Multi Comfort
BY SAINT-GOBAIN

#MILANO2030

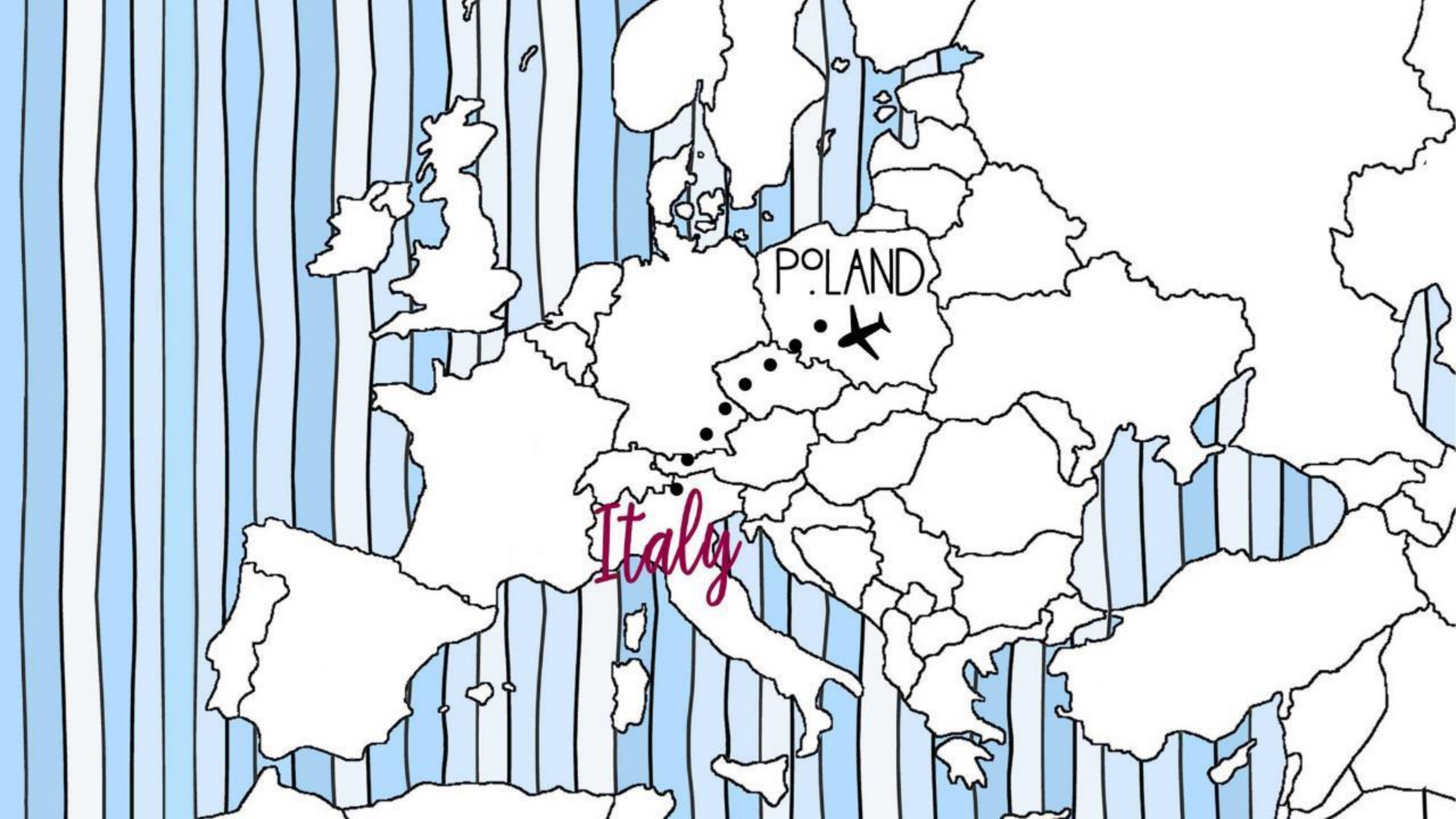
ISOVER
SAINT-GOBAIN

POLITECHNIKA
ŚLĄSKA

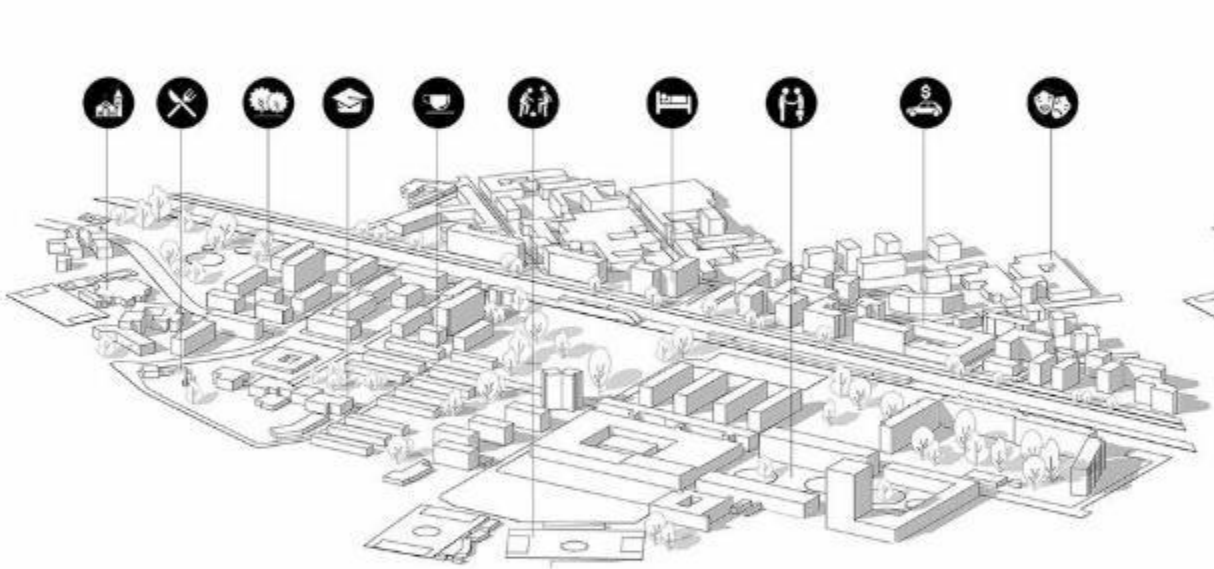
ANNA

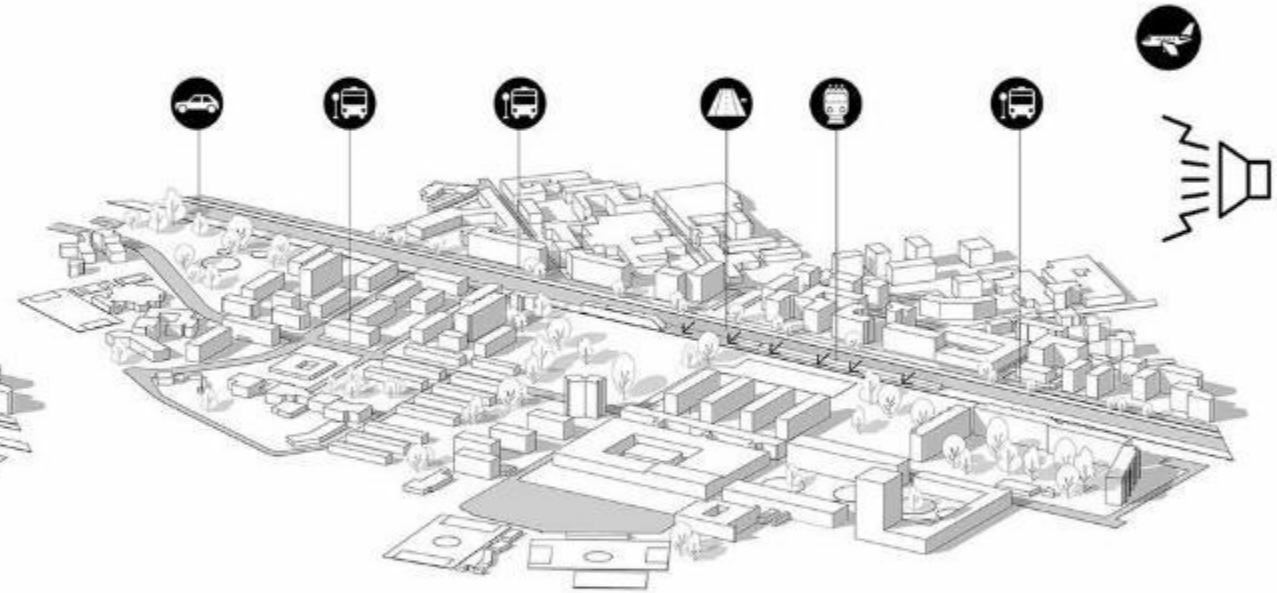
tutor :
MGR INŻ. ARCH. ANDRZEJ DUDA

JOANNA


POLAND
Italy

ANALYSES





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CRESCENZAGO. AREA ANALYSES

siesta

warm night

city bike

students

shaded spaces

MILAN. ITALY

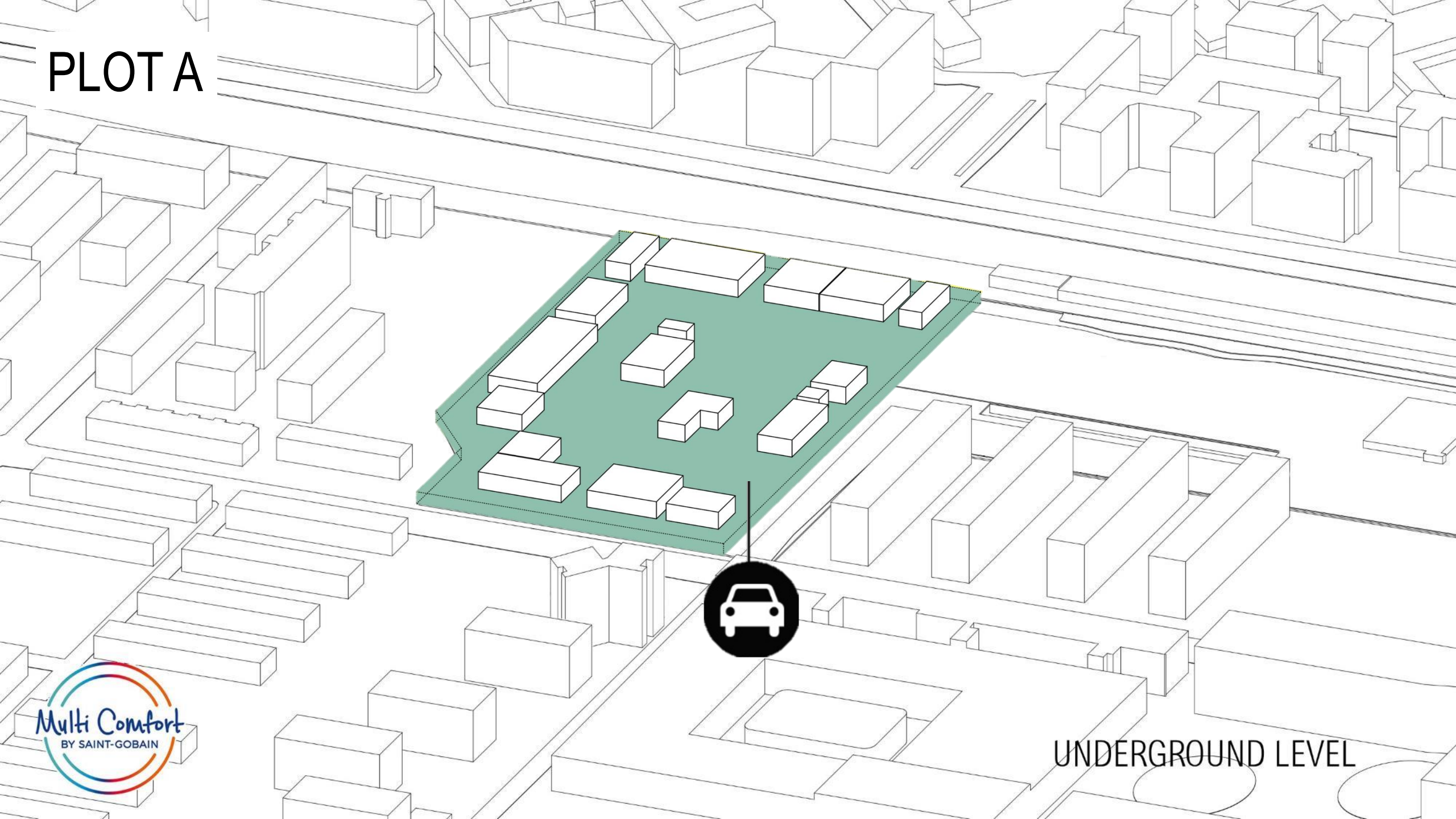
CONCEPT


A
MASTERPLAN

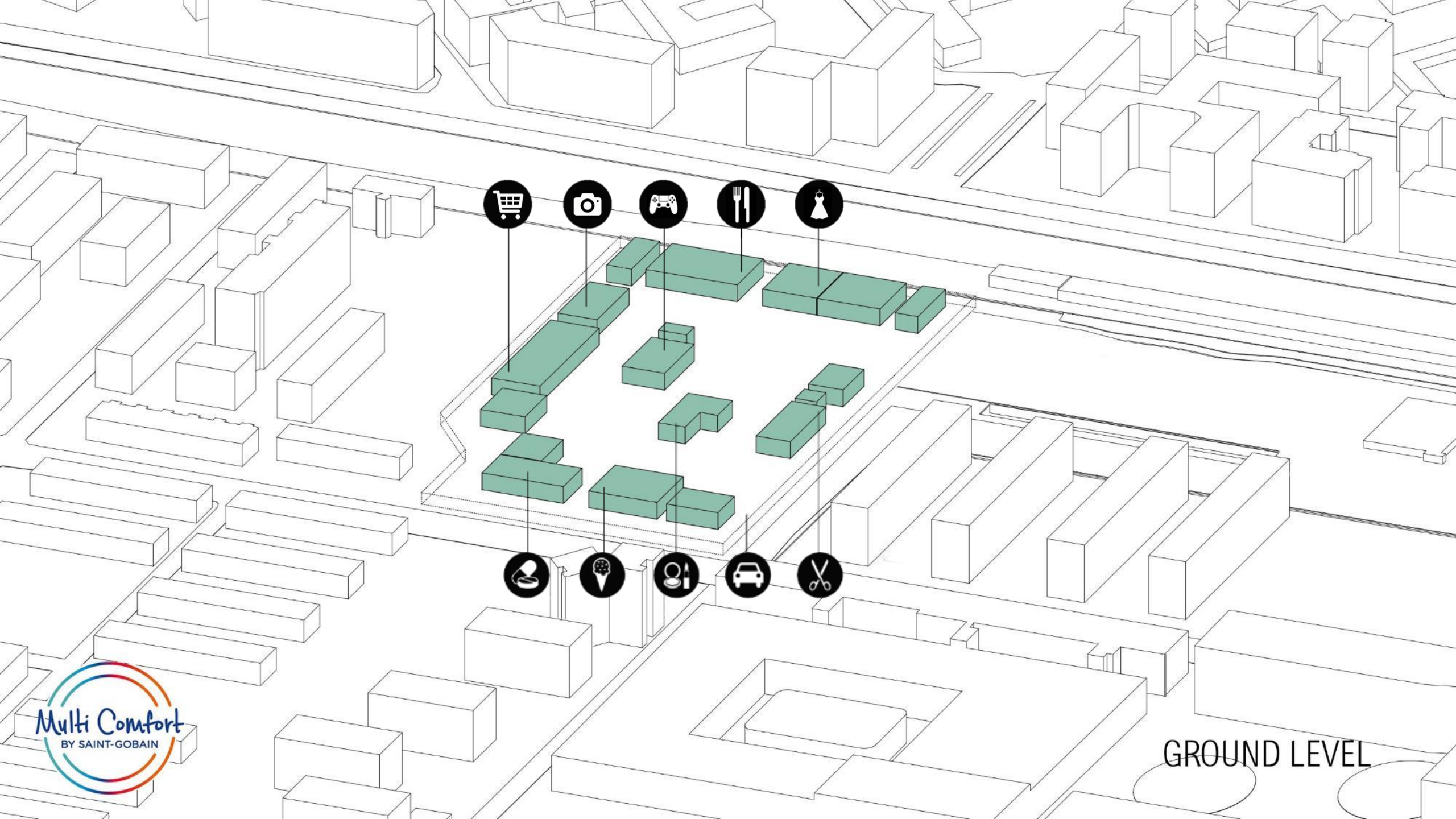
Co.Living

ECOLOGICAL.COLLECTIVE.INNOVATIVE.

