


# RECREATING IN REMA

sustainable multifunctional retrofit

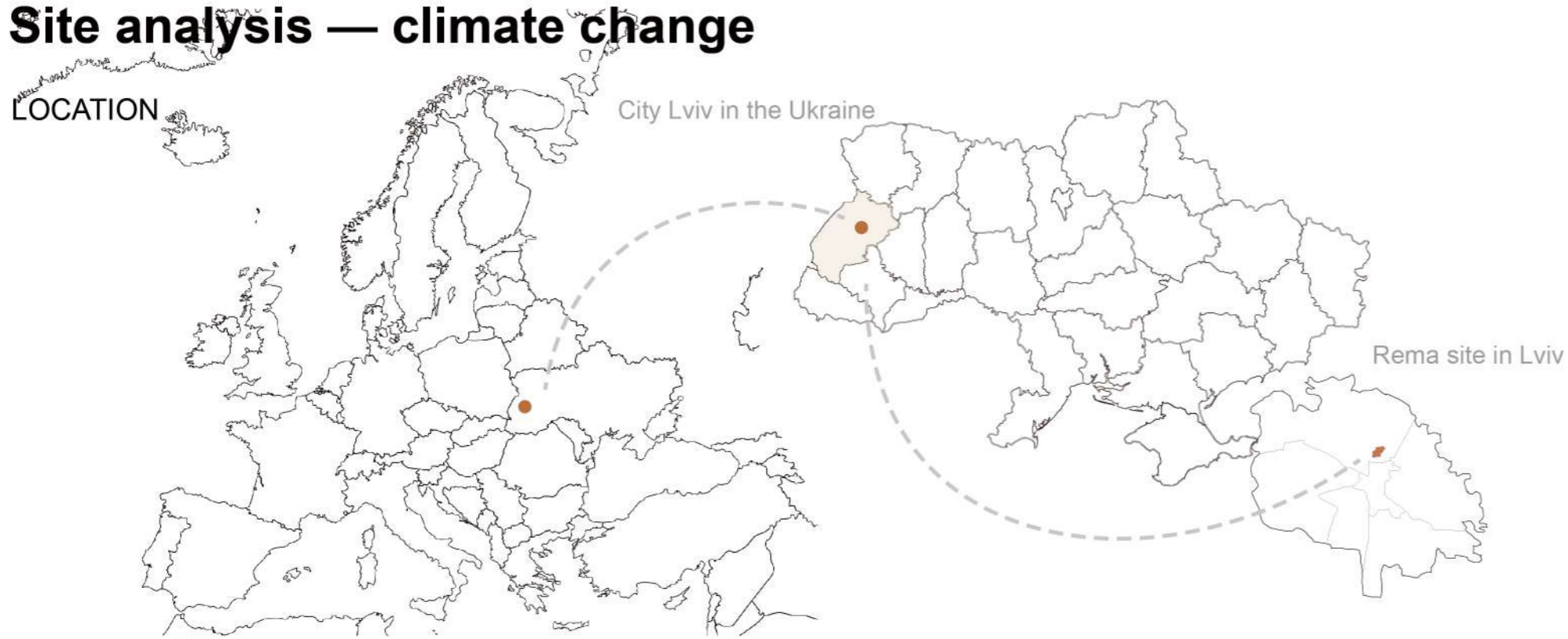
BY  
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## Model pictures



# Site analysis — climate change

LOCATION



## INTRODUCTION

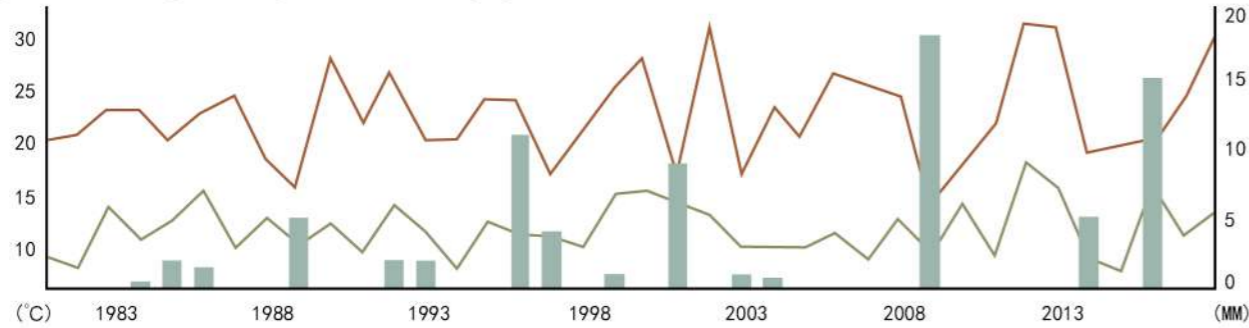
### LOCATION

REMA plant is located in the industrial area of Pidzamche in Ukraine, Europe and has a long history. In the 1920s and 1930s, the Winter Brothers Weigh Factory was located here. A powerful factory of radio-electronic medical equipment was founded on the same place 70 years ago.

### CHARACTERISITY

- Part of the UNESCO World Heritage Site
- Border metropolis
- Urban development areas

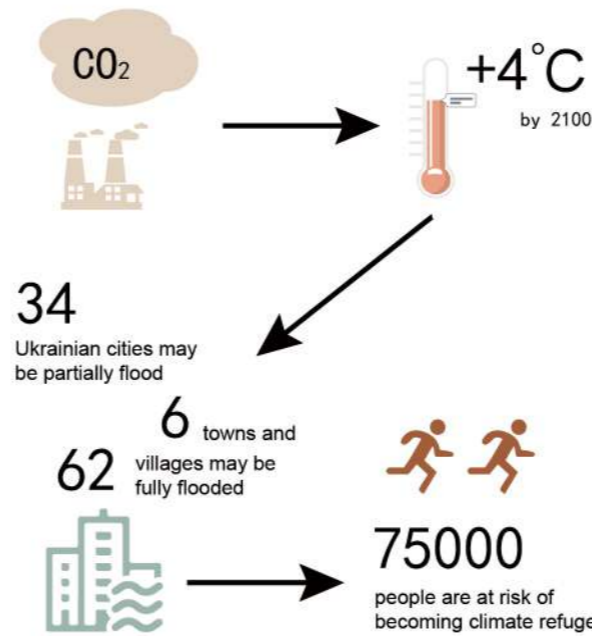
## CLIMATE CHANGE AND FLOOD



observed min/max temperature&precipitation in the past years on 21.06 in Lviv, Ukraine

Link: [https://www.meteoblue.com/en/weather/historyclimate/climatecomparison/lviv\\_ukraine\\_702550](https://www.meteoblue.com/en/weather/historyclimate/climatecomparison/lviv_ukraine_702550)

Link: [https://www.boell.de/sites/default/files/2020-01/Ukraine\\_Energie\\_2019.pdf](https://www.boell.de/sites/default/files/2020-01/Ukraine_Energie_2019.pdf)



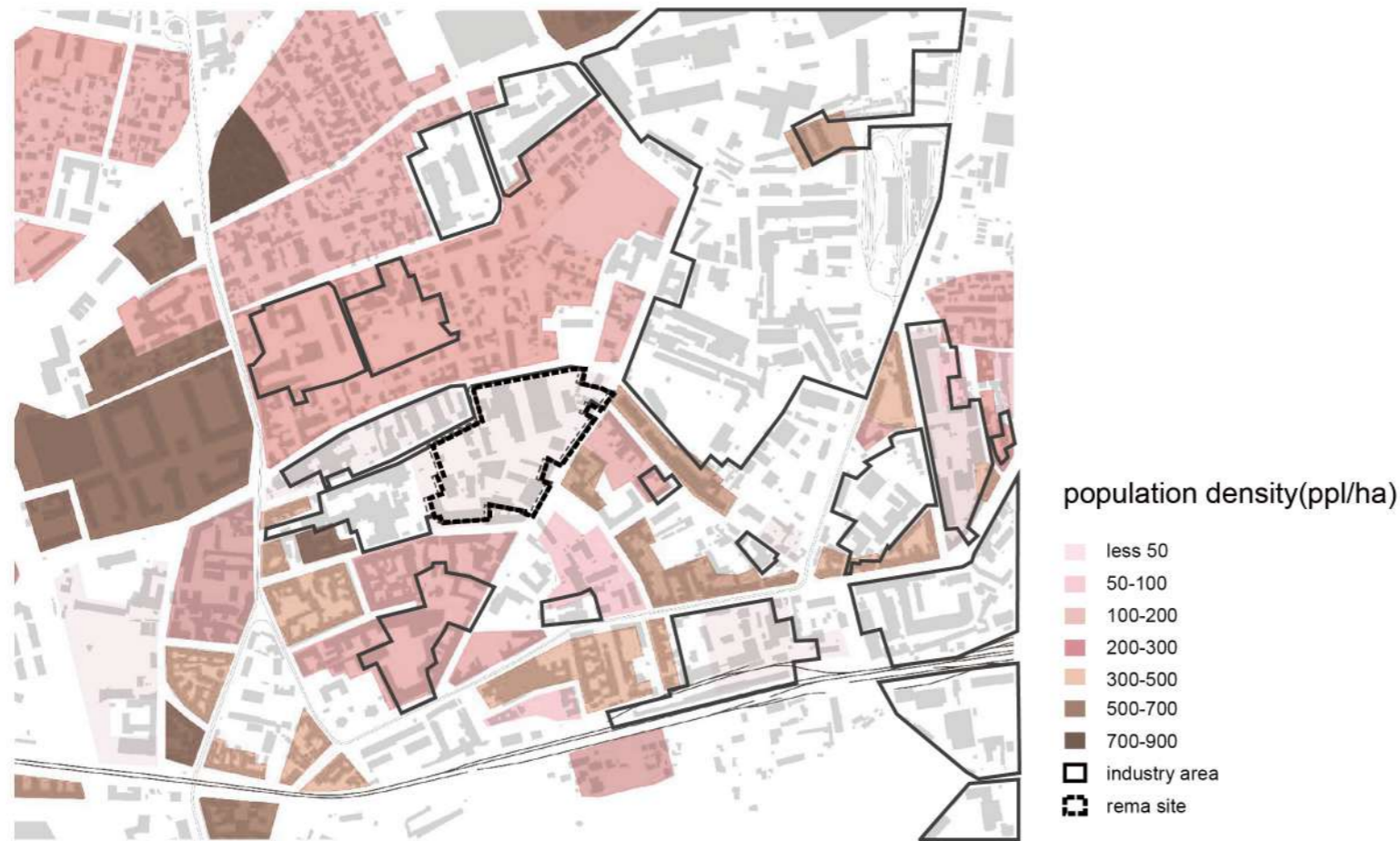
## CLIMATE CHANGE IN LVIV

The mining and burning of fossil fuels exacerbates the effects of climate change in Ukraine, such as heat waves, extreme weather events (storms, floods and droughts), sea level rise, forest fires, loss of biodiversity, land and water degradation, as well as agricultural crop reduction, leading to food insecurity. Due to sea-level rise, coastal areas of Ukraine are under risk of full or partial flooding.

