Multi Comfort
BY SAINT-GOBAIN

Multi Comfort Student Contest 2020

Saint Denis, Paris, France

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BY SAINT-GOBAIN

Egyptian Design Team: 194561

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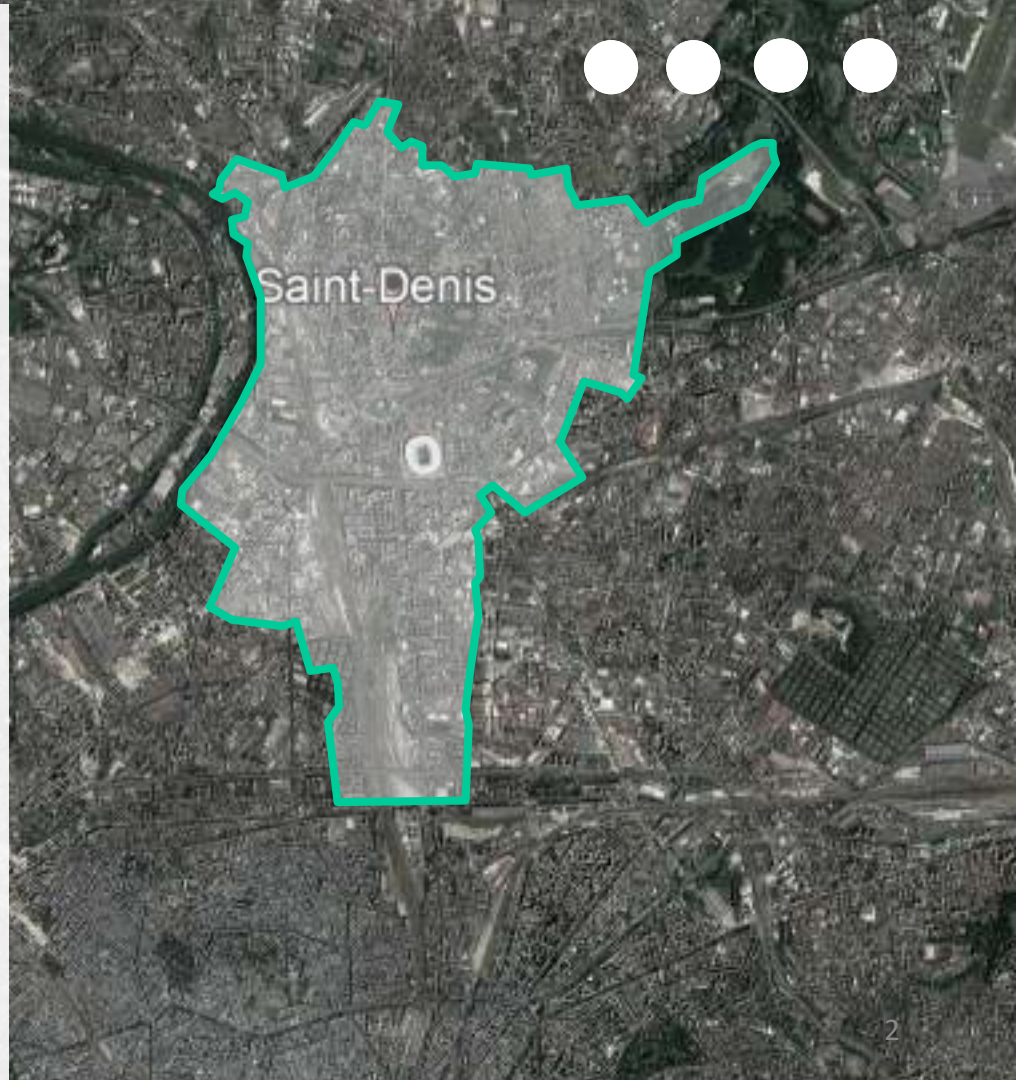
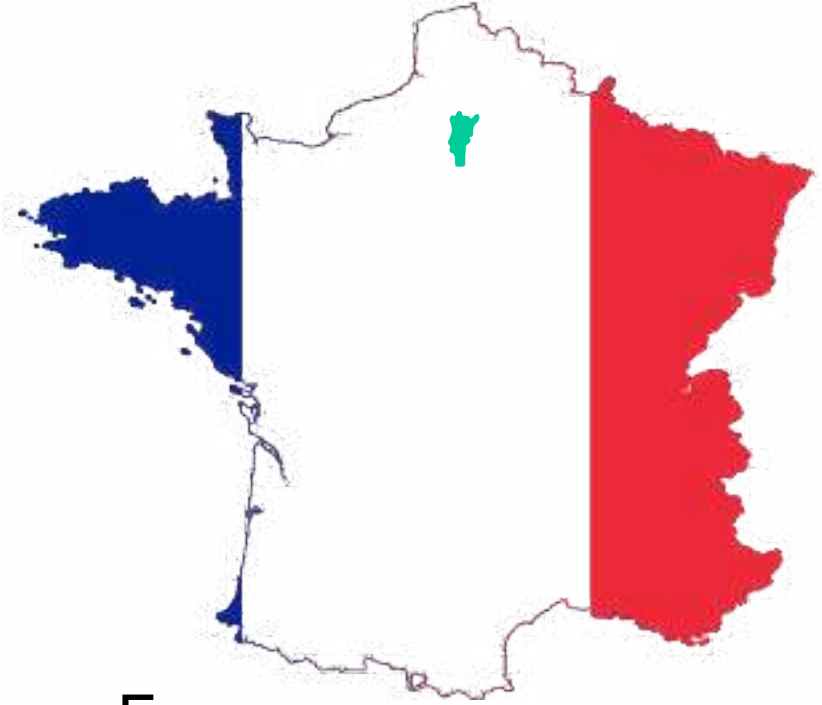
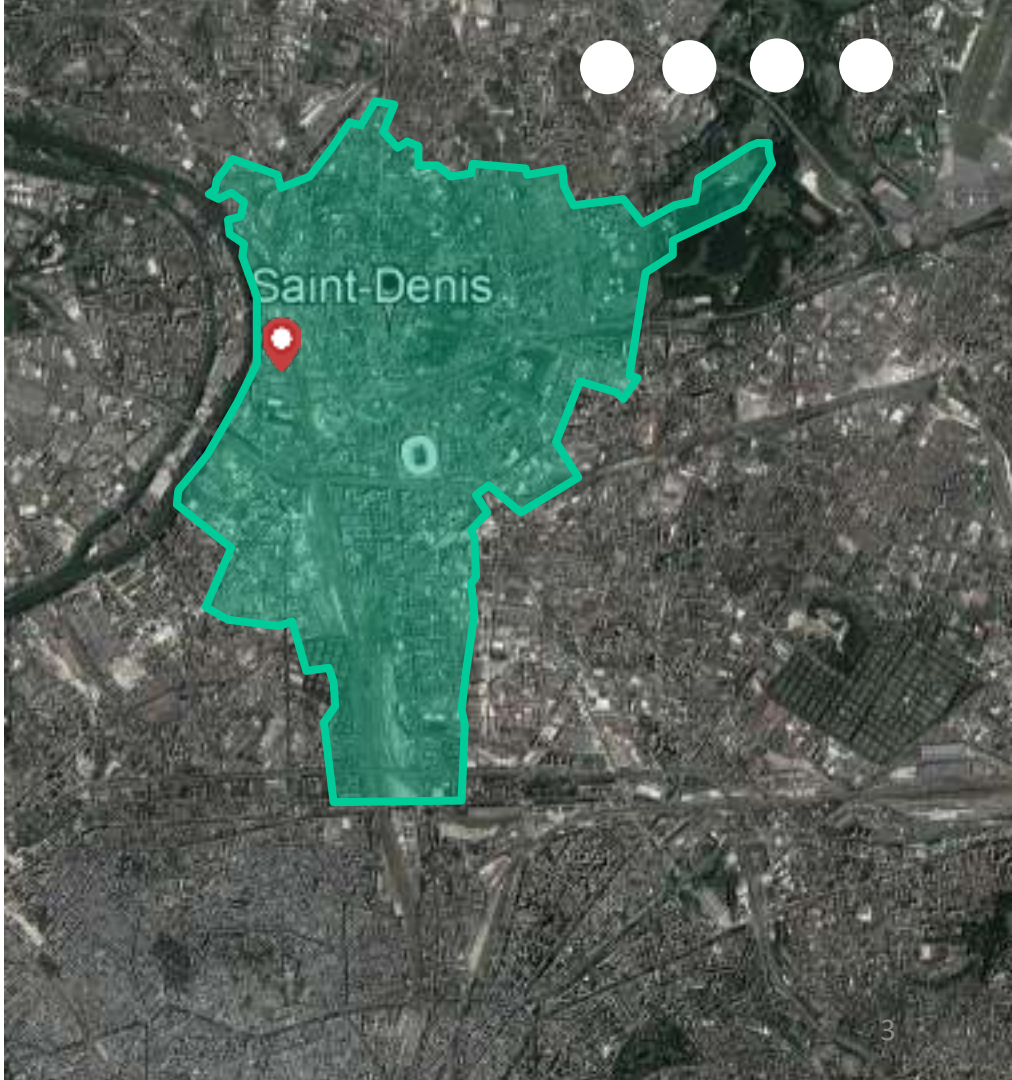
AASTMT, Heliopolis, Cairo



LOCATION



France



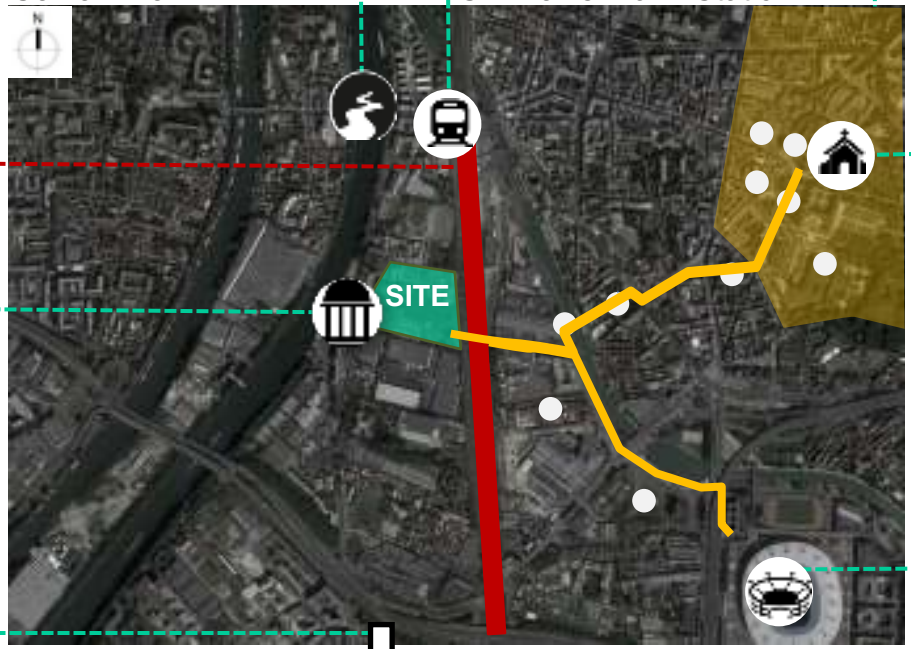
SITE ANALYSIS / ISSUES

Macro Scale Analysis


Seine River


ST. Denis Train Station.