PLOT A



UNDERGROUND LEVEL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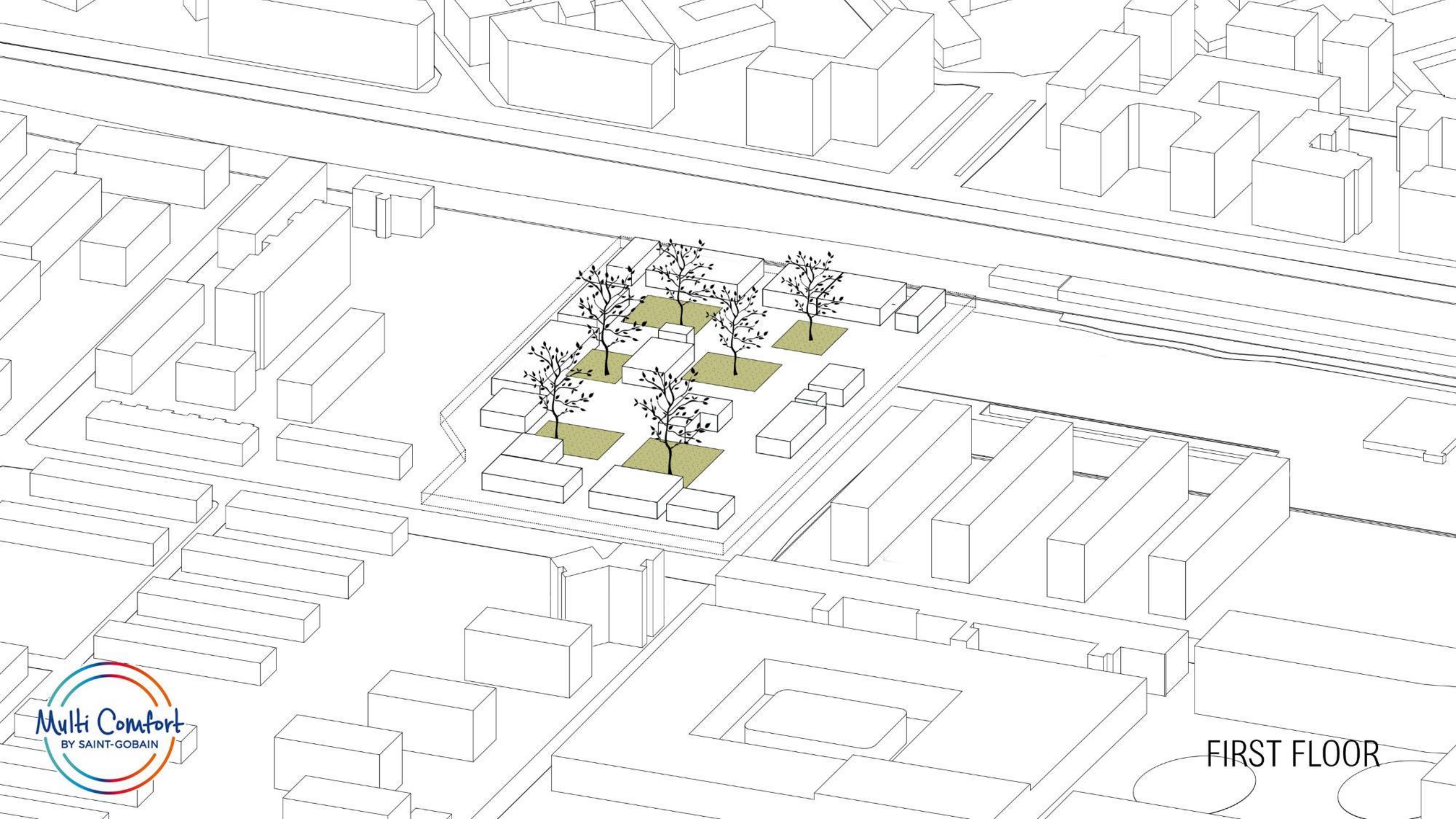
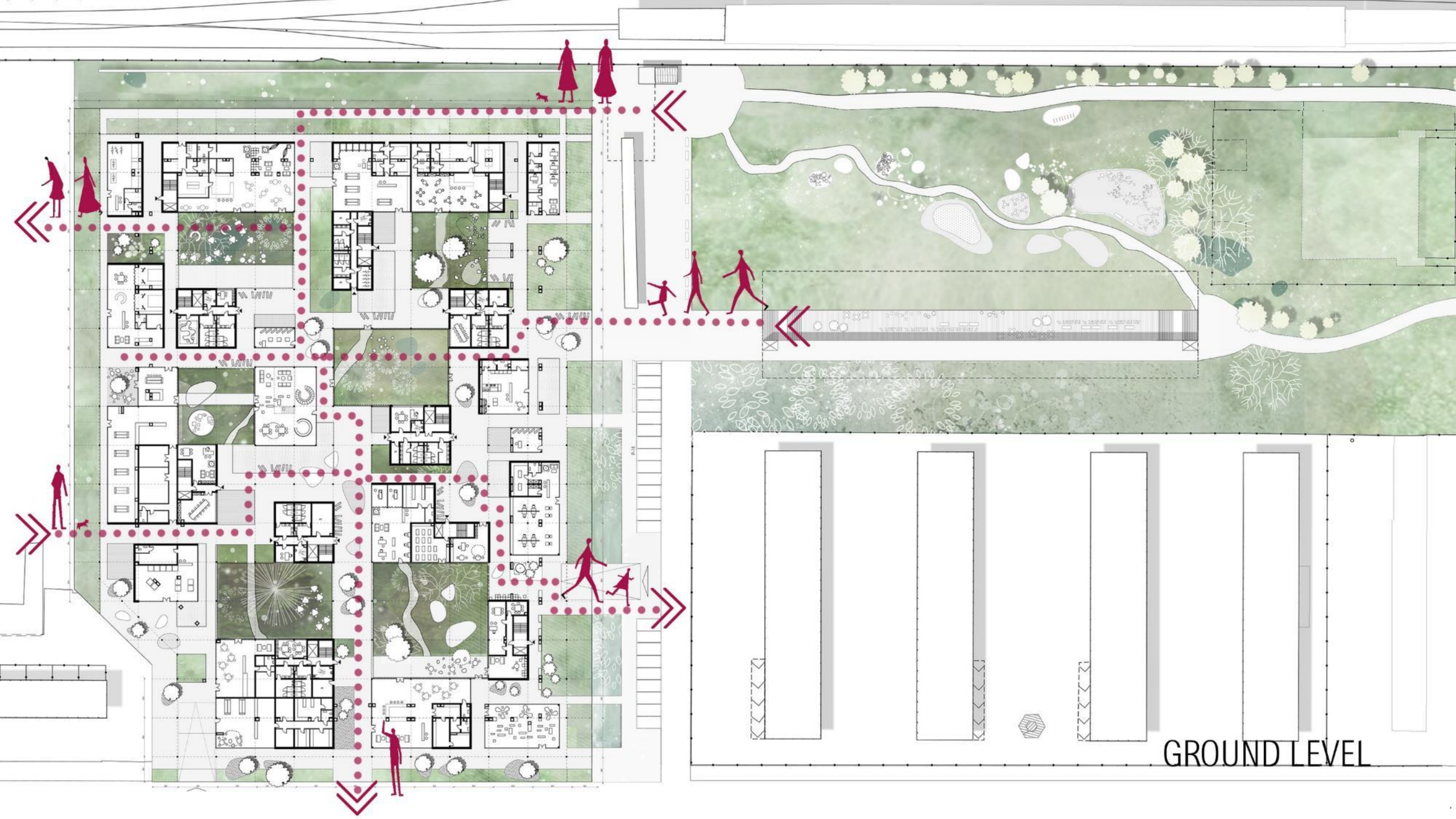
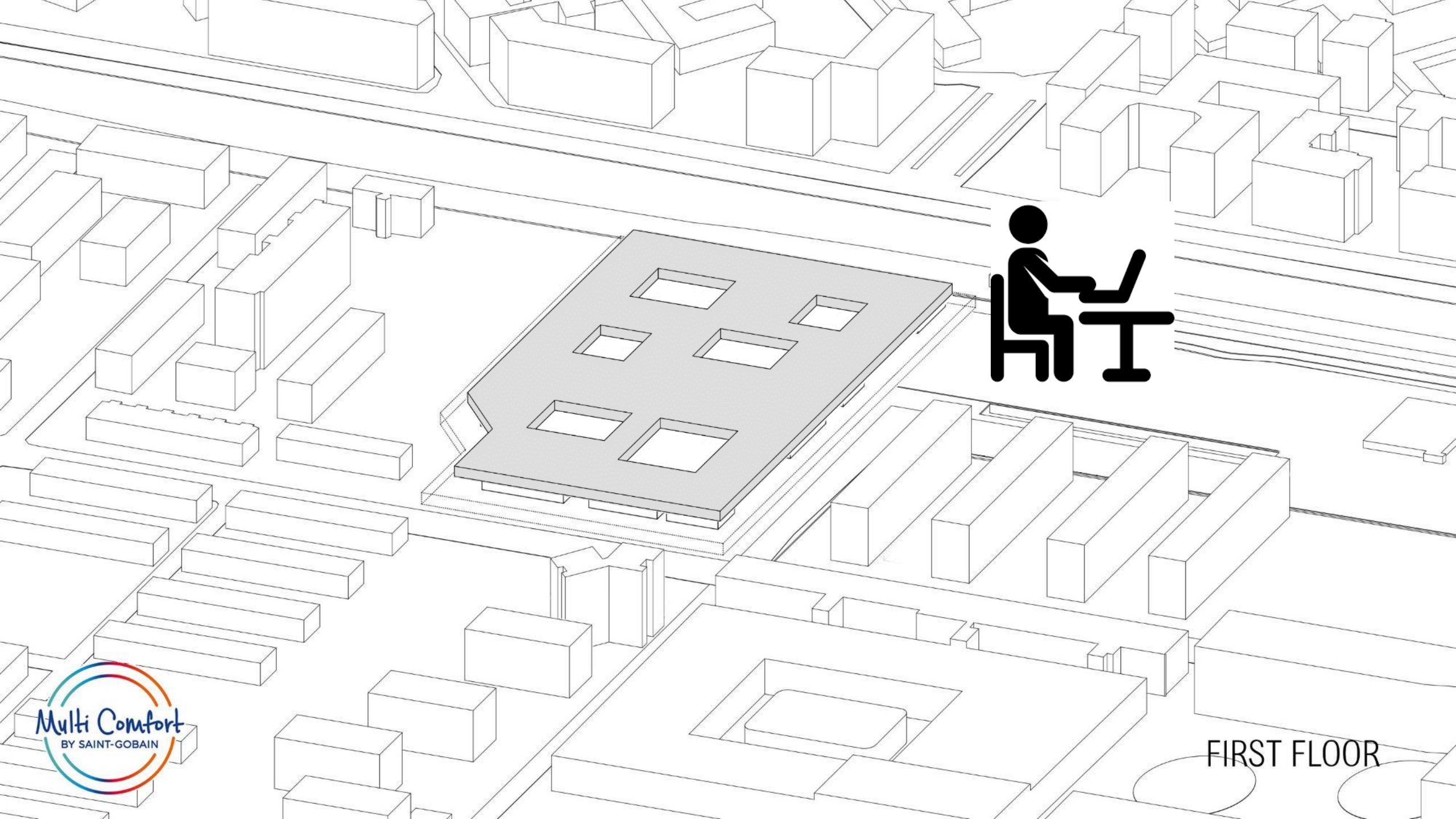
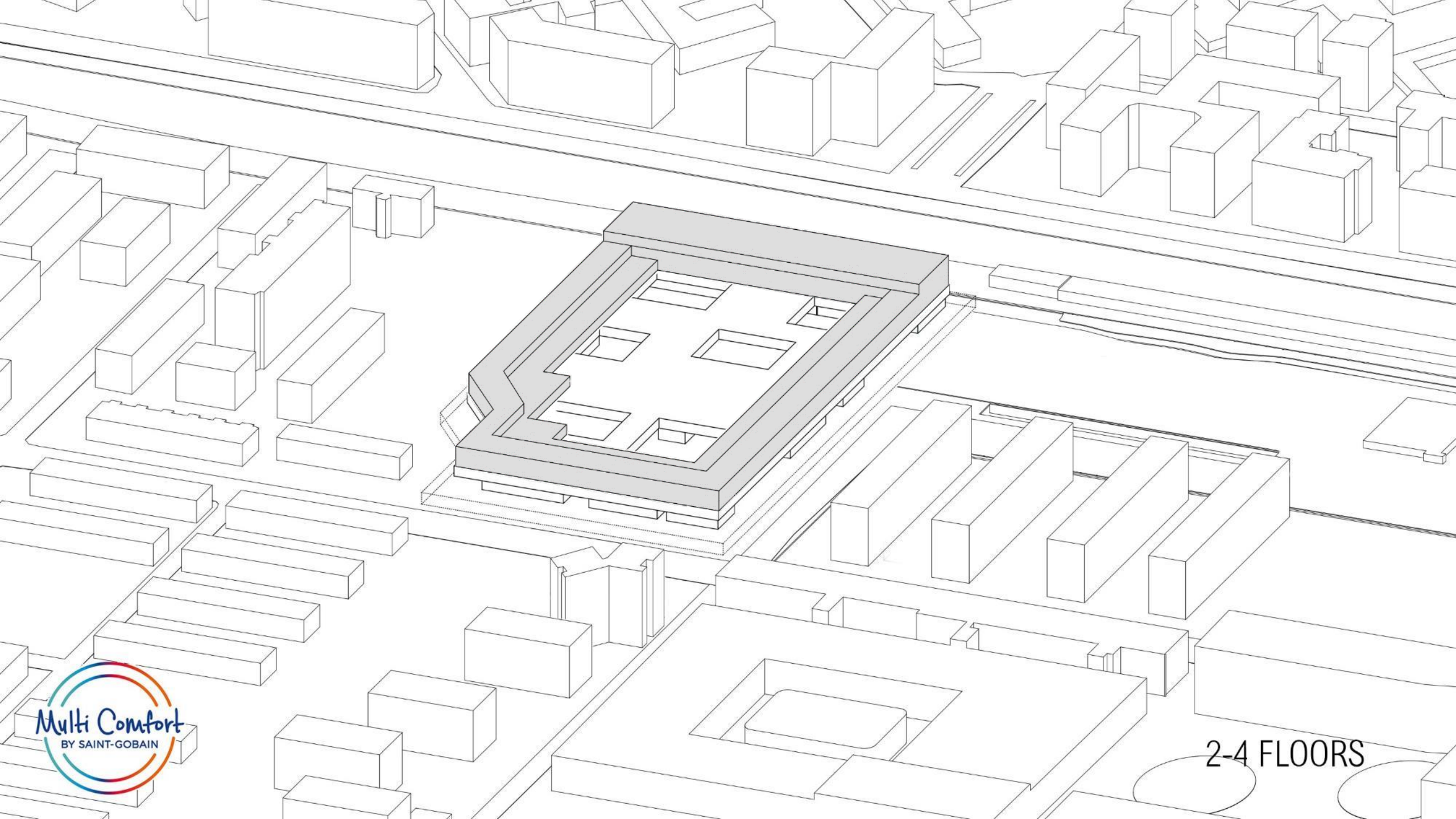
GROUND LEVEL


Multi Comfort
BY SAINT-GOBAIN
FIRST FLOOR


GROUND LEVEL


GROUND LEVEL


Multi Comfort
BY SAINT-GOBAIN
FIRST FLOOR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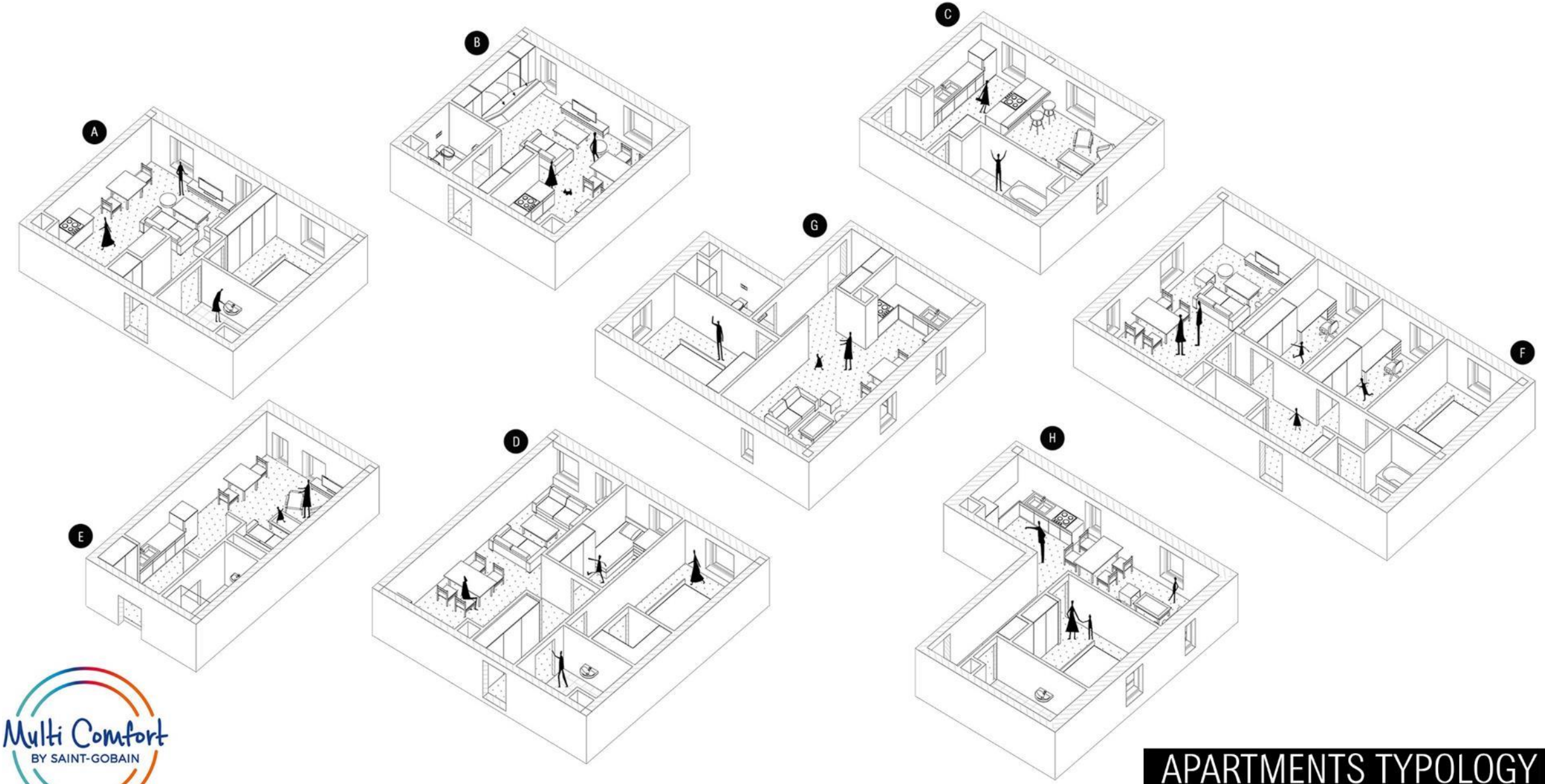
2-4 FLOORS



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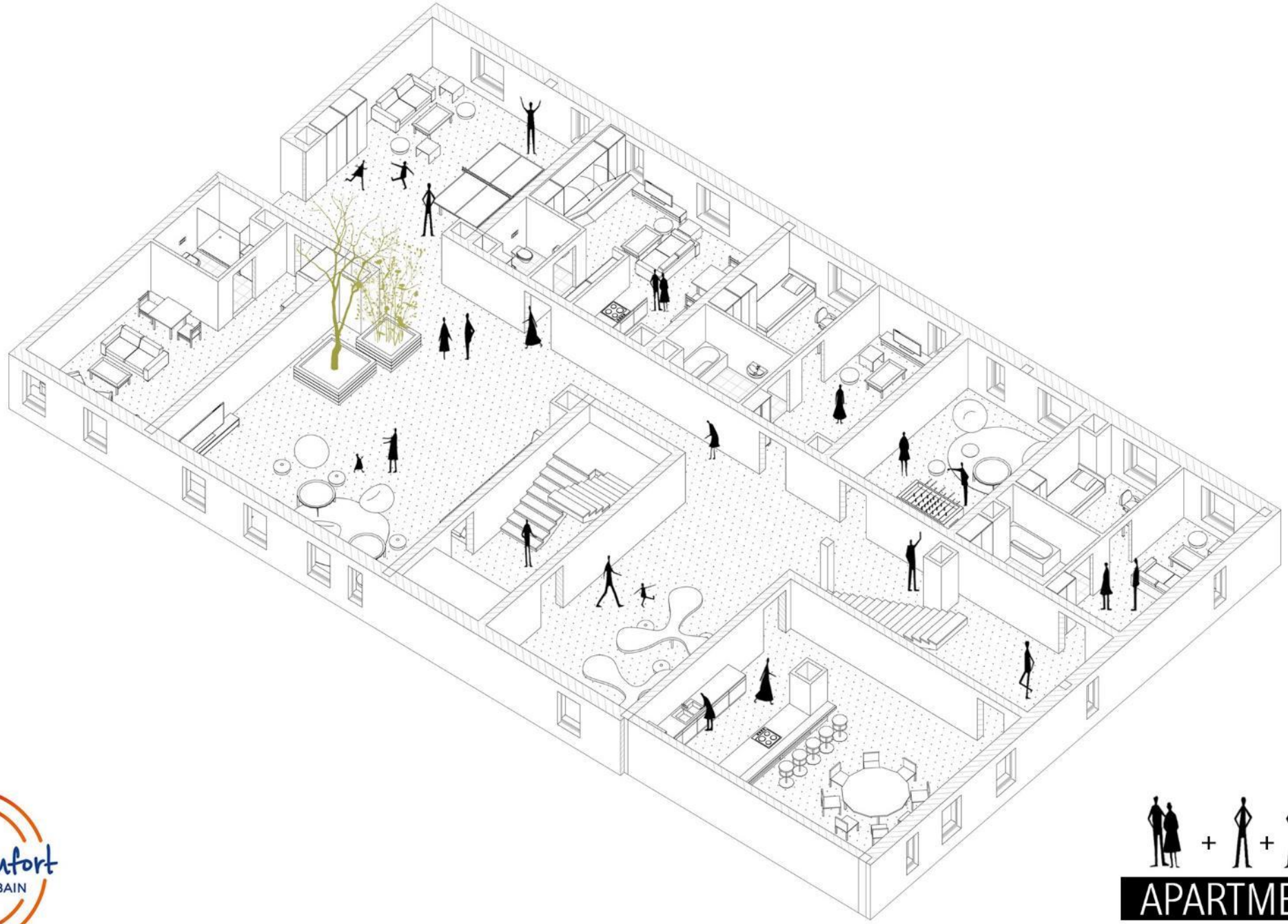
BY SAINT-GOBAIN

APARTMENTS TYPOLOGY



Multi Comfort
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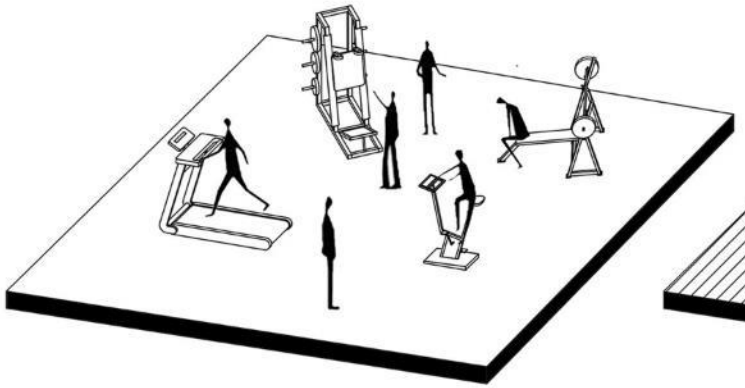
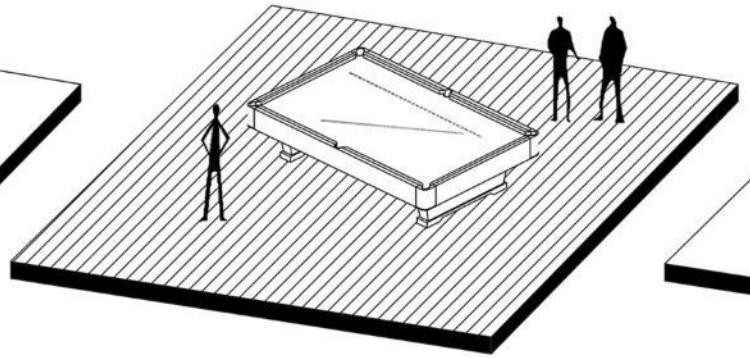
APARTMENTS TYPOLOGY



GYM



BILIARD

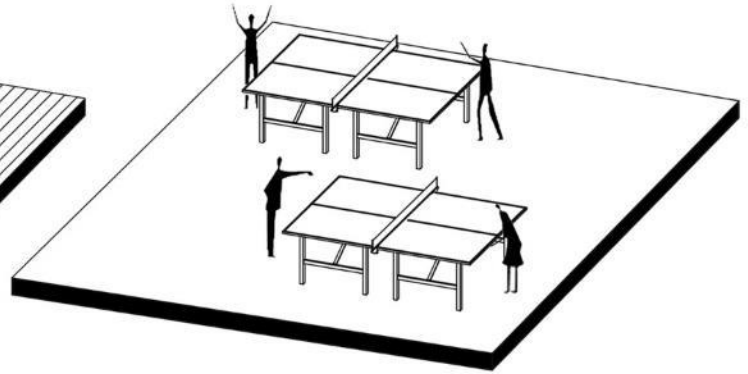
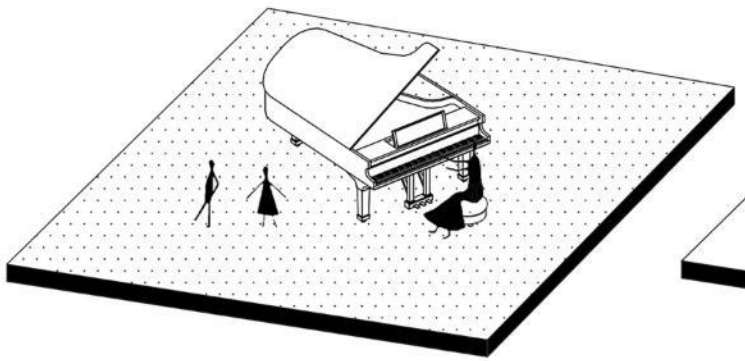
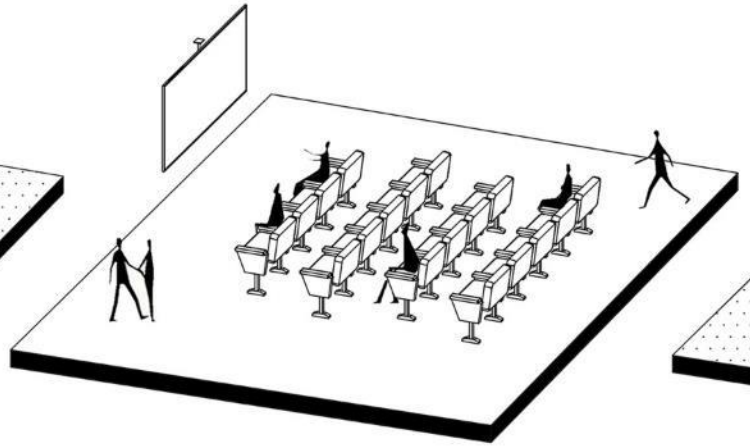