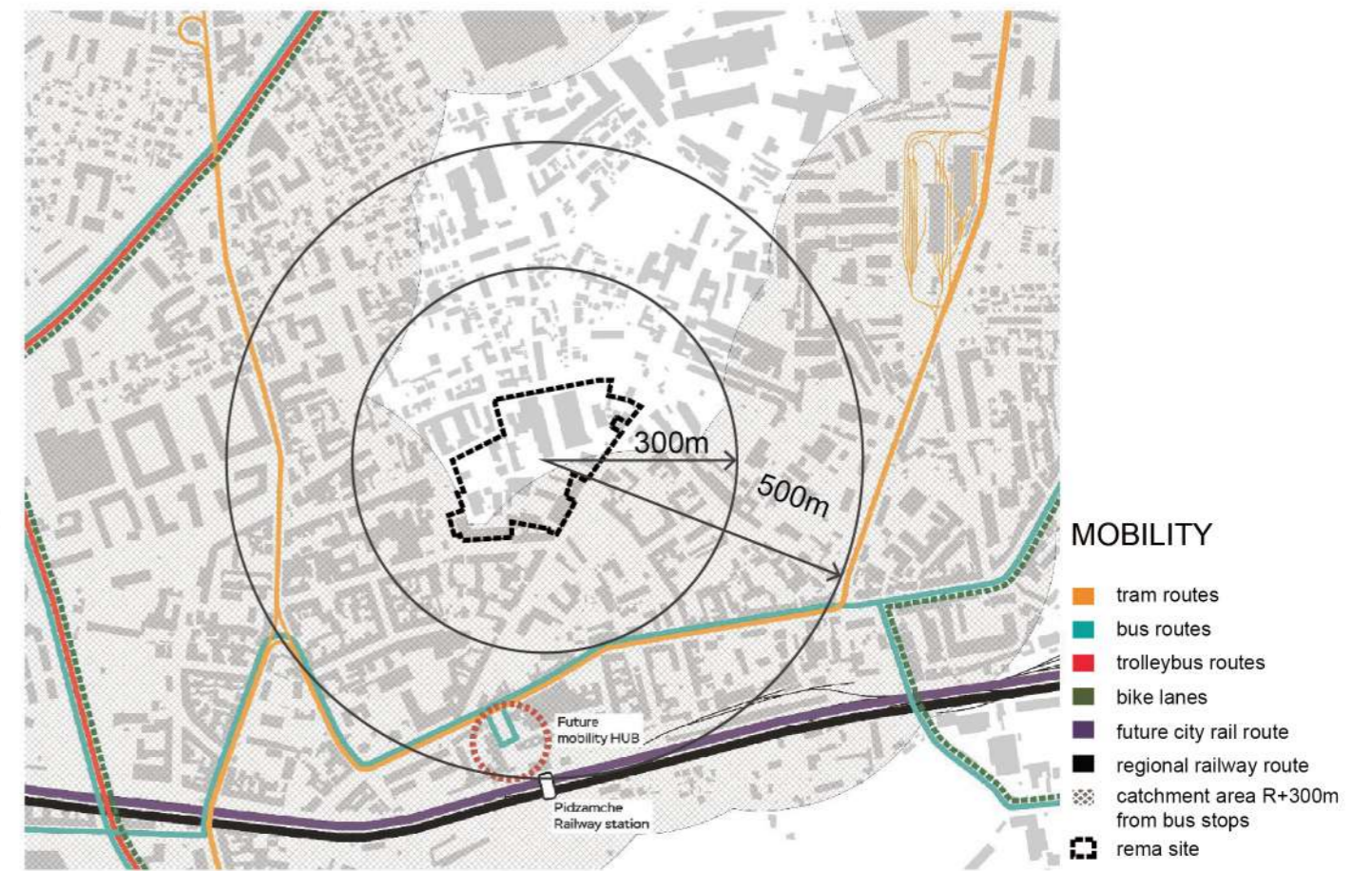


# Site analysis — history and density

DENSITY — Less density in factory area



MOBILITY — Inconvenient public transportation



## HISTORY TIME LINE OF DEVELOPMENT IN REMA

1920s and 1930s



Here in the 1920s and 1930s was the Winter Brothers Weight Factory, on the basis of which REMA was created.

1944



Lviv factory of radio-electronic medical equipment REMA began its activities on 1 August 1944, as a factory of disinfection equipment.

1960s-1980s



The plant experienced its rise in the 1960s-1980s, During its heyday 1000 employees per shift worked at REMA.

1990s



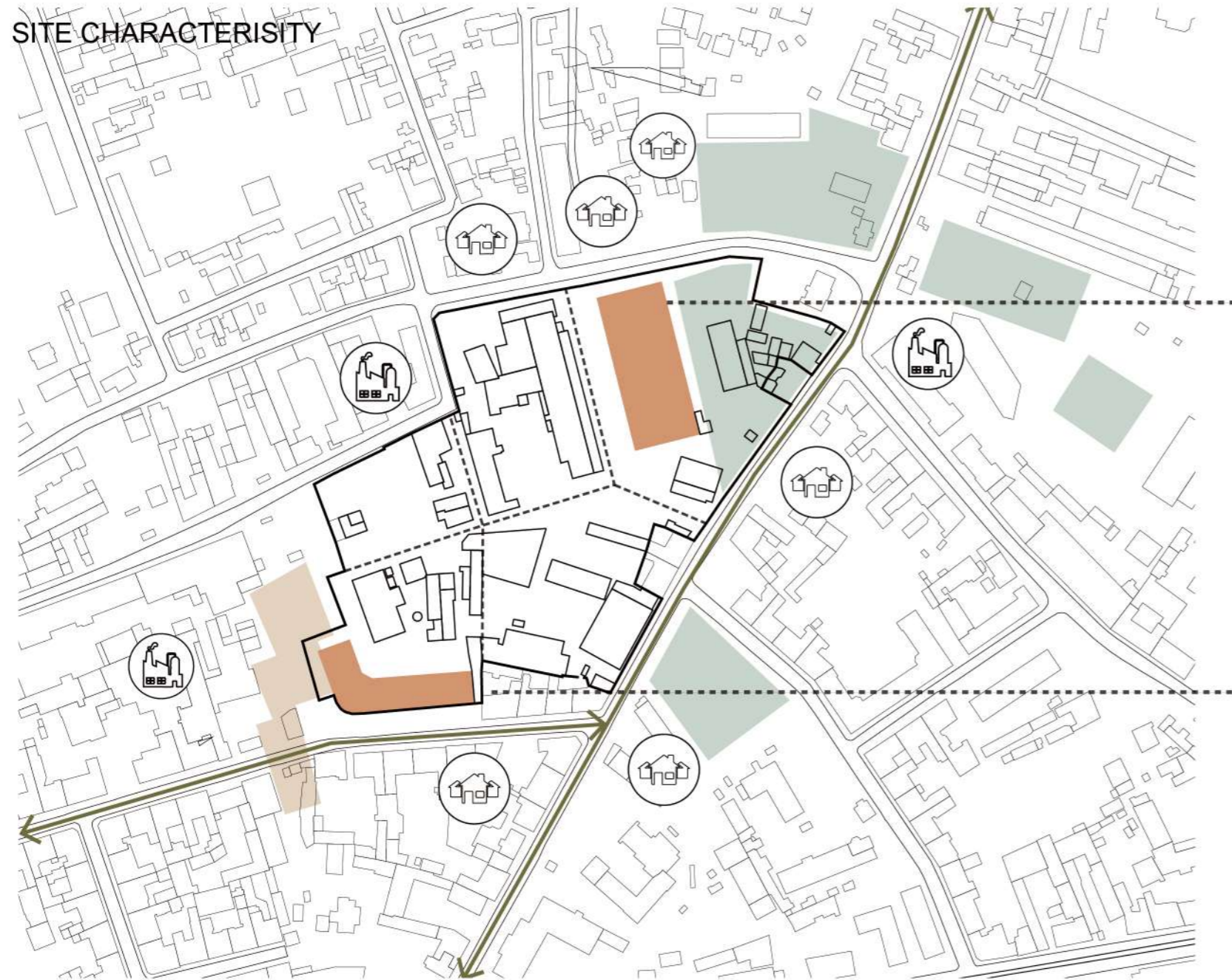
In the 1990s, the plant began to decline, the production almost stopped, and the giant square was empty.

today



Today there are about 70 small companies. The new residents of the factory was created a public organization "ReZavod".

