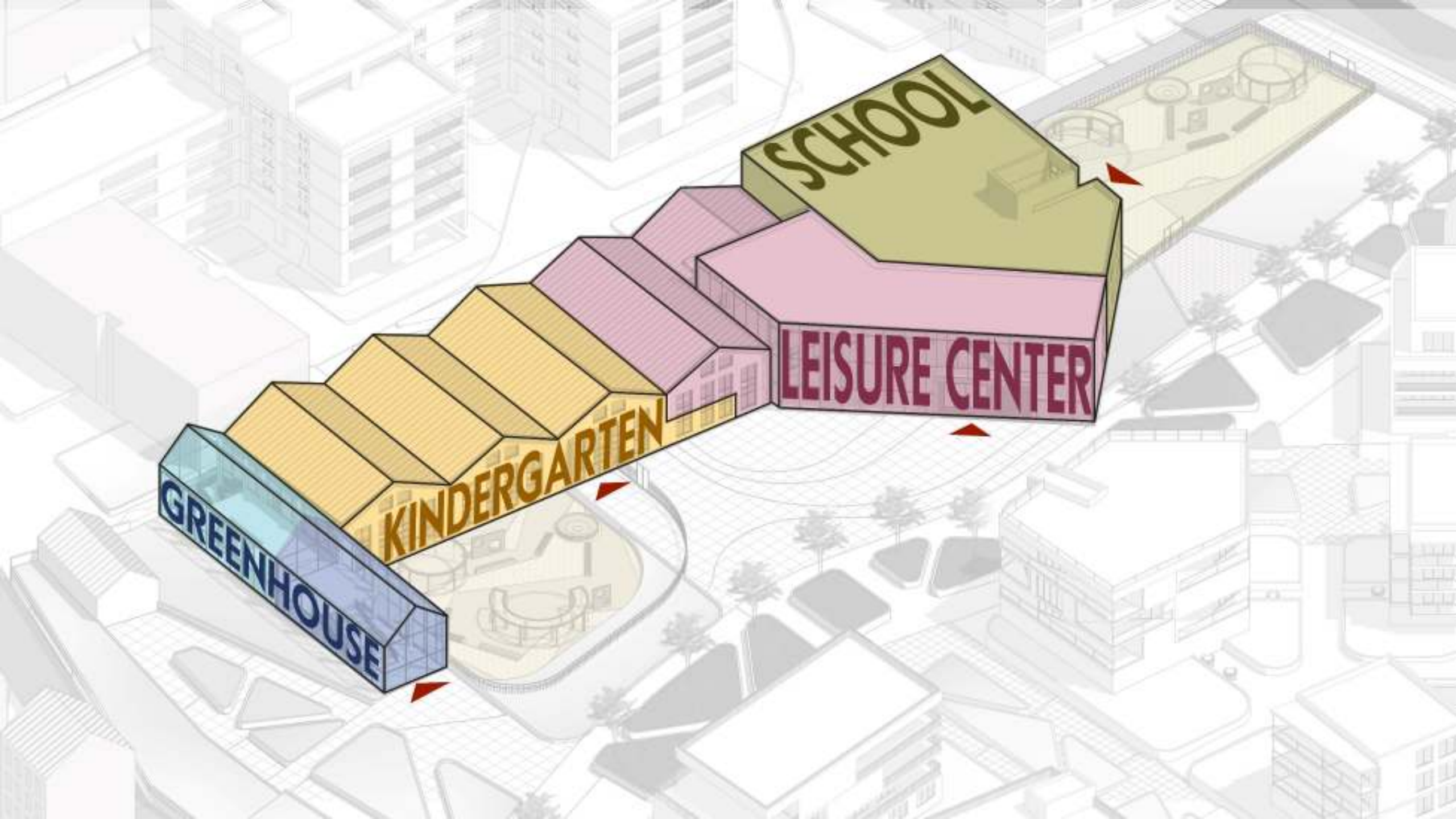


SUSTAINABLE DEVELOPMENT
BEGIN WITH
SUSTAINABLE EDUCATION

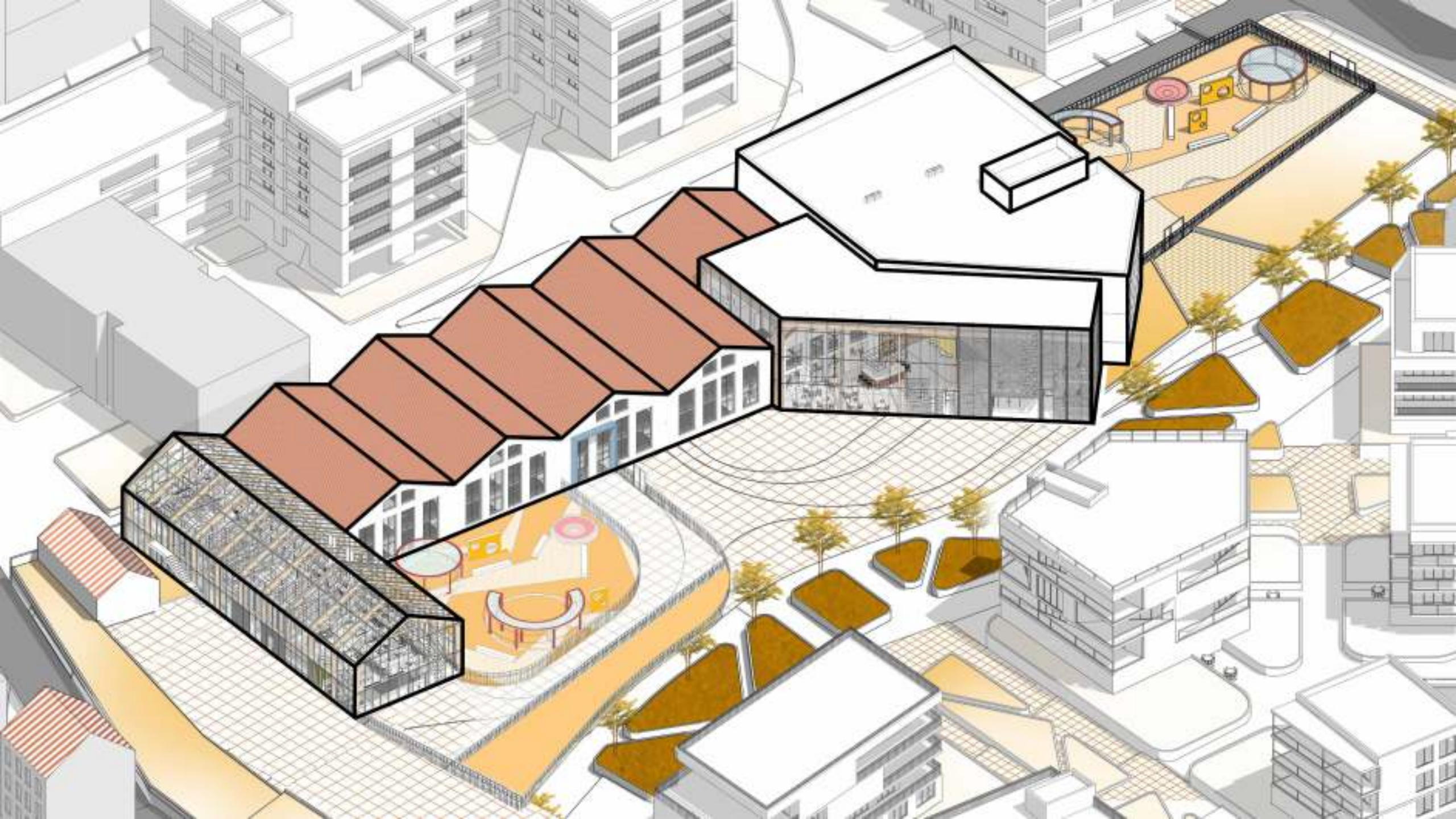
HISTORICAL HERITAGE → SUSTAINABLE EDUCATION ← NEW TECHNOLOGIES

COIGNET FACTORY WAREHOUSES

EDUCATION: LEISURE CENTER + PRIMARY SCHOOL + KINDERGARTEN


SCHOOL
LEISURE CENTER
KINDERGARTEN