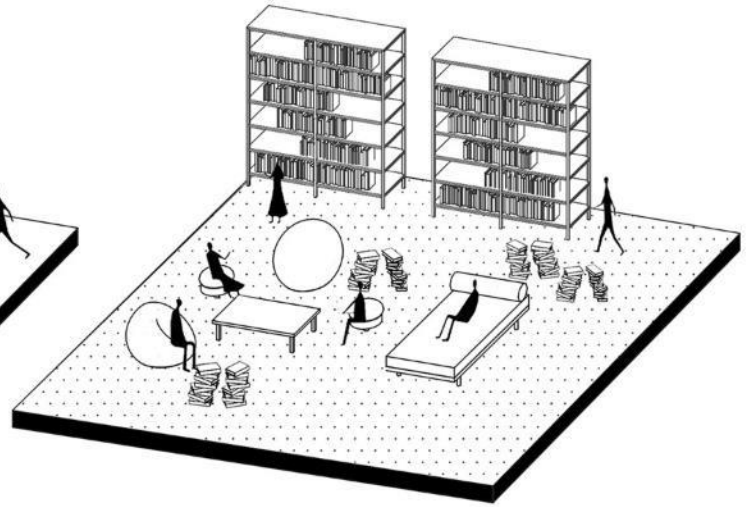
TABLE TENNIS



MUSIC ROOM



MINI CINEMA



READING ROOM

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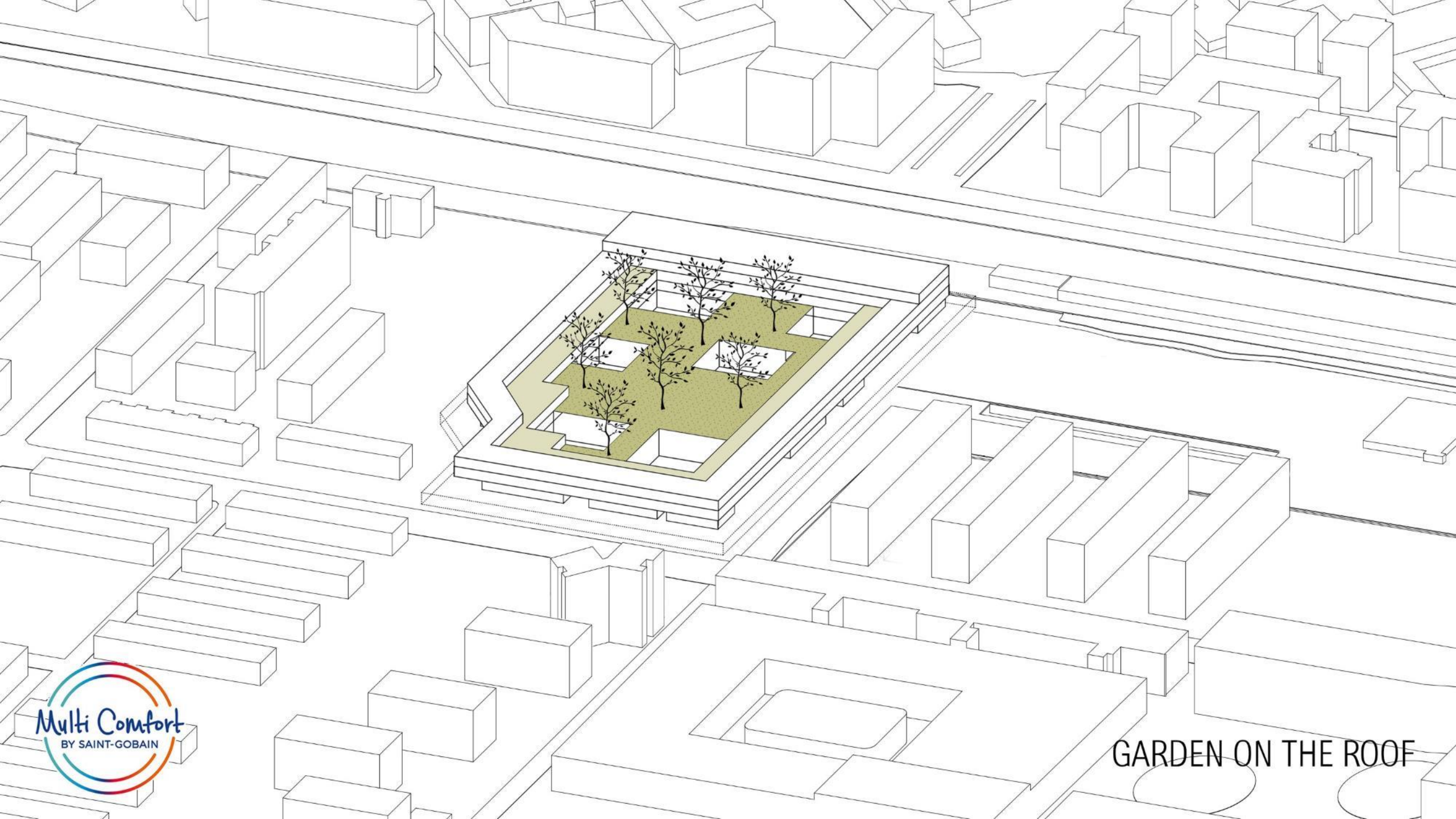
COMMON SPACES



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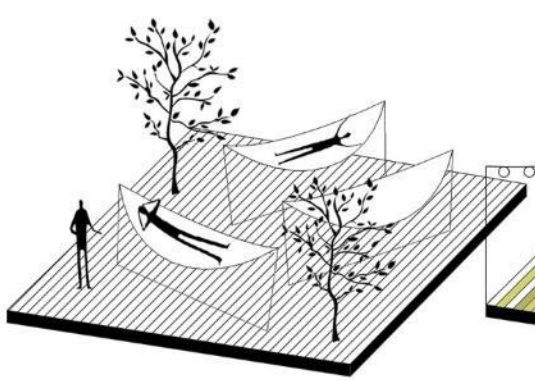
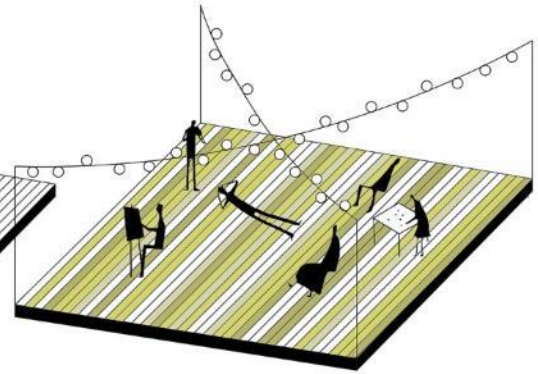
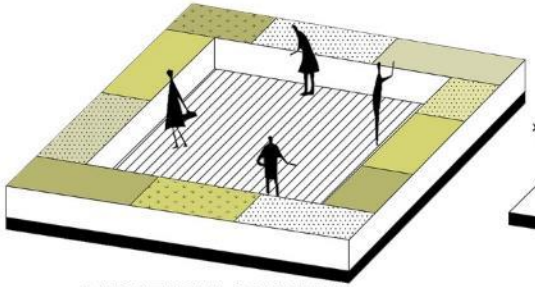
GARDEN ON THE ROOF



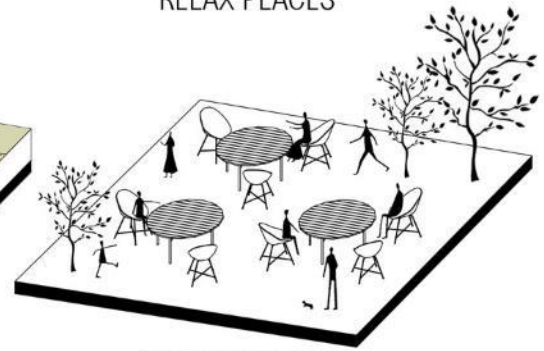
HAMMOCKS



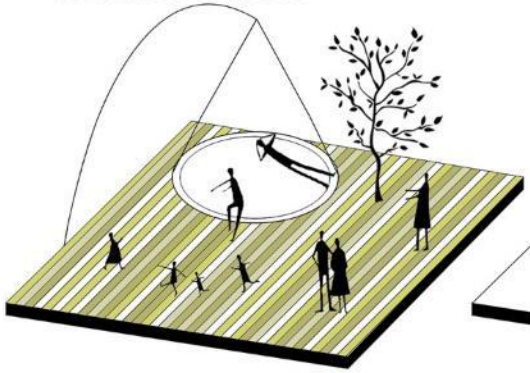
RELAX PLACES



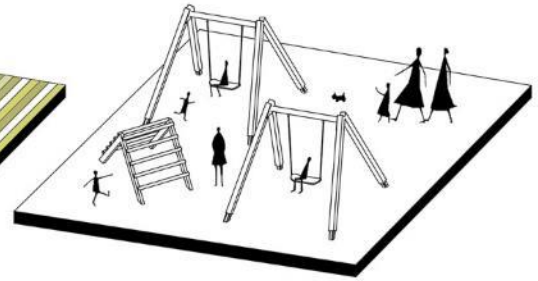
VEGETABLE GARDENS



OUTDOOR TABLES



BIG SWING



PLAYGROUNDS

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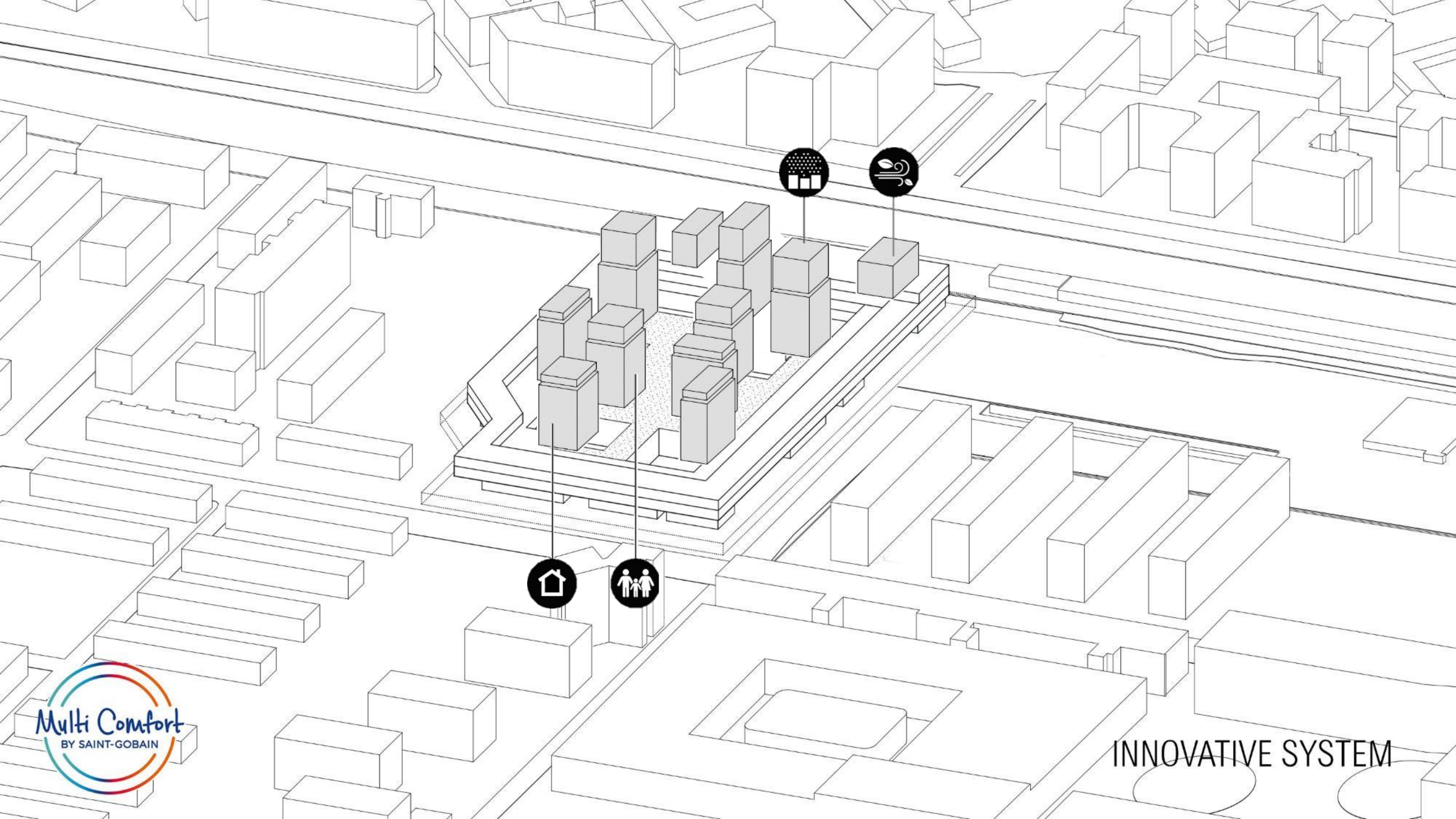
GREEN GARDEN



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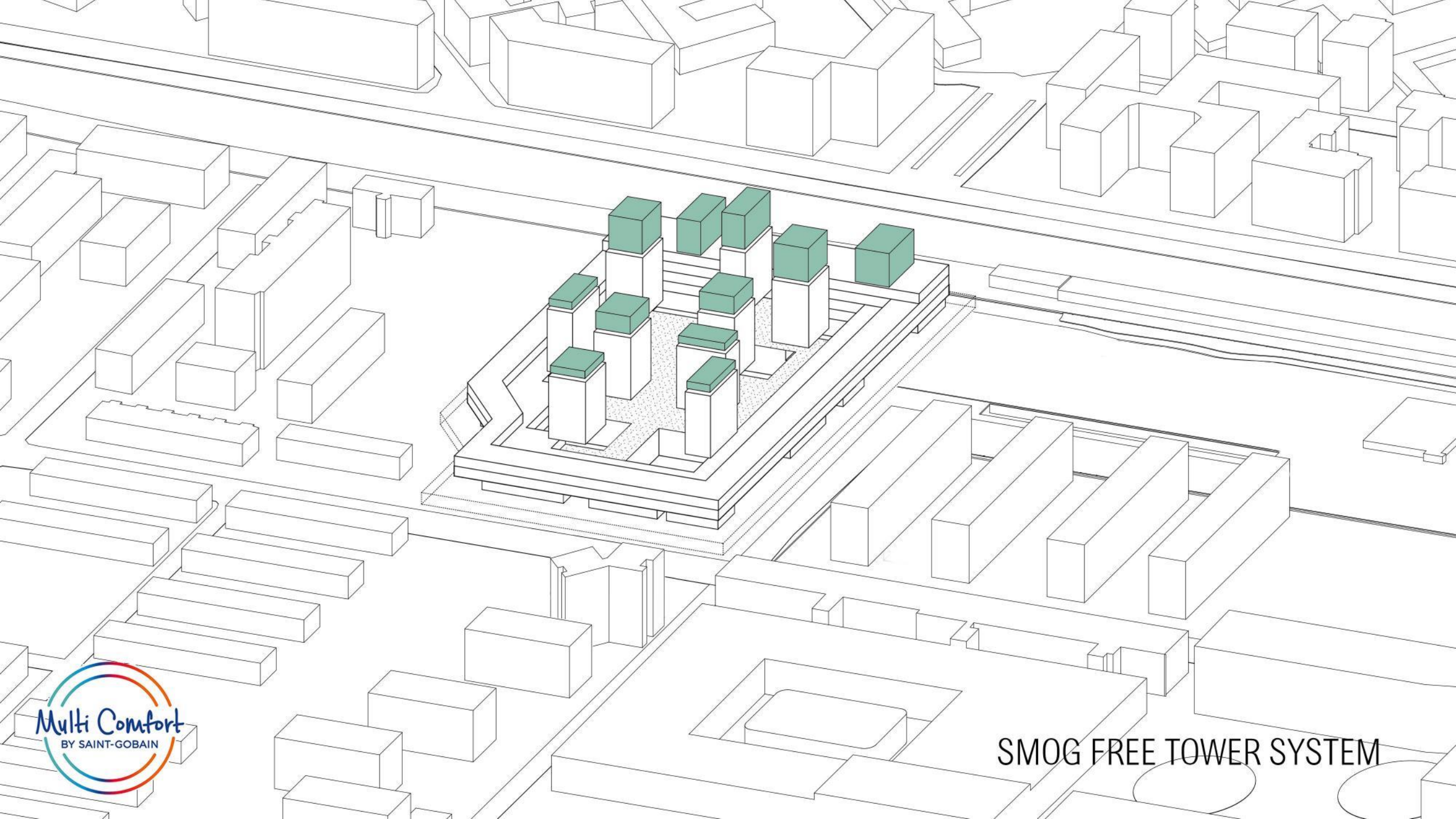
INNOVATIVE SYSTEM



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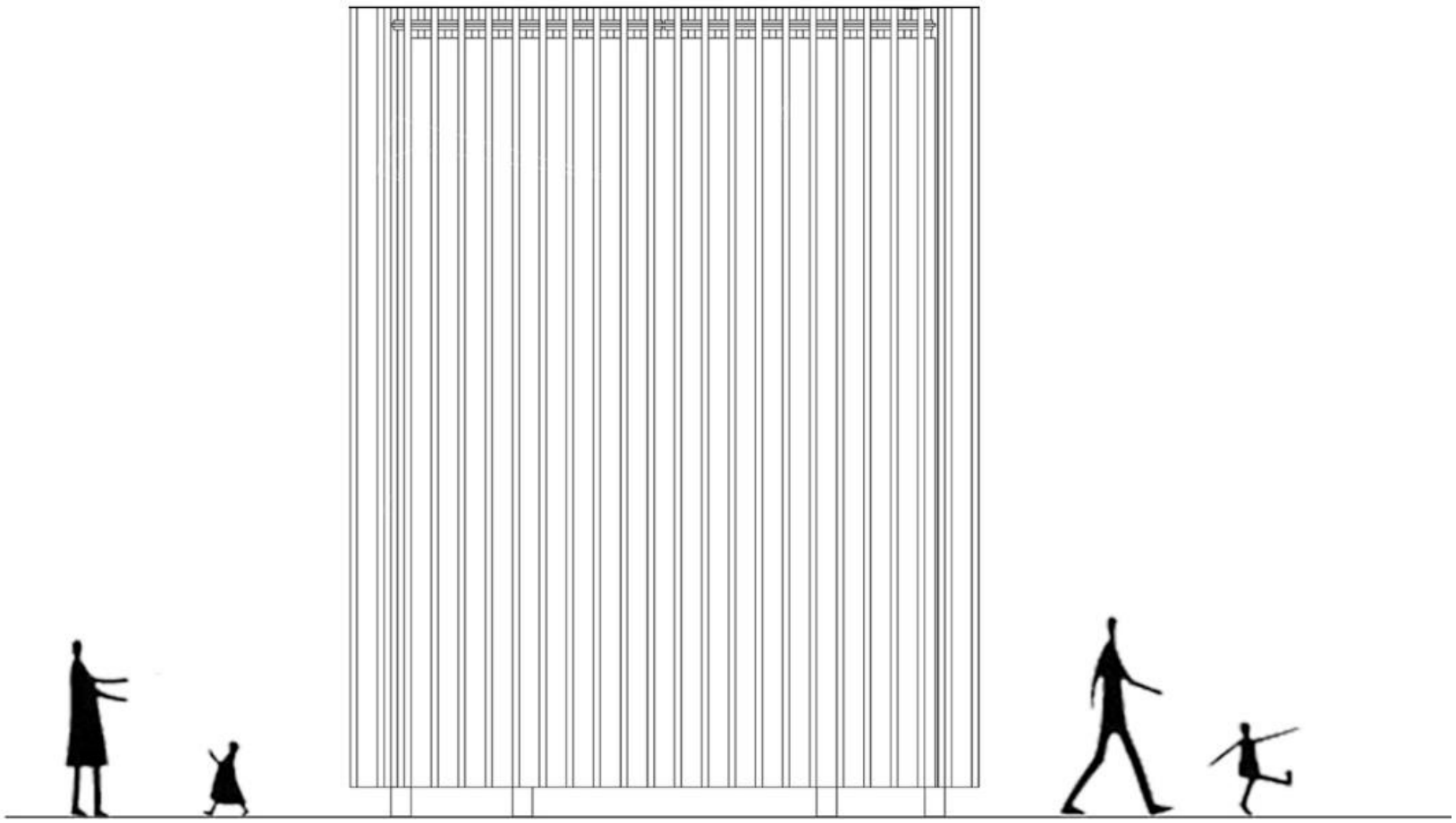
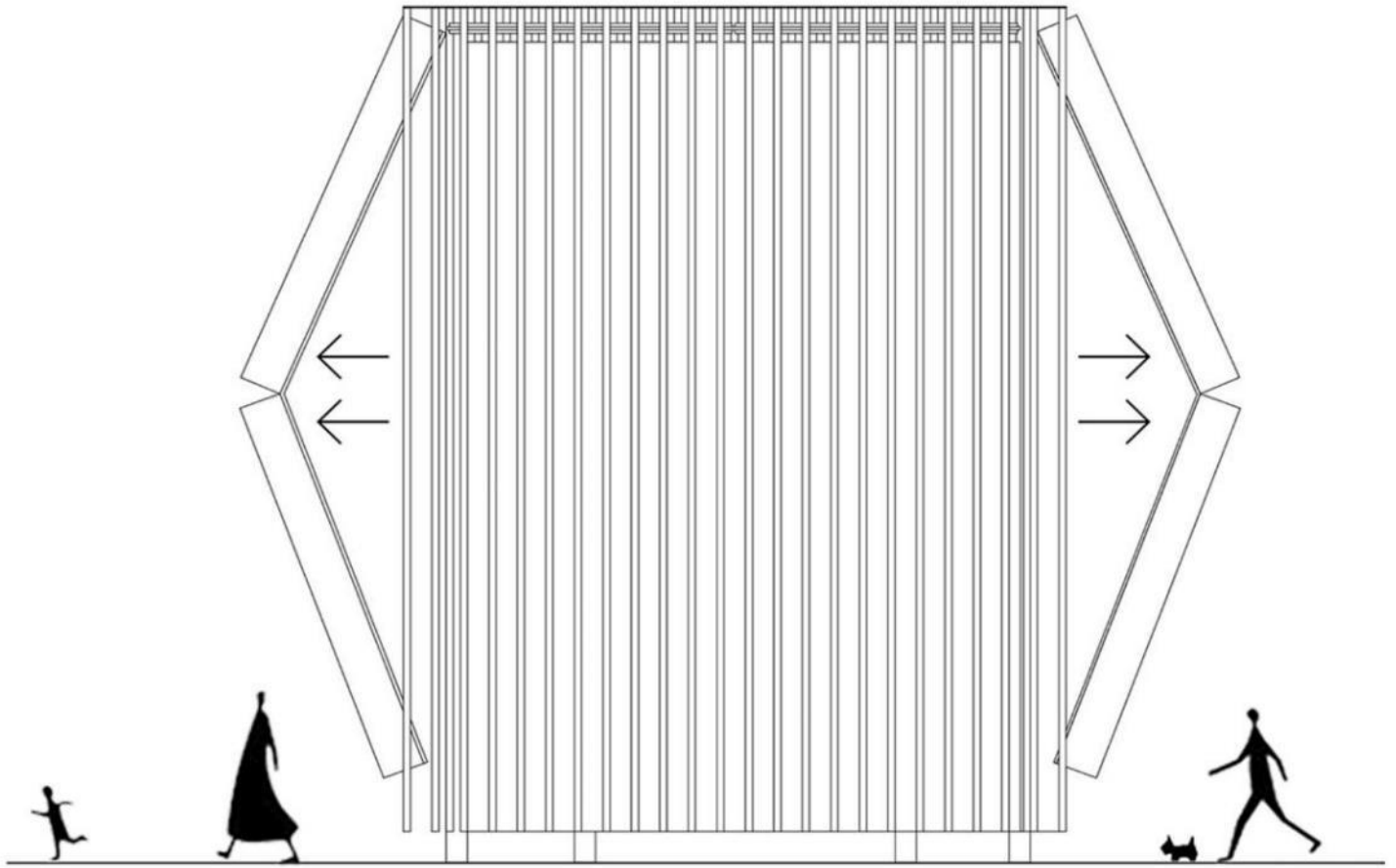
SMOG FREE TOWER SYSTEM