# Site analysis — characteristy

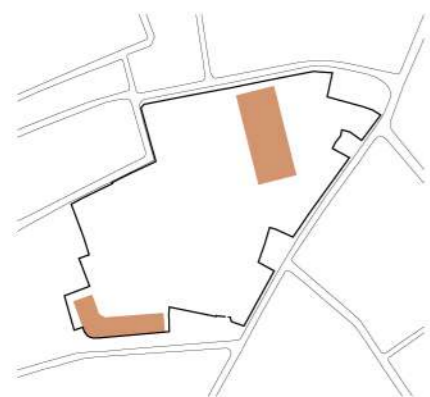


- Metal&steel Workshops
- Gym
- Architects
- Designers
- Engineers
- Manufacture of gallery
- Art studio/Gallery
- Sewing workshops
- Production of tables
- Blacksmith
- Joinery workshops
- Laser cut

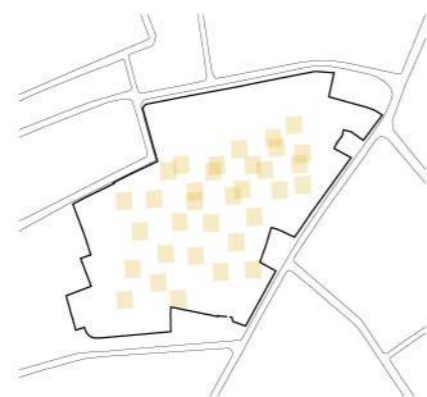


- Joinery workshop
- Sewing workshops
- Advertisers
- Artistic workshops
- Art gallery
- Photo studio
- Theater
- Recording studio
- Bakery
- Architecture visualizers

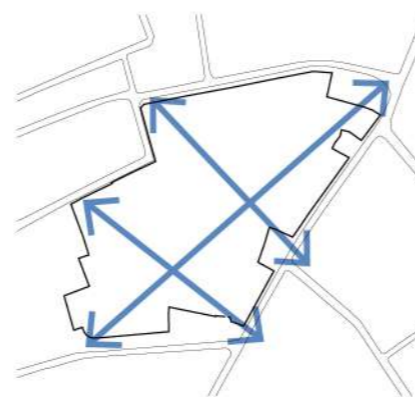
## DESIGN POTENTIAL



element to preserve and connect



program distribution of visitors



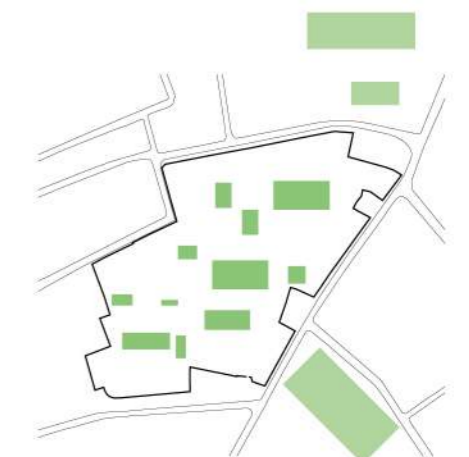
connect surrounding street



art center creative part of the neighborhood



balance between working and living space



distribution of green spaces

# Conclusions & Goals

## Conclusions



climate change and flood safety



unbalance between housing and office



abandoned parcel,  
small design companies

## Goals



**sustainable**

rainwater collection and  
recycled use



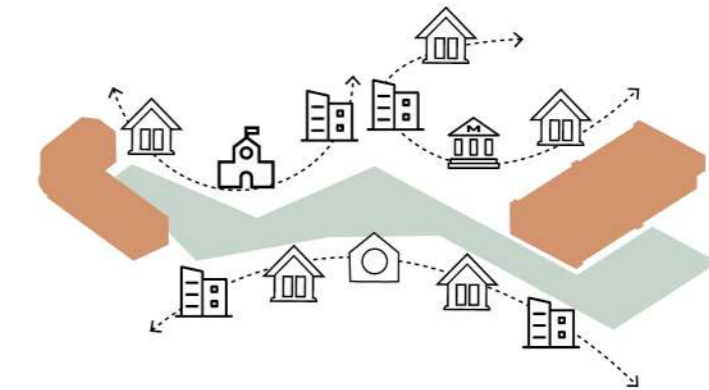
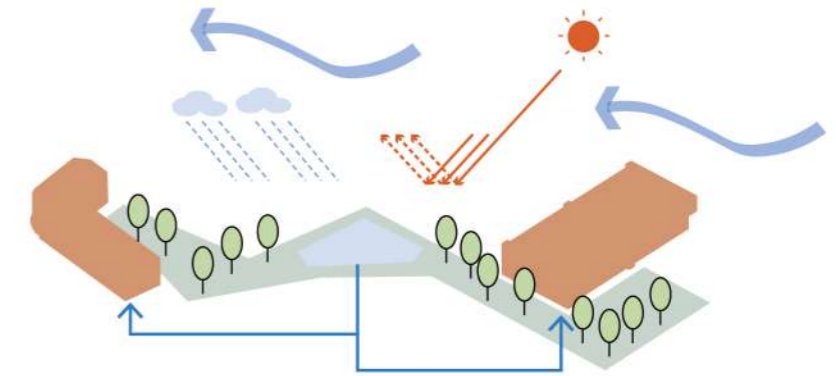
**multifunctional**