GREENHOUSE

N



MAISON COIGNET
EDUCATIONAL CENTER

N

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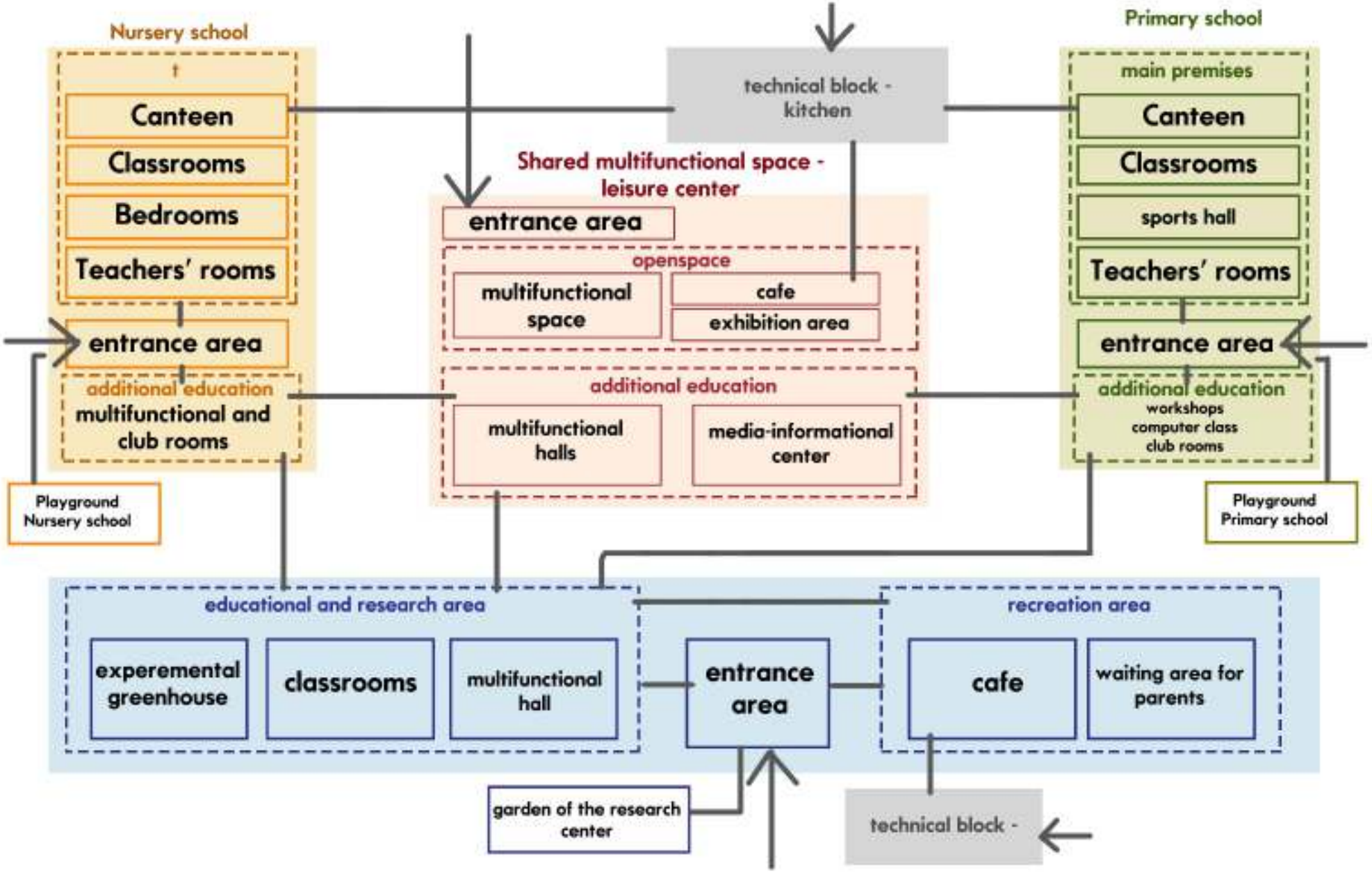
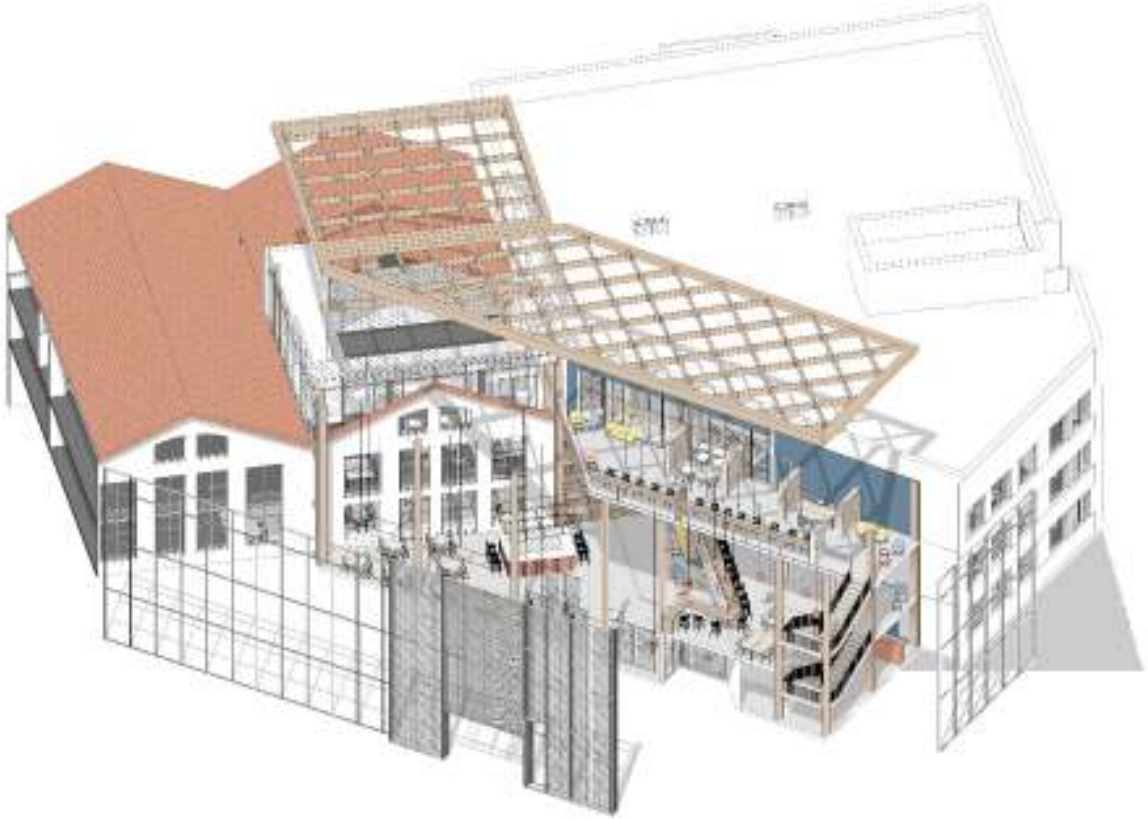
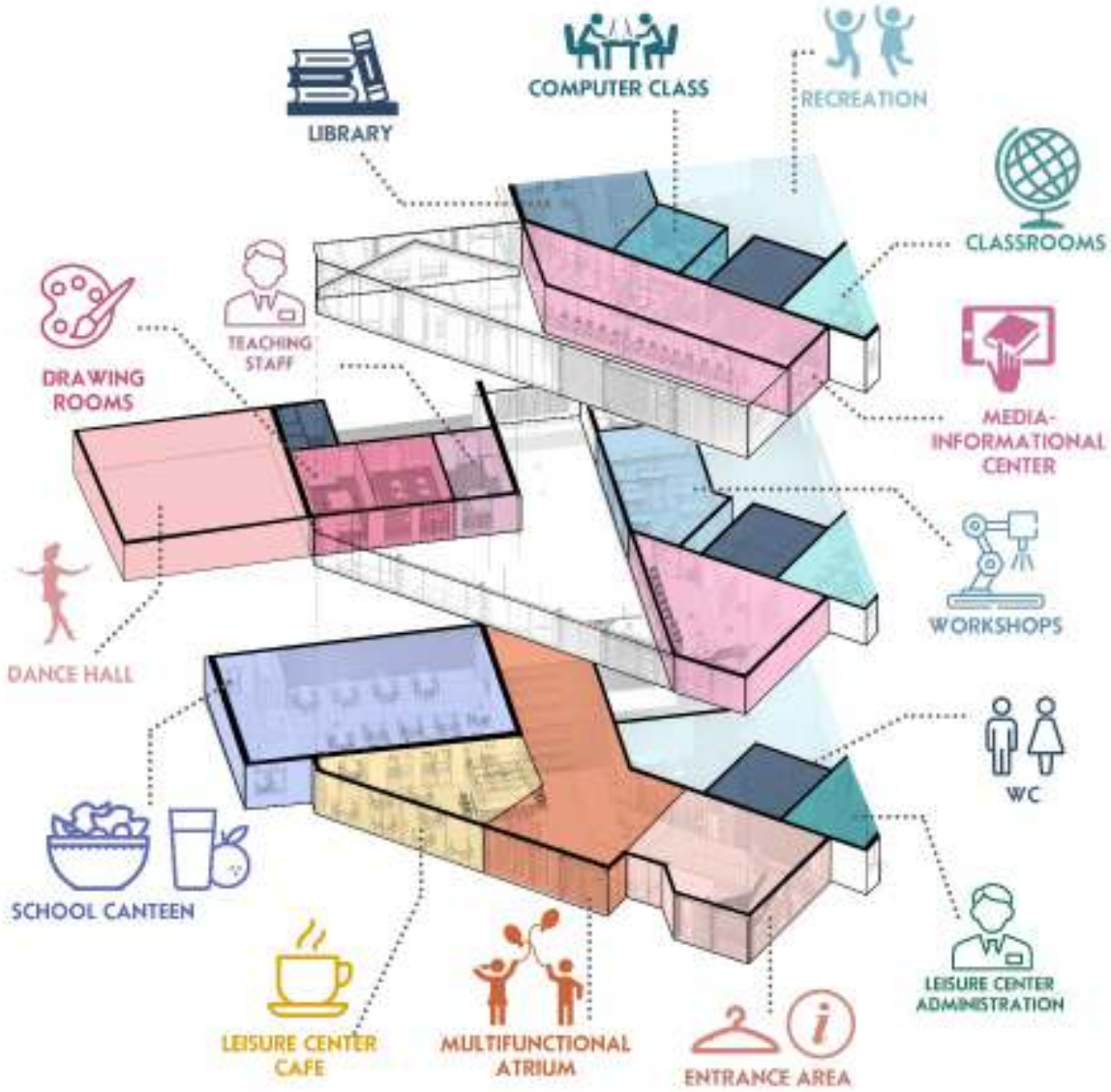
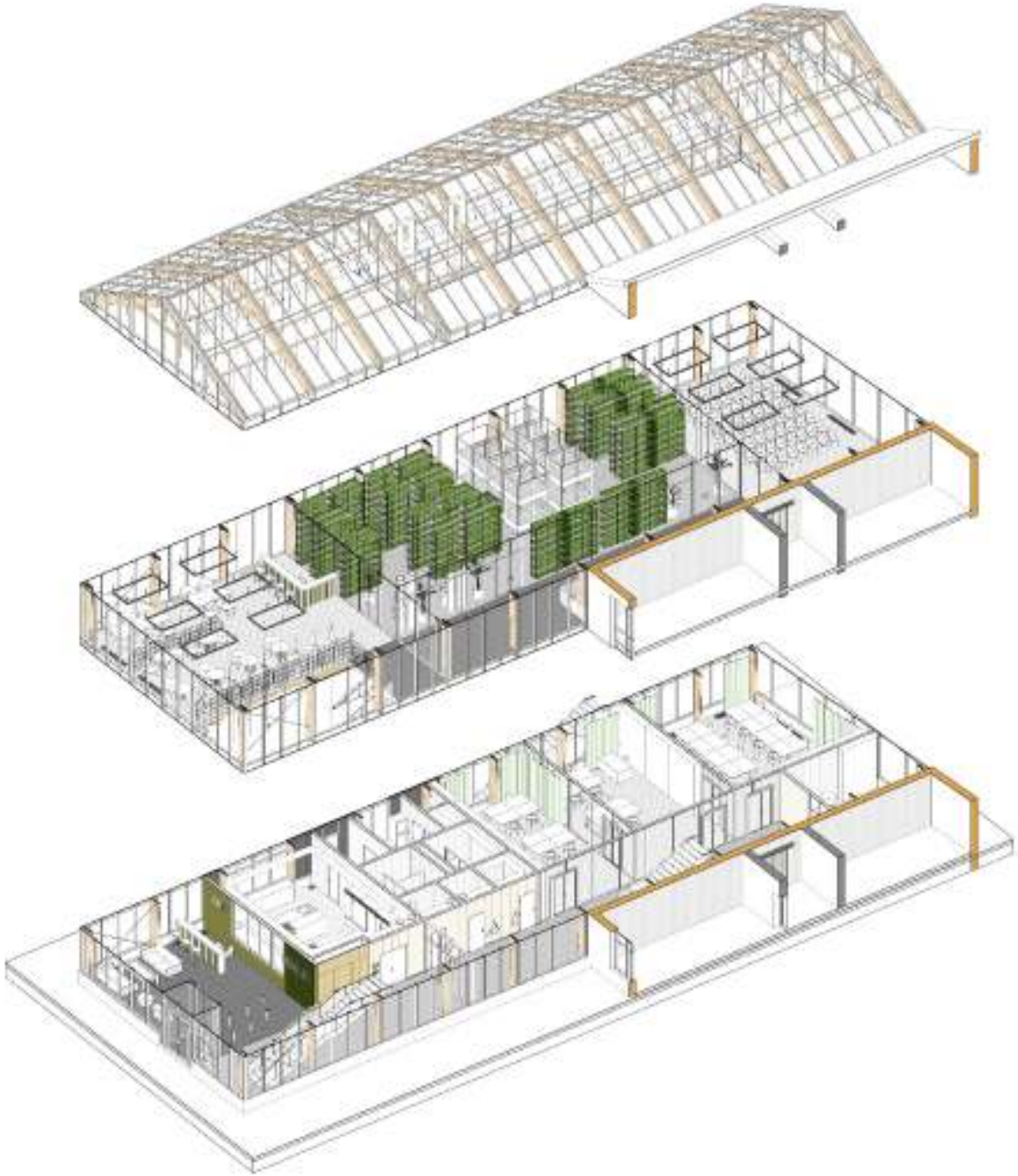
FUNCTIONAL SCHEME OF CHILDREN'S EDUCATIONAL CENTER