Breathe



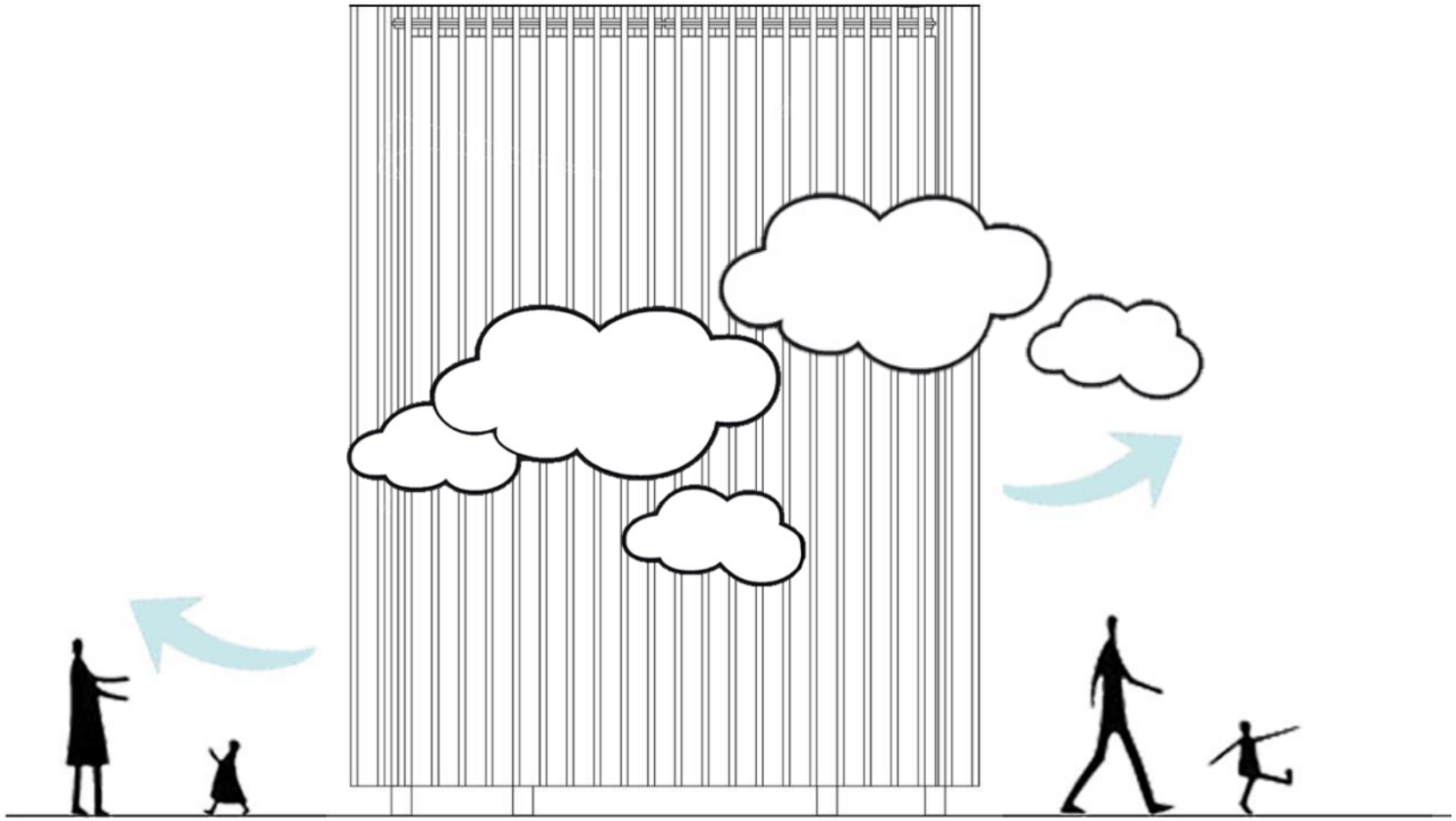
SMOG FREE TOWERS SYSTEM

Breathe

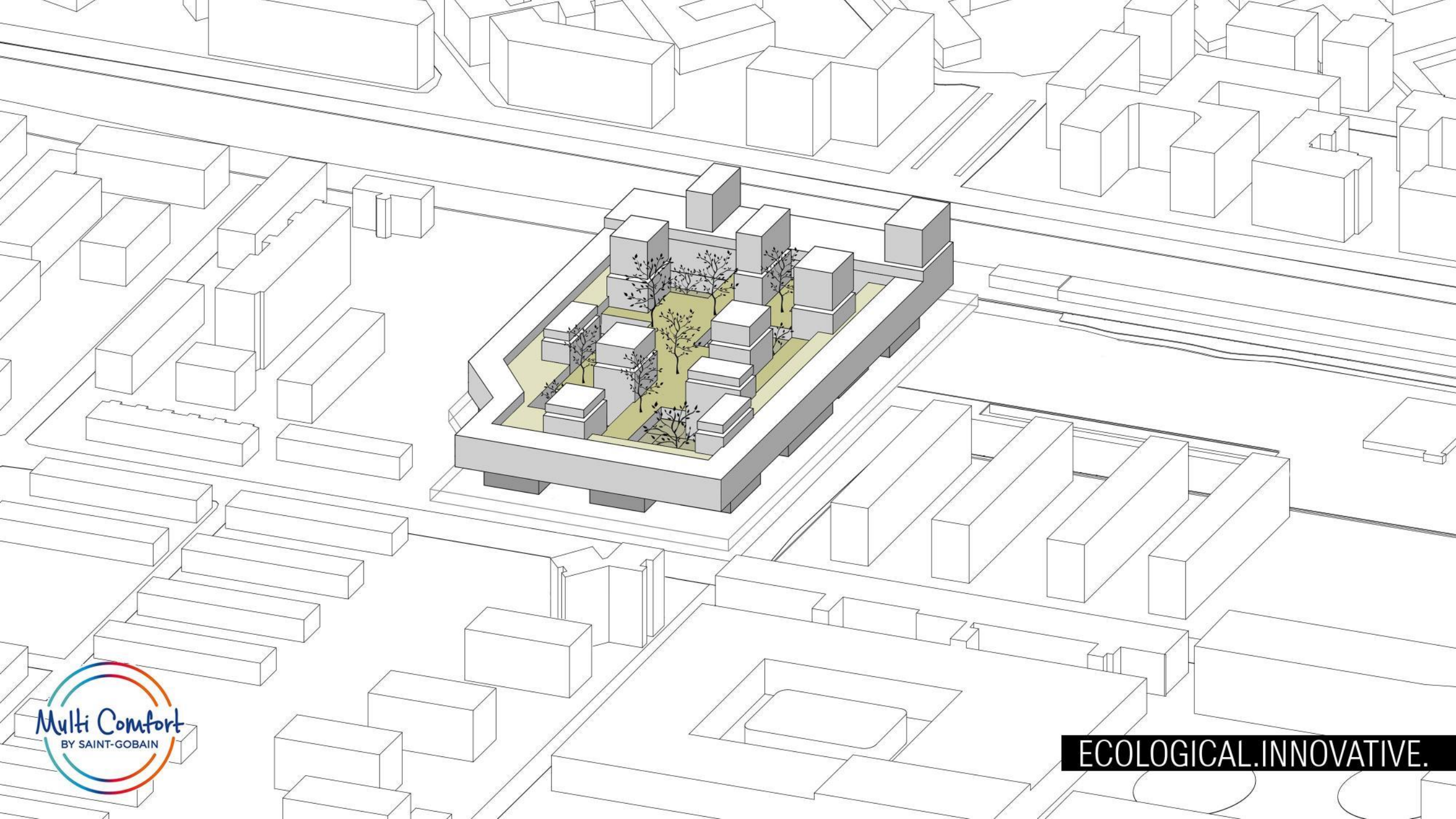


SMOG FREE TOWERS

Breathe



SMOG FREE TOWERS



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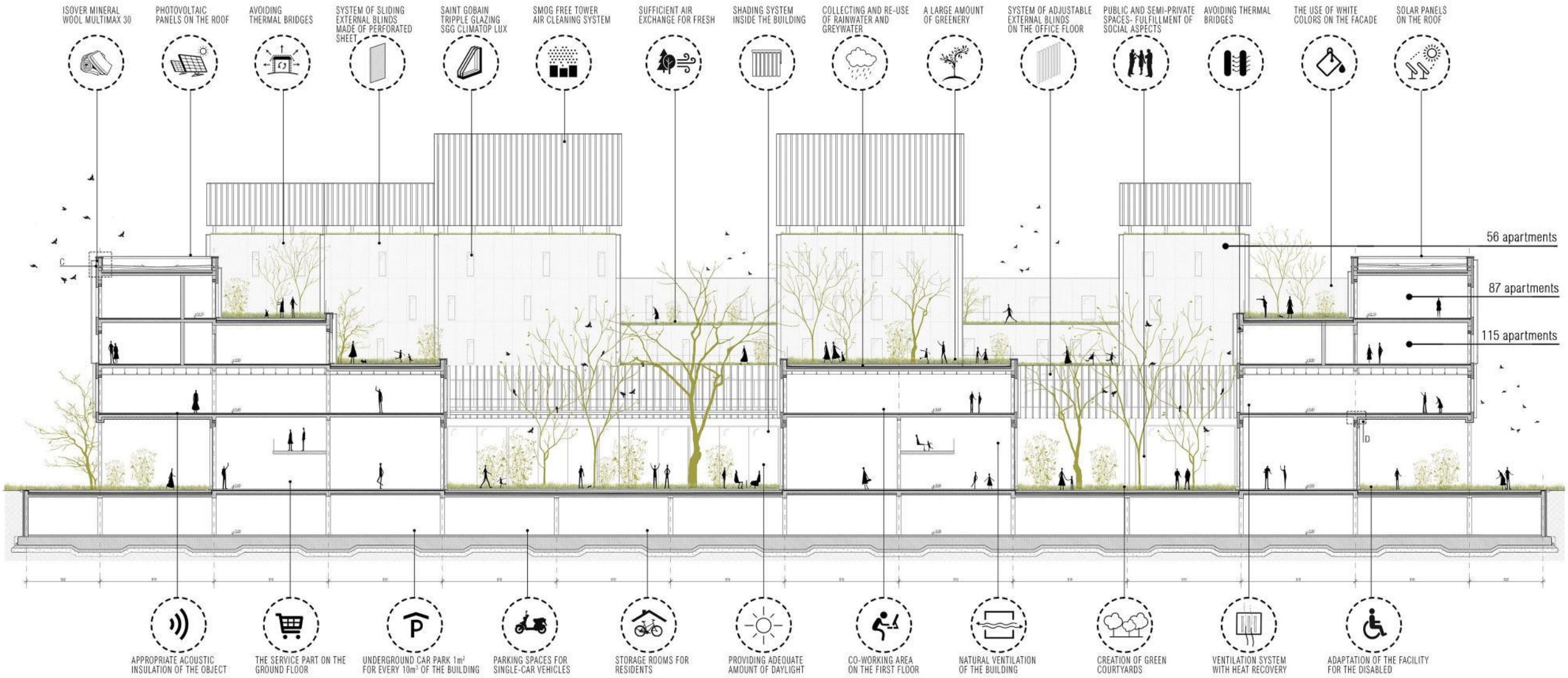
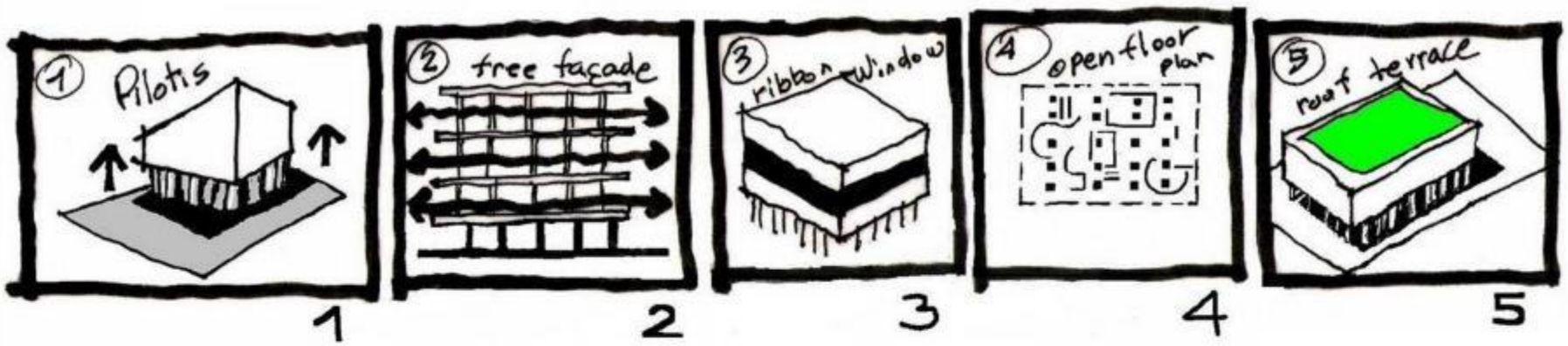
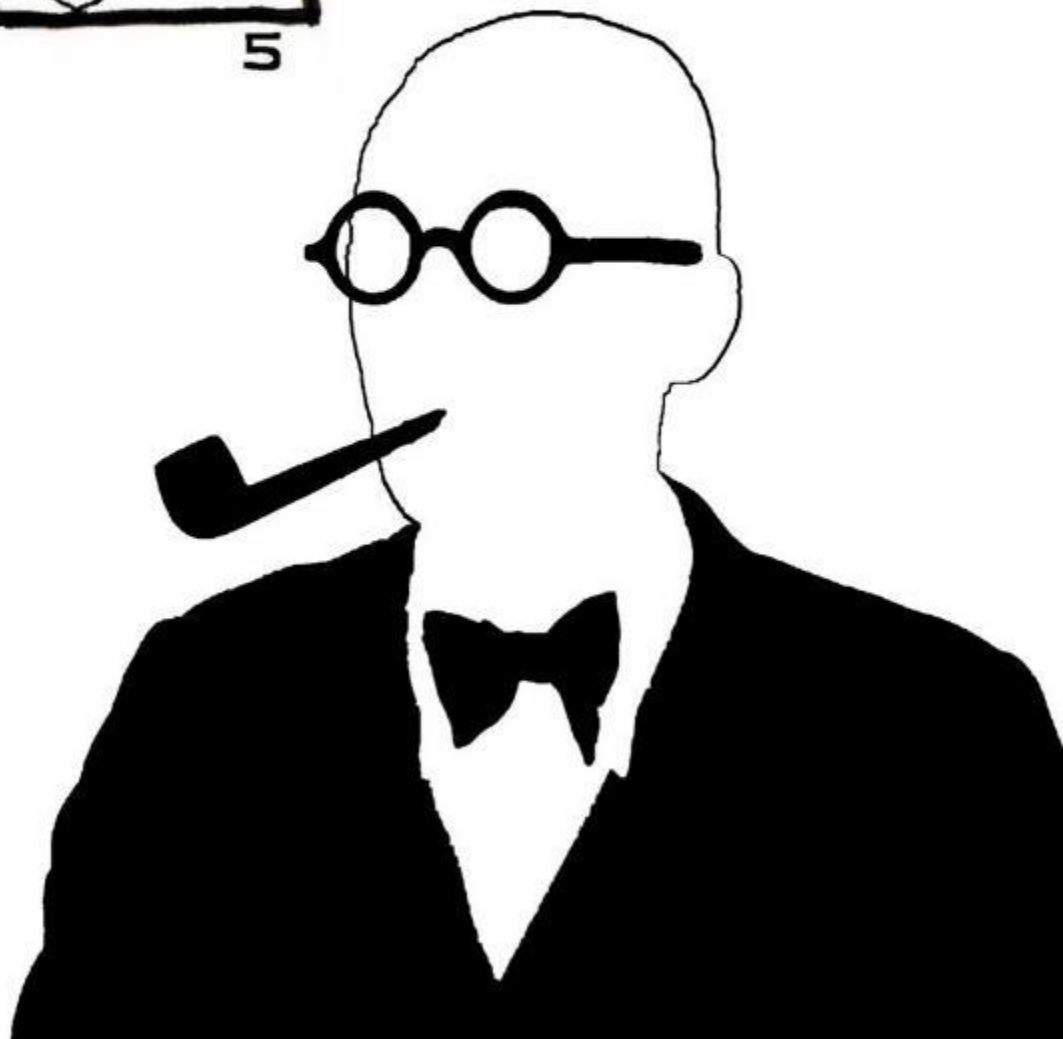
ECOLOGICAL.INNOVATIVE.