art studio, office, housing,  
exhibition



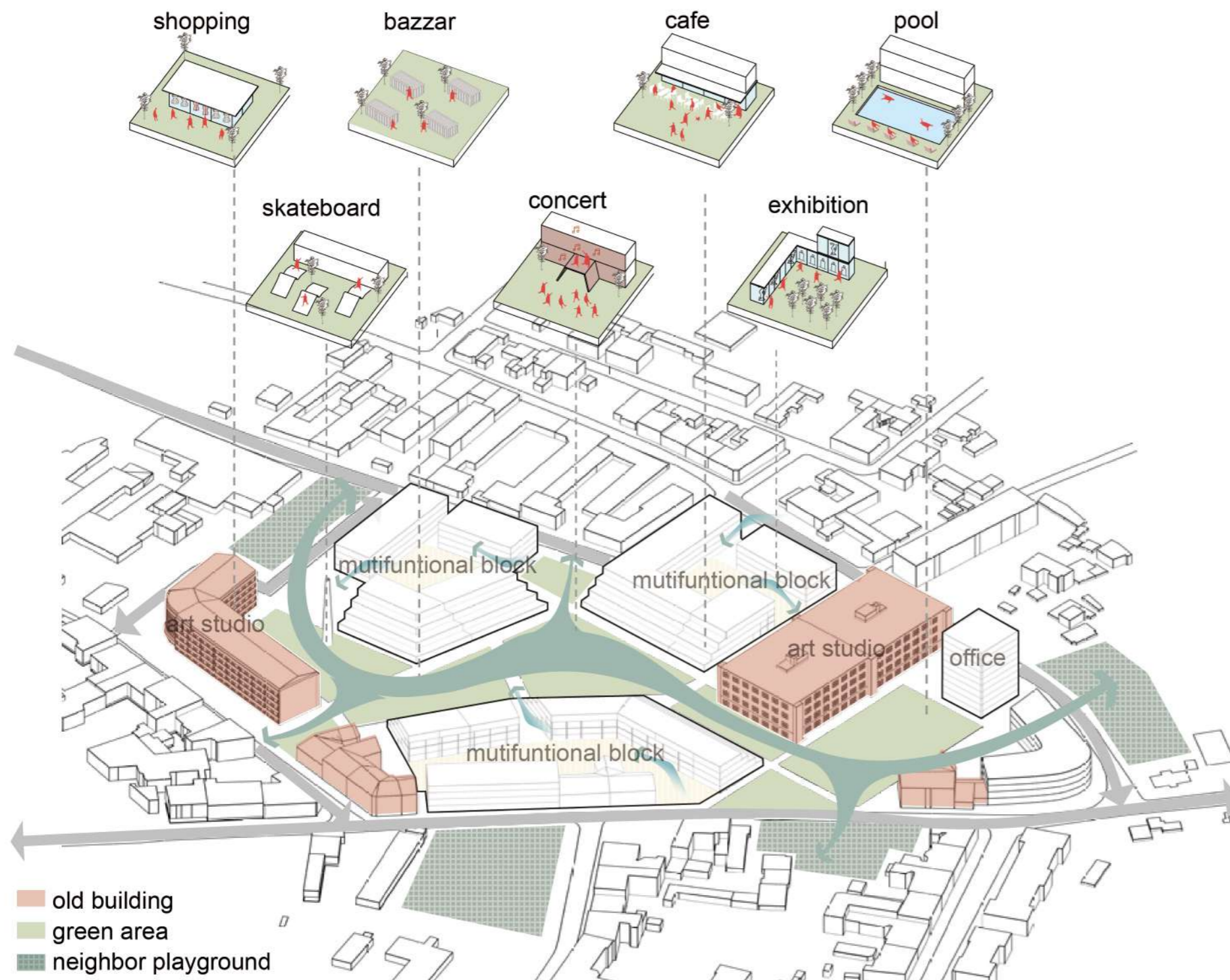
**retrofit and recreative**

preserve and renewal the original  
phenomenon

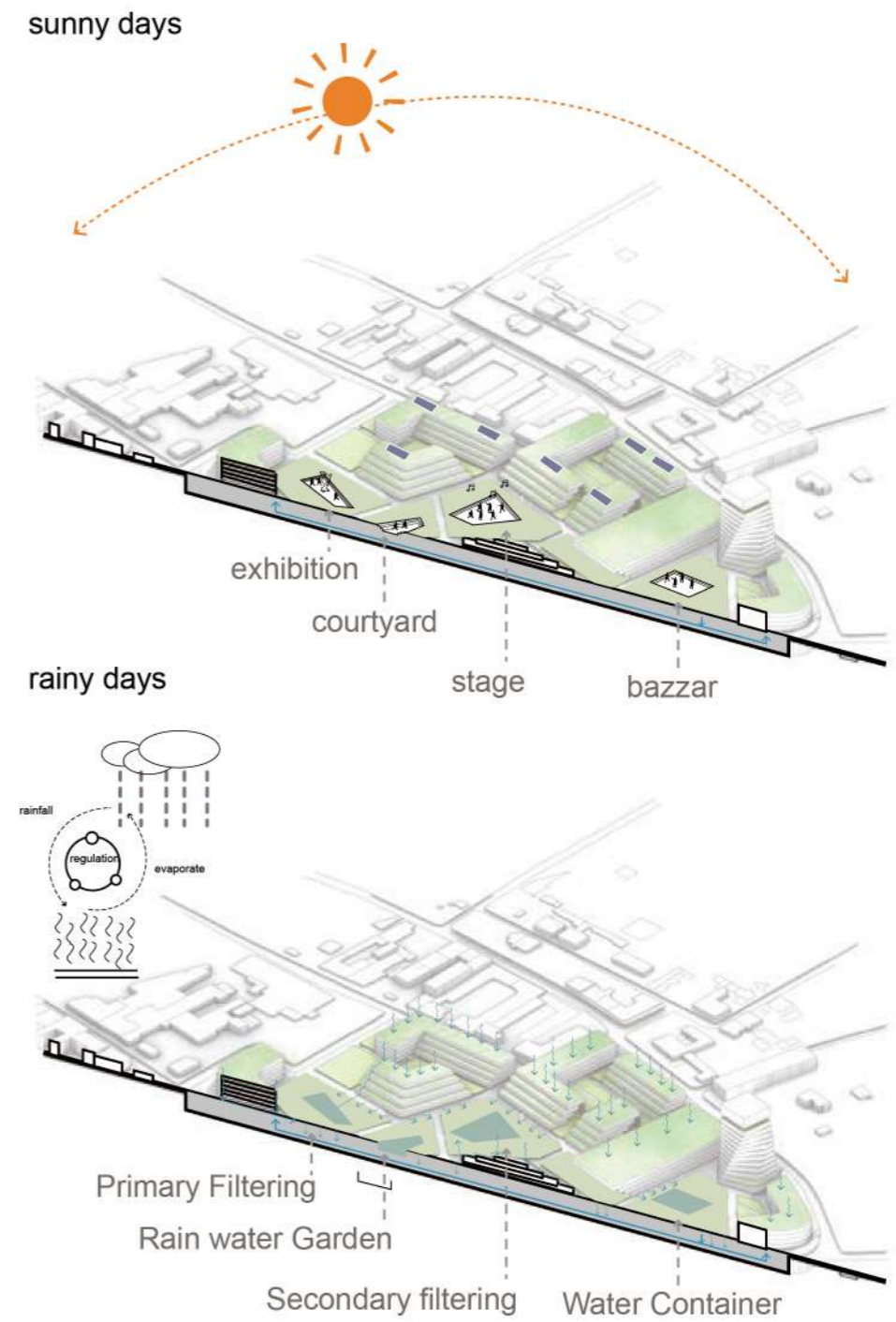


# Concept

## 1. Integrate original activities

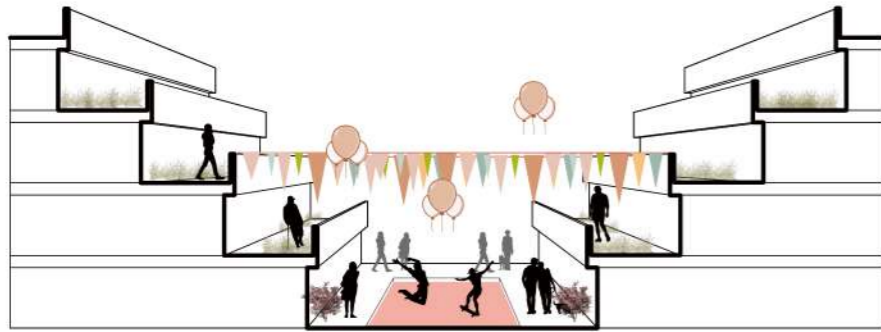


## 2. Water Plaza for double function



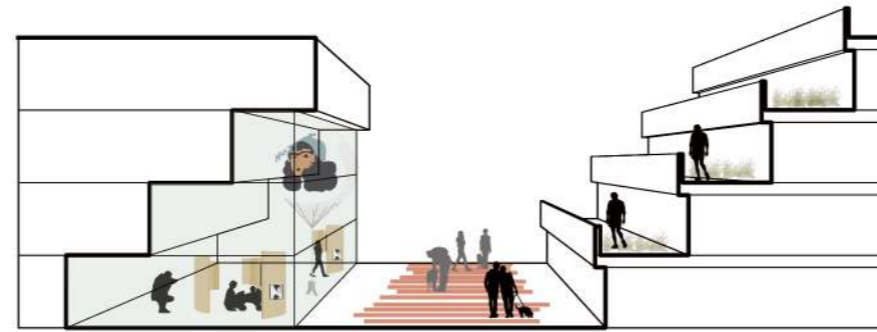
# Space diagrams

## 1. Open street interface



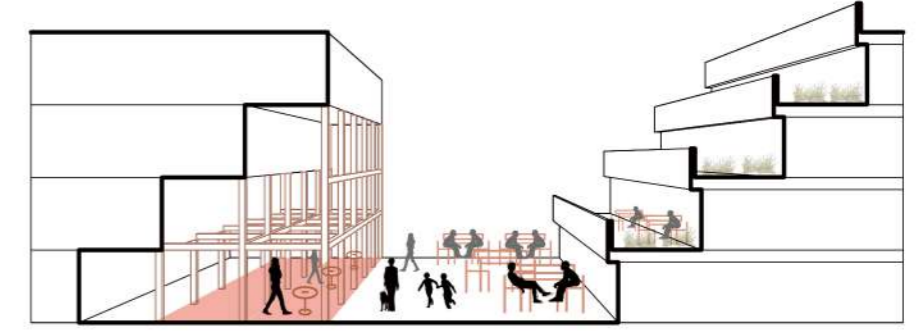
### Creative interface

The stepped volum of the buildings create an “open, inviting and sustainable place”.



### Artistic interface

The upside-down terrace building creates an interesting space for artistic exhibition and gallery.

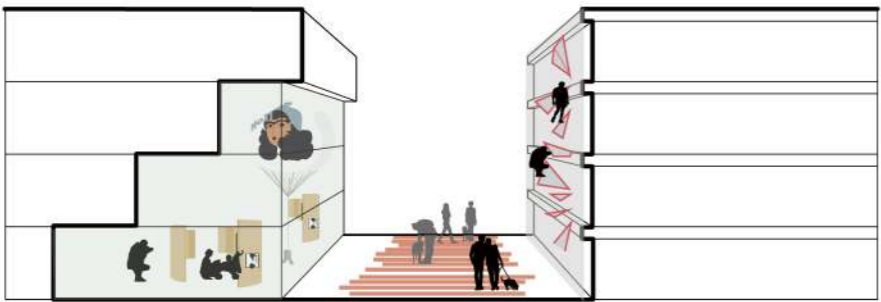


### Market interface

The upside-down terrace and old building structure create an leisure space for open market and cafe.

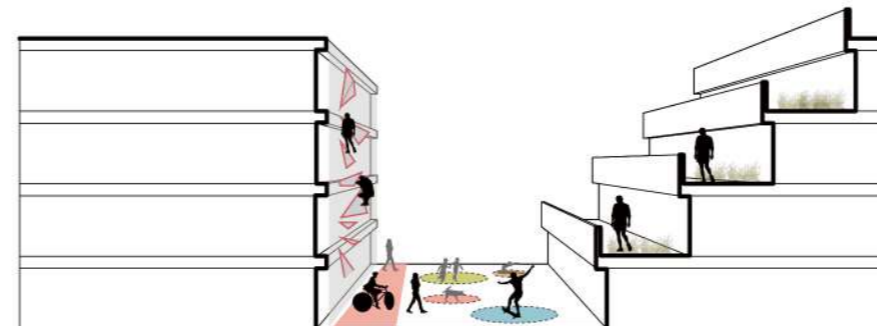


## 2. Semi-open street interface



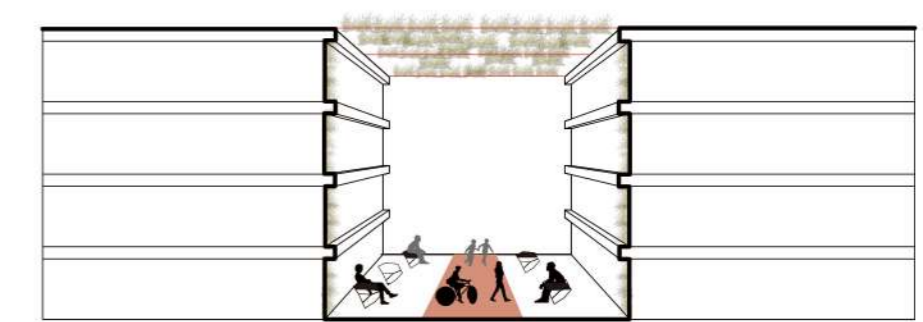
### Entertainment interface

The vertical building surface create the space for entertainment and exhibition.



### Playground interface

The vertical building surface create the space for entertainment like climbing and skating.



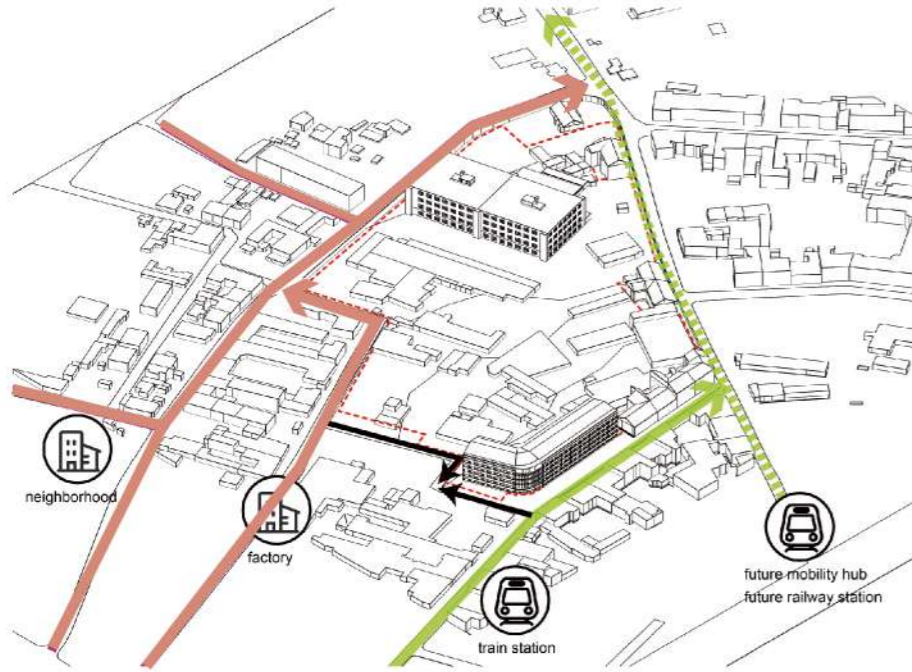
### Leisure interface

The normal street interface create greenary area for take a rest, it become quite, relaxed and comfortable.