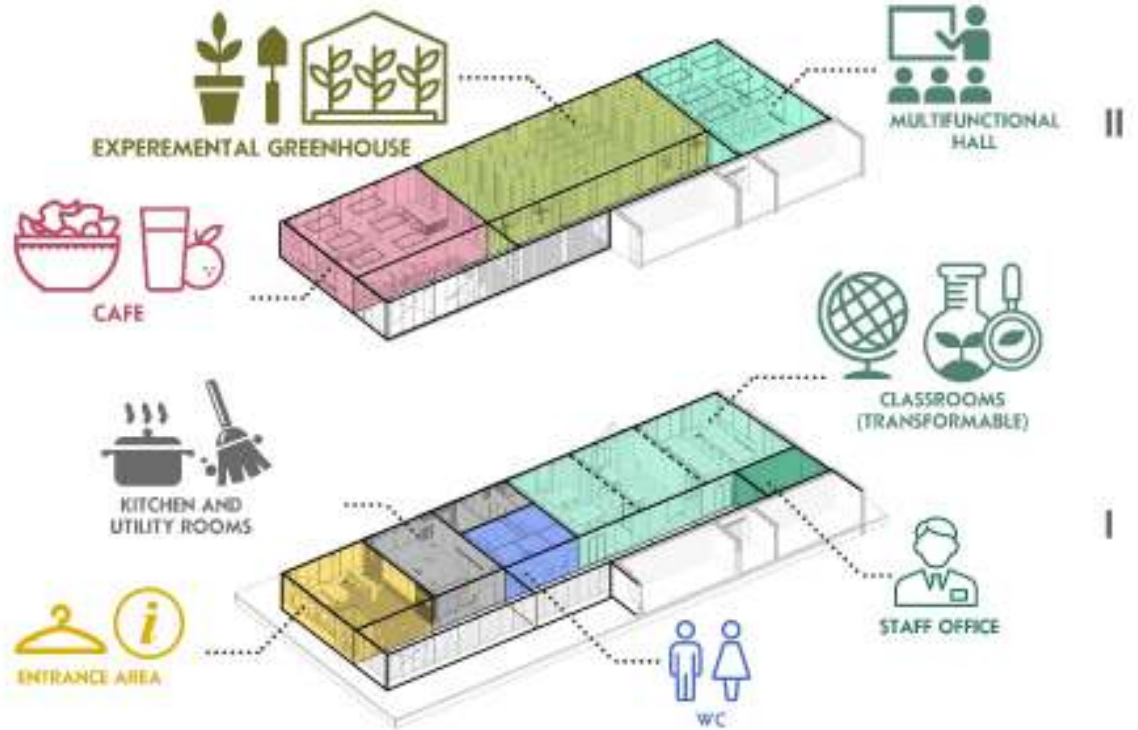
CHILDREN'S LEISURE CENTER

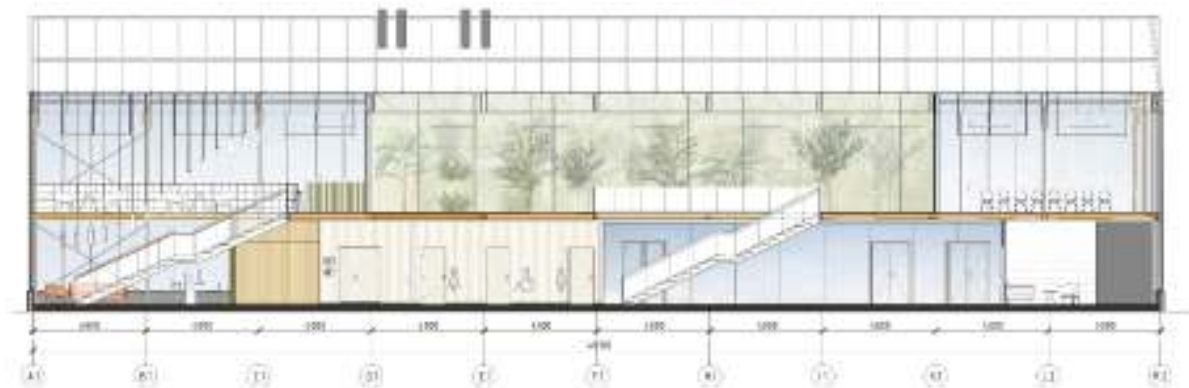






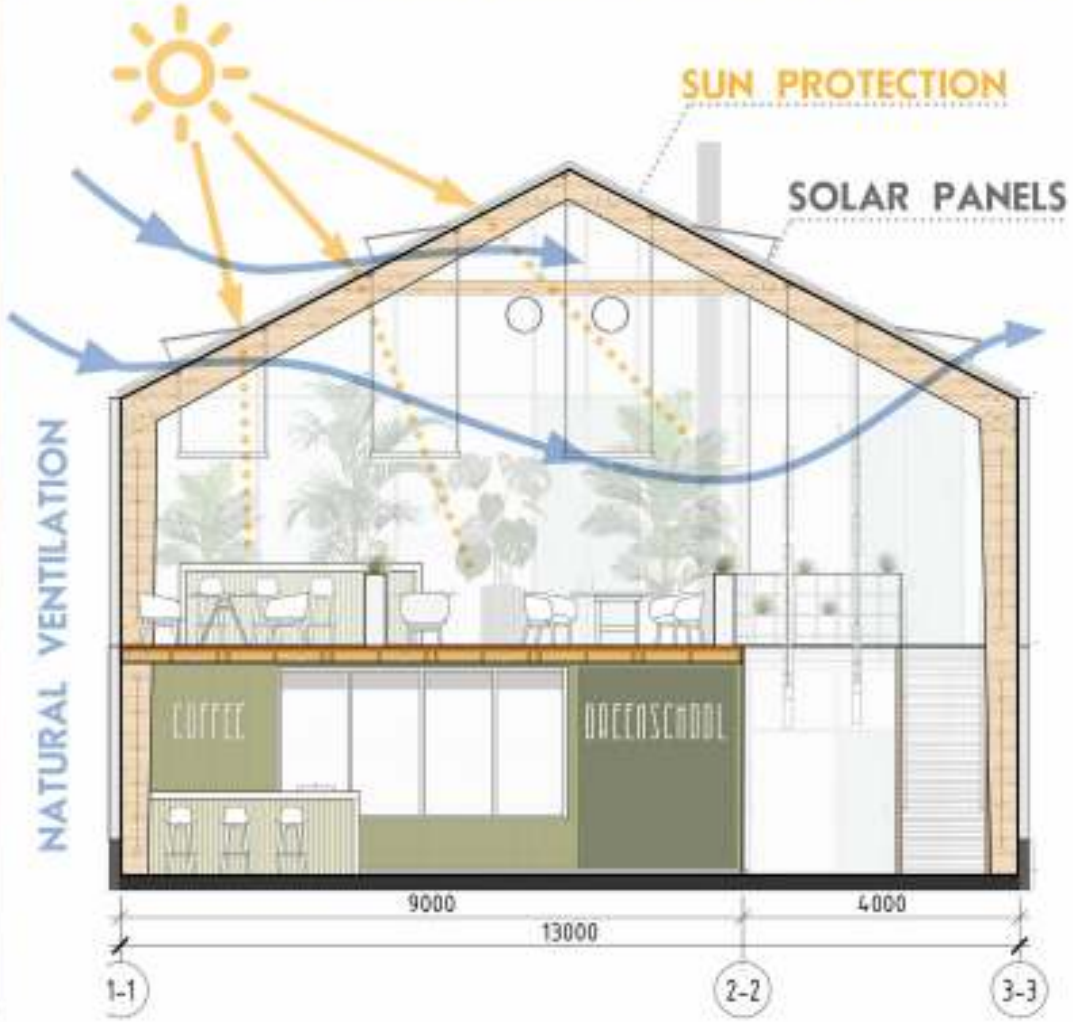
CHILDREN'S RESEARCH CENTER FOR ENVIRONMENTAL SCIENCES





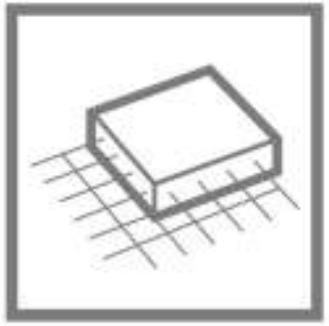
greencafe
CAFTEE
BOCCHSCHOOL

SUSTAINABLE DEVWLOPMENT BEGIN WITH SUSTAINABLE EDUCATION