ST. Denis Market.




Saint Denis Basilica.


Maison coignet


Saint Denis pleyel


France Stadium

Micro Scale Analysis

Zac sud Confluence

Industrial

Residential

Industrial

Micro Scale Analysis

Zac sud Confluence

Industrial

Residential

Industrial

Saint Denis station

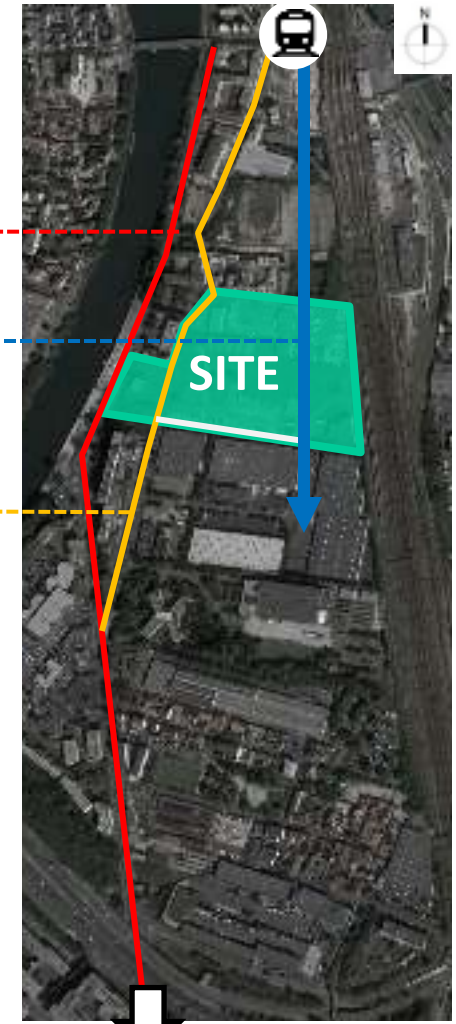
Saint Denis pleyel

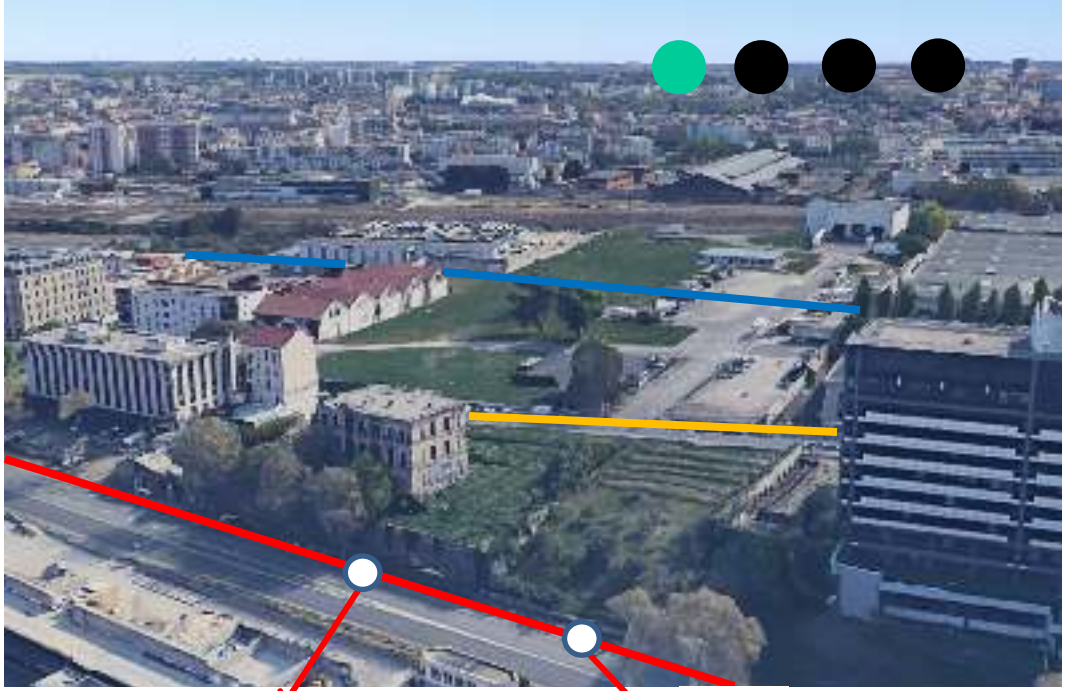
Micro scale analysis

Boulevard de la Liberation

Future Coignet street

Rue Charles Michels





2-THE UNDERUSE OF HISTORICAL PLACES

Warehouses

Maison Coignet

3-SITE IS NOT LIVELY

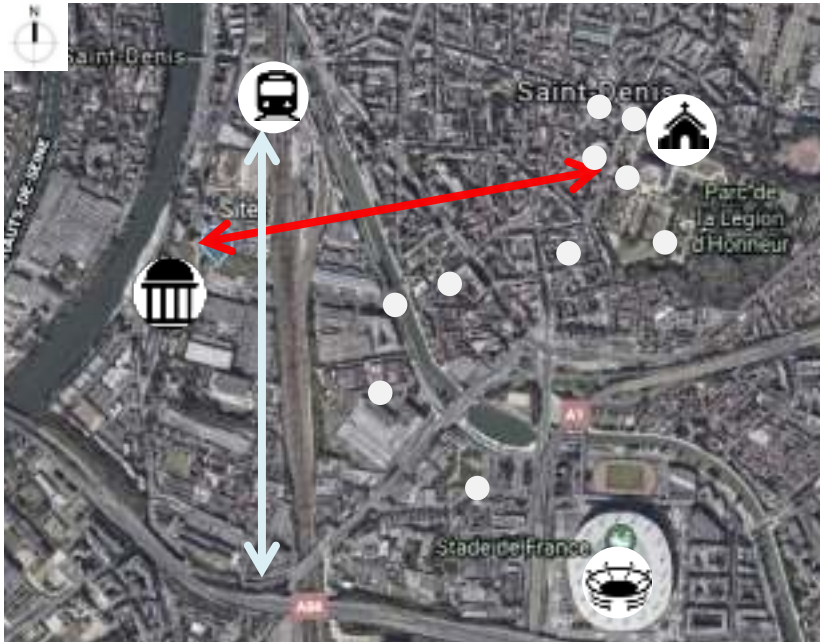
Our Design Objective

"Injecting vitality into the site by transforming it into several Connective Platforms"

1 - Connecting East to west

2 - Connecting South to North

3 -Connecting History to the context



Our Design Objective

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5- connecting the built with the natural

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“Injecting vitality into the site by transforming it into several Connective Platforms”

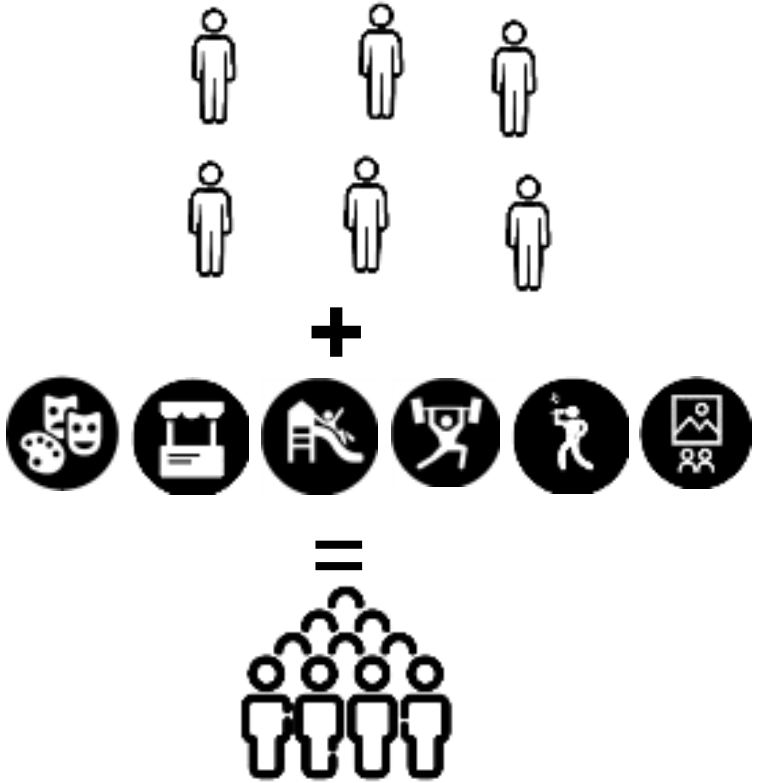
1 - Connecting East to west
2 - Connecting South to North