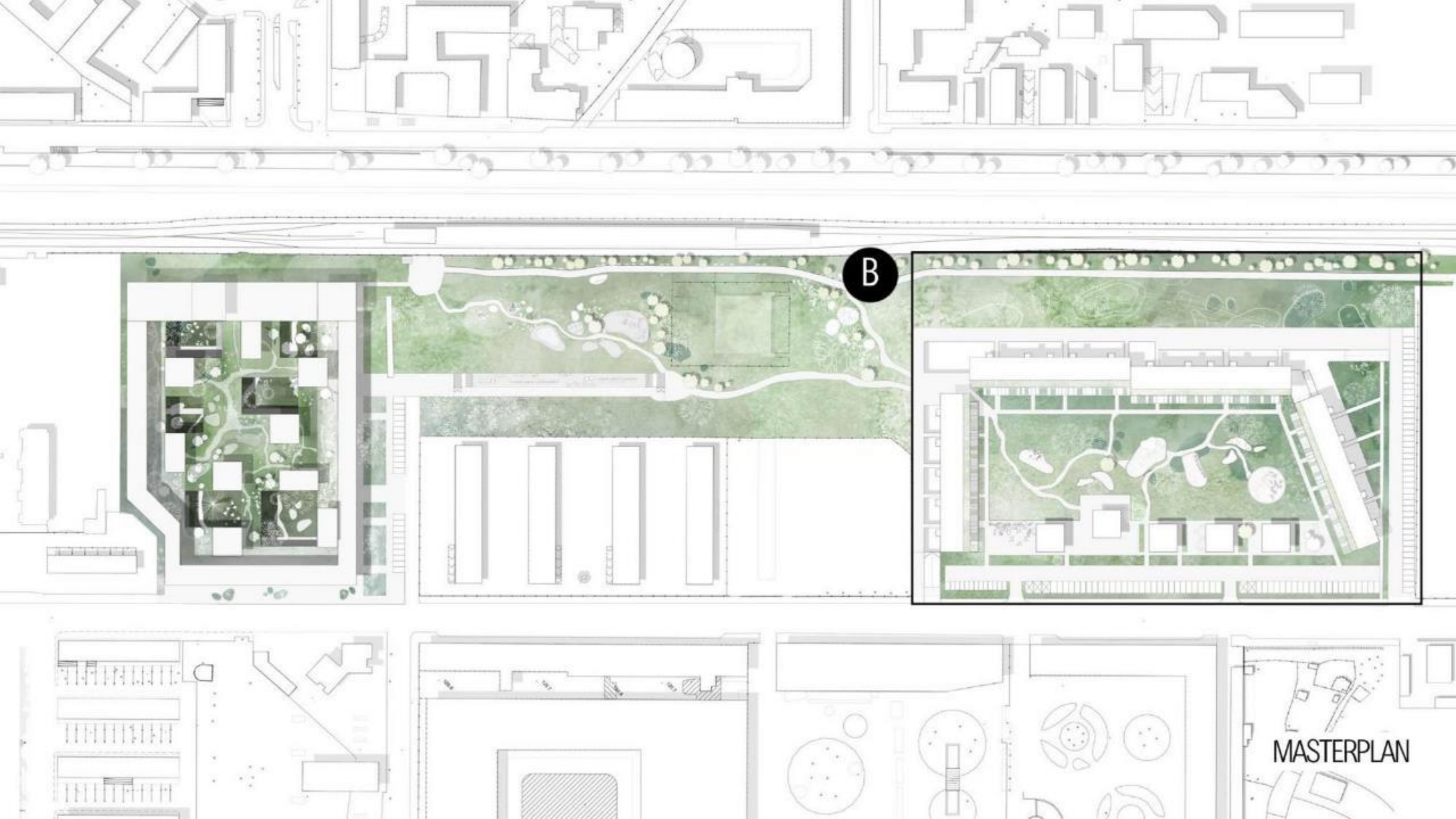


BULIDING SECTION PLOT A

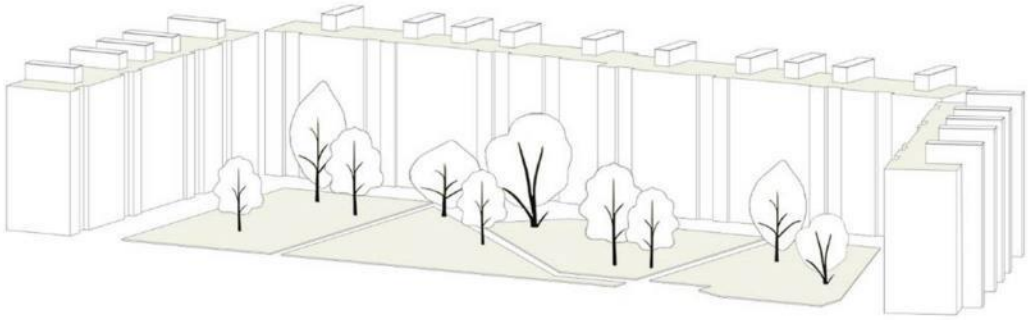




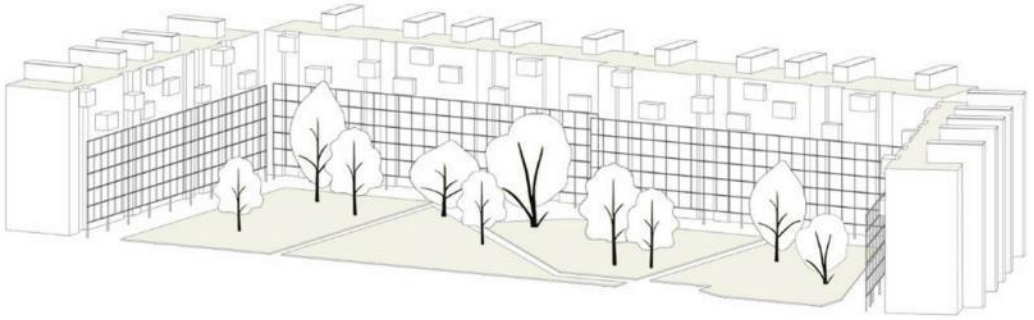
Le Corbusier


B
MASTERPLAN

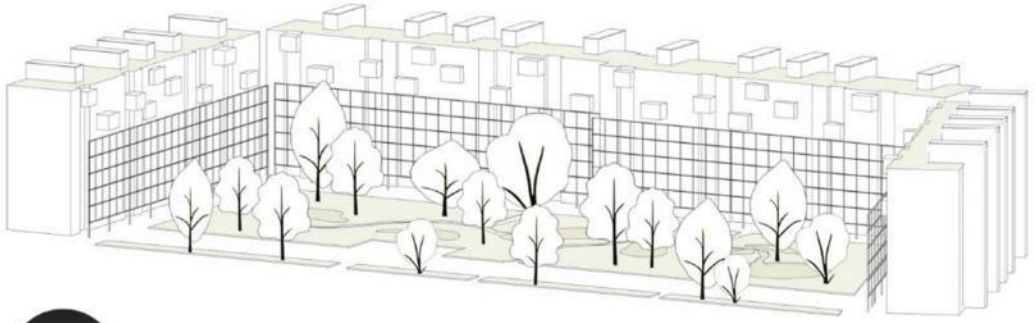
PLOT B



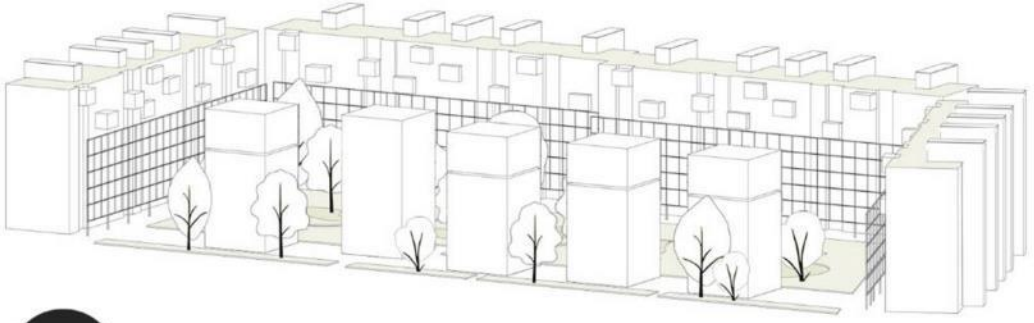
WARMING OF THE BUILDING.
CHANGE OF THE ROOF ON THE GREEN ROOFS



INTRODUCTION OF NEW CONSTRUCTION



SPACE MANAGEMENT



INTRODUCTION OF NEW FUNCTIONS

Multi Comfort BY SAINT-GOBAIN

Breathe See

REVITALIZING CHANGES

GREEN ROOF

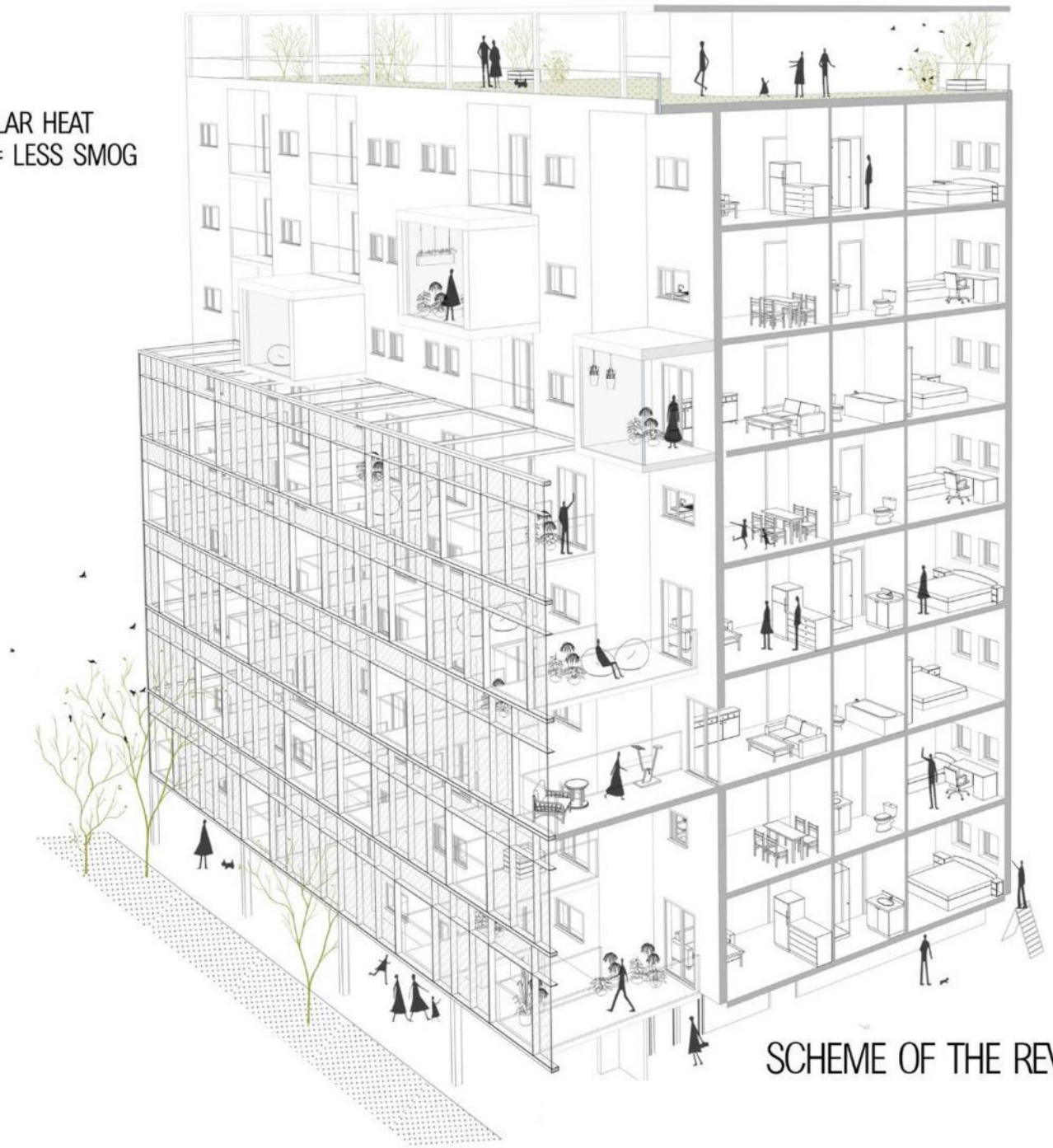
PROTECTS THE BUILDING FROM DIRECT SOLAR HEAT
LESS GROUND LEVEL OZONE + LESS HEAT = LESS SMOG
IMPROVE AIR QUALITY

NEW
BALCONIES

POSSIBILITY OF THE INDIVIDUAL USE

NEW
CONSTRUCTION

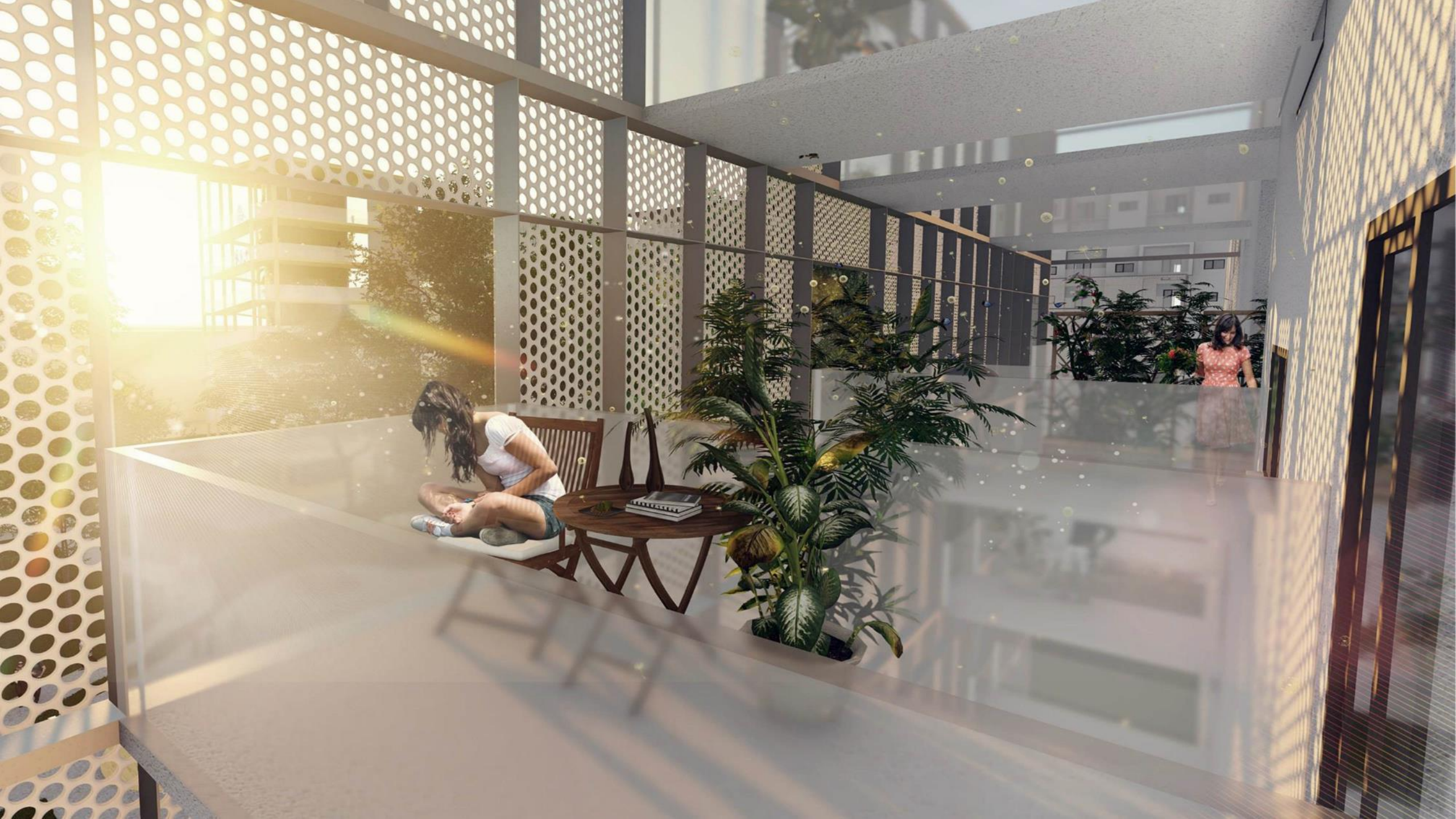
SHADING TO COOL SPACE
DIFFUSE LIGHT

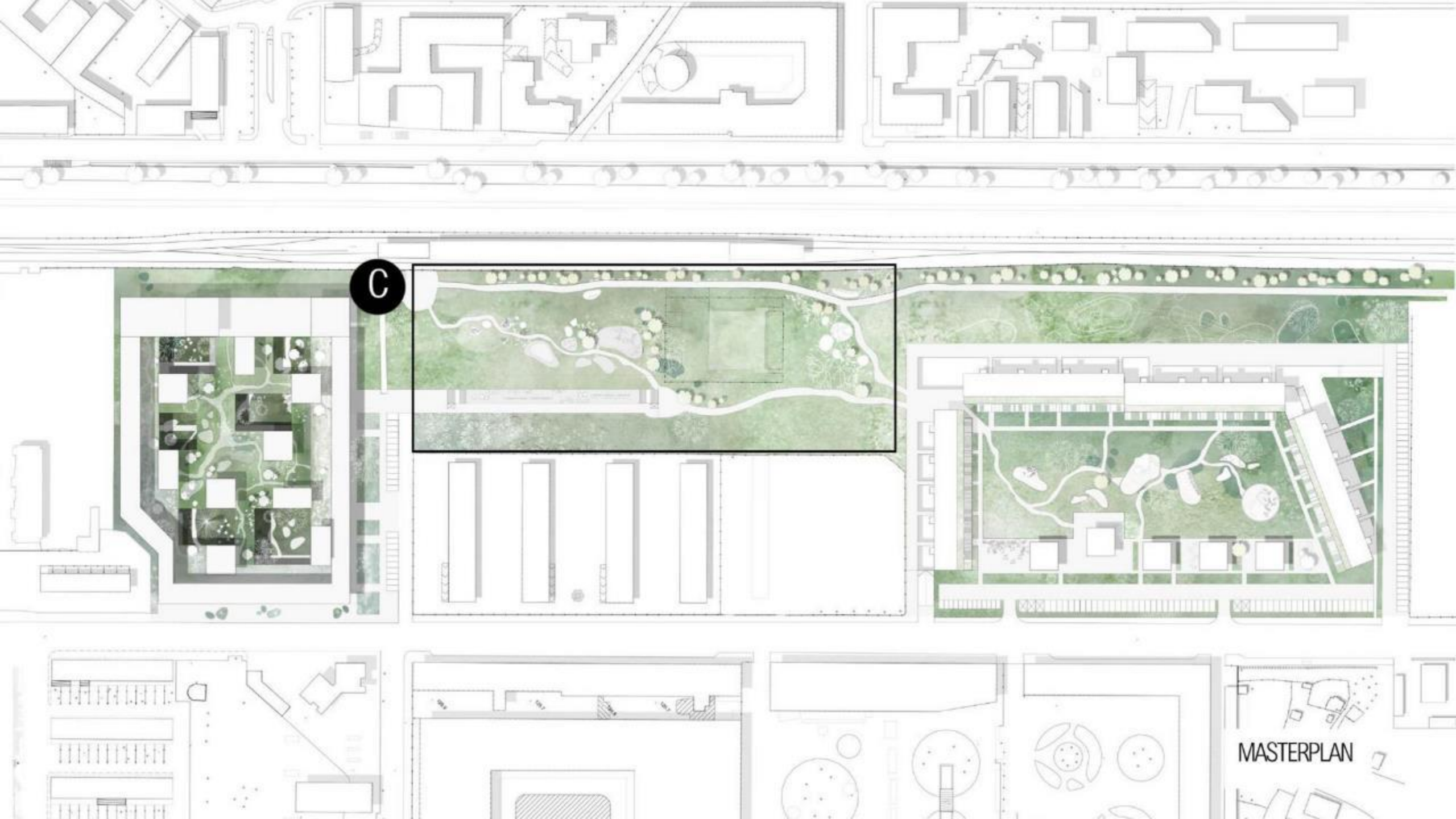


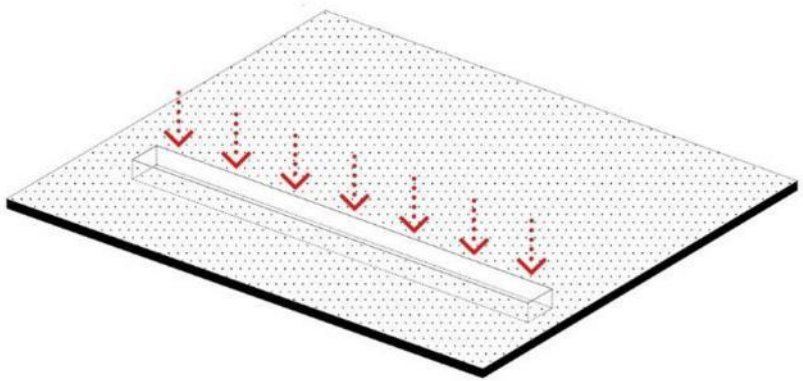
SCHEME OF THE REVITALIZED BUILDING

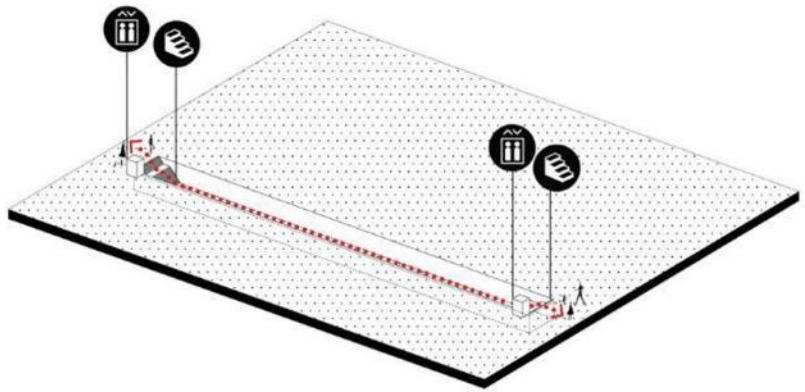
Multi Comfort
BY SAINT-GOBAIN

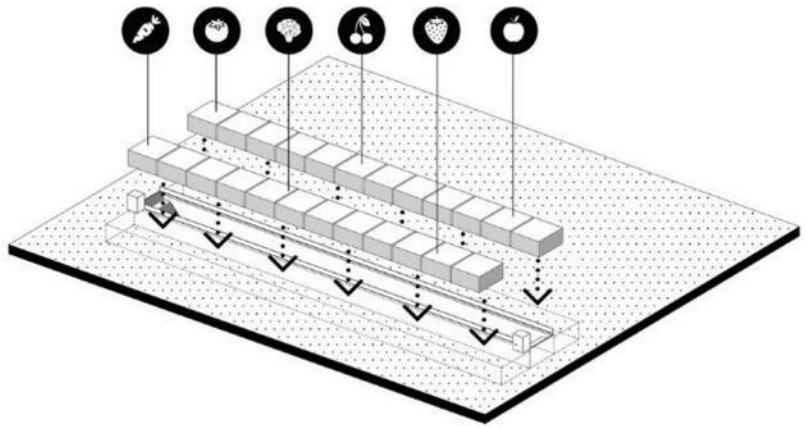
Feel Hear




C
MASTERPLAN







Multi Comfort
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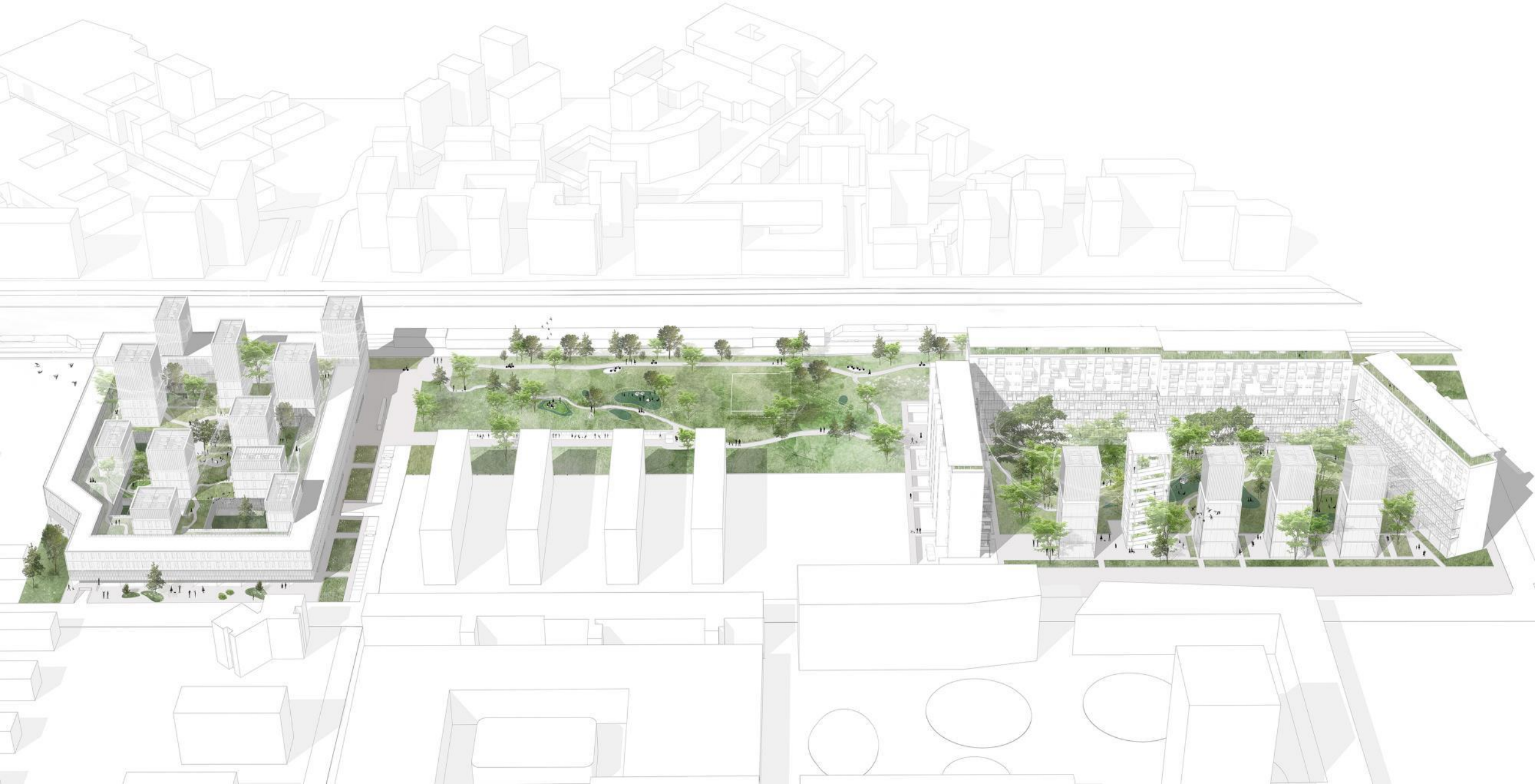
SHAPE DRAWING SCHEME. PLOT C

greenery
recreation
relax

Multi Comfort
BY SAINT-GOBAIN

LOADING

PLEASE WAIT...