MAISON COIGNET

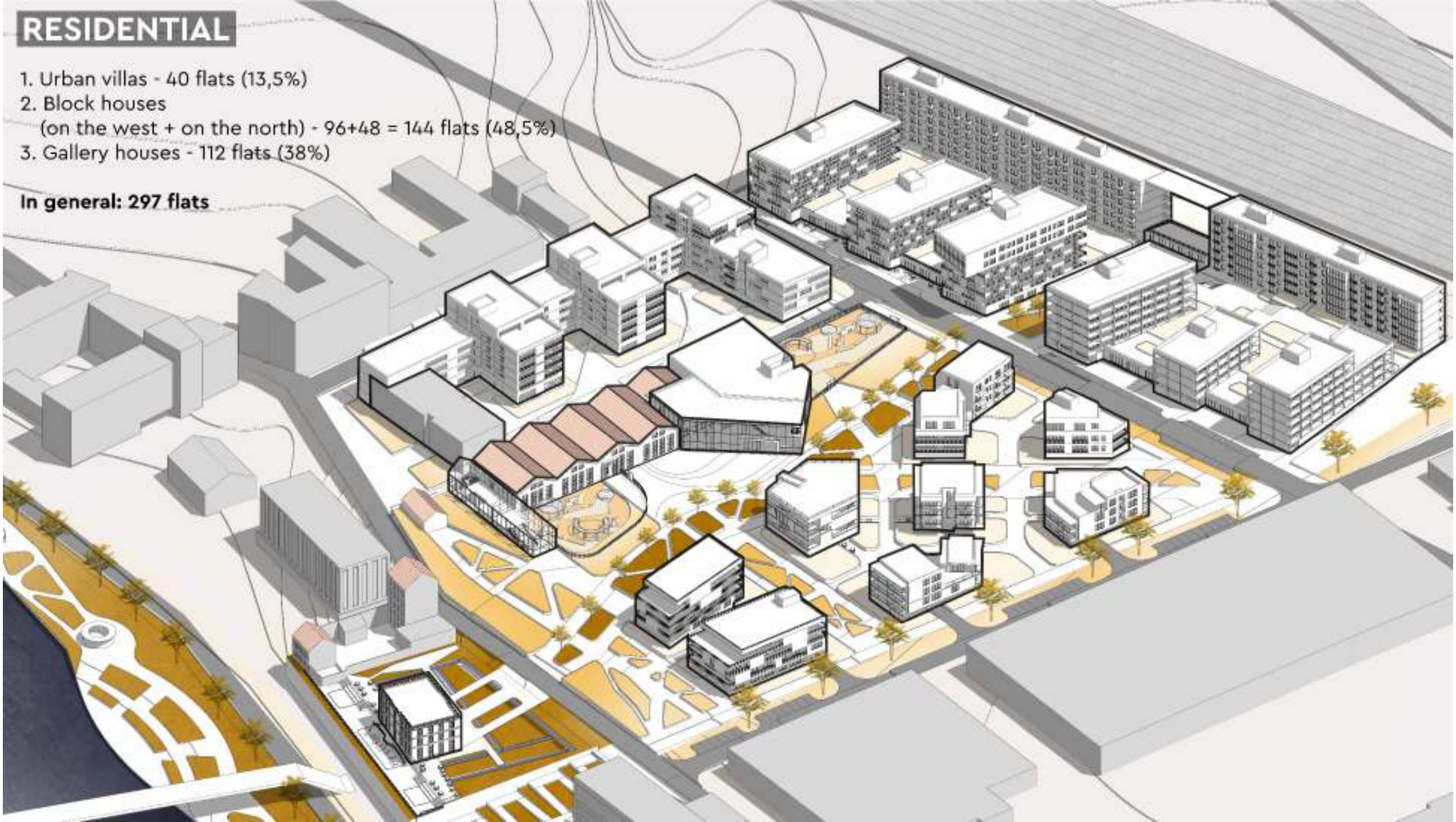
INTERACTIVE MUSEUM OF BUILDING CONSTRUCTIONS



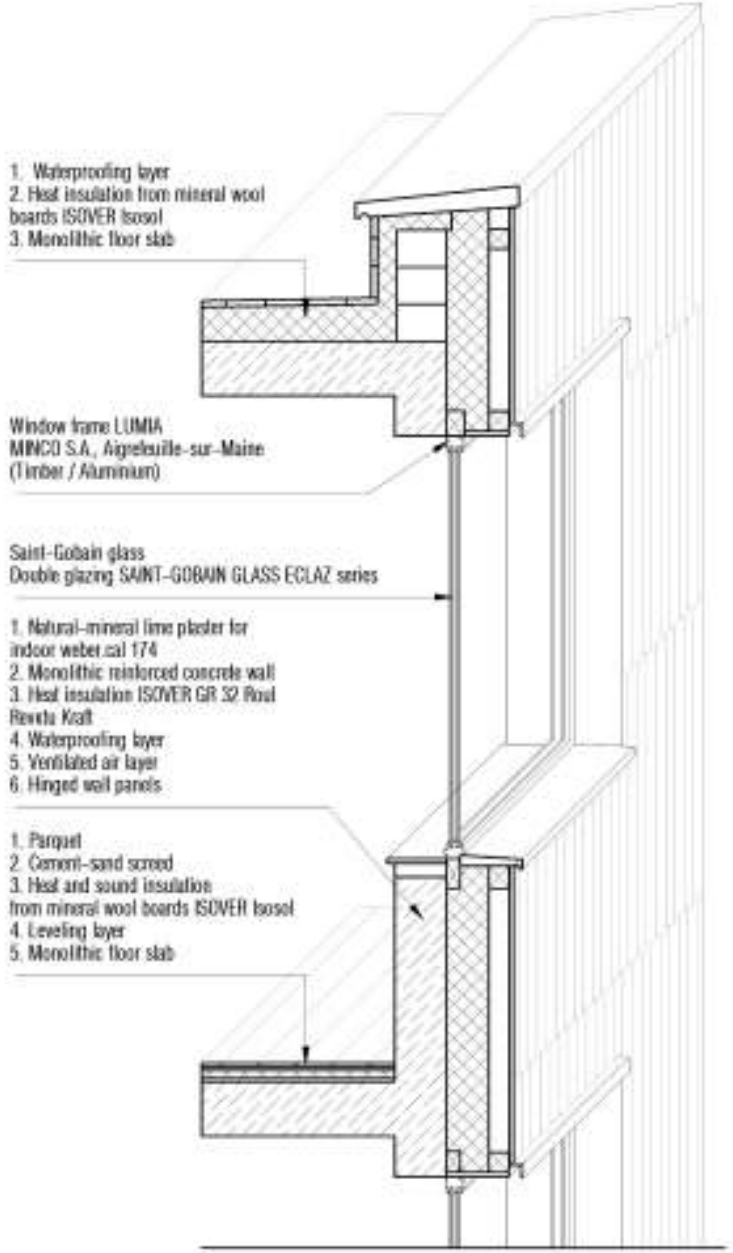
RESIDENTIAL

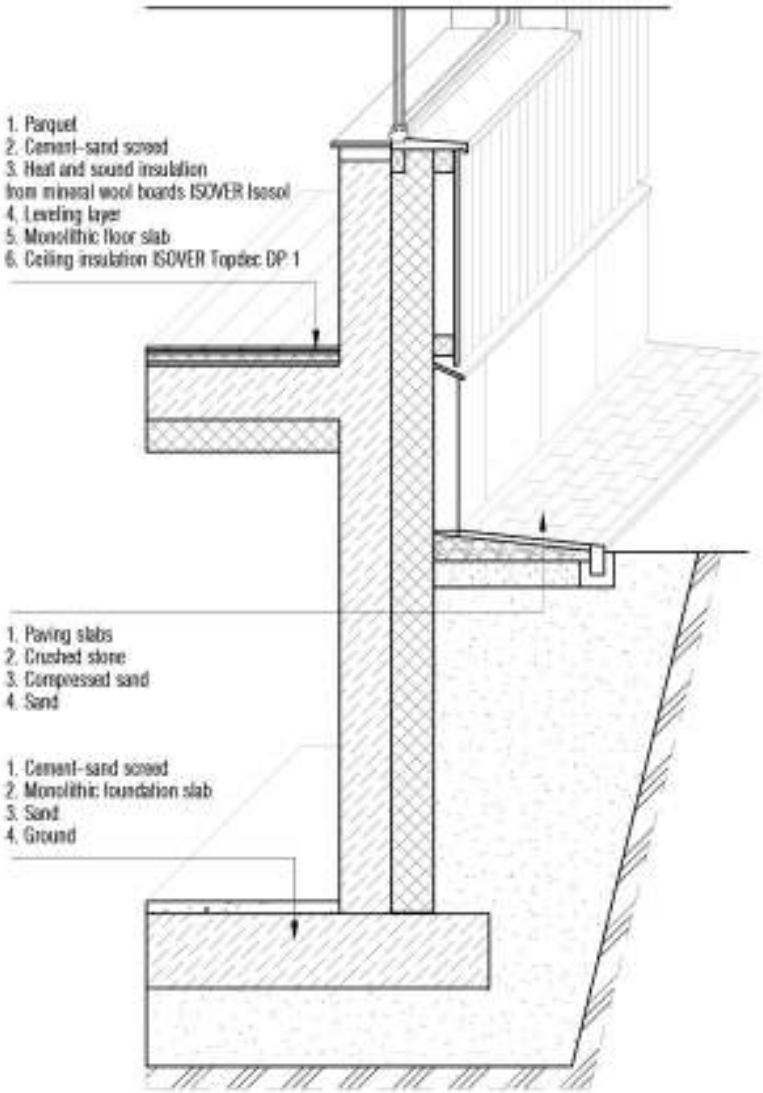
1. Urban villas - 40 flats (13,5%)
2. Block houses
   (on the west + on the north) - 96+48 = 144 flats (48,5%)
3. Gallery houses - 112 flats (38%)