3 -Connecting History to the context

4 - Connecting Present to past

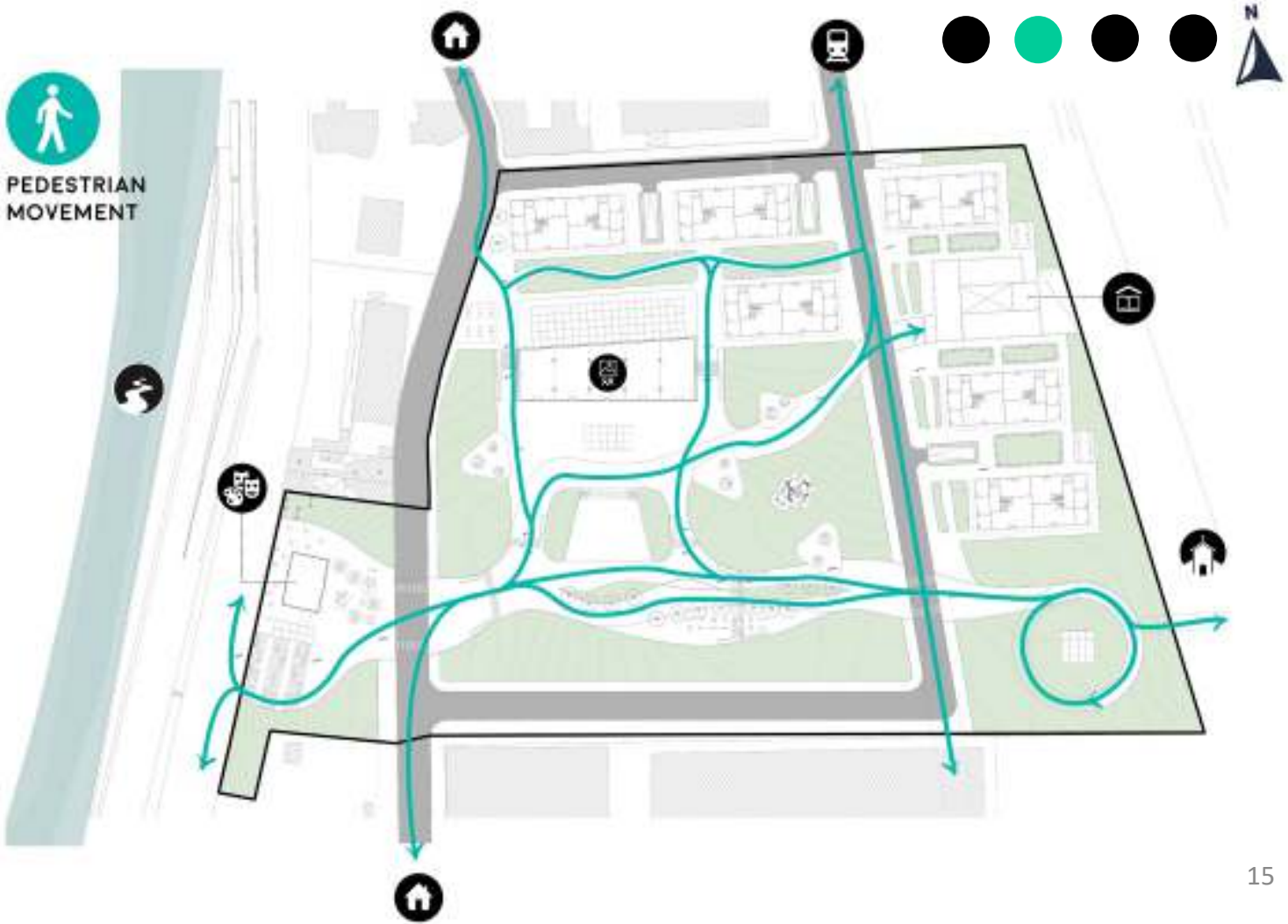
5- connecting the built with the natural