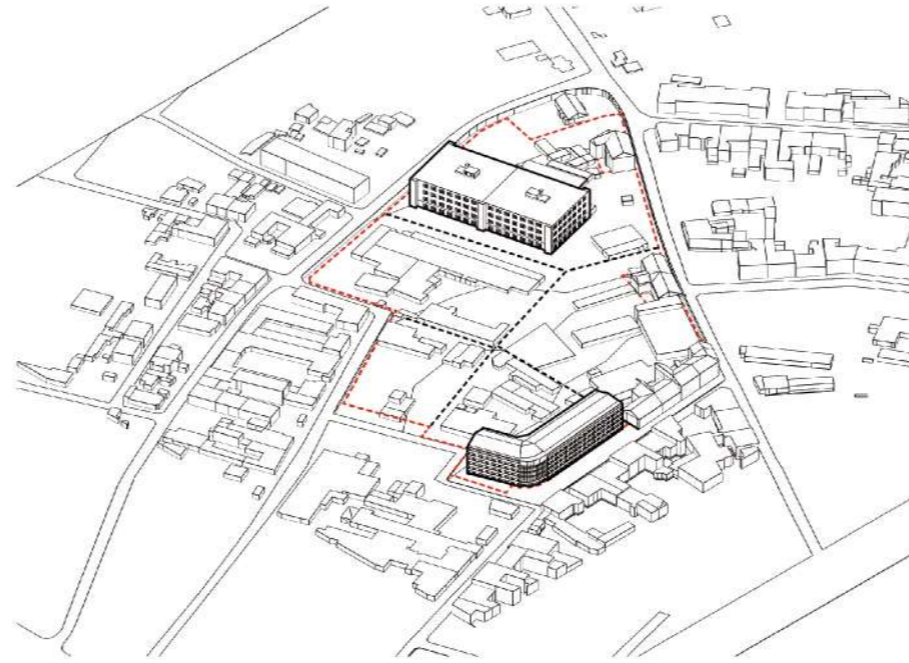




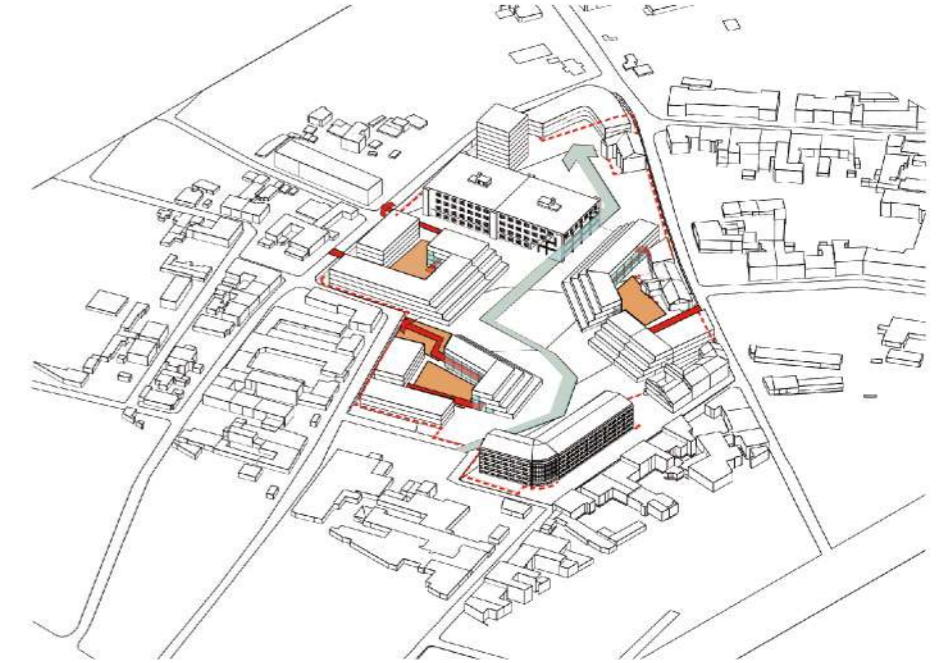
# Develop steps



1. Improving connection between streets with prominent circulation and the once with neighborhood.



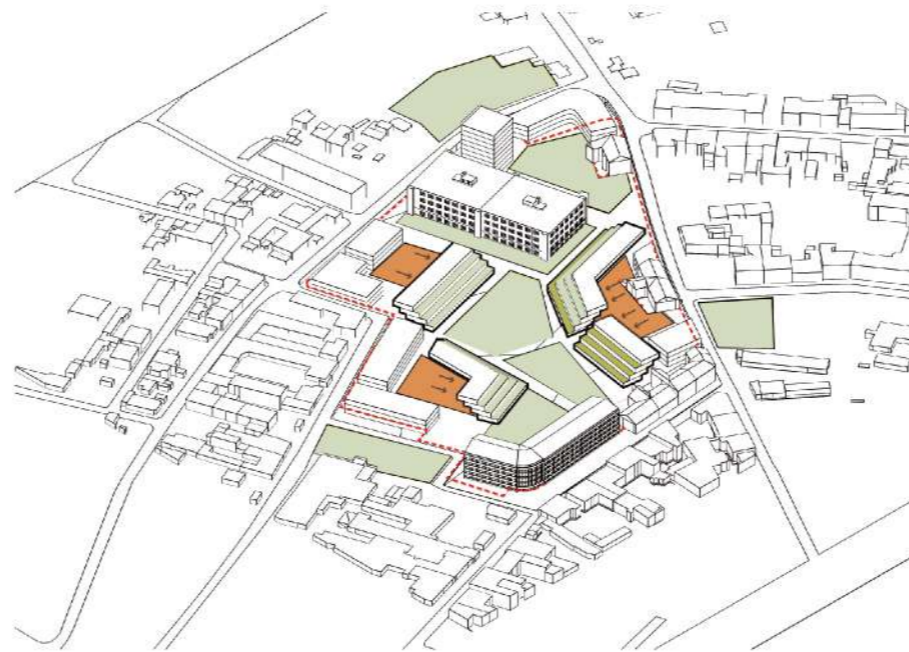
2. Division of the area into several parts according to the original urban fabric.



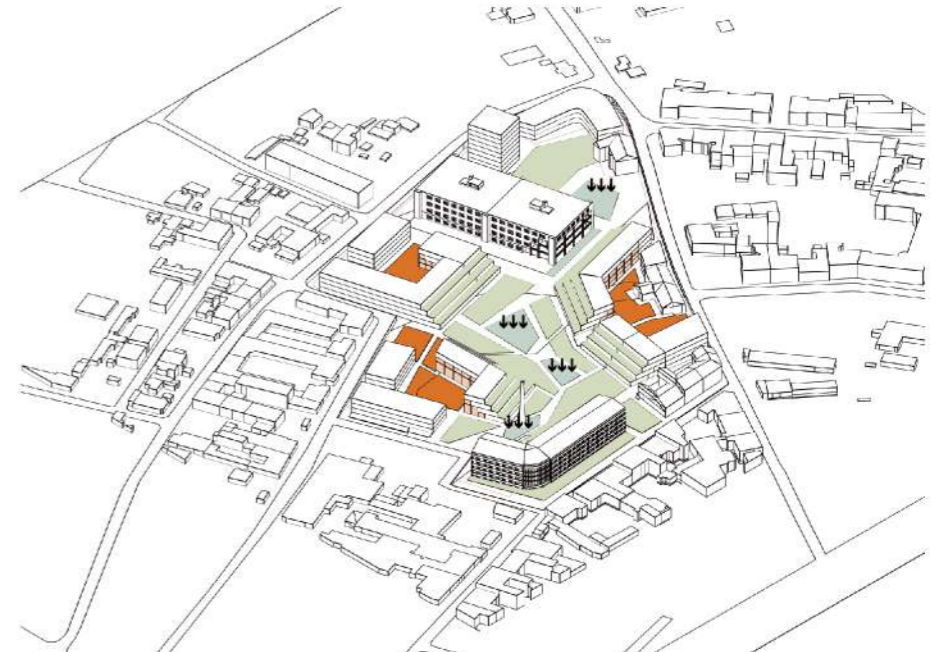
3. Link two old buildings with main public greenery and connect the office blocks and the neighborhood.