In general: 297 flats

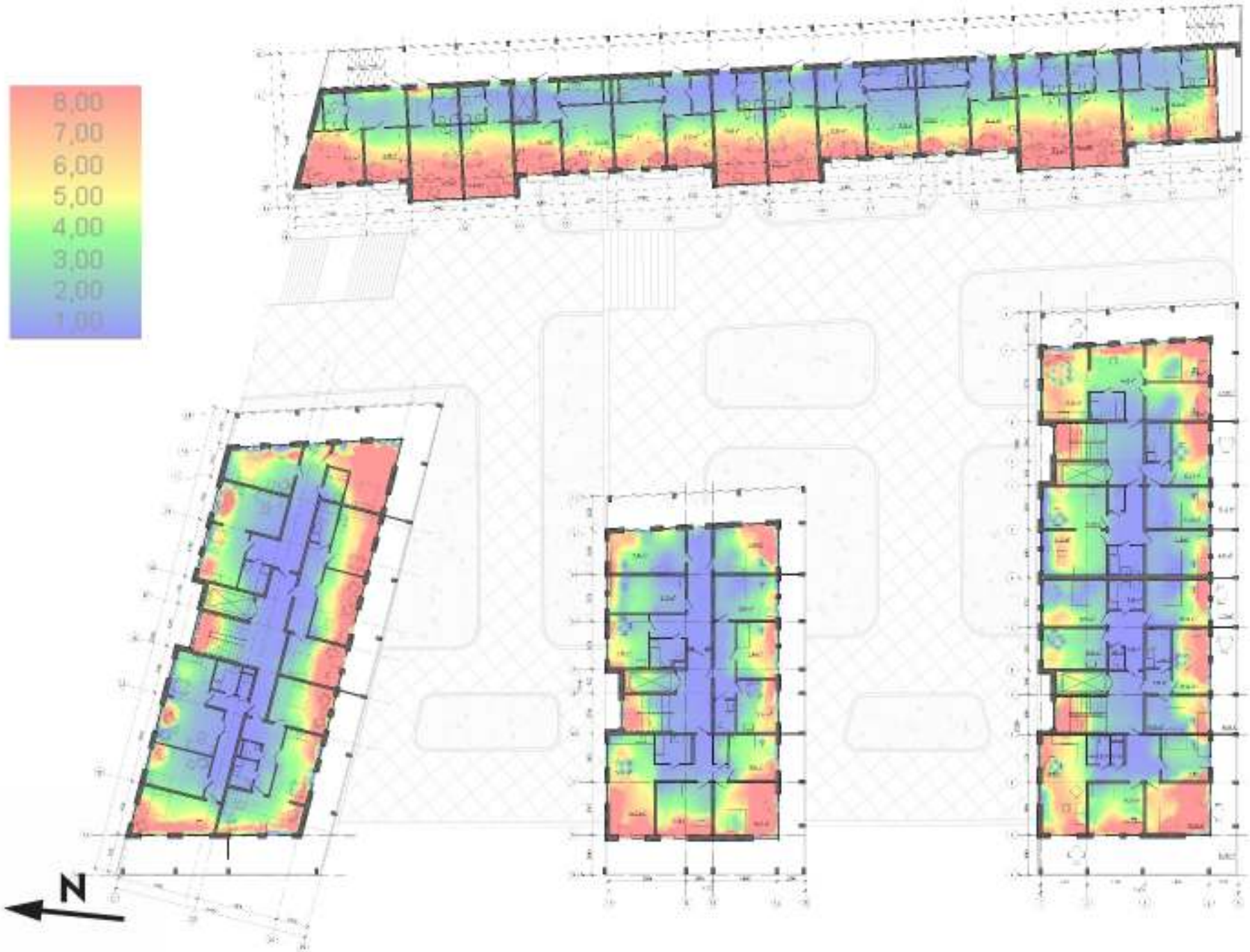


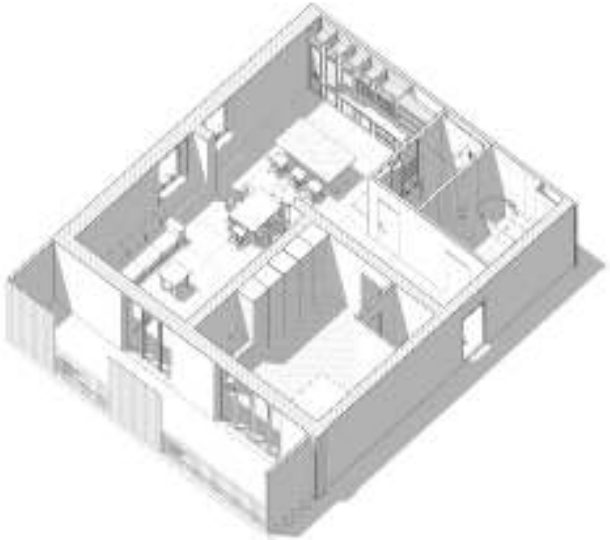
External wall construction



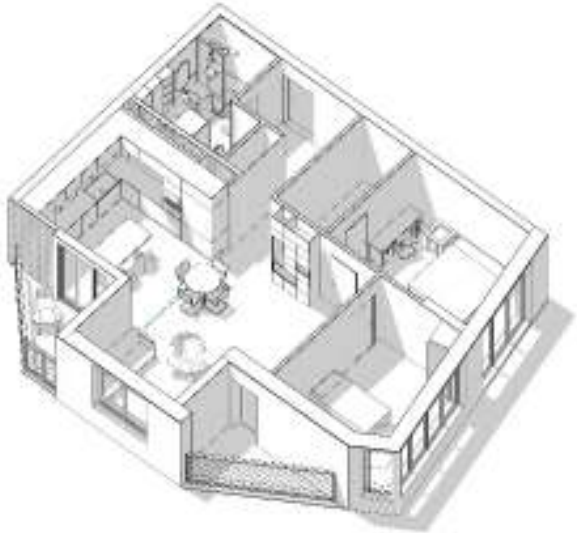


T1 (1 room)
T1 *2 (1 room)
T2 (2 rooms)
T3 (3 rooms)
T4 (4 rooms)