6- Connecting the individual with the community

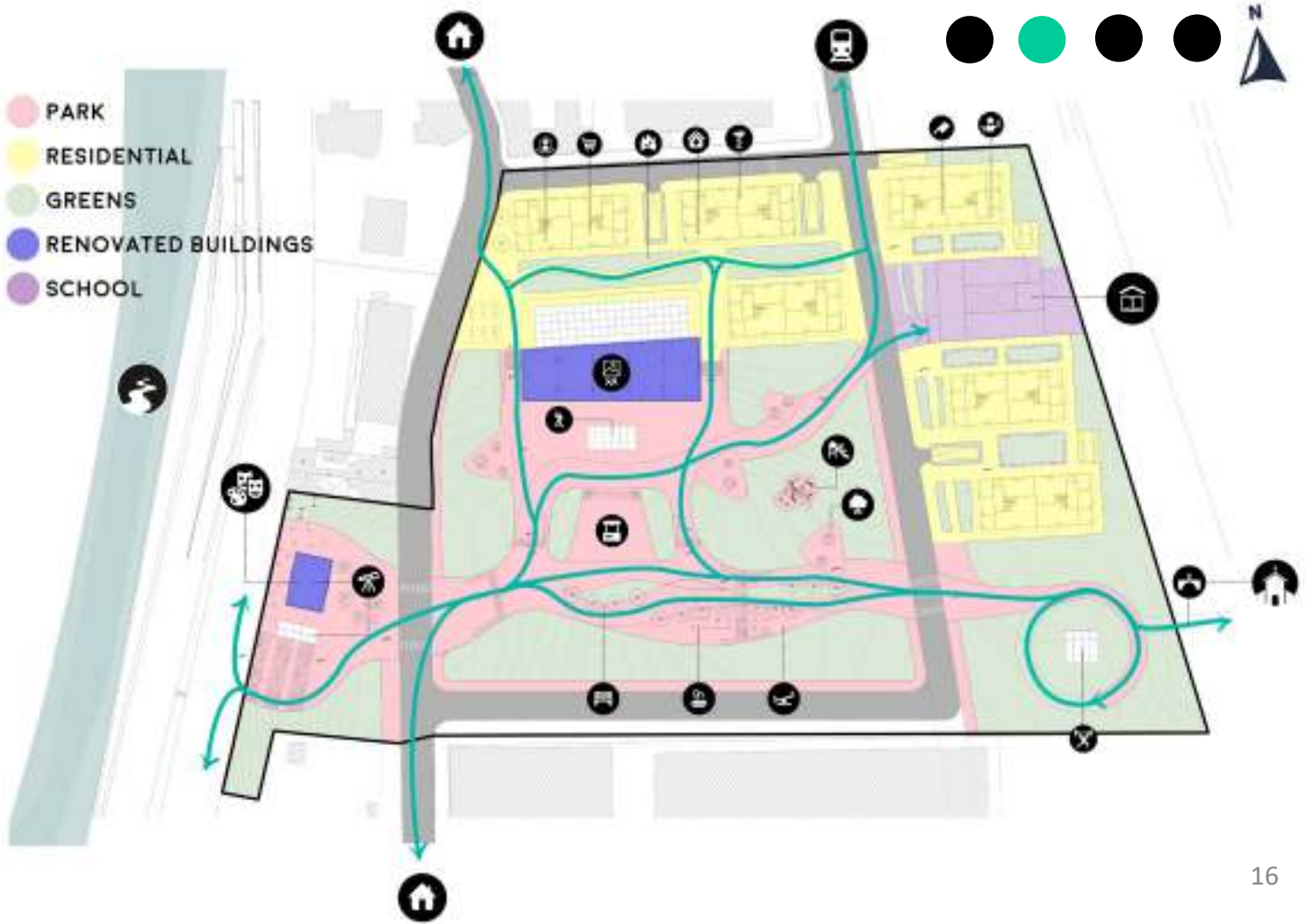


THE CONNECTIVE PLATFORM

Pedestrian Movement



Zoning /Activities

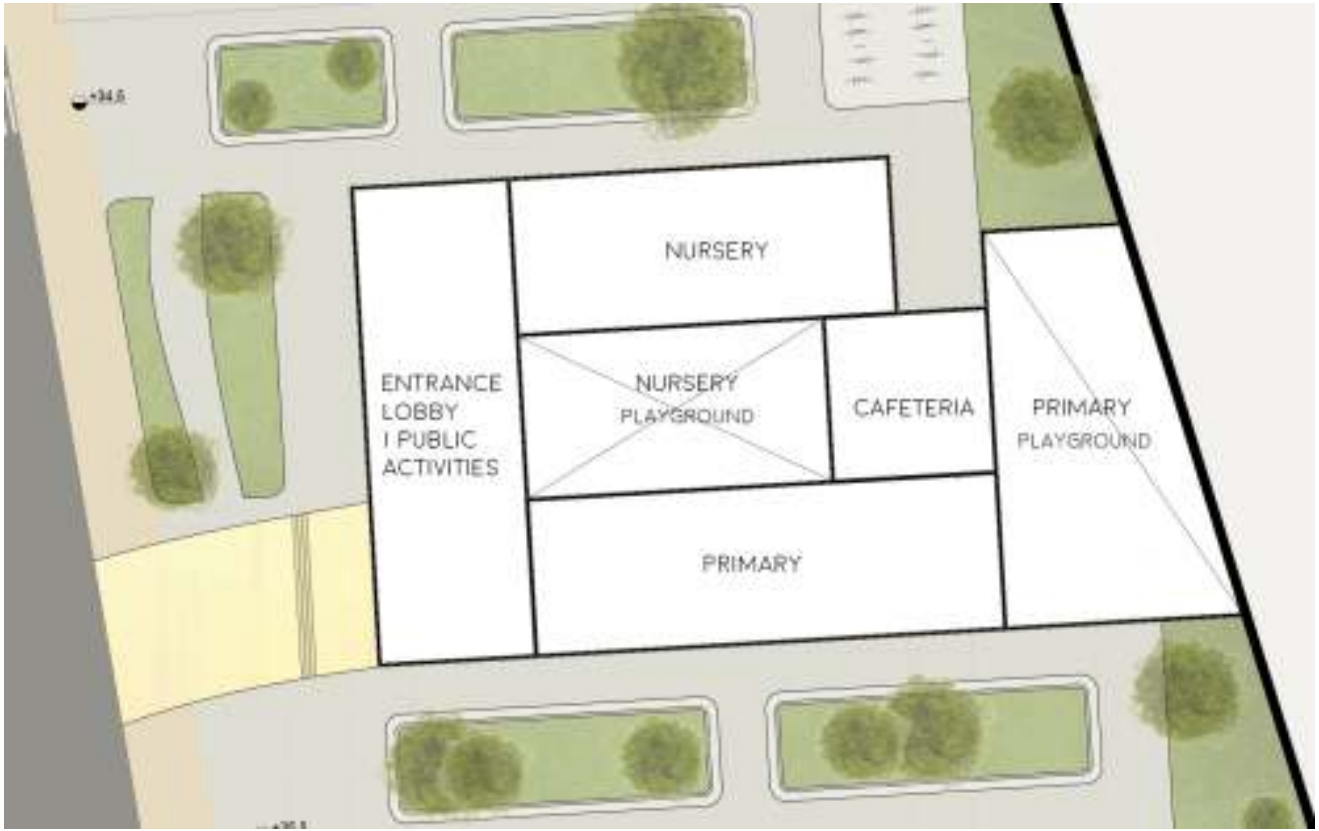


Masterplan


la Seine

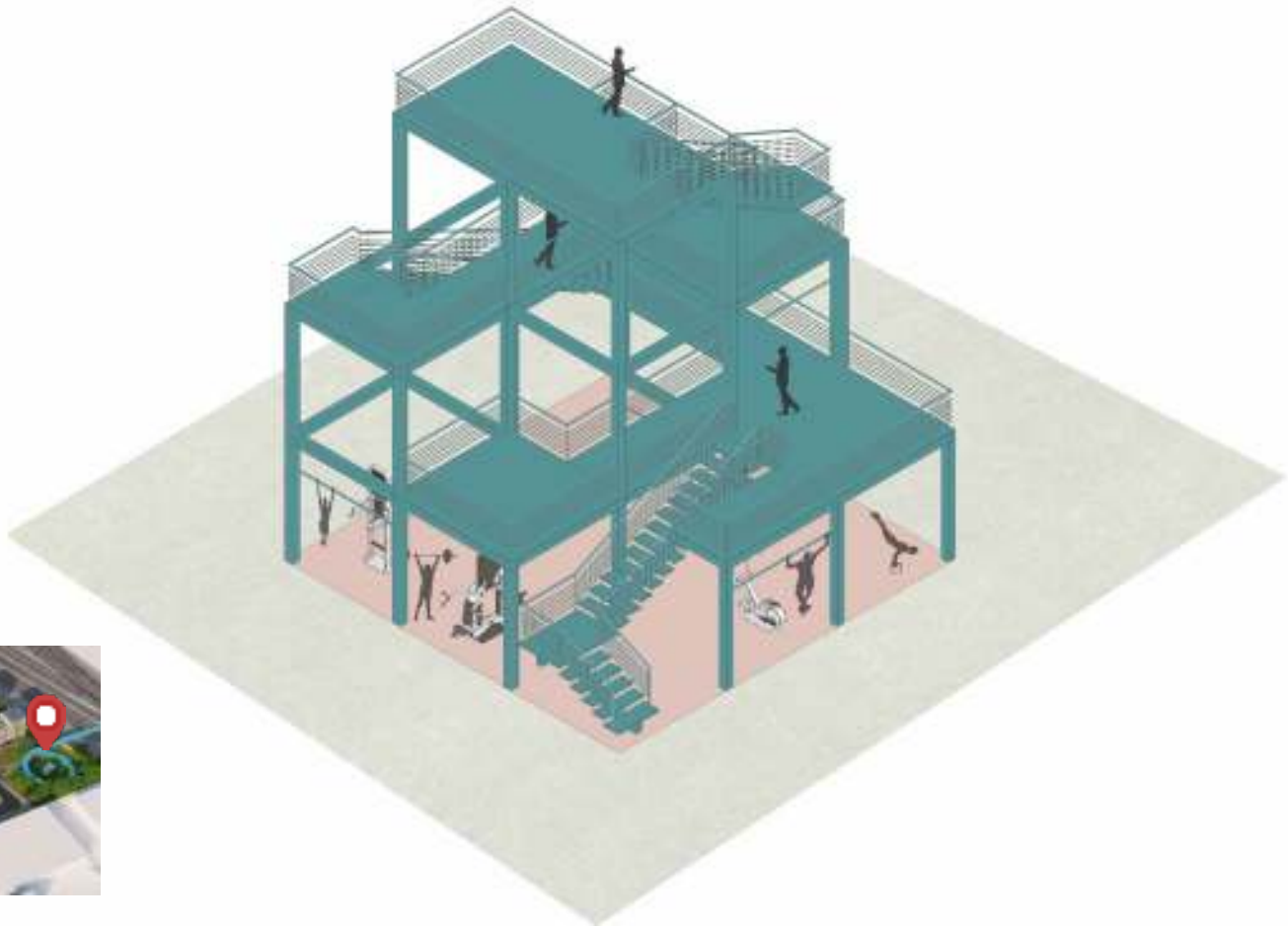

OBSERVATION DECK
WAREHOUSES
ART GALLERY
BRIDGE TO
CITY CENTER
SEINE
RIVER

School Design