4. Differentiate the public space and semi public space



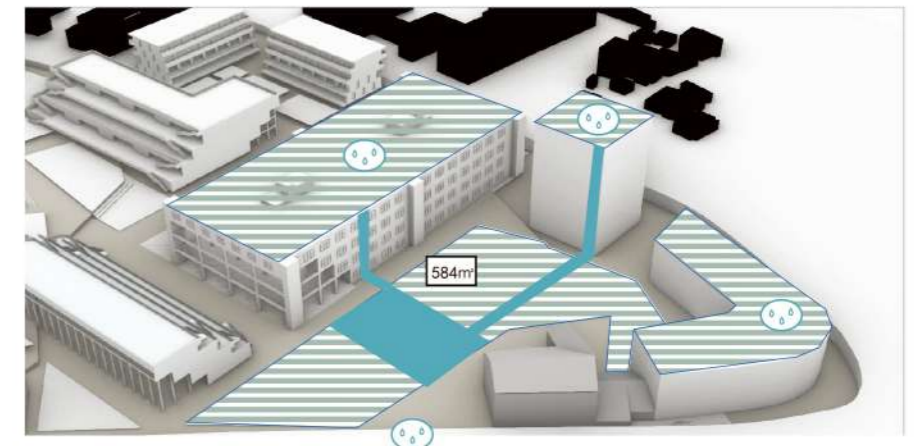
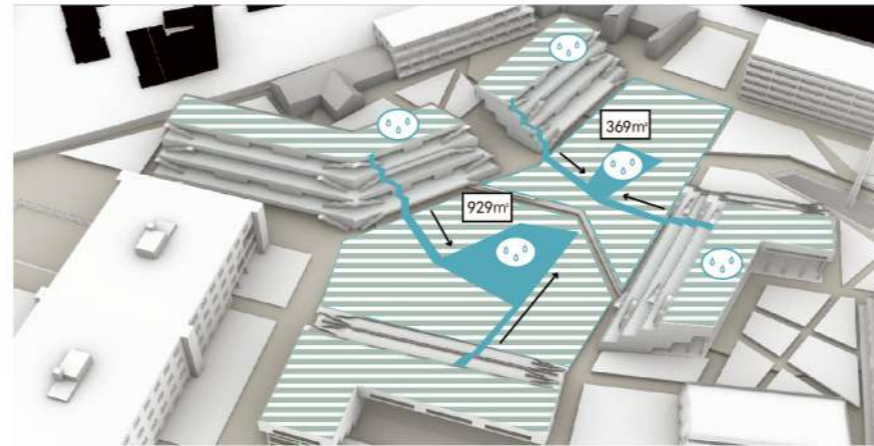
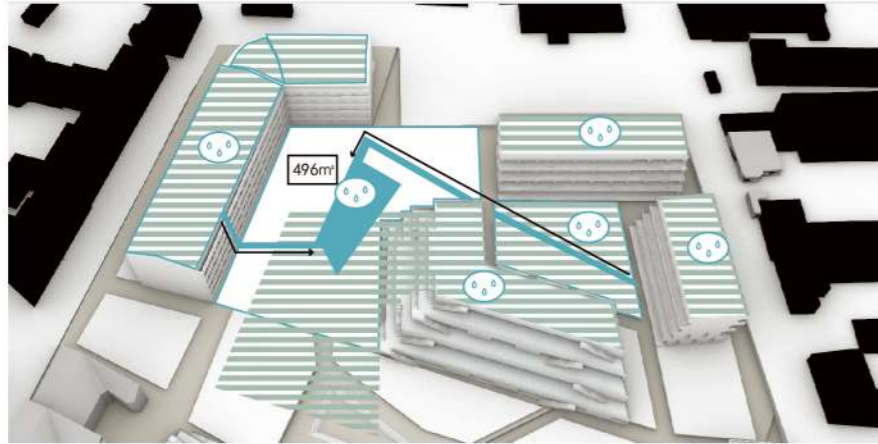
5. Extending the green spaces onto the terraces and create private for the office blocks.



6. Use water plaza for double function, including collecting rain water and form creative space.

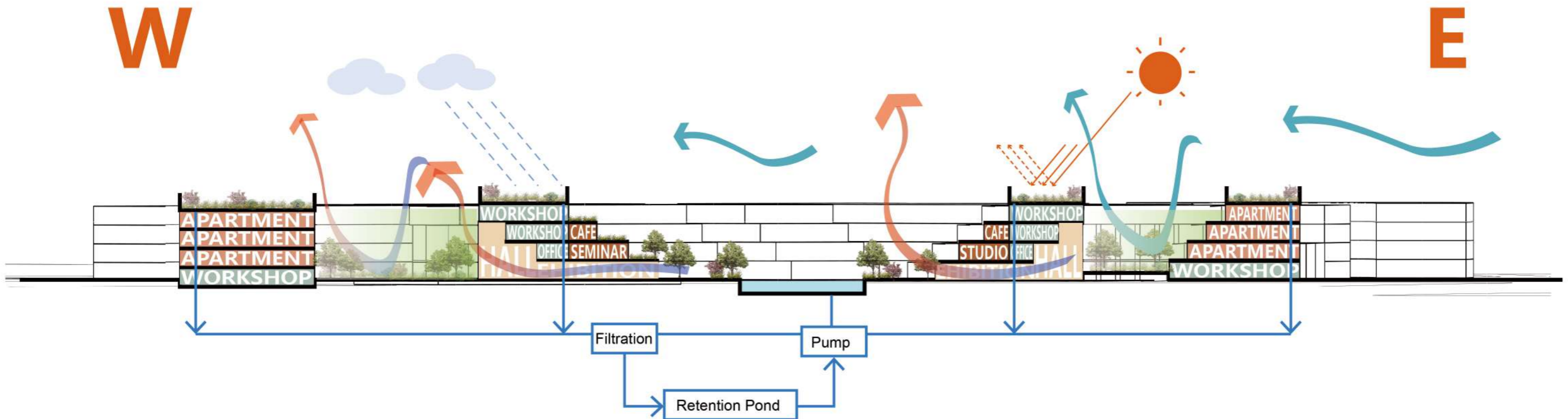
# Rainwater harvest and reuse

## 1. Collect rain water

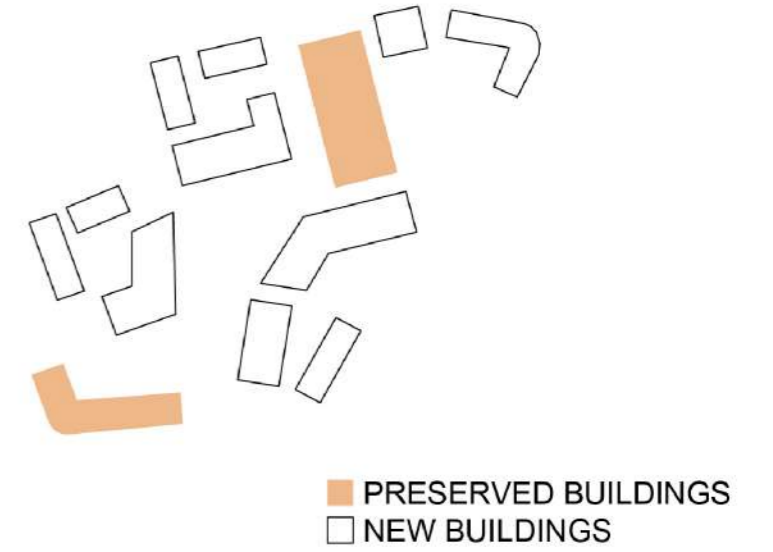
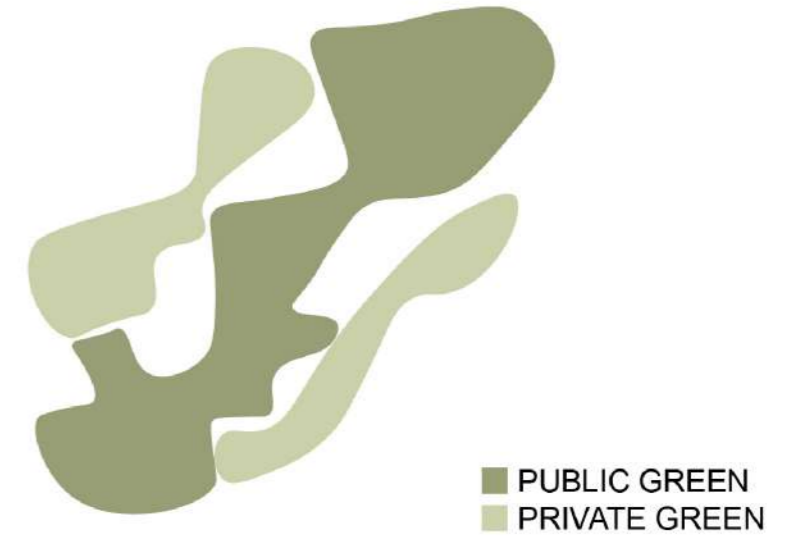
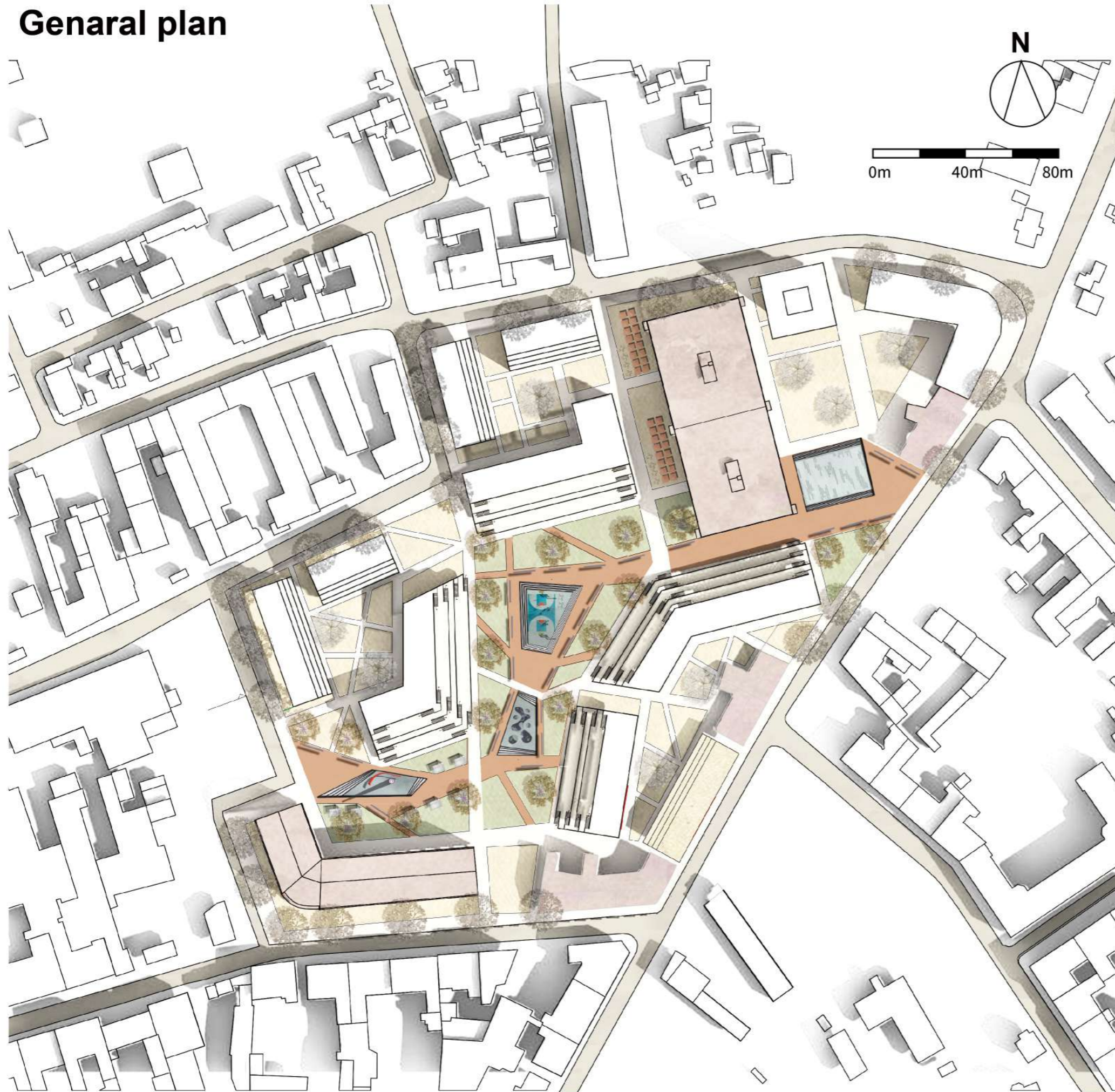