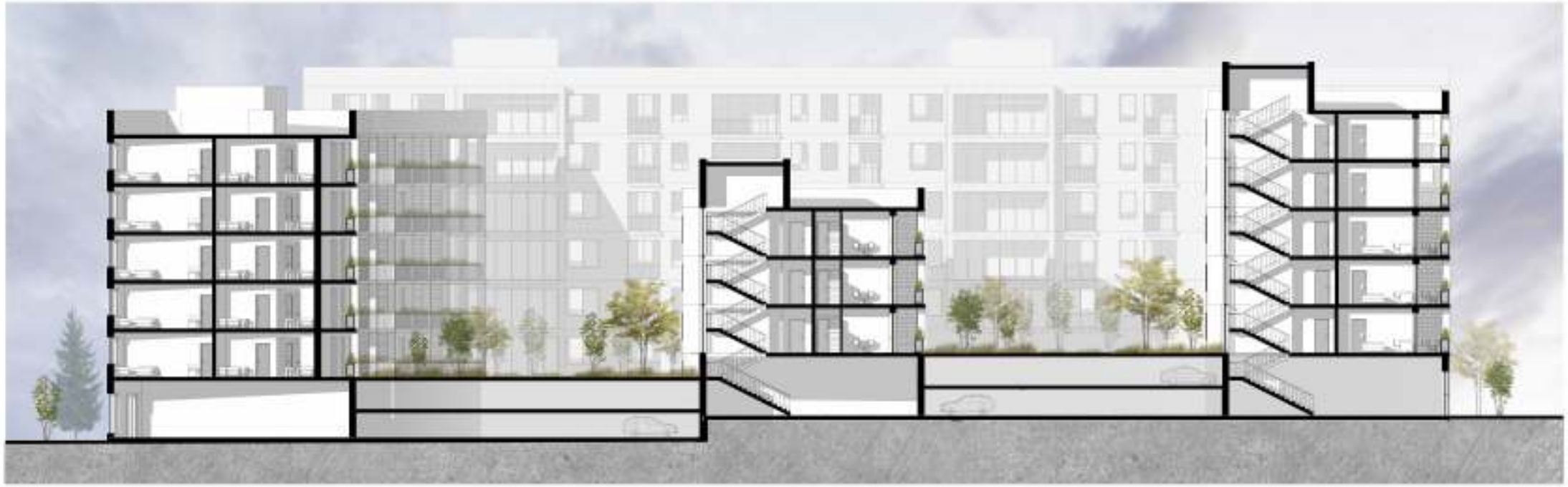


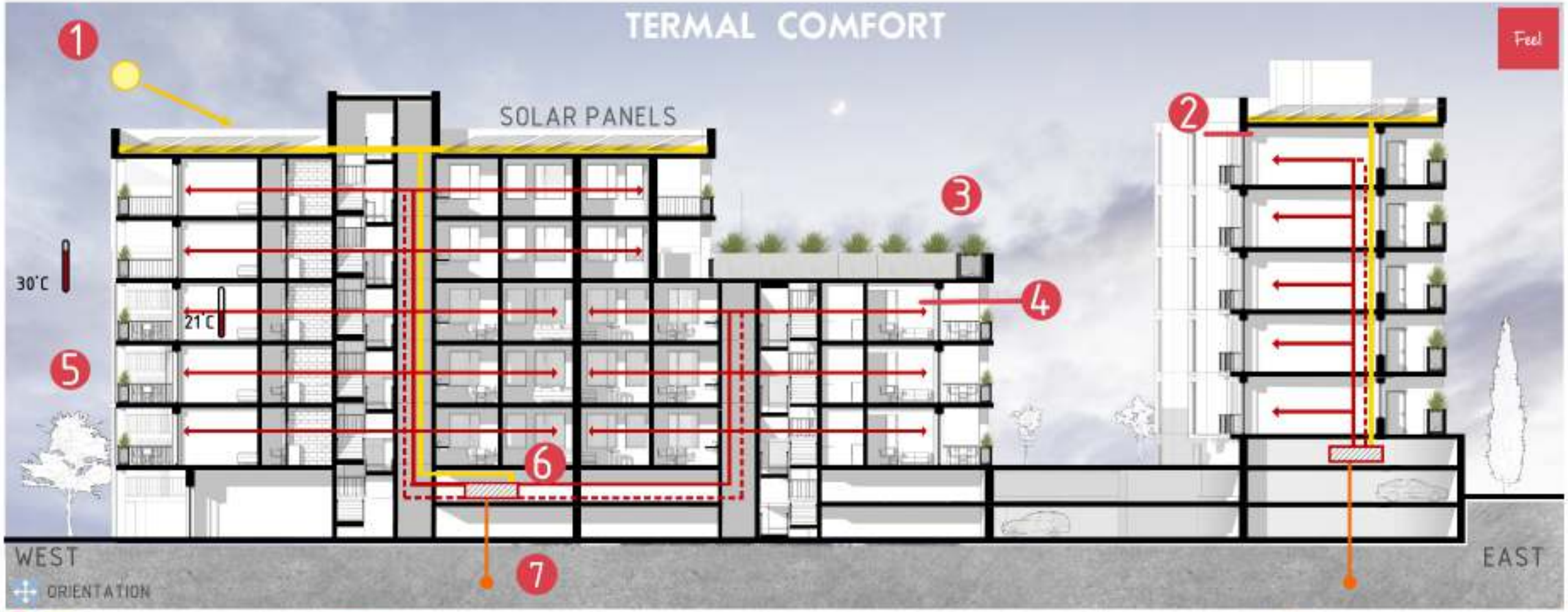


APARTMENT IN A SECTIONAL HOUSE



APARTMENT IN URBAN VILLA

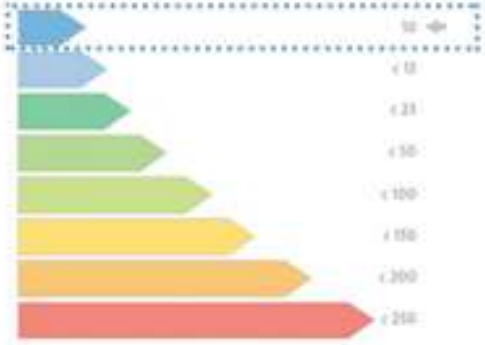




1. SOLAR PANELS BOSH'Solar 5000 TF'
2. WALL HEAT INSULATION ISOVER
3. VEGETATION ON THE TERRACES
4. TRIPLE GLAZING SAINT GOBAIN SGGCLIMATOP LUX
5. SHADED TERRACES
6. BUDERUS WATER HEATING SYSTEM
7. GEOTHERMAL ENERGY SOURCES

ENERGY EFFICIENCY CLACCES: A++

- Specific Annual Heat Demand: 9.59 kWh/(m2a)
- Specific Annual Cooling Demand: 2.91 kWh/(m2a)
- Frequency of Overheating: 5.66 %



TERMAL COMFORT

Feel

1. SOLAR PANELS BOSH'Solar 5000 TF'
2. WALL HEAT INSULATION isover
3. VEGETATION ON THE TERRACES
4. TRIPLE GLAZING SAINT GOBAIN SGGCLIMATOP LUX
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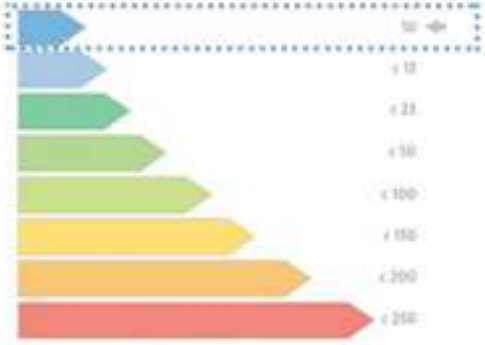


THERMAL COMFORT: GLAZING

SCHOOL

SAINT-GOBAIN GLASS PLANITHERM series

U_g=0.55 W/m²K g=0.54

Energy efficient glass for comfortable places

+ SGG BIOCLEAN

QUICK AND EASY,
SCRUB-FREE CLEANING

LEISURE CENTER: ATRIUM

CHILDREN'S RESEARCH CENTER
FOR ENVIRONMENTAL SCIENCES:
EXPEREMENTAL GREENHOUSE, CAFE

THERMAL COMFORT: GLAZING

RESIDENTIAL

SAINT-GOBAIN GLASS ECLAZ series

U_g=0.55 W/m²K g=0.60

Source of light and well-being.
For very high performance double glazed windows.

EPD VERIFIED

The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.