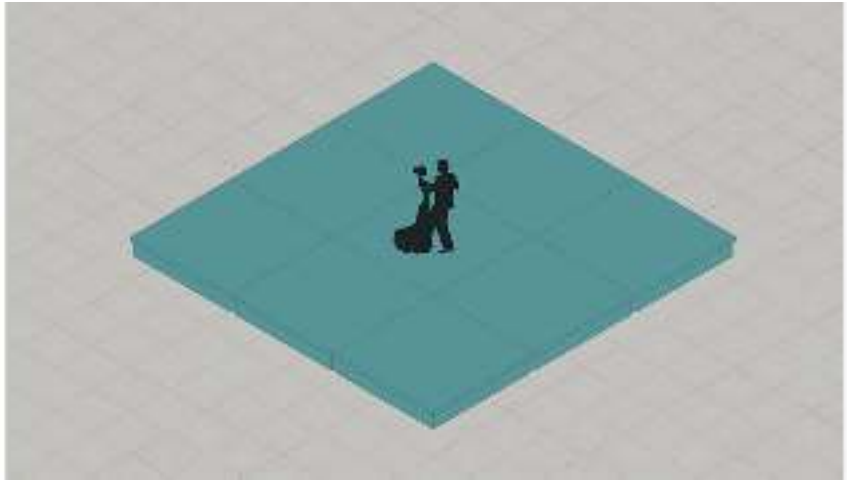


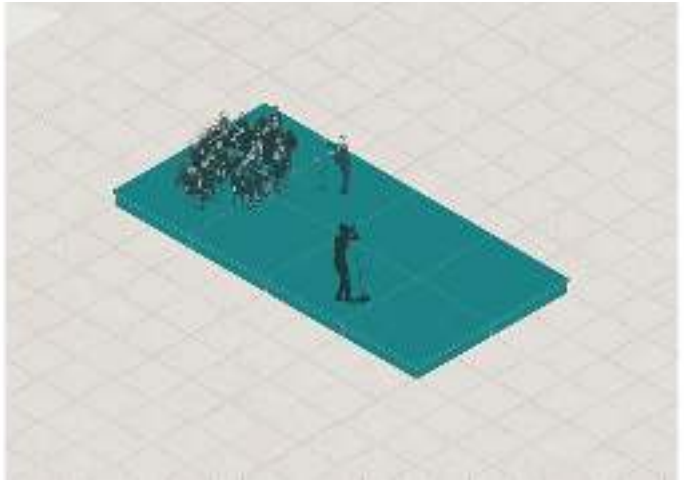
Before

Sports Platform

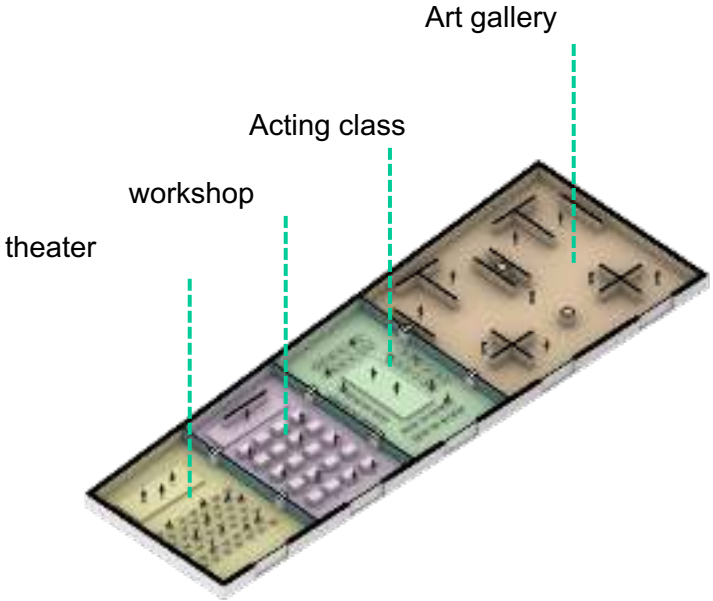


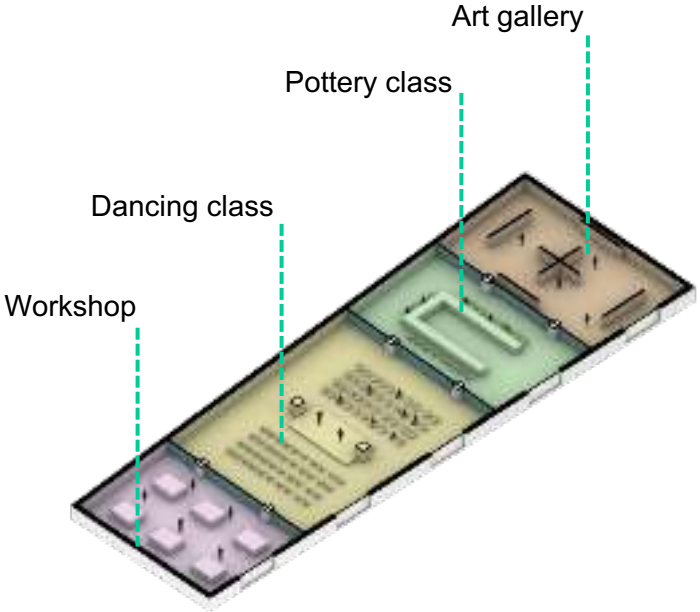
Performance Platform





Arts platform



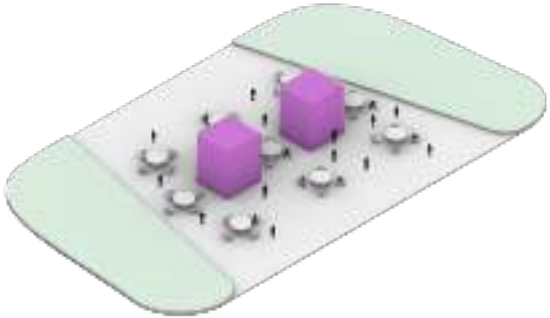


Flexible rearrangement of warehouse spaces using partitions to host art activities