According to the average precipitation in July, we estimate the highest average amount of rainfall and calculate the deep of each water plaza, the average plaza should be 1.6meter deep. By penetration of the greenery on the rooftop and groundfloor, we use pipe to drain the rainwater to the sink and filtrate the water underground. After that, the water can be reused for people's daily life.

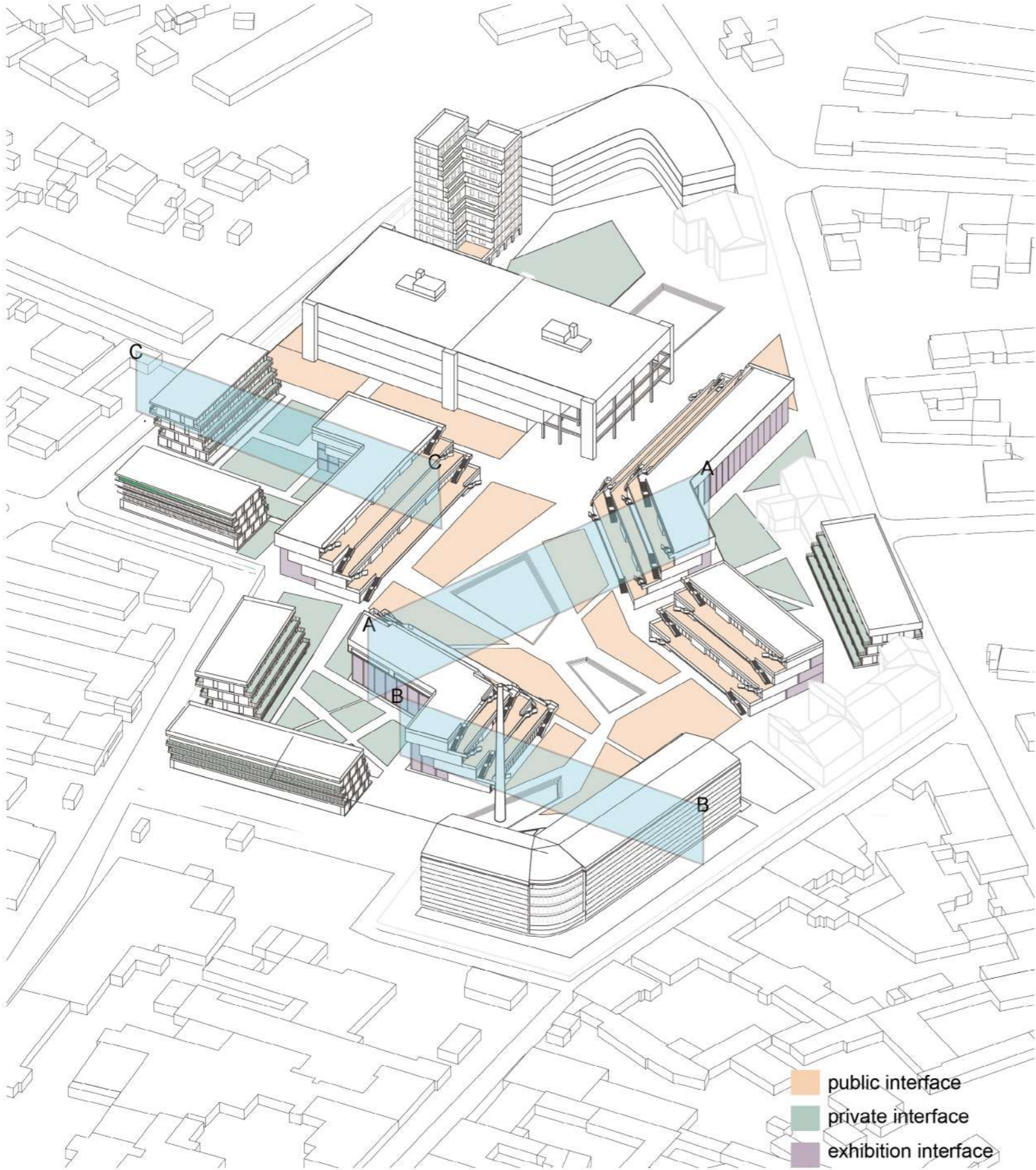
## 2. Reuse rain water



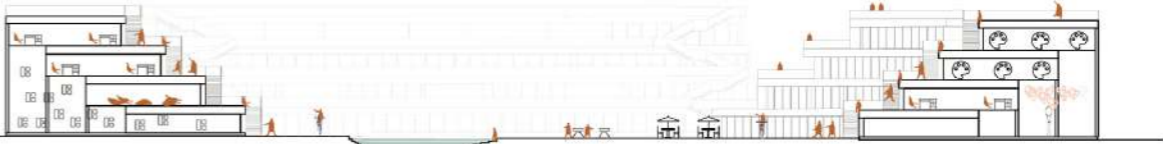
# General plan



# Pubic&Private interface



public interface