A KEY CONTRIBUTION IN SUSTAINABILITY

TEMPERATURE CONTROL LOW-E

DAYLIGHT COMFORT
from 75% to 82% transparency

ENERGY SAVINGS

NEUTRAL AESTHETICS IN TRANSMISSION AND REFLECTION

RESIDENTINAL BUILDINGS: BALCONIES AND TERRACES

RESIDENTINAL BUILDINGS: WINDOWS

O_2 VEGETATION PRODUCE OXYGEN

H_2O VEGETATION CONTROL HUMIDITY

VEGETATION CAPTURES SMALL DUST PARTICLES

OUTSIDE AIR

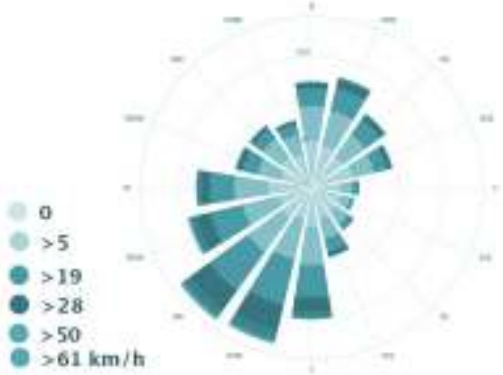
FRESHED AND COOLED AIR

USED WARM AIR

EXIT AIR

CLIMAVER – ISOVER's air duct solution for the Multi-Comfort House

ACTIV air NON-TOXIC MATERIALS



INDOOR AIR QUALITY

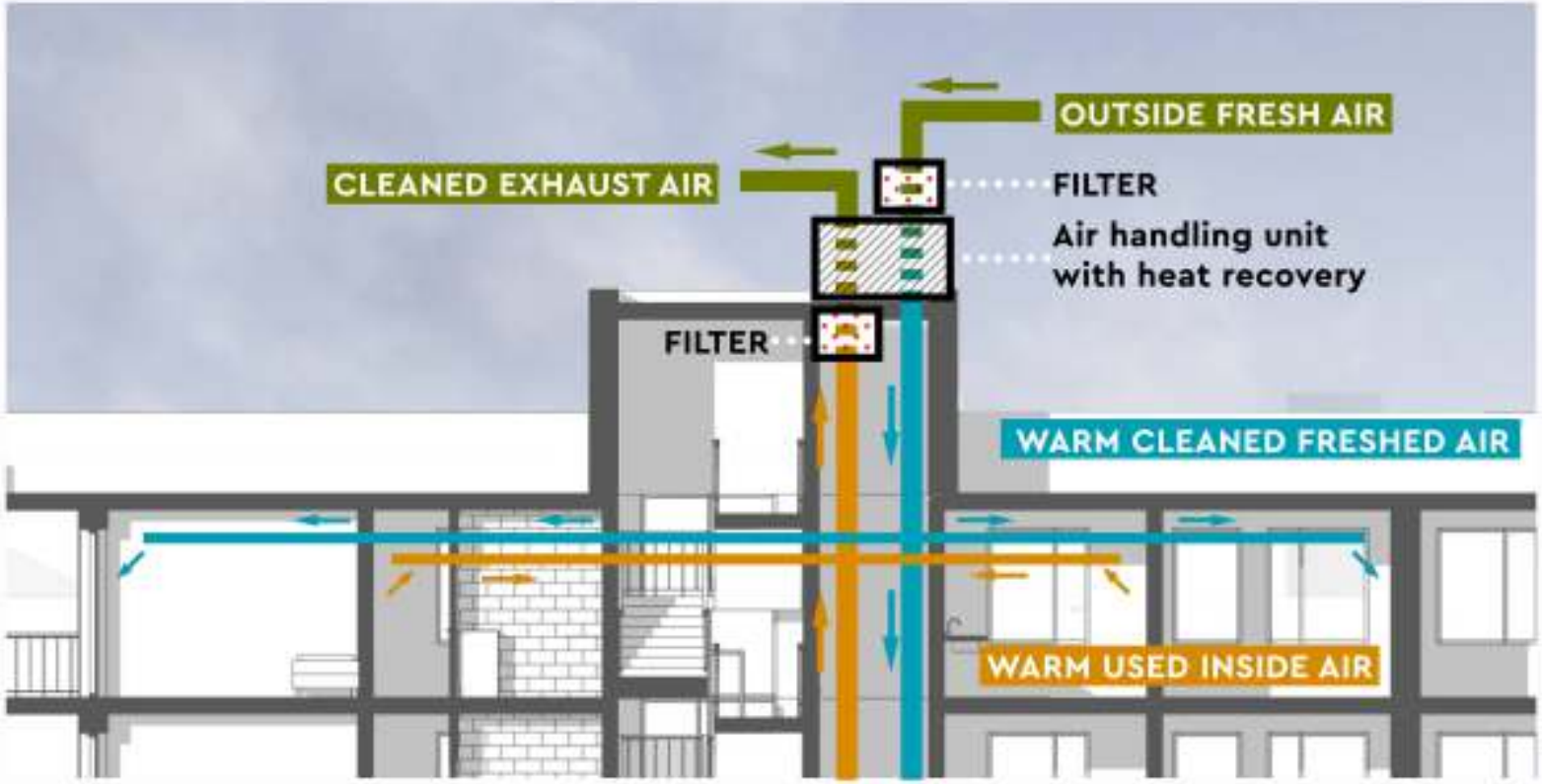
Central Ventilation system

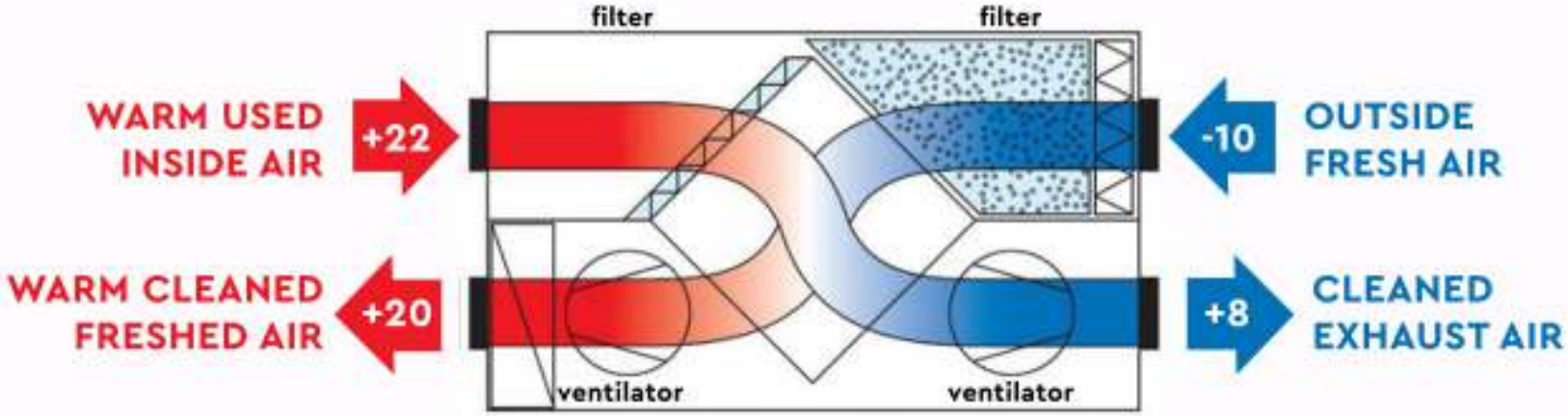
Zehnder Group Nederland B.V.
ComfoAir XL4400

Heat recovery air handling unit.

Air flow range_____1500-3200 m³/h
Heat recovery efficiency_____87%
Specific electric power:_0.42 Wh/m³
Extract air filter_____G4
Outdoor air filter_____F7

Plate recuperator:





INDOOR AIR QUALITY

Apartment Ventilation system

Zehnder Group Nederland B.V.
ComfoAir200

Heat recovery air handling unit.

Air flow range	50-150 m³/h
Heat recovery efficiency	92%
Specific electric power:	0.42 Wh/m³
Extract air filter	ISO Coarse 60%
Outdoor air filter	ISO ePM1 50%

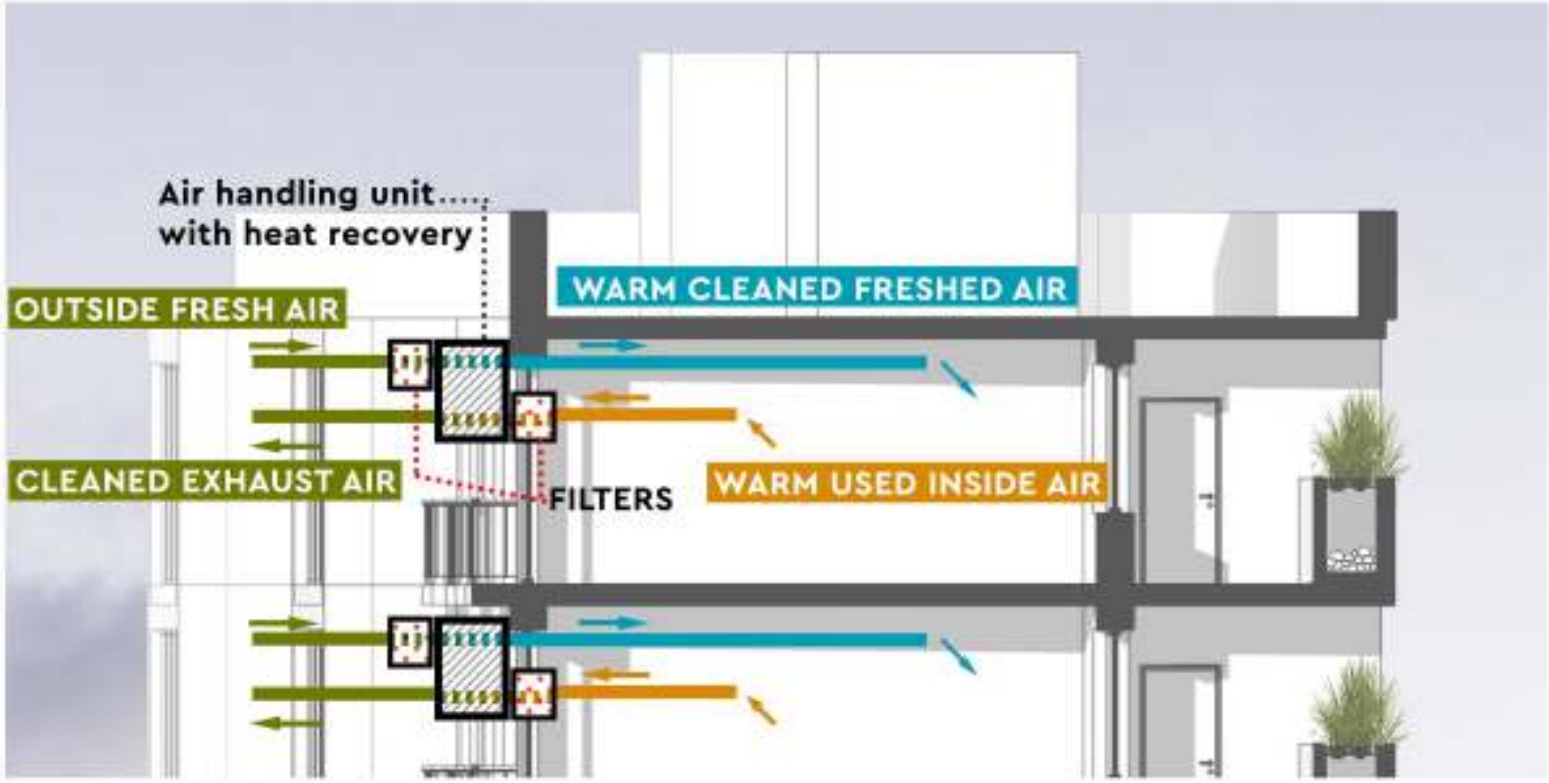
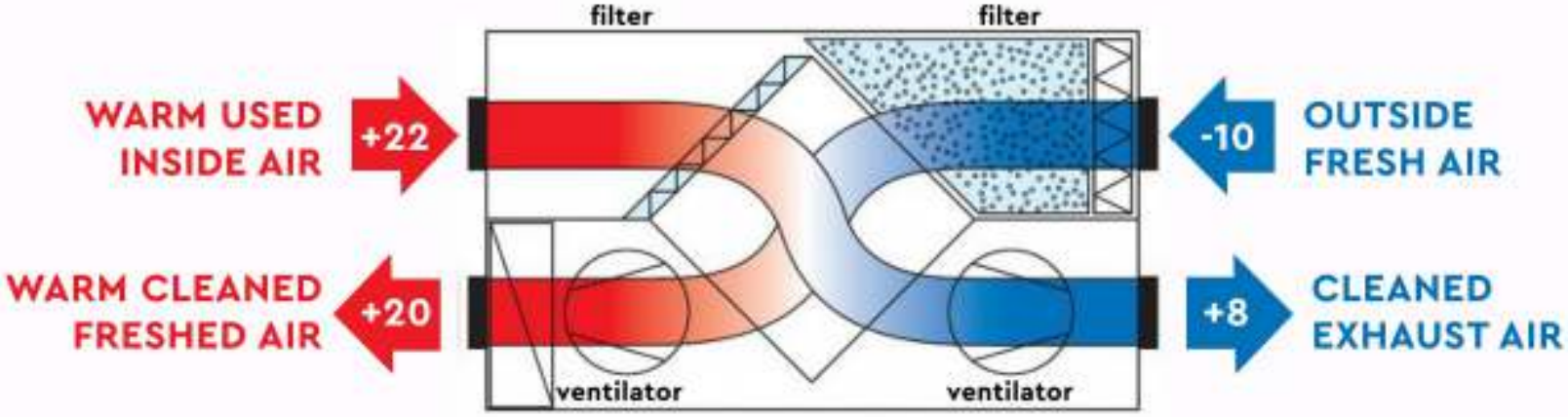
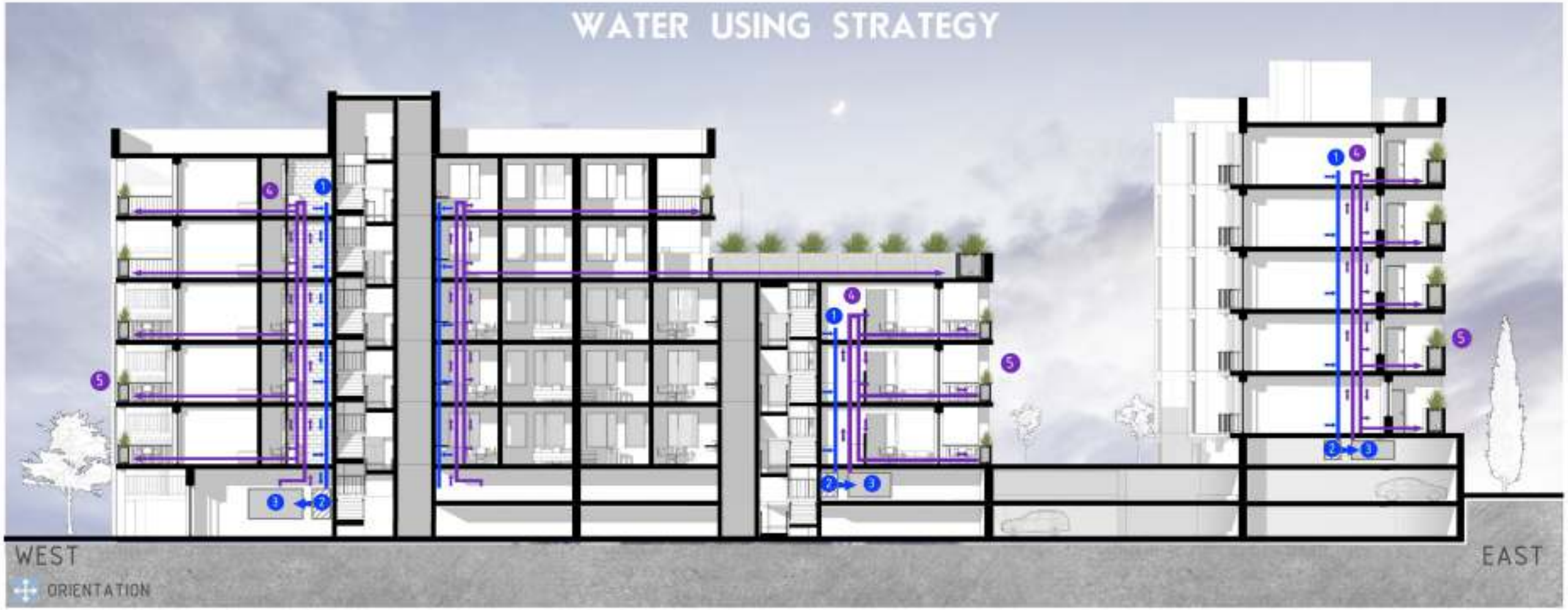
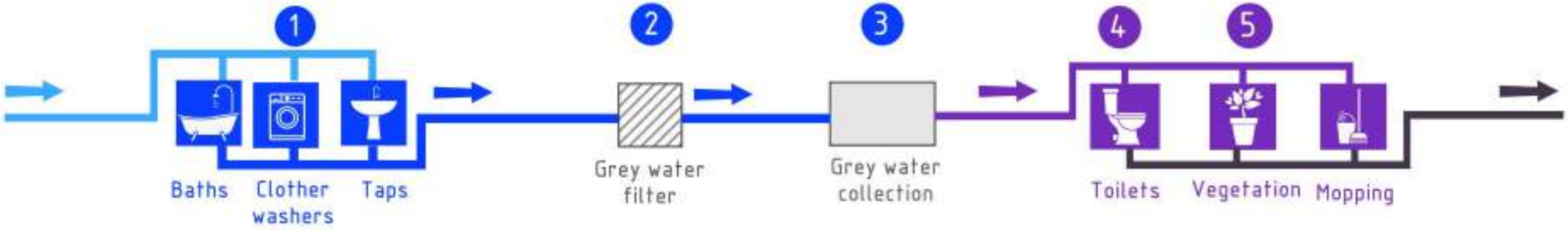