TECHNICAL ASPECTS

Hear

silence acoustics

appropriate sound environment

isolate from bothersome sounds

reduce reverberation

See

light

attention to the right amount of daylight

design

color

providing an outside view

Multi Comfort
BY SAINT-GOBAIN

Feel

pleasant temperature in both winter and summer

adequate thermal insulation

Breathe

air quality

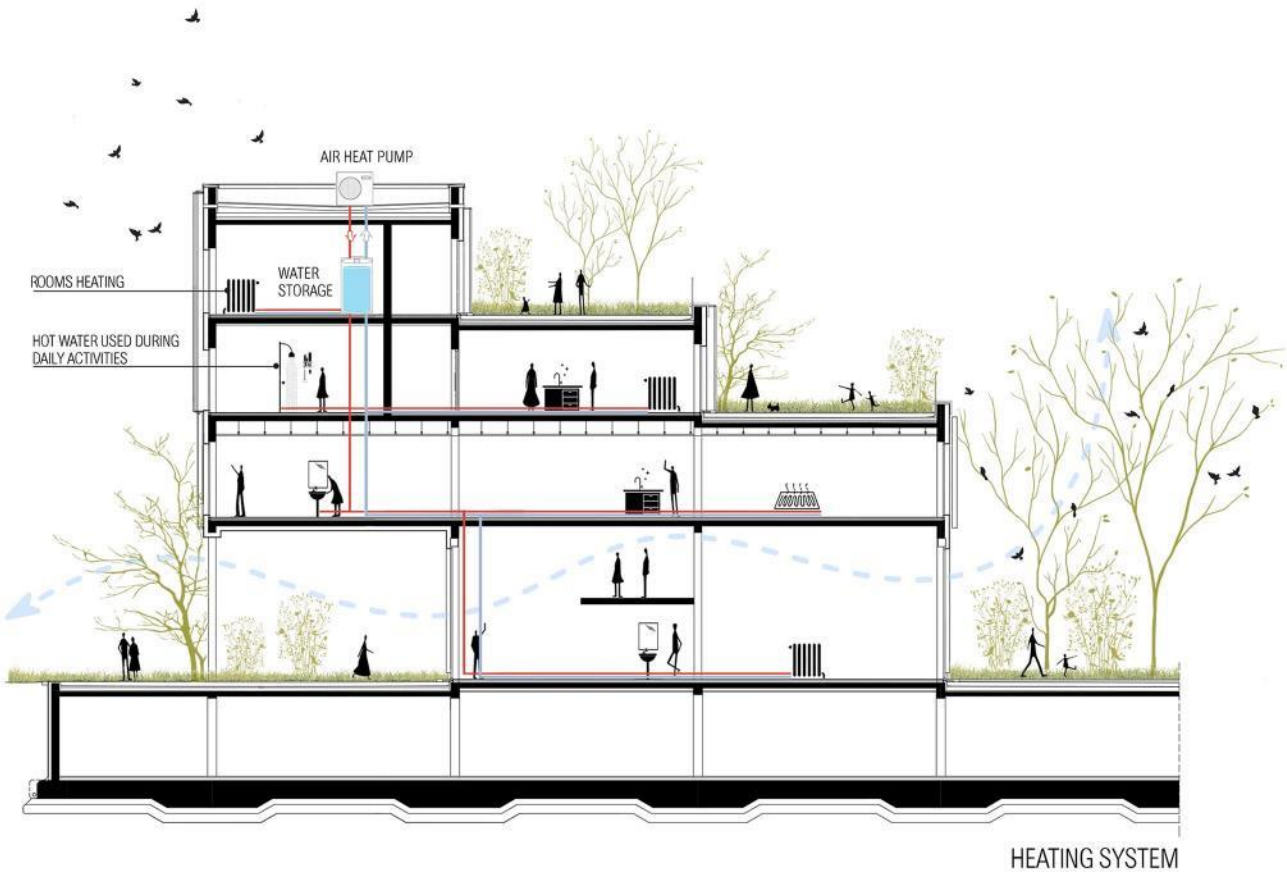
cleanliness

humidity

healthy microclimate

ventilation and ensuring adequate air exchange

PLOT A



HEATING SYSTEM

PLOT B

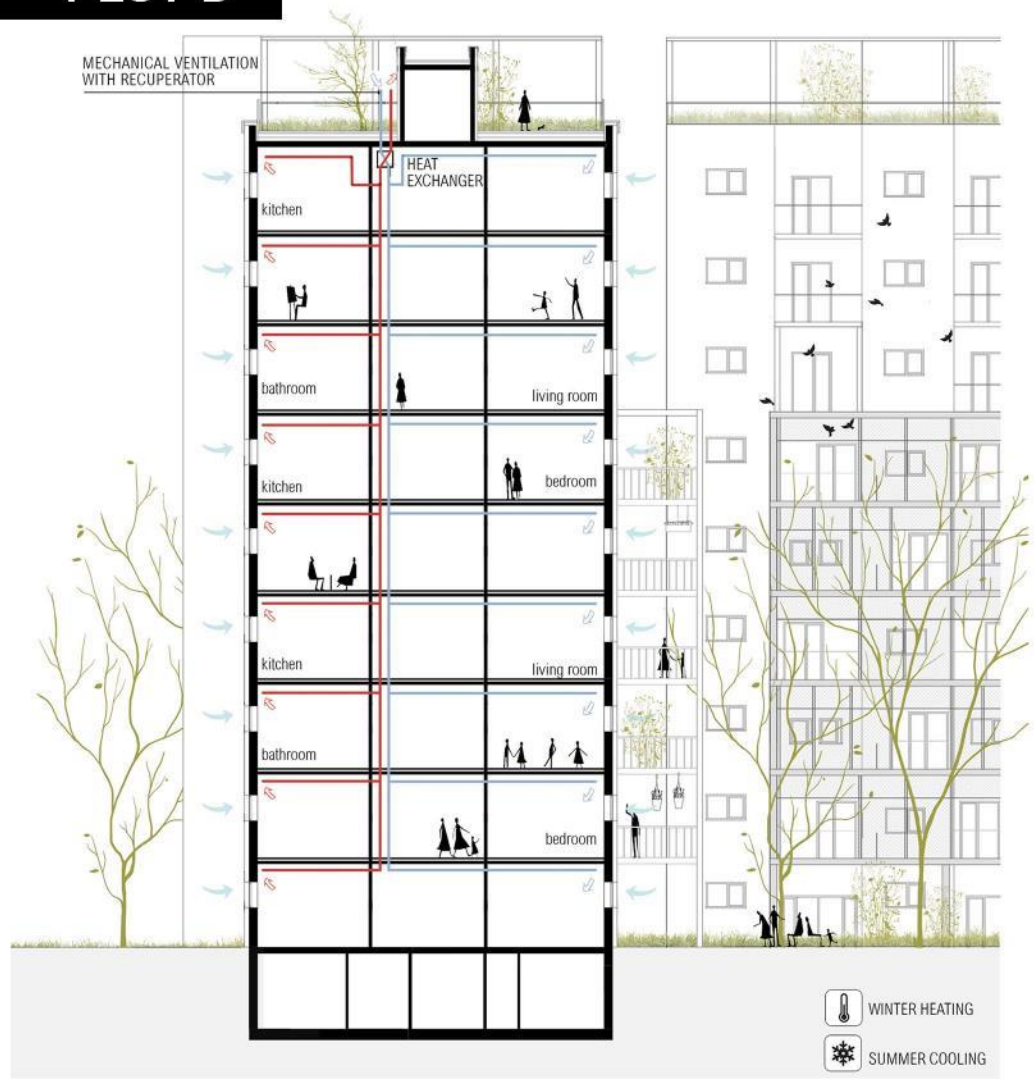
HEATING SYSTEM

Multi Comfort
BY SAINT-GOBAIN

HEATING SYSTEM

PLOT A

PLOT B

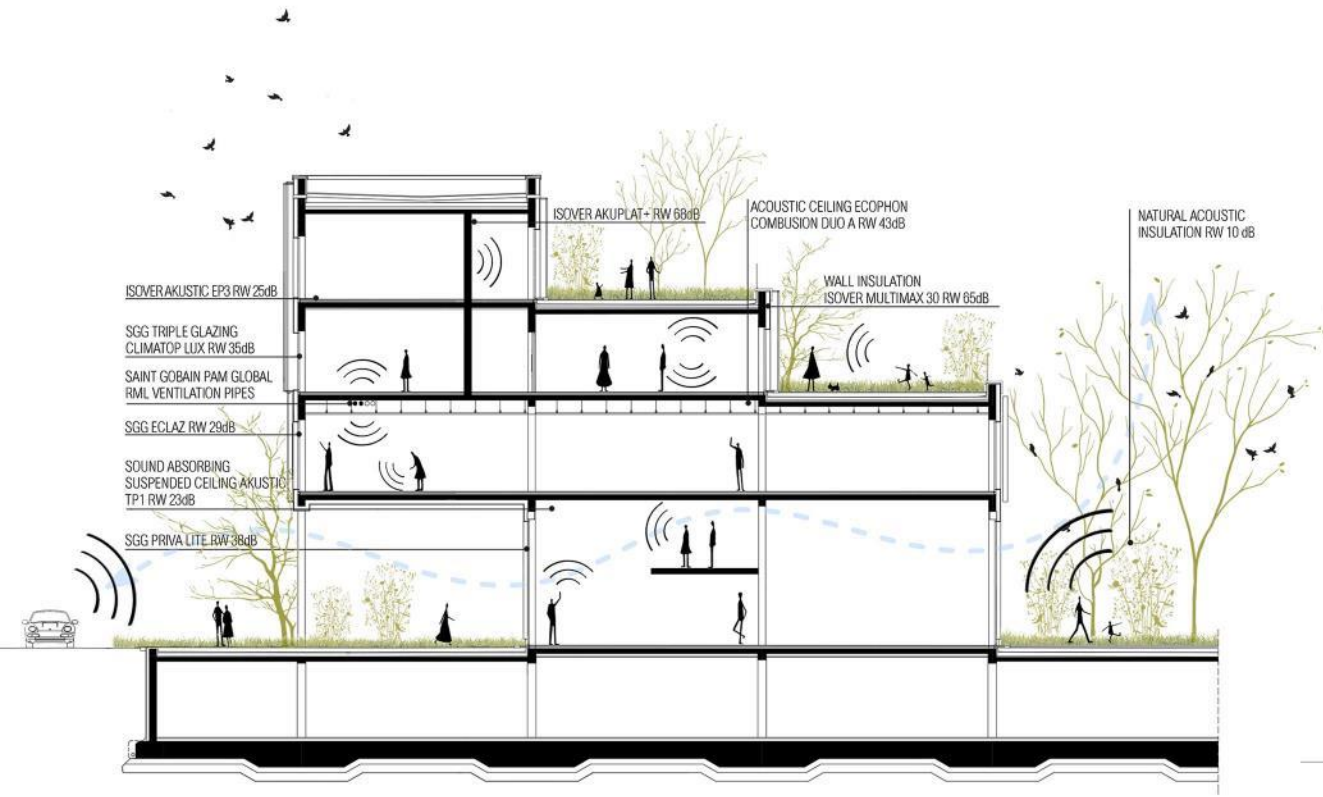


VENTILATION SYSTEM WITH HEAT RECOVERY

Multi Comfort
BY SAINT-GOBAIN

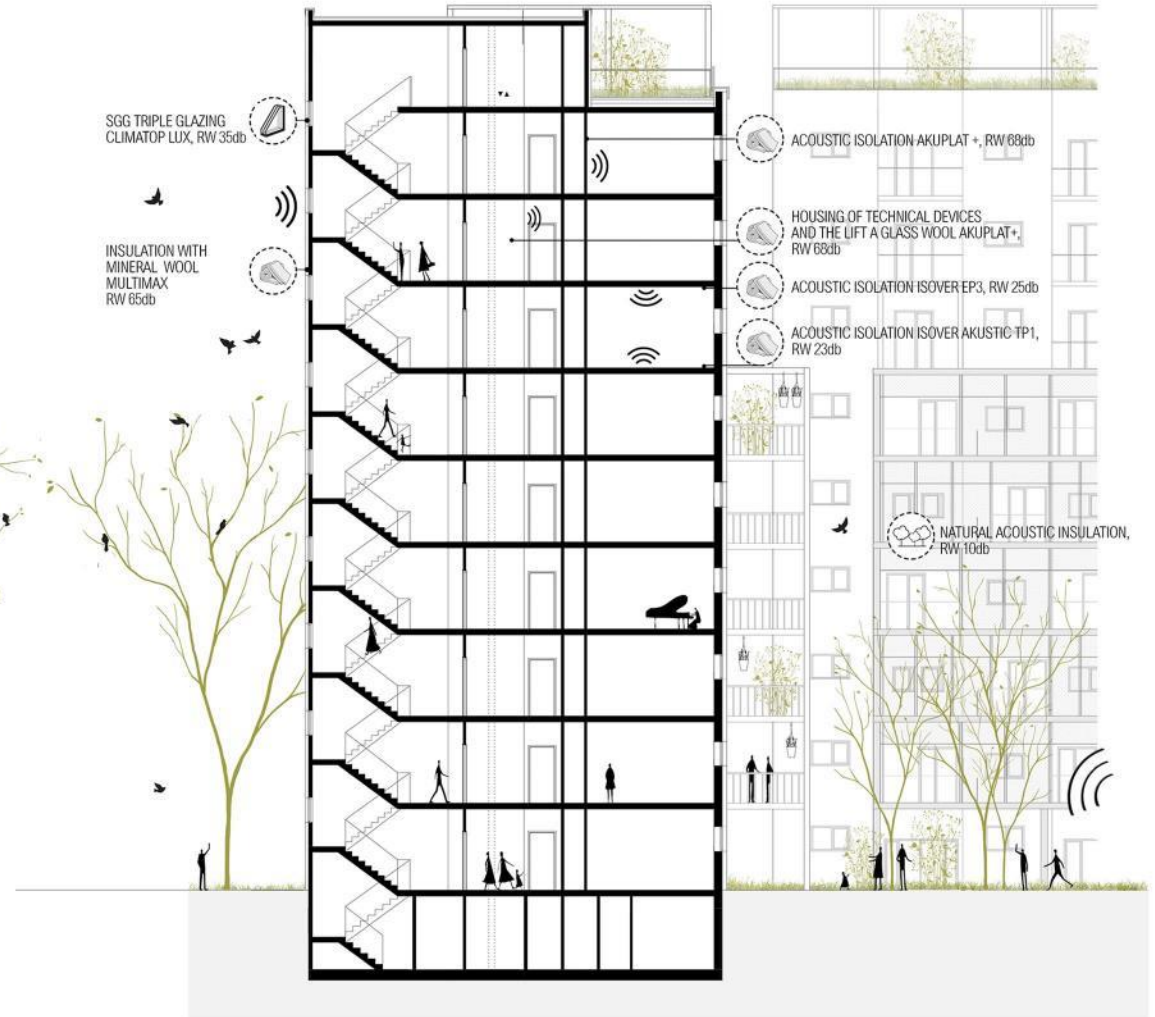
VENTILATION SYSTEM

PLOT A



ACOUSTIC COMFORT
-using **Saint Gobain** products

PLOT B

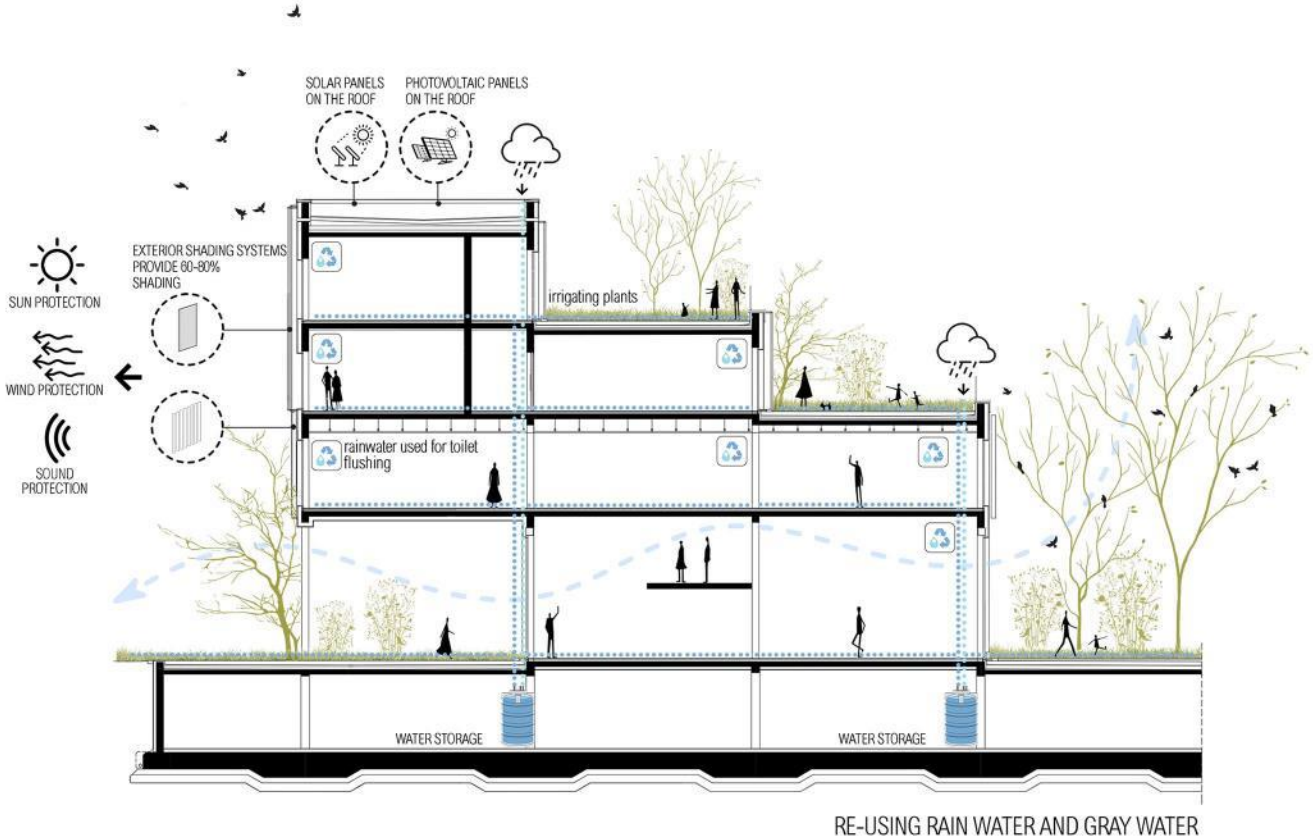


ACOUSTIC COMFORT
-using **Saint Gobain** products

Multi Comfort
BY SAINT-GOBAIN

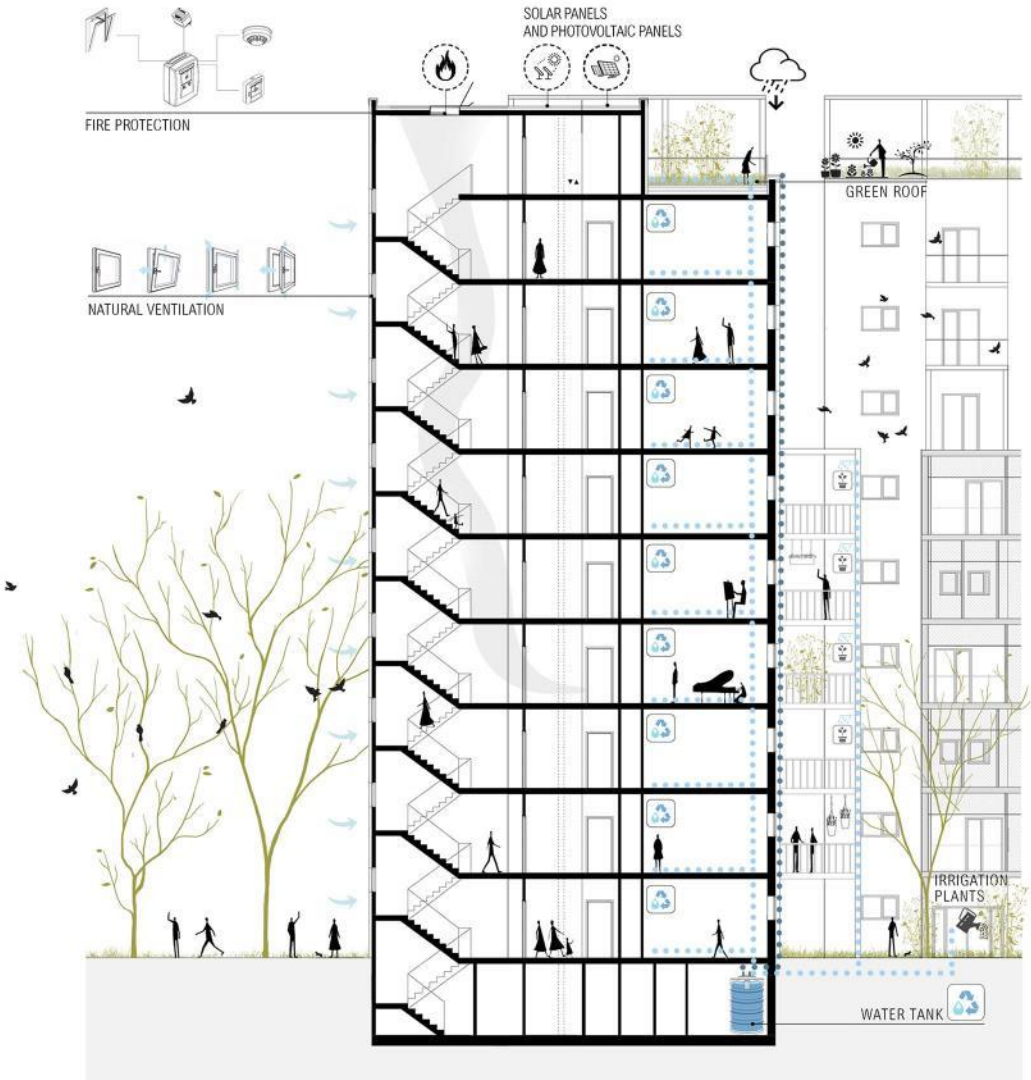
ACOUSTIC COMFORT

PLOT A



RE-USING RAIN WATER AND GRAY WATER

PLOT B



RE-USING RAIN WATER AND GRAY WATER

Multi Comfort
BY SAINT-GOBAIN

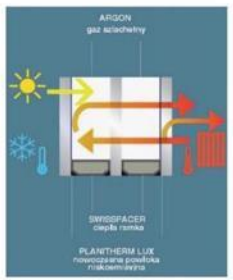