Commercial platform

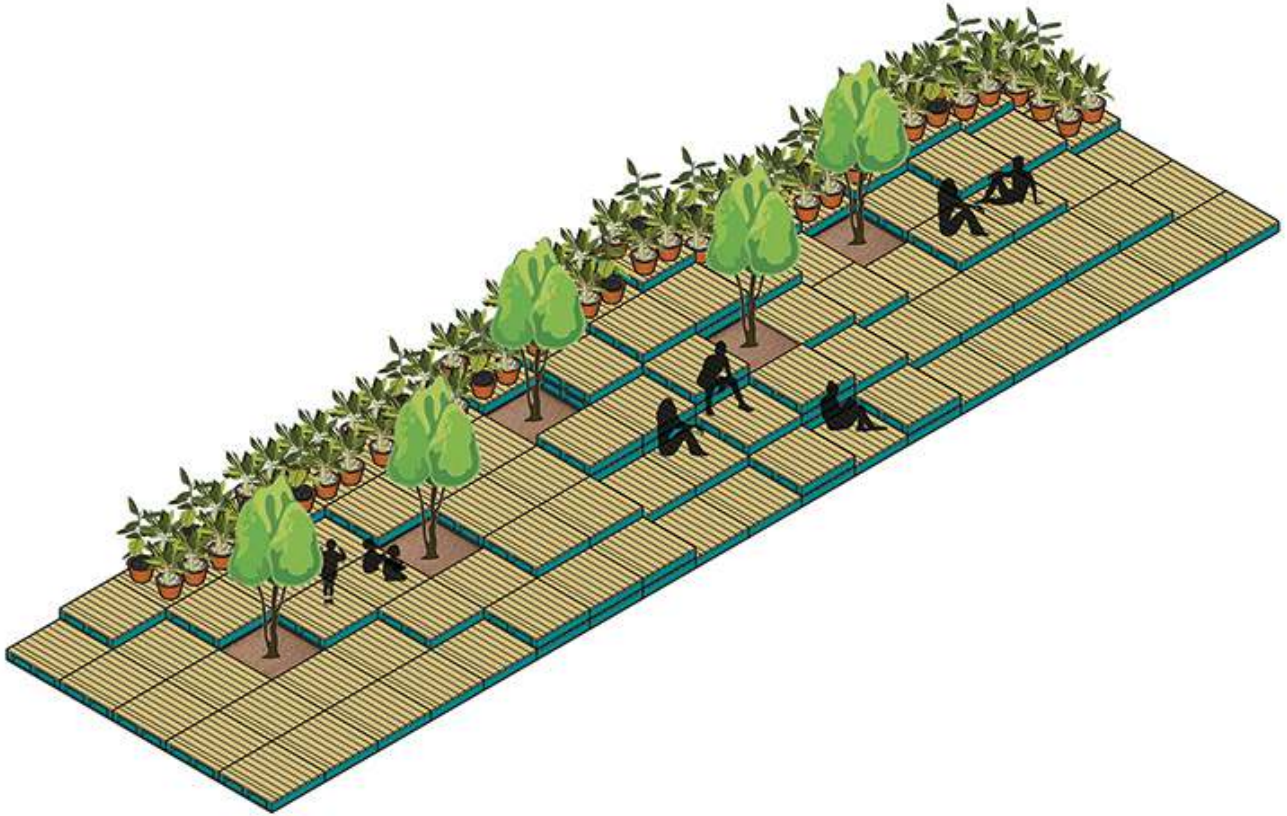
Bazaar

Grocery kiosks



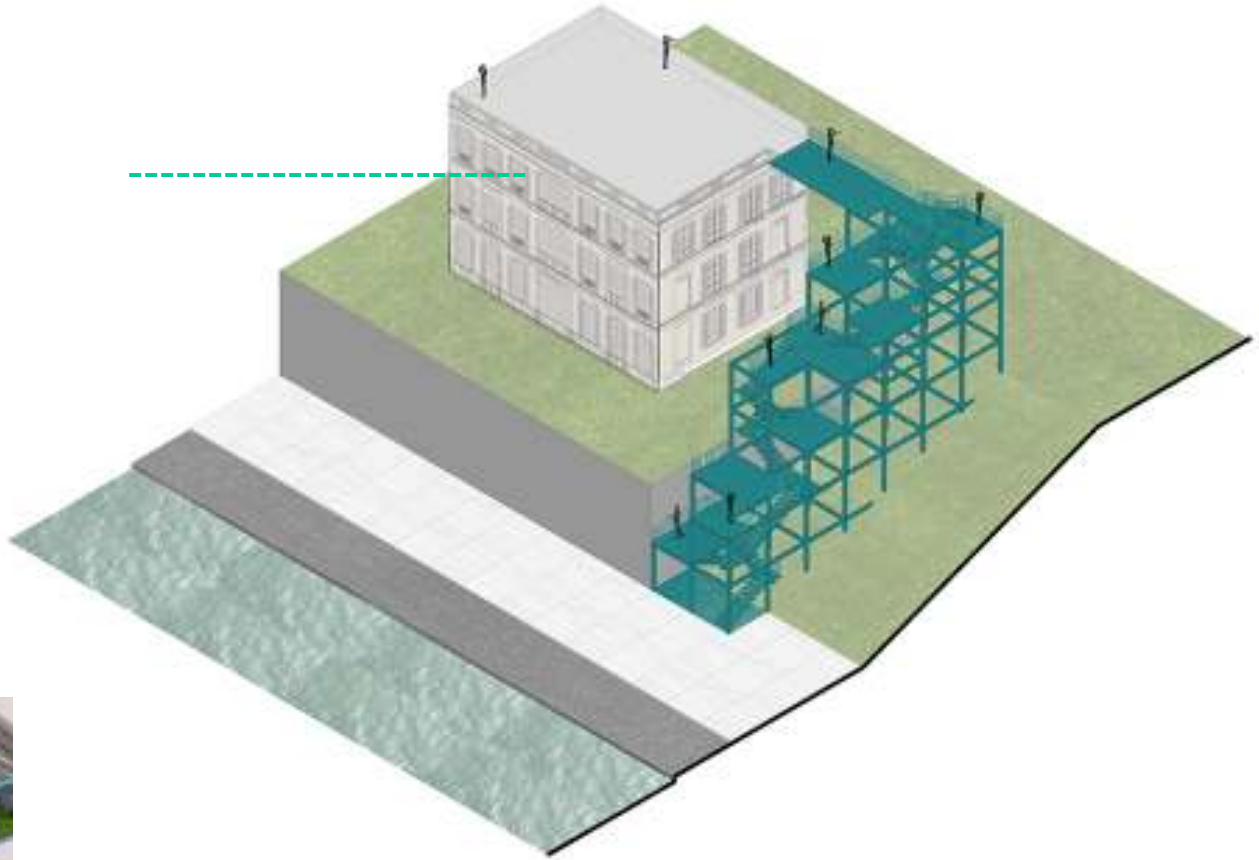
Food Kiosks

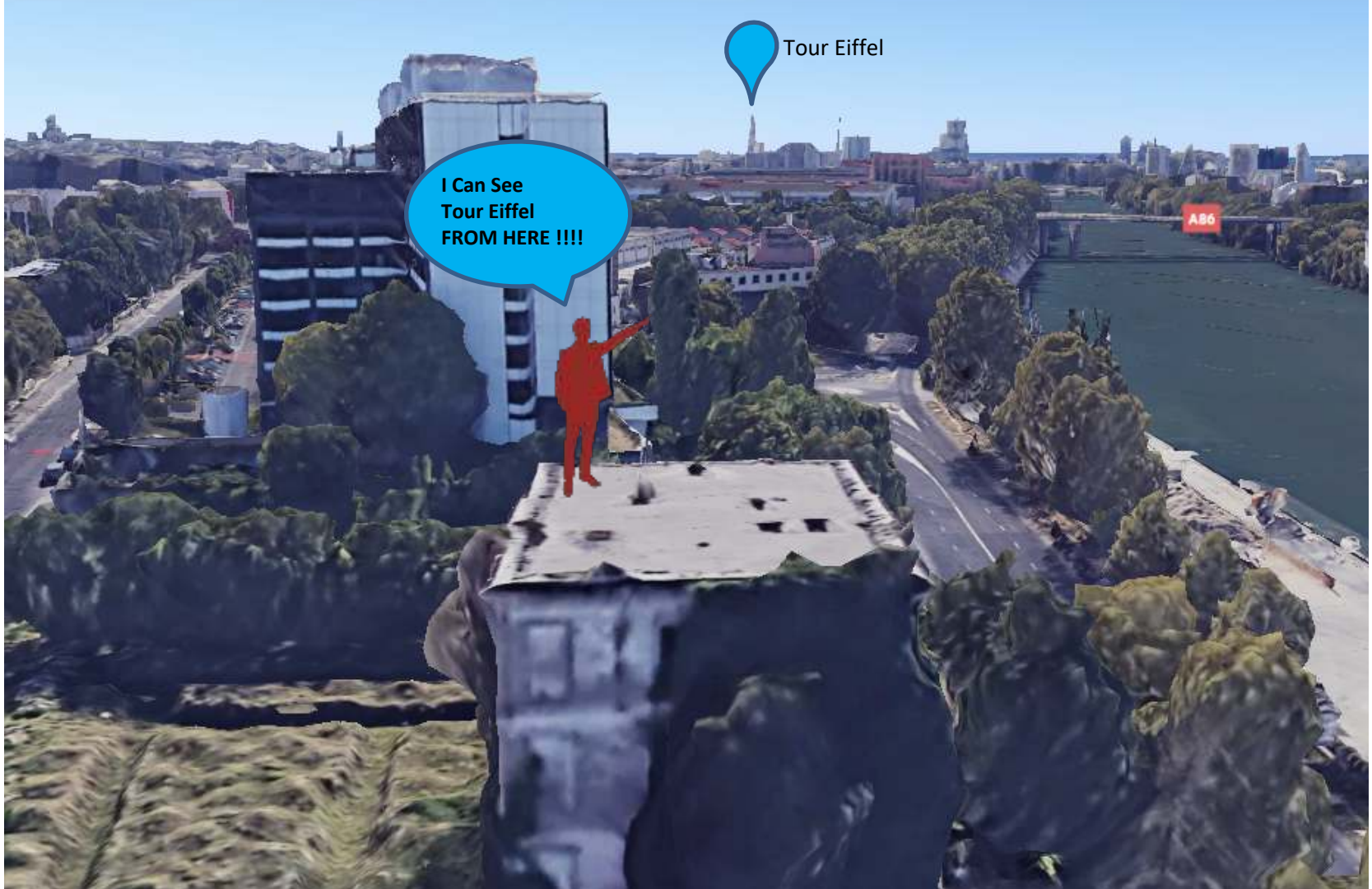
Gathering platform



Observation Platform

Coignet Cultural Center



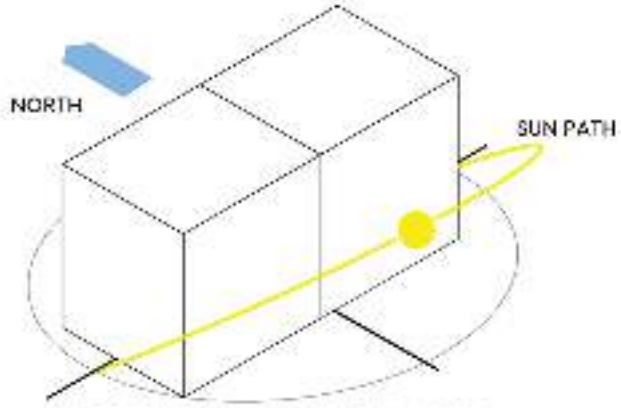

Tour Eiffel
I Can See
Tour Eiffel
FROM HERE !!!!
A86

Before

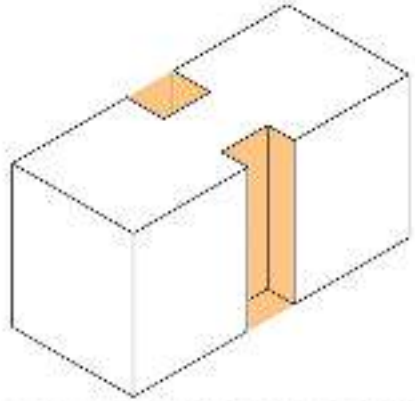
After

RESIDENTIAL BUILDINGS

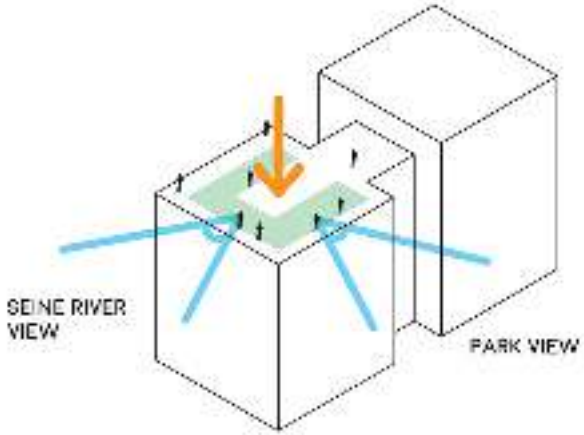
Form Generation



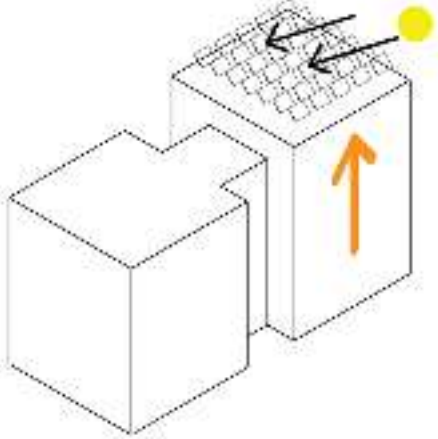
1-STARTING WITH LONGITUDINAL FORM TO MAXIMIZE NORTH/SOUTH FACADE



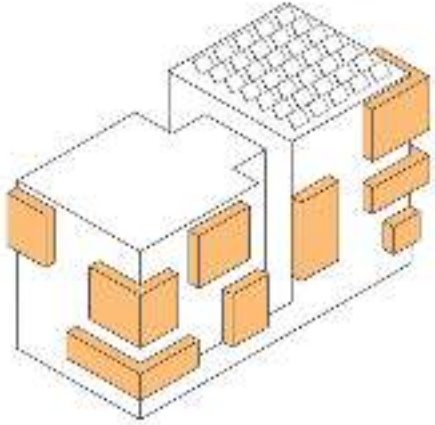
2-BUILDING SUBTRACTIONS FOR EXTRA NATURAL VENTILATION AND LIGHTING



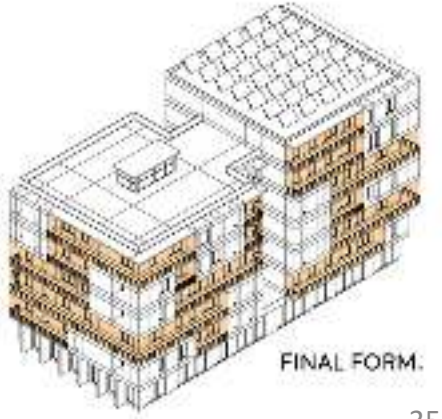
3-BUILDING HEIGHT DIFFERENCE FOR SEINE VIEWS AND GREEN ROOF



5-HIGHER MASS TO HAVE SOLAR PANELS WITHOUT HAVING SHADOW FALLING ON IT



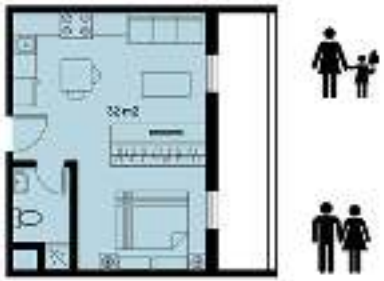
5-EXTRUDED MASSES FOR BUILDING SELF SHADING



6- CREATING BALCONIES FOR MORE SELF SHADING AND SITE VIEWS

APARTMENT TYPES

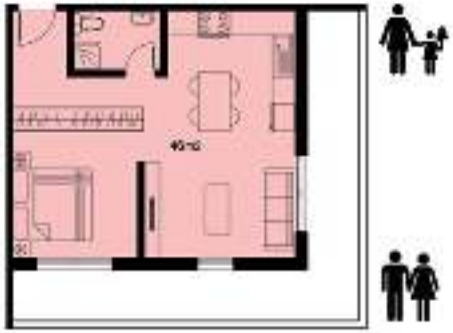
SMALL STUDIO- 32M2



SMALL TWO BEDROOM APT - 62 M2

THREE BEDROOM APT - 90 M2

LARGE STUDIO - 46M2



LARGE TWO BEDROOM APT. 73 M2

USER TYPOLOGY	APARTMENTS NUMBERS
SINGLE PARENT	T1 60 APARTMENT
MARRIED COUPLE	T2 54 APARTMENT
	T3 54 APARTMENT
SMALL FAMILY	T4 66 APARTMENT
	T5 66 APARTMENT
LARGE FAMILY	TOTAL : 300 APARTMENT