Plate recuperator:



WATER USING STRATEGY



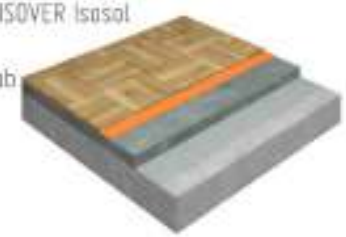


ACUSTIC COMFORT

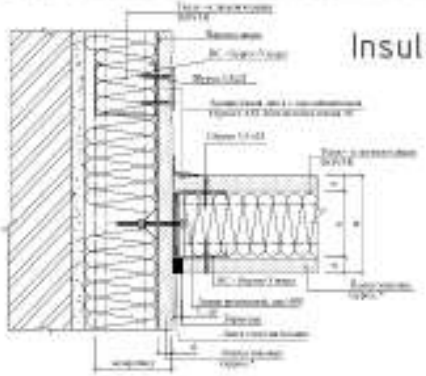
VEGETATION PROTECT FROM NOIZE

PROTECTION FROM THE NOIZE

FLOORS
1. Parquet
2. Cement-sand screed
3. Heat and sound insulation from mineral wool boards ISOVER Isosol
4. Leveling layer
5. Monolithic floor slab

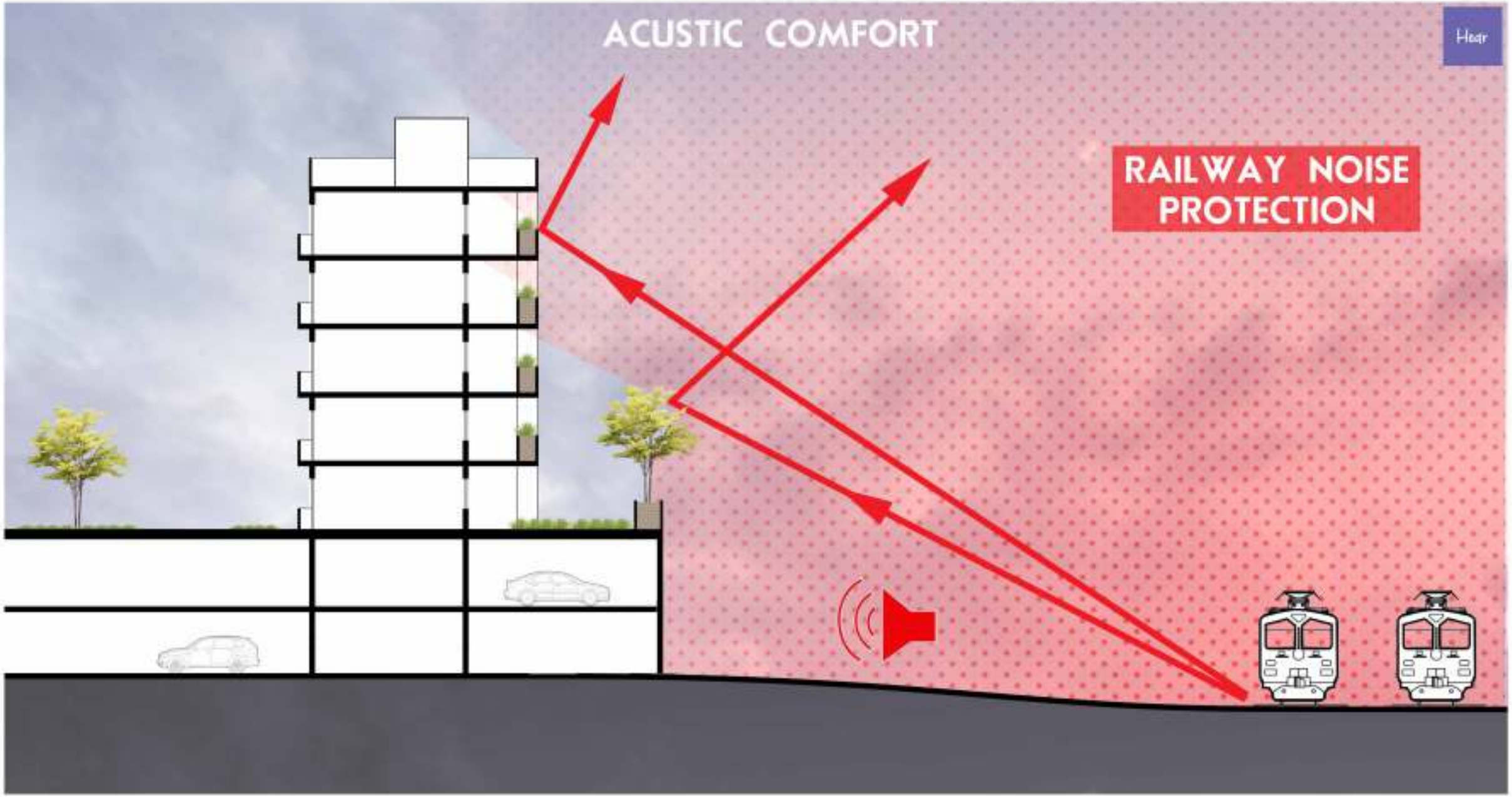


WALLS BETWEEN UNITS
С-1М-10ПТИМА (100)
1. Plaster and putty weber.vetonit JS
2. Paper tape 75м
3. Profiles Gyproc-ULTRA
4. Профили Gyproc-ULTRA
5. Quartz-based mineral insulation ISOVER SoundProtection
6. Gypsum construction boards Gyproc Optima



Insulating between rooms 57,5dB

Insulating between dwellings 70,5dB

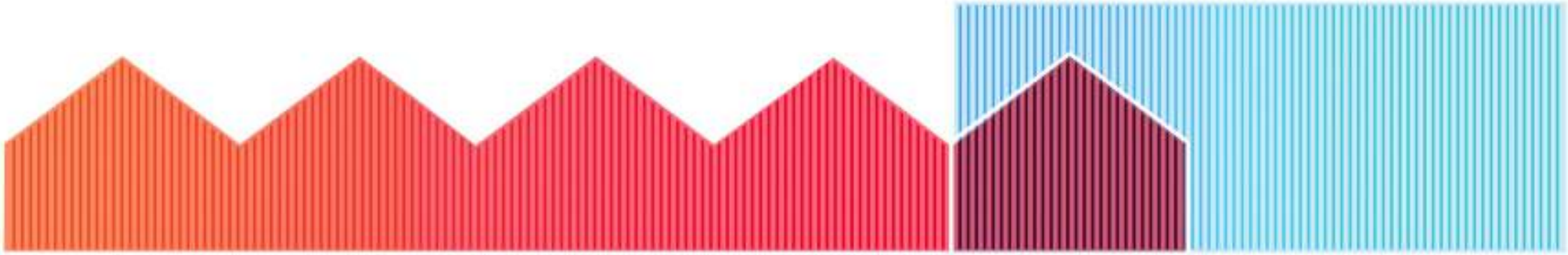

ACUSTIC COMFORT
Hear
RAILWAY NOISE PROTECTION

EVACUATION ROUTES

FIRE ALARM SENSORS

Paris Fire Brigade

THANK YOU FOR THE ATTENTION!



MAISON COIGNET URBAN PARK