USE OF NATURAL ENERGY SOURCES AND RE-USE RAINWATER

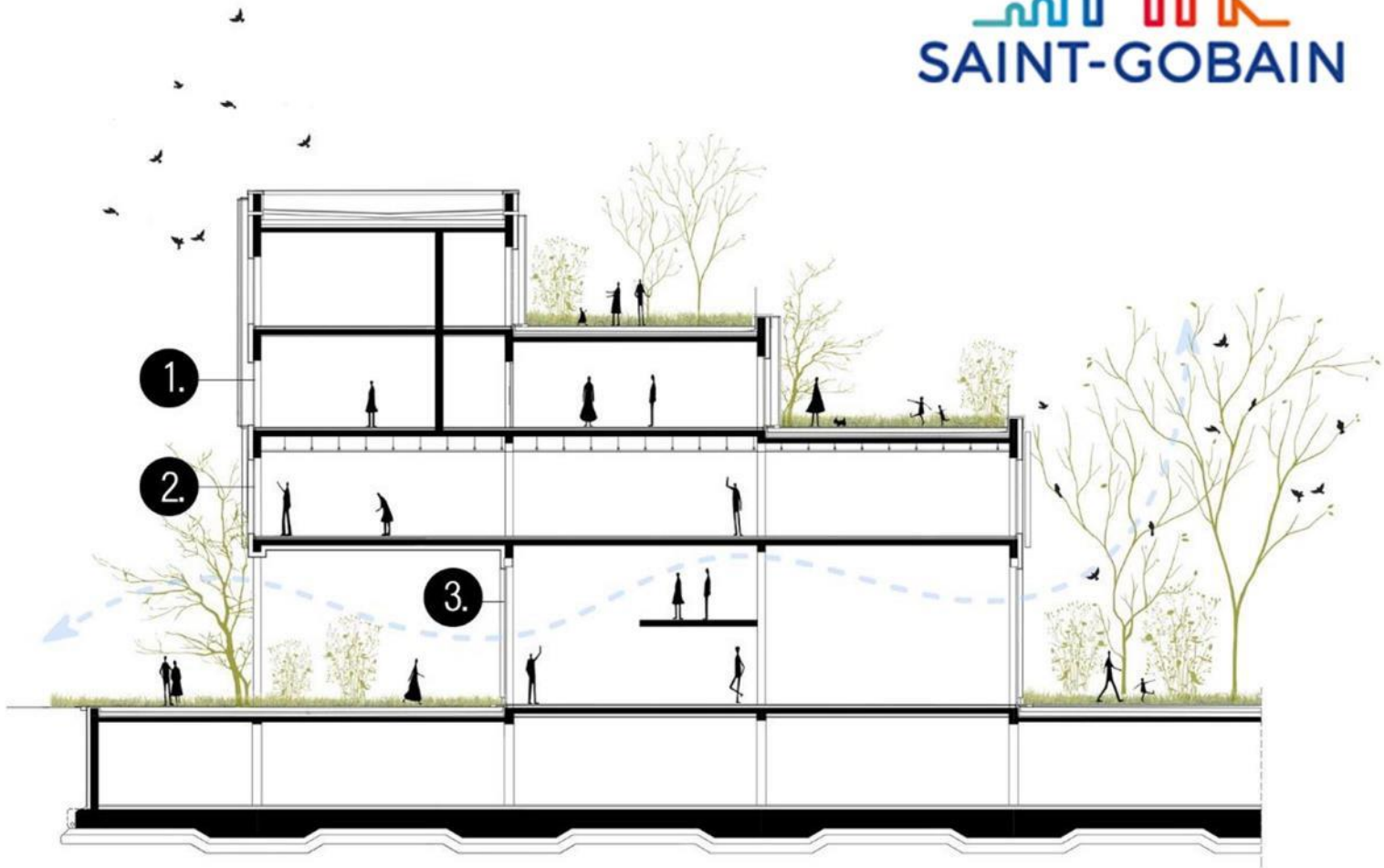
1. CLIMATOP LUX
Rw 35 dB

2. ECLAZ
Rw 29 dB

3. PRIVA-LITE
Rw 38 dB

SWISSPACER WARM EDGE





Multi Comfort
BY SAINT-GOBAIN

SAINT-GOBAIN

ENERGY SAVING-WINDOW
SGG TRIPLE GLAZING WINDOW

EXTERIOR BLINDS

INTERIOR BLINDS

SAINT GOBAIN
TRIPPLE GLAZING
WINDOWS
CLIMATOP LUX
0,73W/m²K

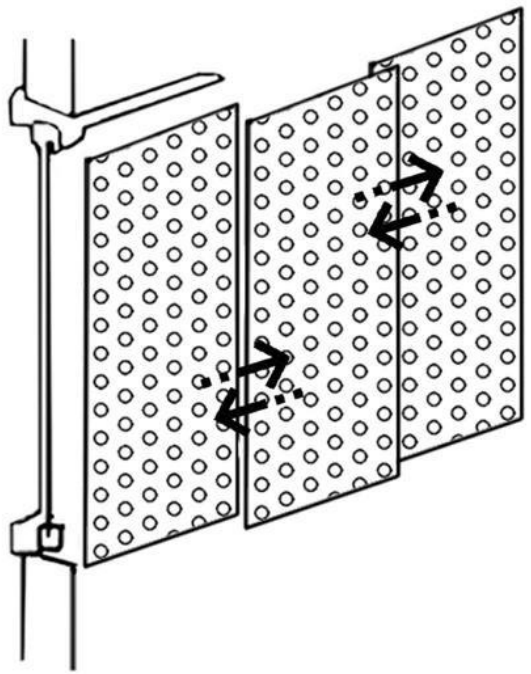
PERFORATED
METAL PLATE
PROVIDES
60 TO 80 %
SHADING

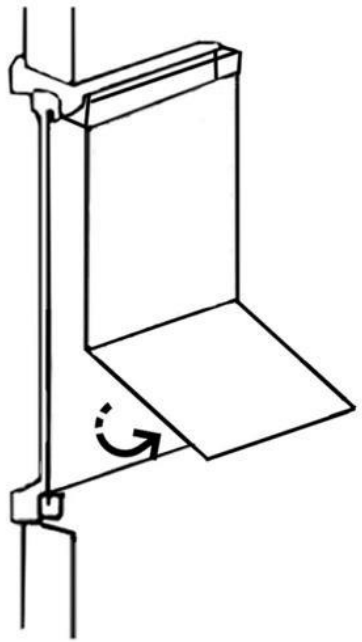
EXTERIOR
WOODEN
BLINDS

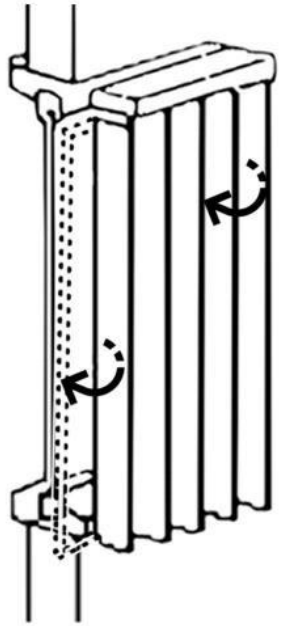
TRADITIONAL
ITALIAN
BLINDS

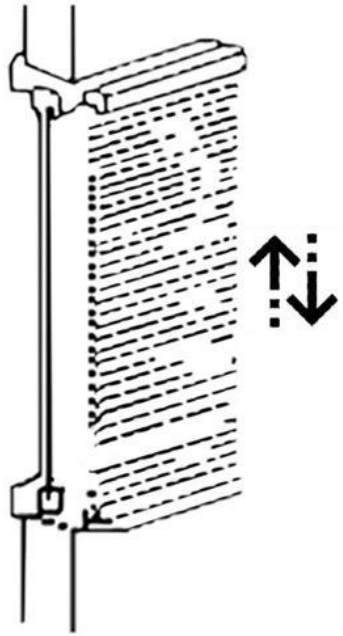
Multi Comfort
BY SAINT-GOBAIN

SHADING SYSTEM



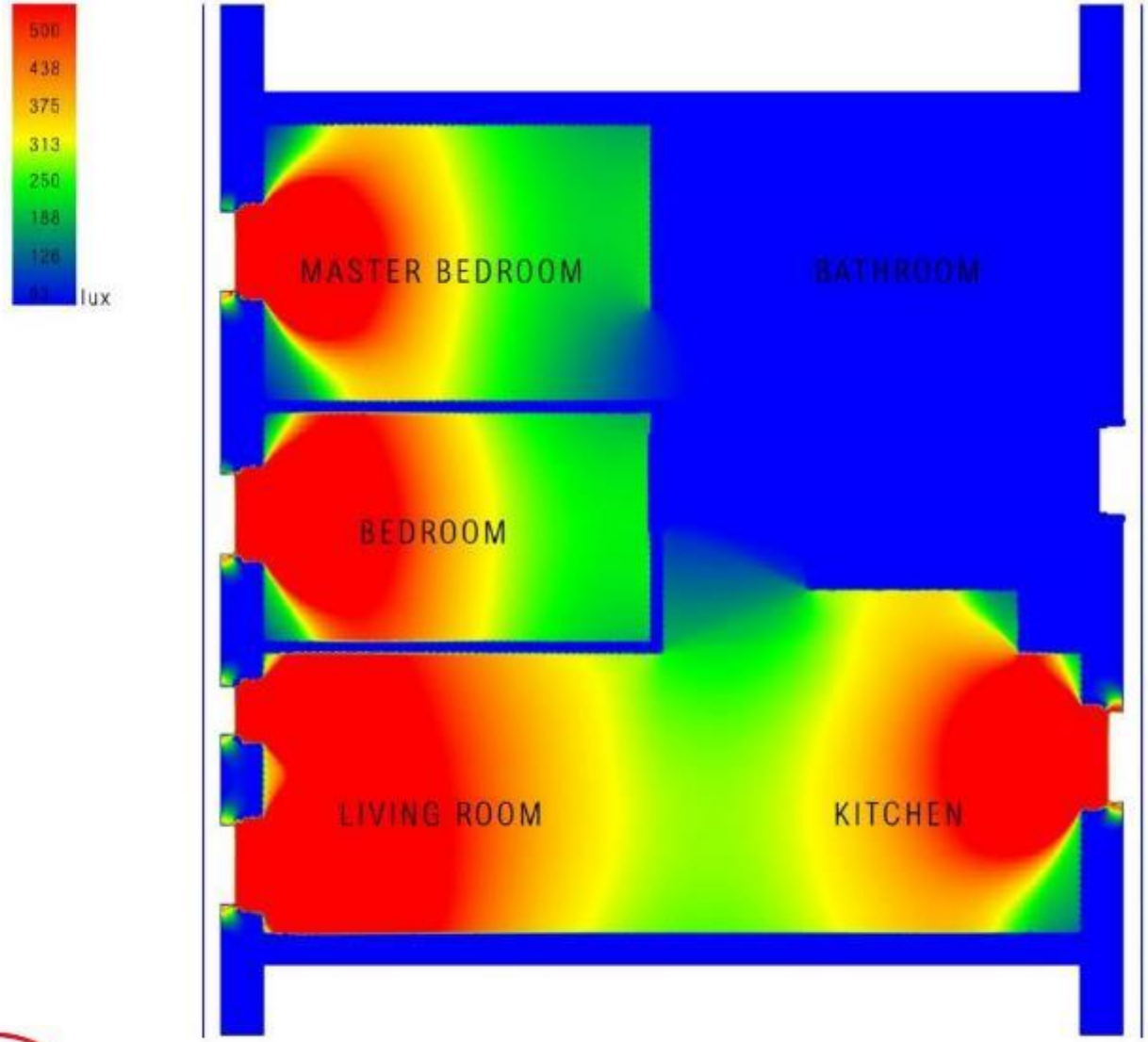


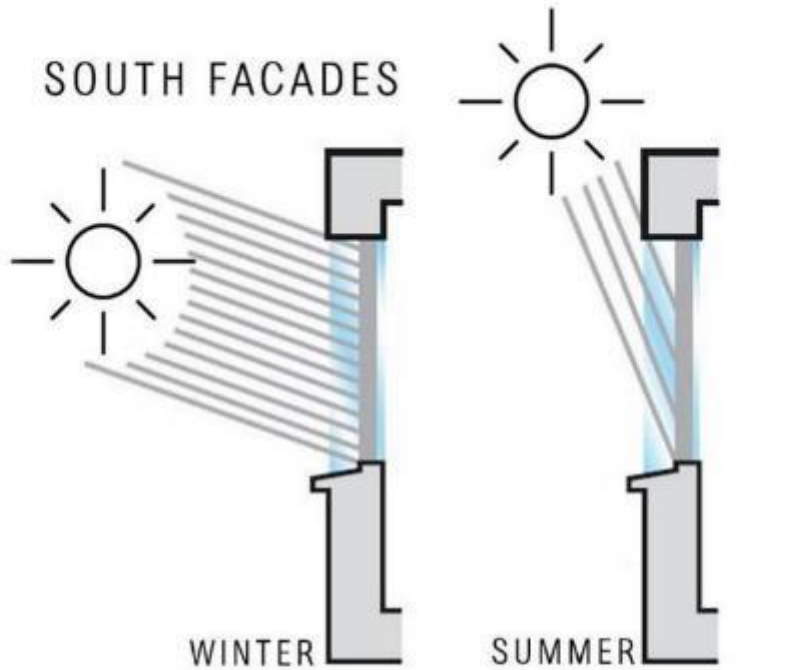




Multi Comfort
BY SAINT-GOBAIN

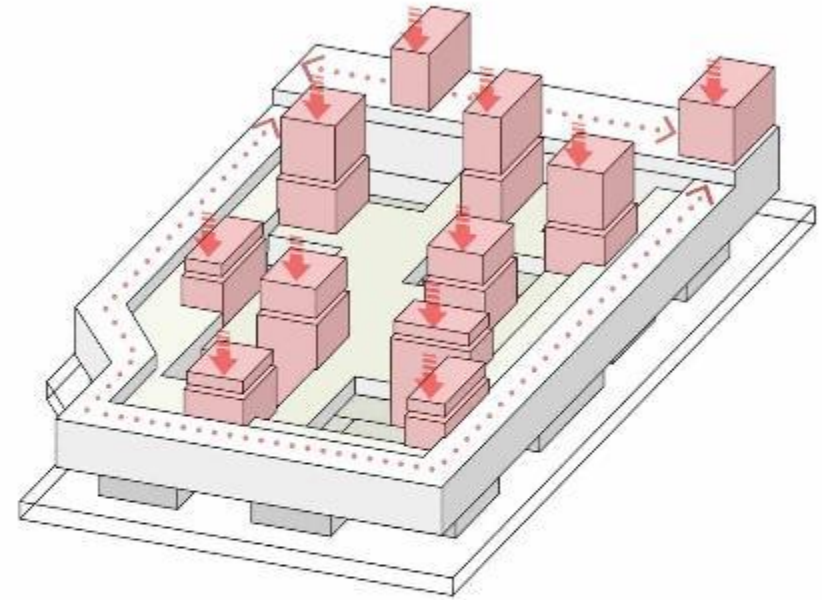
POSSIBILITY FOR REGULATION OF THE SHADING SYSTEM



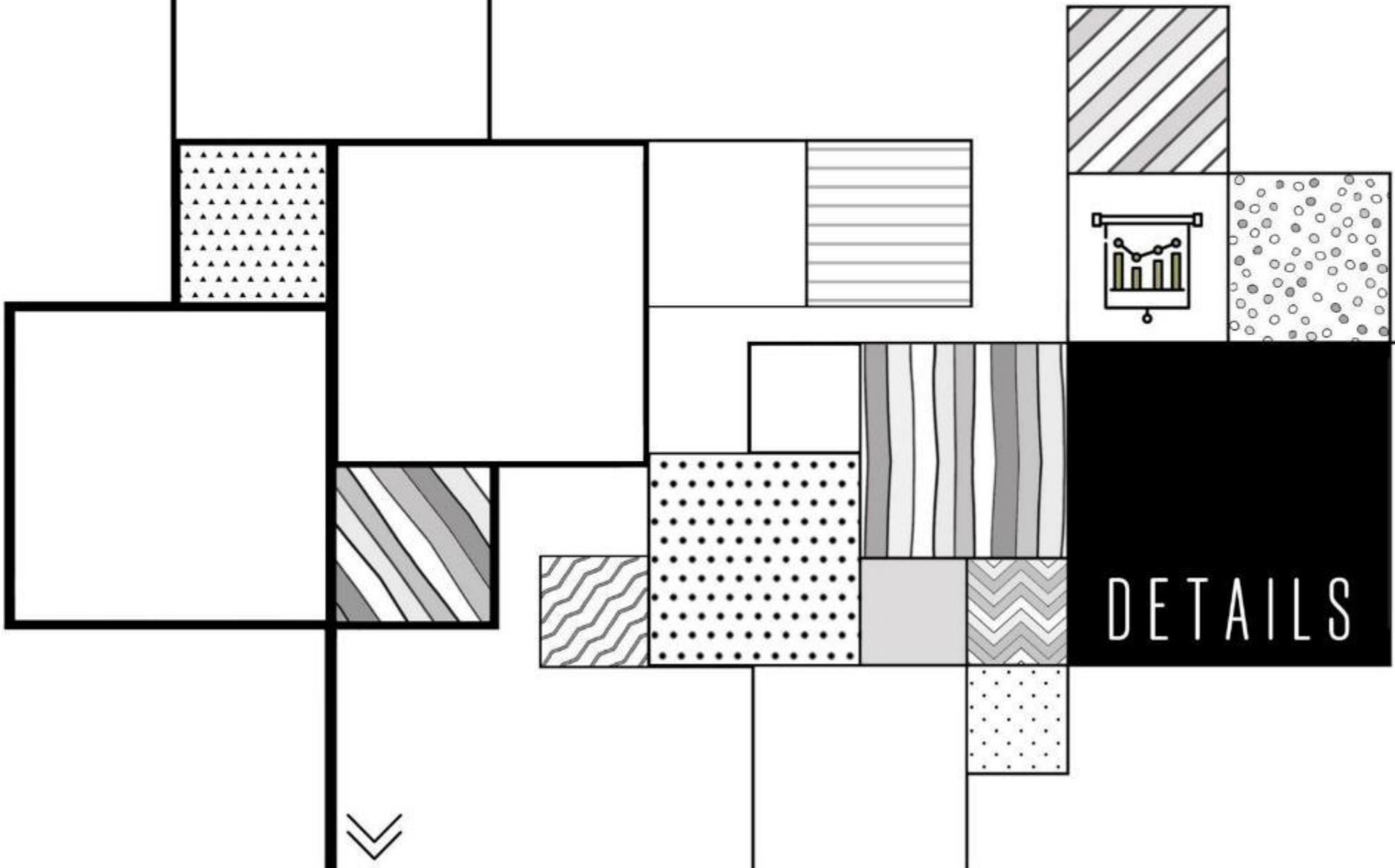


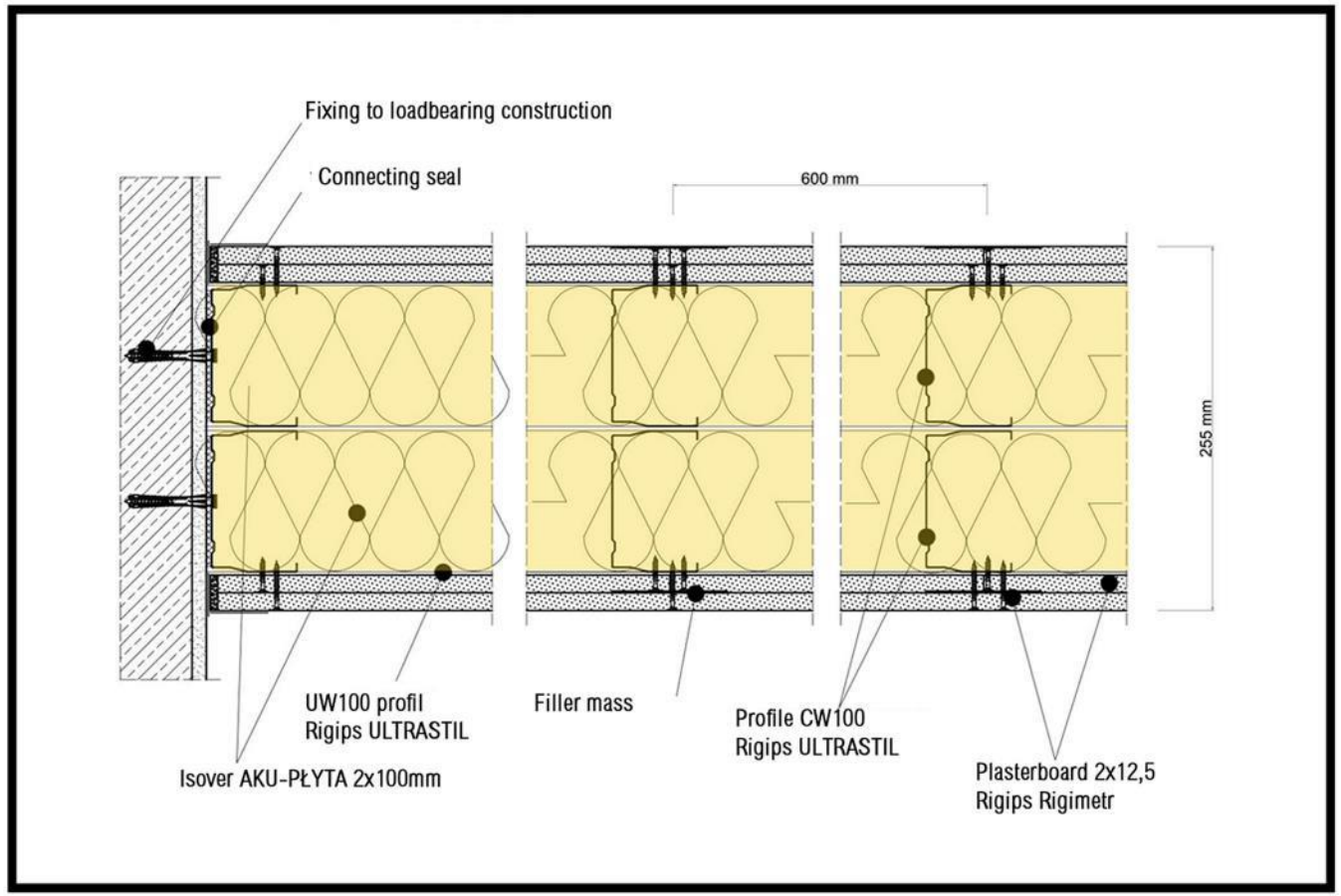
Multi Comfort
BY SAINT-GOBAIN

VISUAL COMFORT

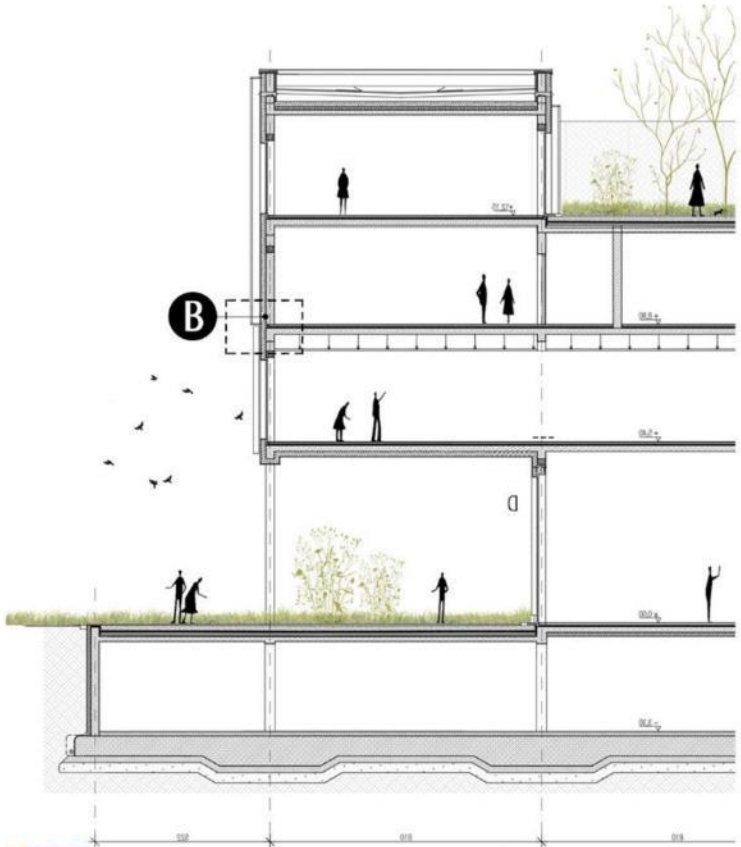


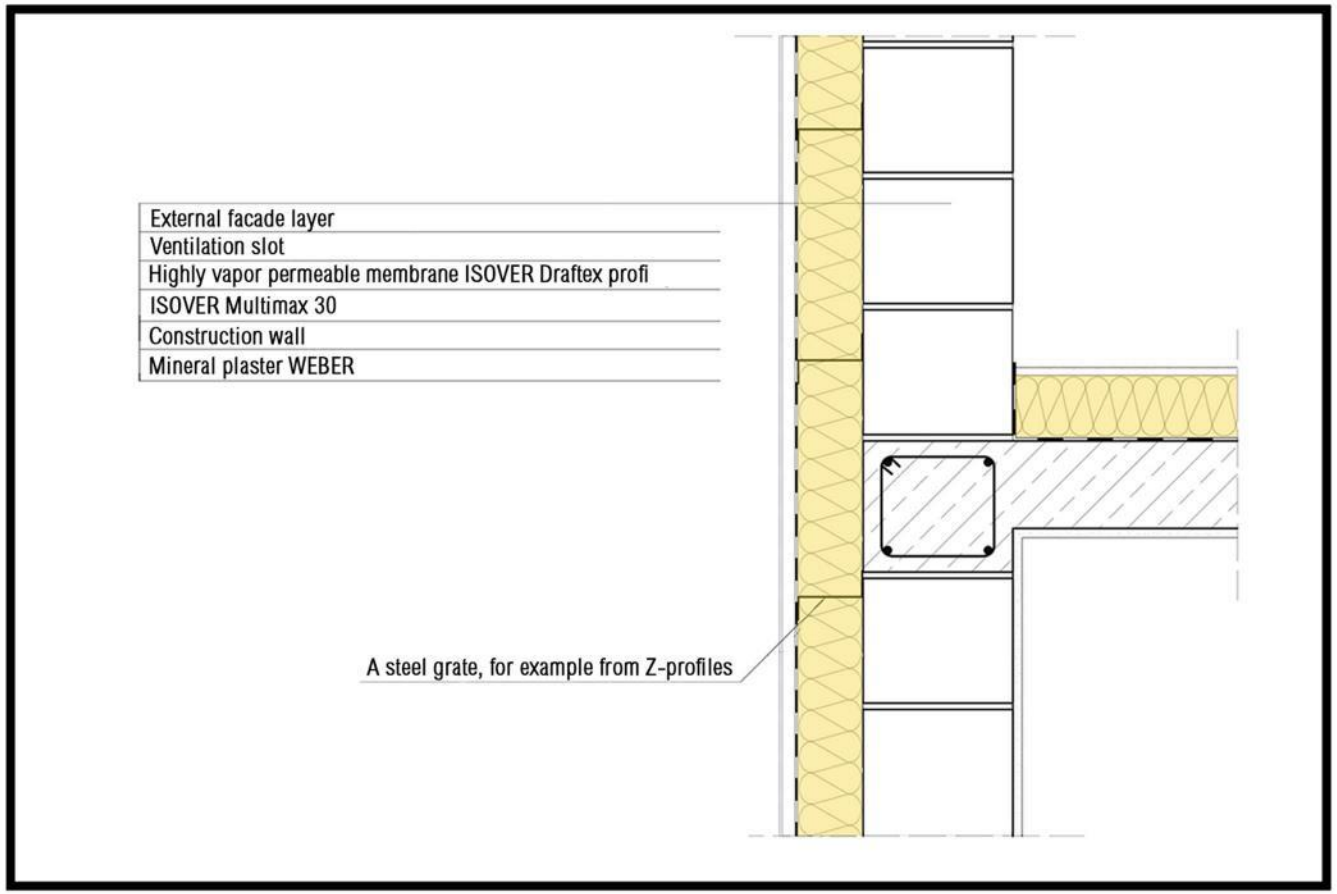
FIRE SAFETY STRATEGY


DETAILS

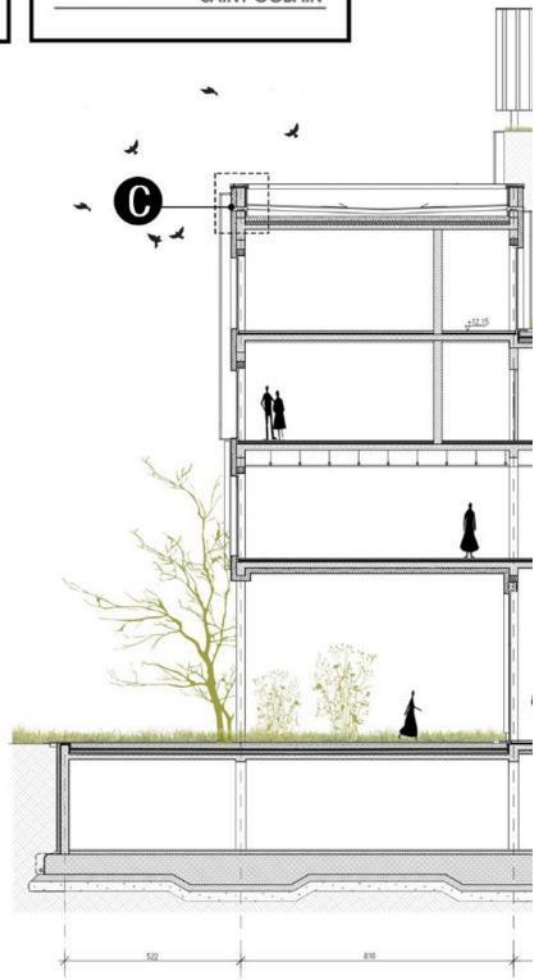


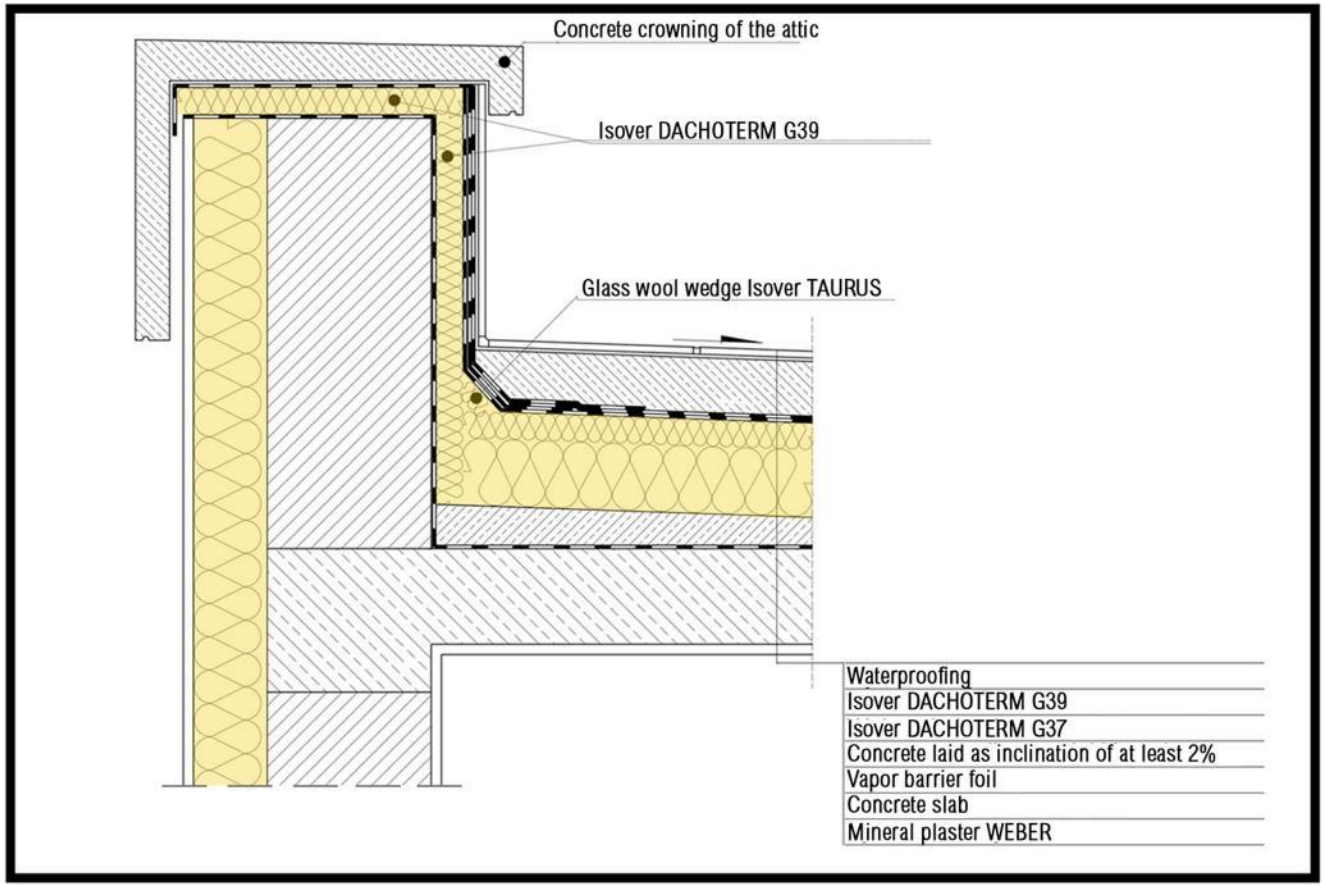