PLANS

FIRST FLOOR

GROUND FLOOR

SECOND FLOOR

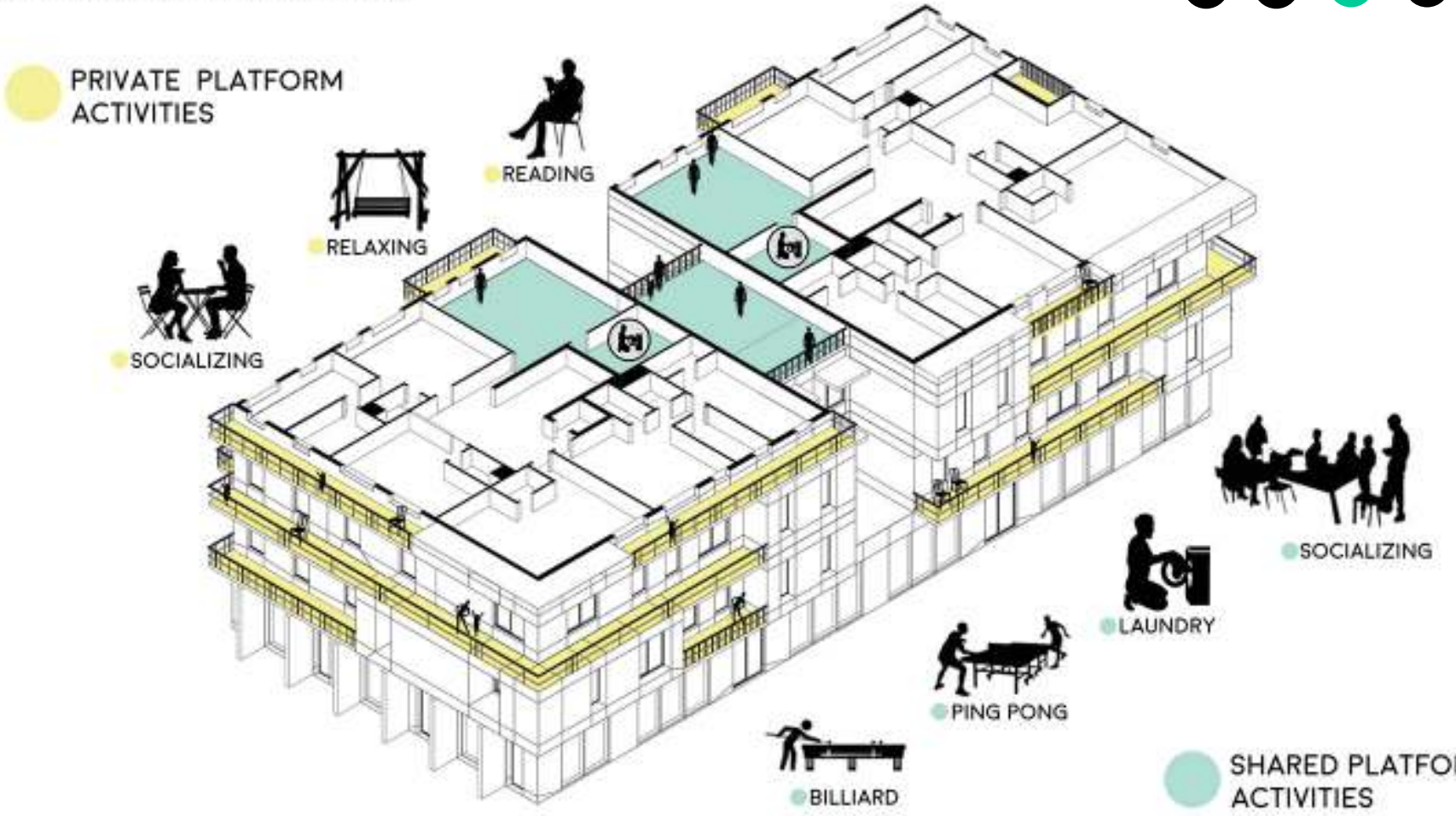
THIRD FLOOR

FOURTH FLOOR

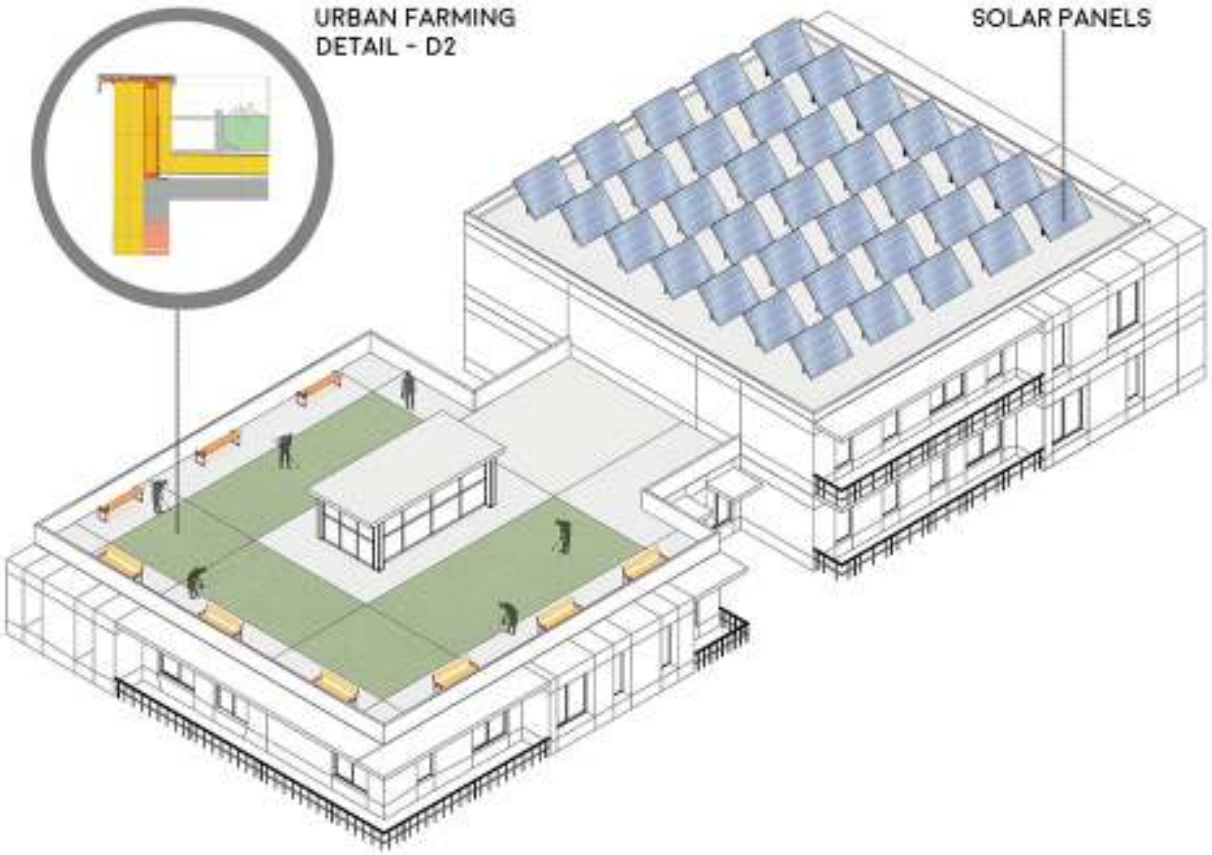
FIFTH FLOOR

TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 COMMUNAL SPACES

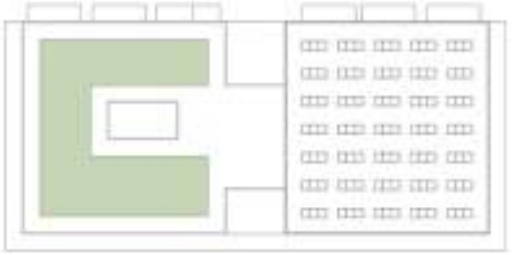
COMMUNAL PLATFORM



ECOLOGICAL PLATFORM



SIXTH FLOOR



ROOF PLAN

URBAN FARMING TYPE 2 TYPE 3 TYPE 5 COMMUNAL SPACES

SECTIONS

- RESIDENTIAL SPACES
- CORES
- COMMUNAL SPACES
- COMMERCIAL
- PARKING
- URBAN FARMING

CROSS SECTIONS

LONGITUDINAL SECTIONS

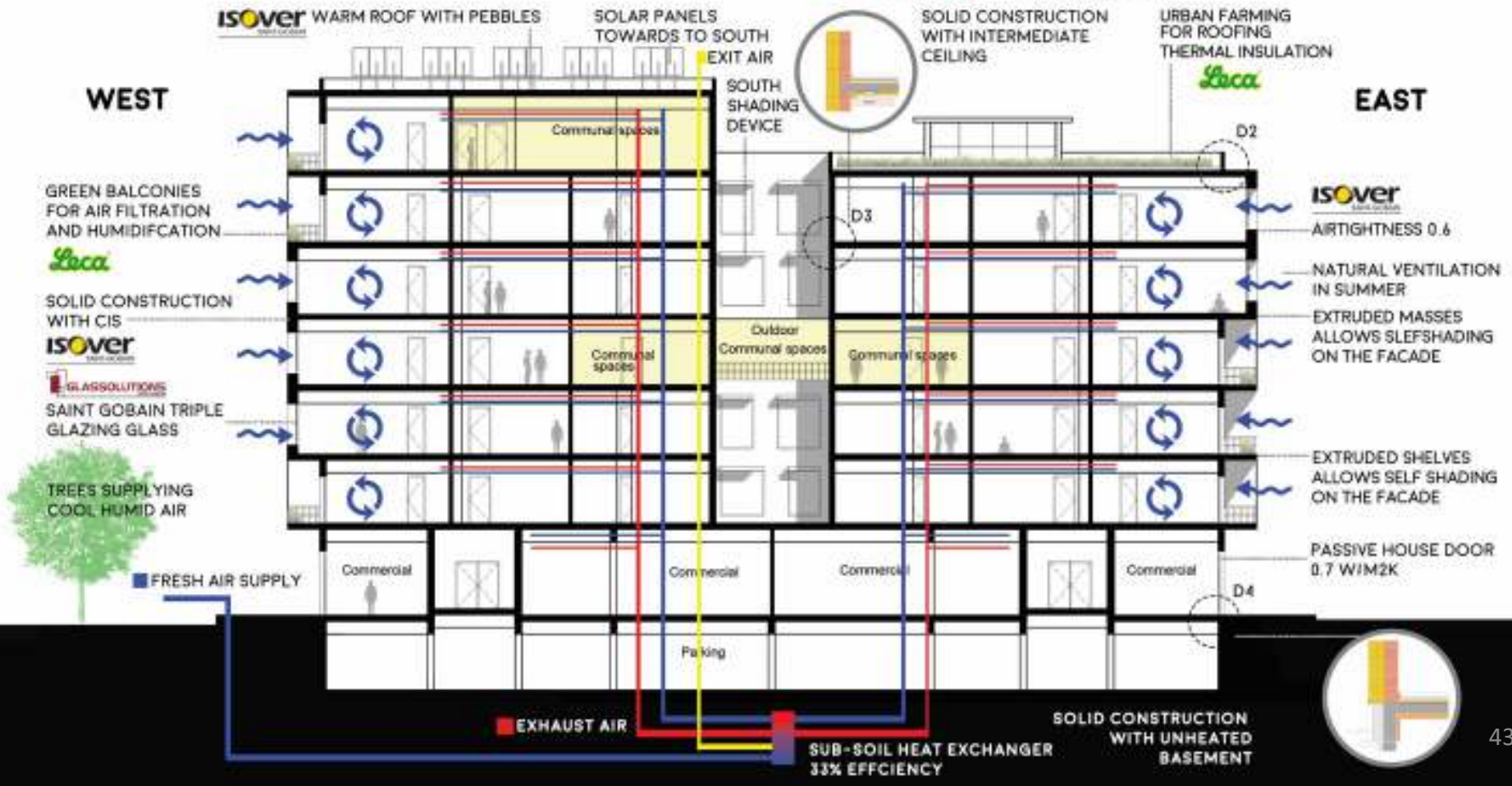
ELEVATIONS

SOUTH ELEVATION

EAST ELEVATION

TECHNICAL PARAMETERS

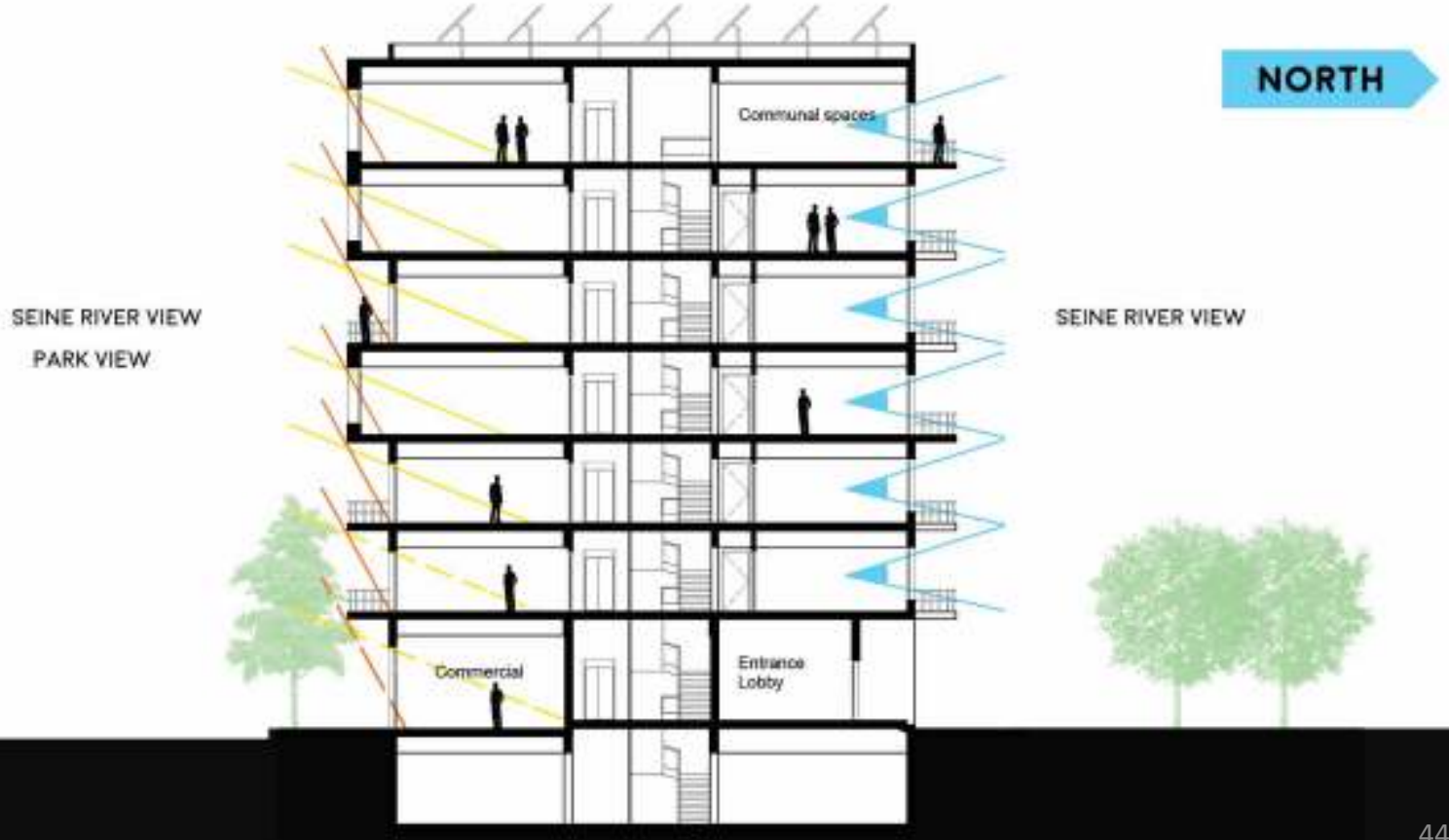
THERMAL AND VENTILATION STRATEGIES



VISUAL AND THERMAL COMFORT STRATEGIES

SAINT-GOBAIN

SUMMER SUN - 62°
WINTER SUN - 25°
VISUAL COMFORT



FIRE SAFETY AND ACOUSTIC COMFORT STRATEGIES

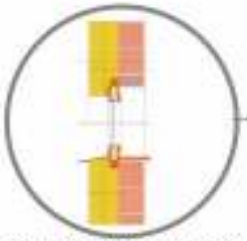
USING NON-COMBUSTIBLE MATERIALS FOR BETTER BUILDING RESISTANCE

MAXIMUM MOVEMENT FOR STAIRS <15 M

MAXIMUM SOUND NOISE AFFECTING SITE 45 DB FROM TRAIN (REDUCED 20 DB BY SOUND BARRIER)

OBJ D >45 DB
OBJ D >38 DB
OBJ D >36 DB
OBJ D >34 DB
OBJ D >31 DB