PARTITION WALL DETAIL



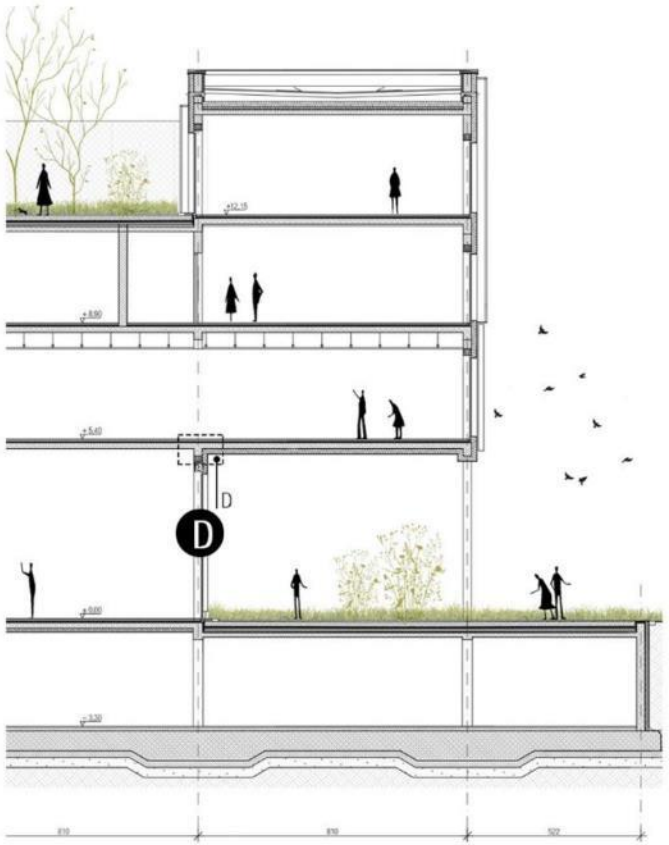


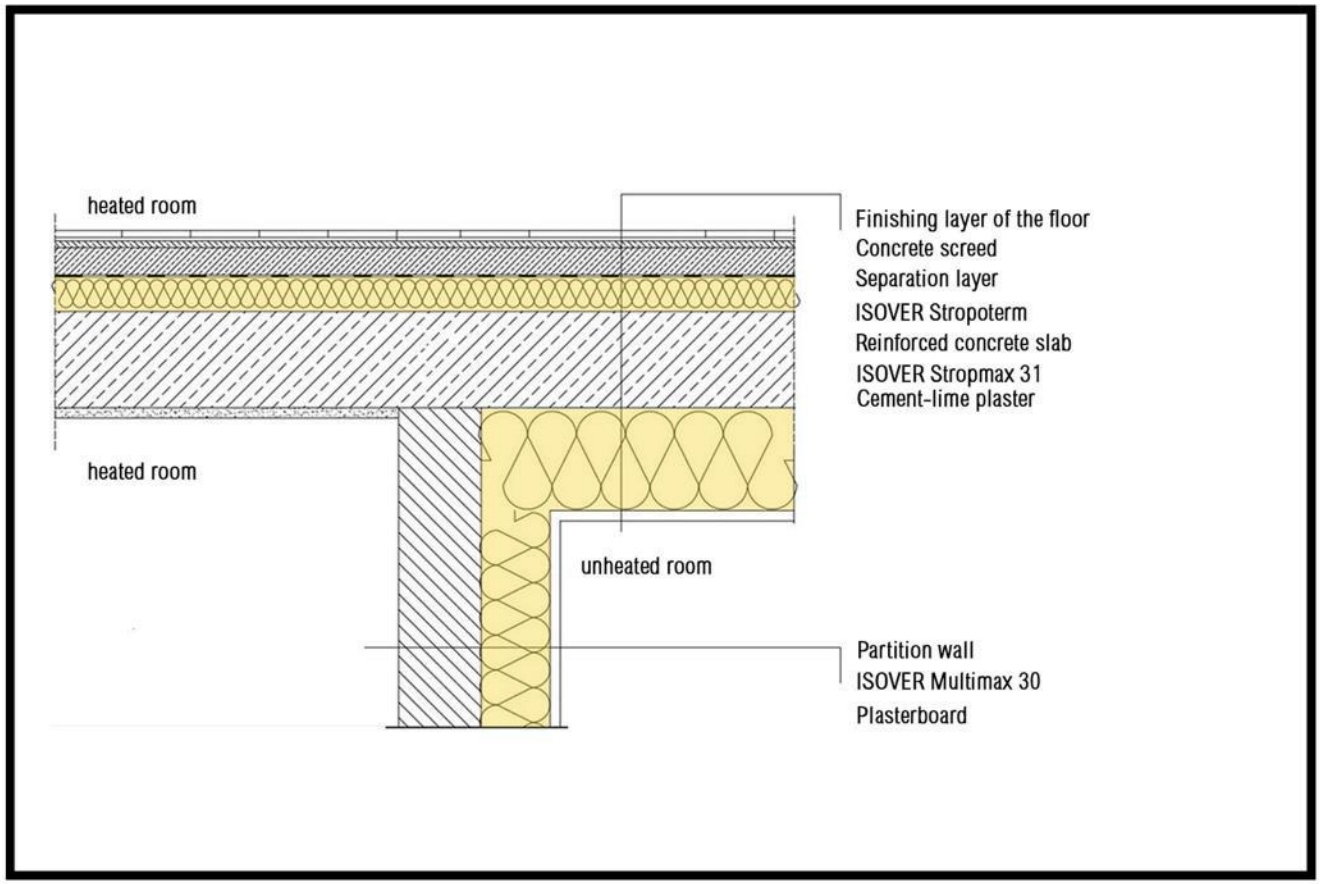
EXTERNAL WALL DETAIL



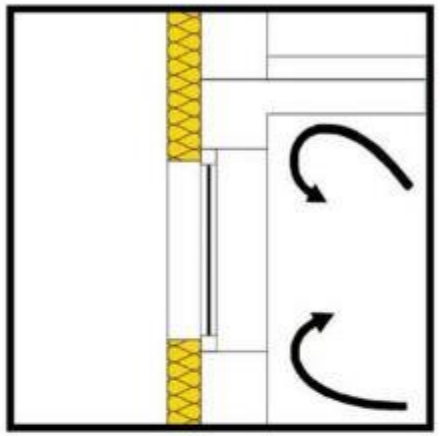


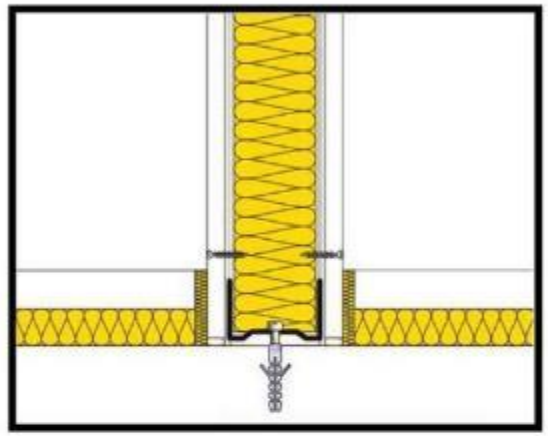
FLAT ROOF DETAIL

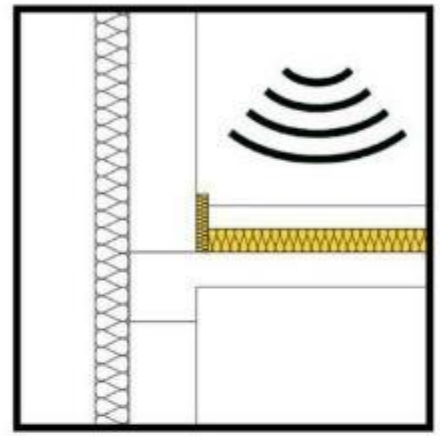


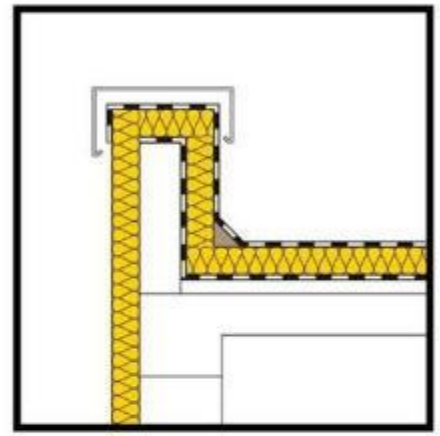


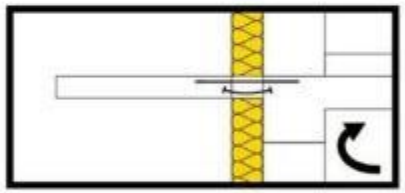
CEILING ABOVE THE HEATED AND UNHEATED PART

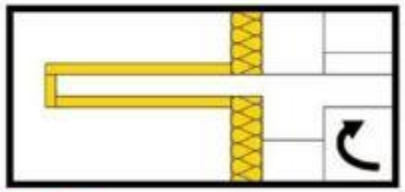


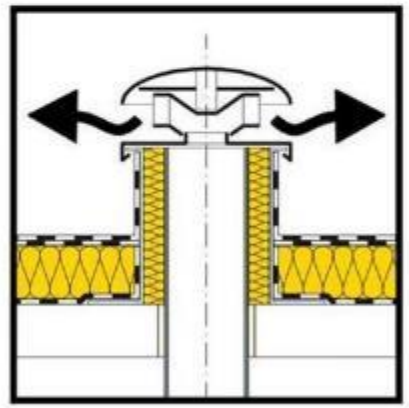


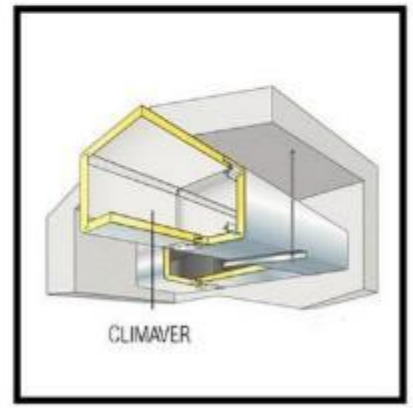


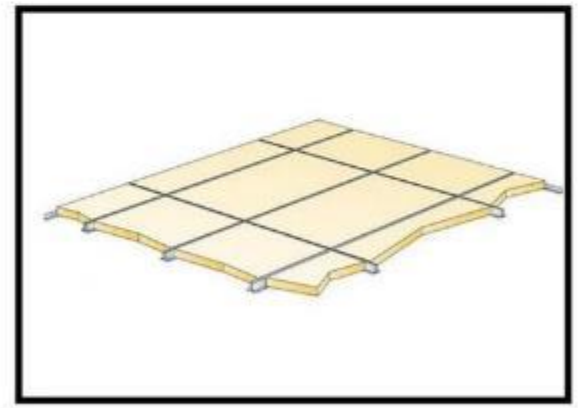






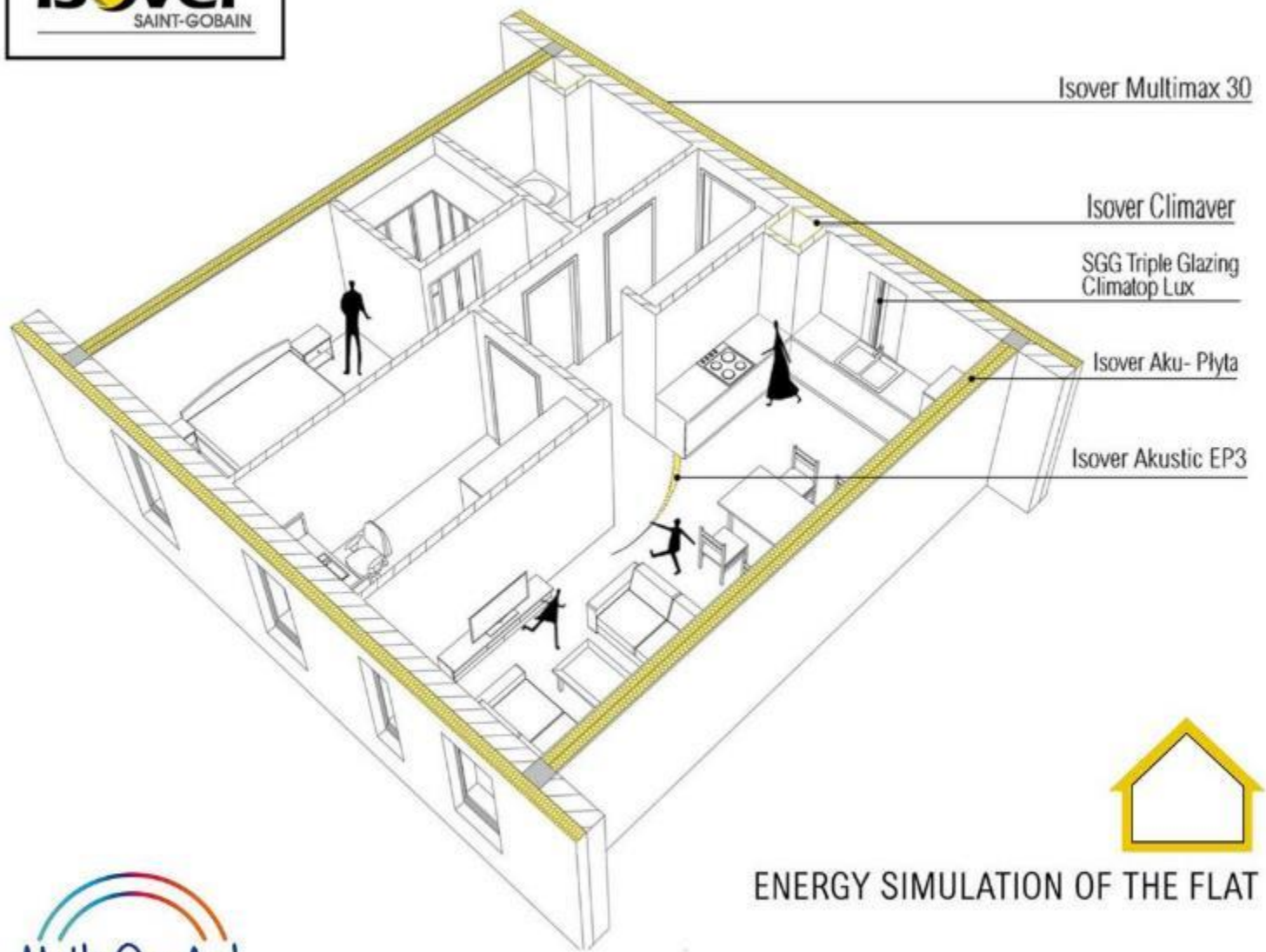






SCHEMES OF SOLUTIONS USED IN THE PROJECT.
WAYS OF AVOIDING THERMAL BRIDGES.

AVOIDING THERMAL BRIDGES

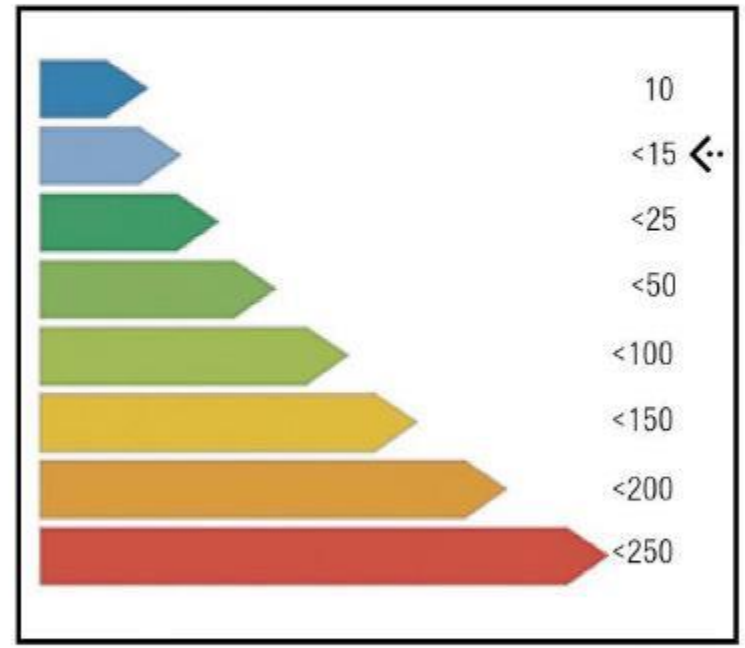


ENERGY SIMULATION OF THE FLAT

CALCULATIONS- MULTI COMFORT DESIGNER

Specific Heat Demand

Transmission Heat Losses:	1794.11	kWh/a
Ventilation Heat Losses:	93.67	kWh/a
Total Heat Losses:	1887.78	kWh/a
Internal Heat Gains:	584.62	kWh/a
Solar Heat Gains:	518.78	kWh/a
Total Heat Gains:	1070.83	kWh/a
Annual Heat Demand:	816.95	kWh/a
Specific Heat Demand:	13.24	kWh/(m2a)



SPECIFIC HEAT DEMAND: 13,24kWh/(m²a)

ENERGY EFFICIENCY CLASSES