SITE MAP SHOWING NOISES AFFECTING THE SITE FROM EACH SIDE



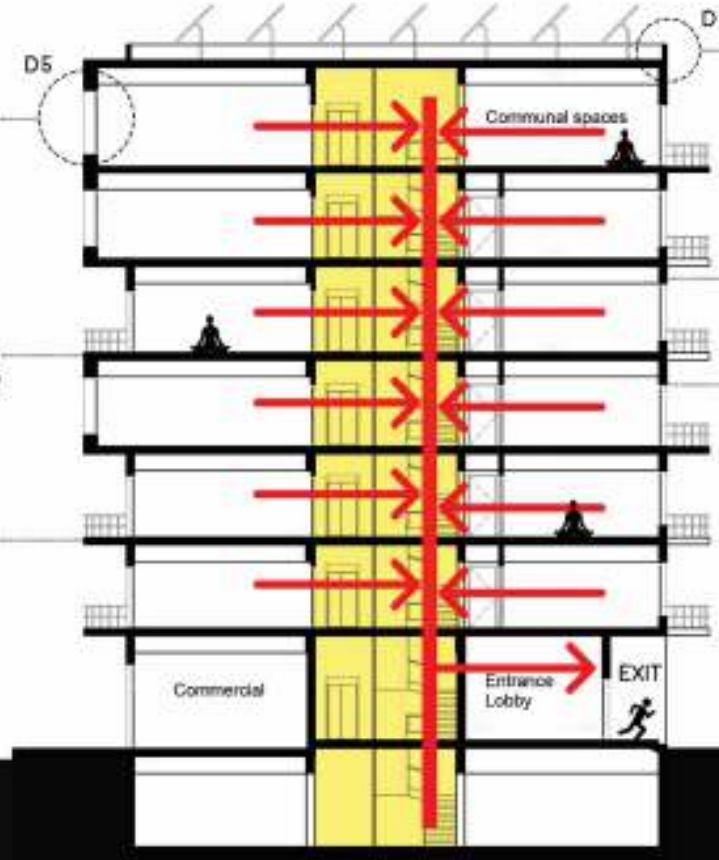
SOLID CONSTRUCTION WITH WINDOW

SOUND PROOF TRIPLE GLASS SGG CLIMATOP LUX 35 DB

GLASSOLUTIONS

NON-COMBUSTABLE MATERIALS

ISOVER



WARM ROOF WITH PEBBLES (MW) EAVES

WALL SOUND INSULATION 46 DB

ISOVER

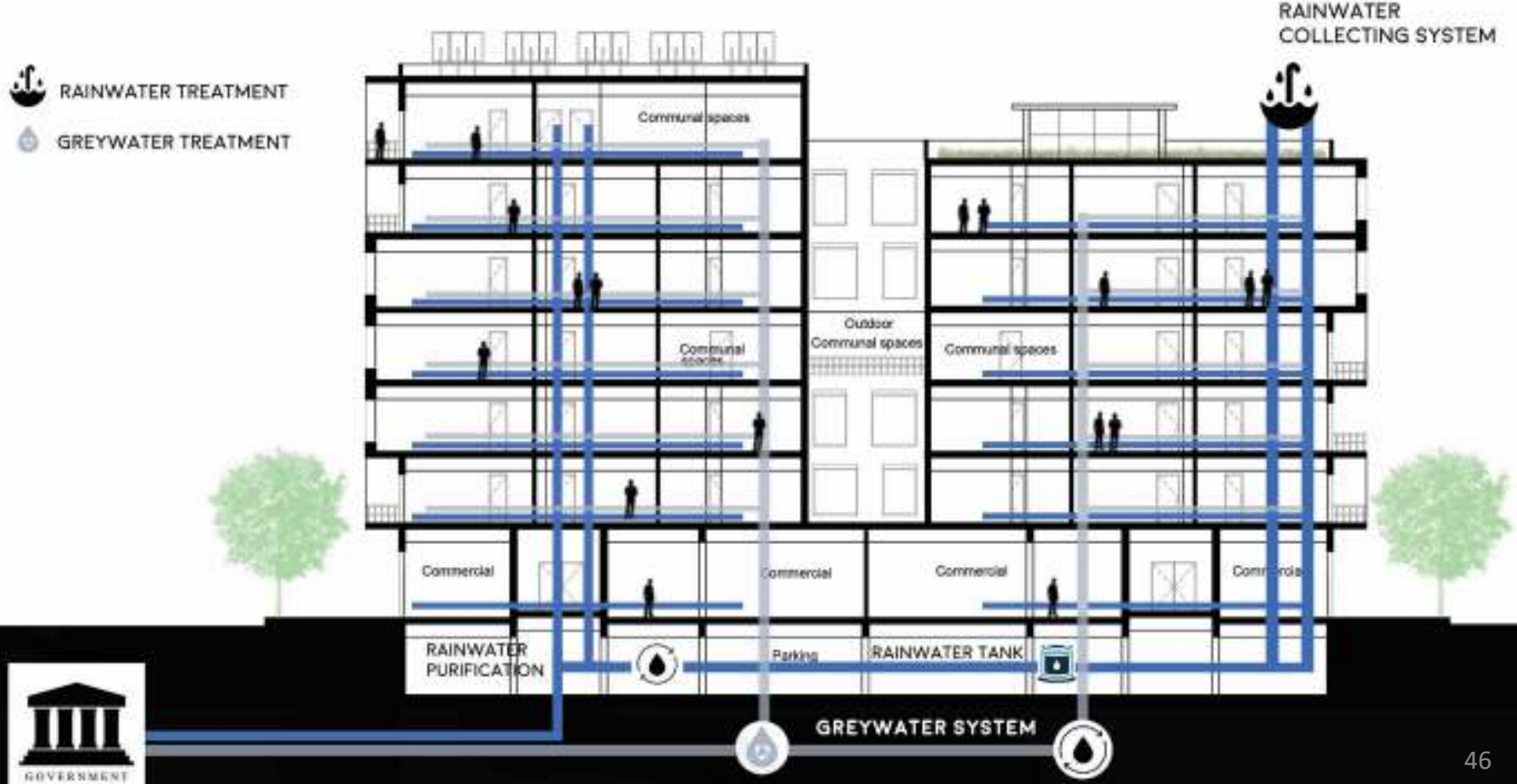
HIGH AIRTIGHTNESS REDUCES SOUND AND SOLAR RADIATION 0.6

SOUND BARRIER FOR FLOOR WAVES

SOUND BARRIER - 20 DB

TRAIN -LOUD NOISE-

WATER STRATEGY



BUILDING CALCULATION

PROJECT DATA

OBJECT: RESIDENTIAL BUILDING
COUNTRY: FRANCE
CITY: PARIS
CONSTRUCTION: NEW BUILDING

AREA INPUT

HEATED SPACE AREA: 3.354 M2
HEATED SPACE VOLUME: 11.068 M3
AIV: 0.33
SUM OF THERMAL ENVELOPE: 2.800

OPAQUE ELEMENTS

ROOF FLAT: 0.11 W/(M2K)
WALL AGAINST AIR: 0.11 W/(M2K)
SLAB AGAINST UNHEATED CELLAR: 0.17 W/(M2K)
WALL AGAINST NEIGHBOR: NOT TAKEN INTO CONSIDERATION

TRANSPARENT ELEMENTS

WINDOWS: 0.55 W/(M2K)
DOOR: 0.7 W/(M2K)

QUALITY

AIRTIGHTNESS: 0.6
THERMAL BRIDGE - FREE: YES

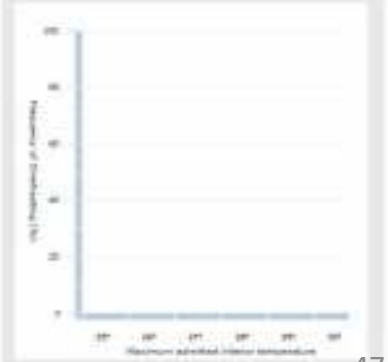
SHADING

0:	0.7
90:	0.46
180:	0.48
270:	0.46

HVAC

EFFICIENCY HEAT RECOVERY SYSTEMS: 95%
EFFICIENCY SUBSOIL HEAT EXCHANGER: 33%

CALCULATIONS



Thank you.