A-A Section



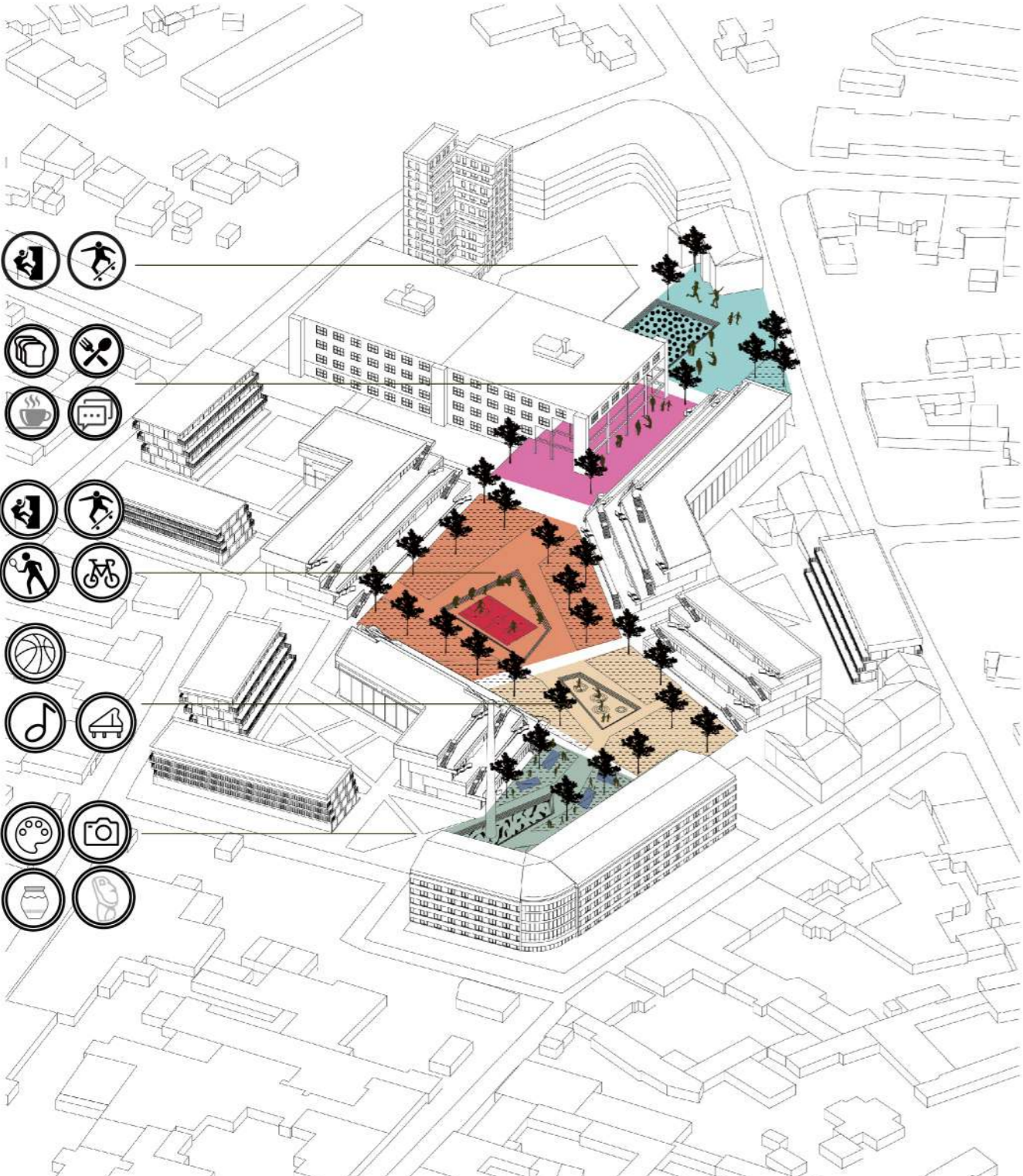
B-B Section

private interface

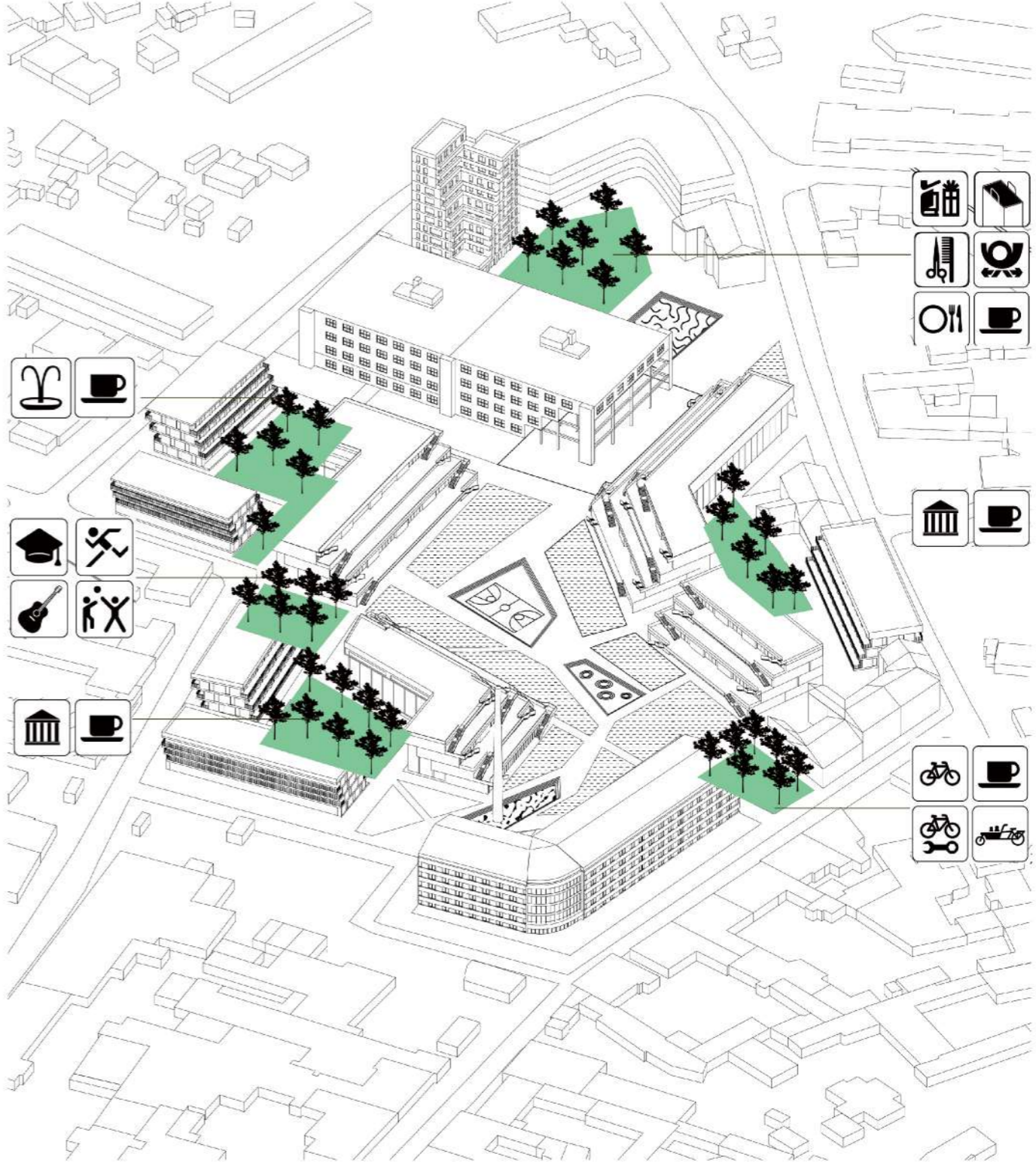


C-C Section

# Public & Semi-open space

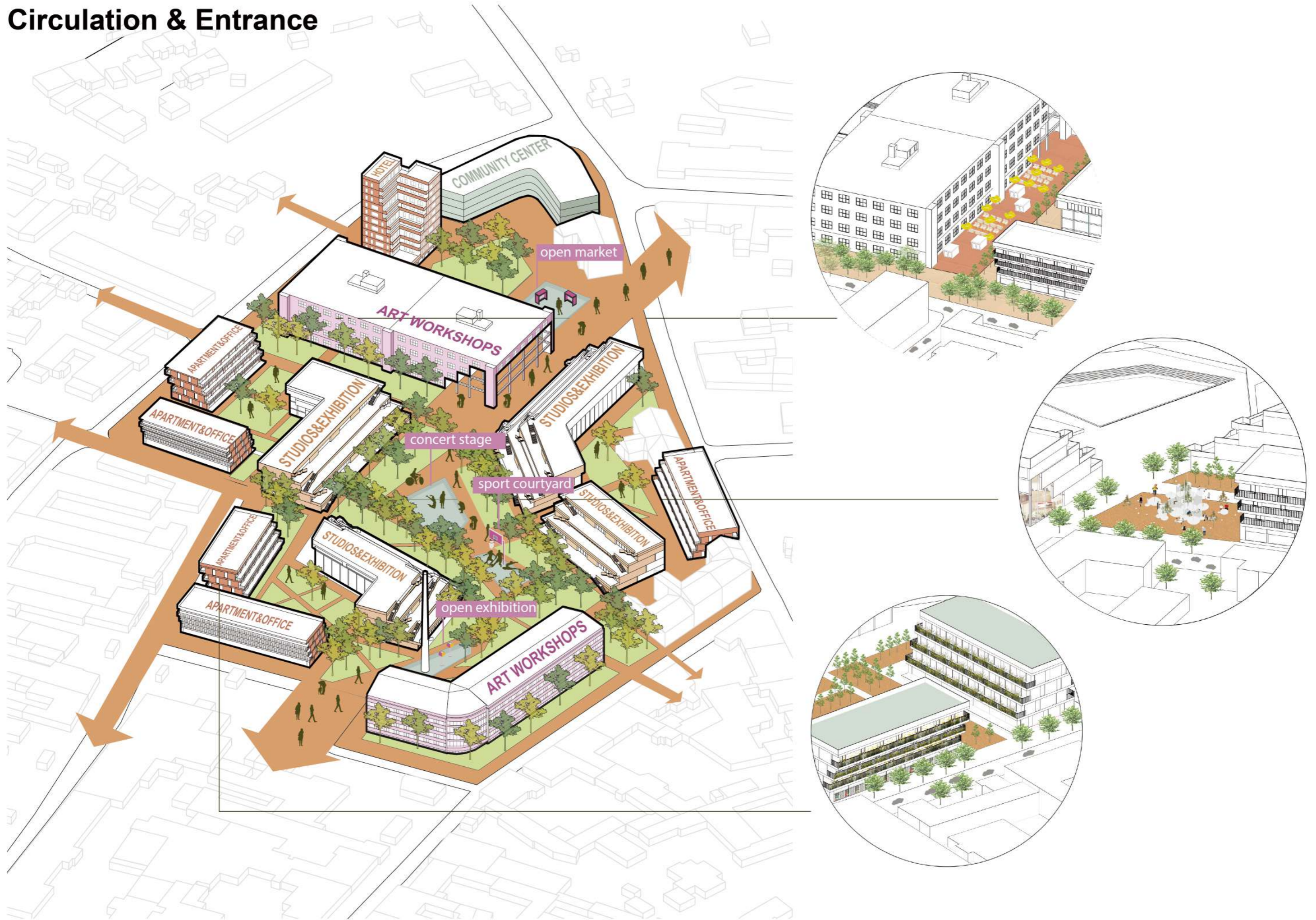


Public open space connect the old buildings and create variety of activities such as exhibition, bazaar, exercise , skating board and concert.

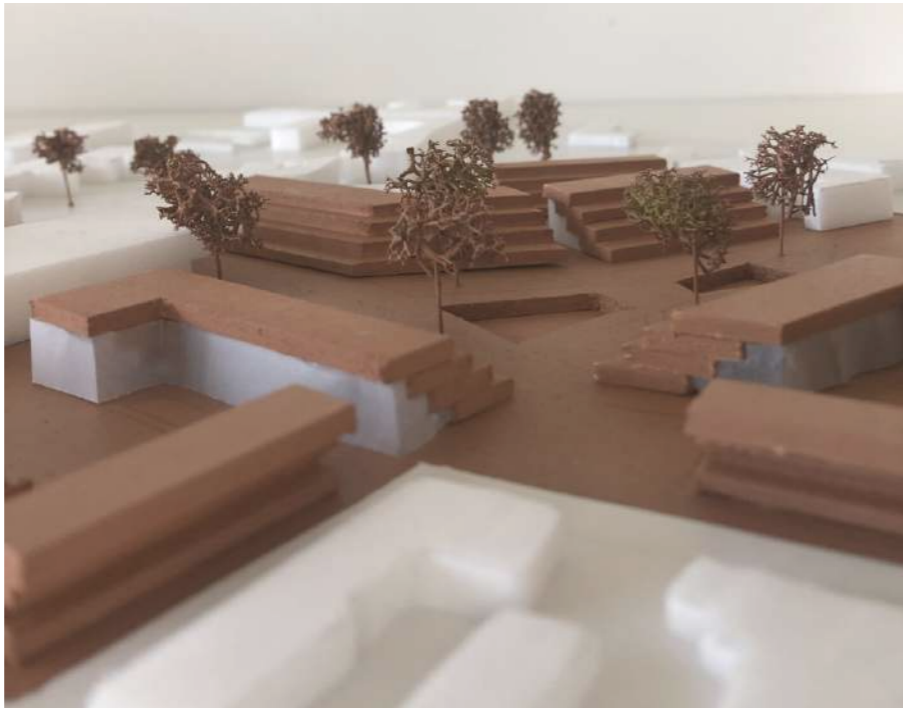


Semi-open space separate in the office neighborhood, create leisure space for coffe, gallery and courtyard.

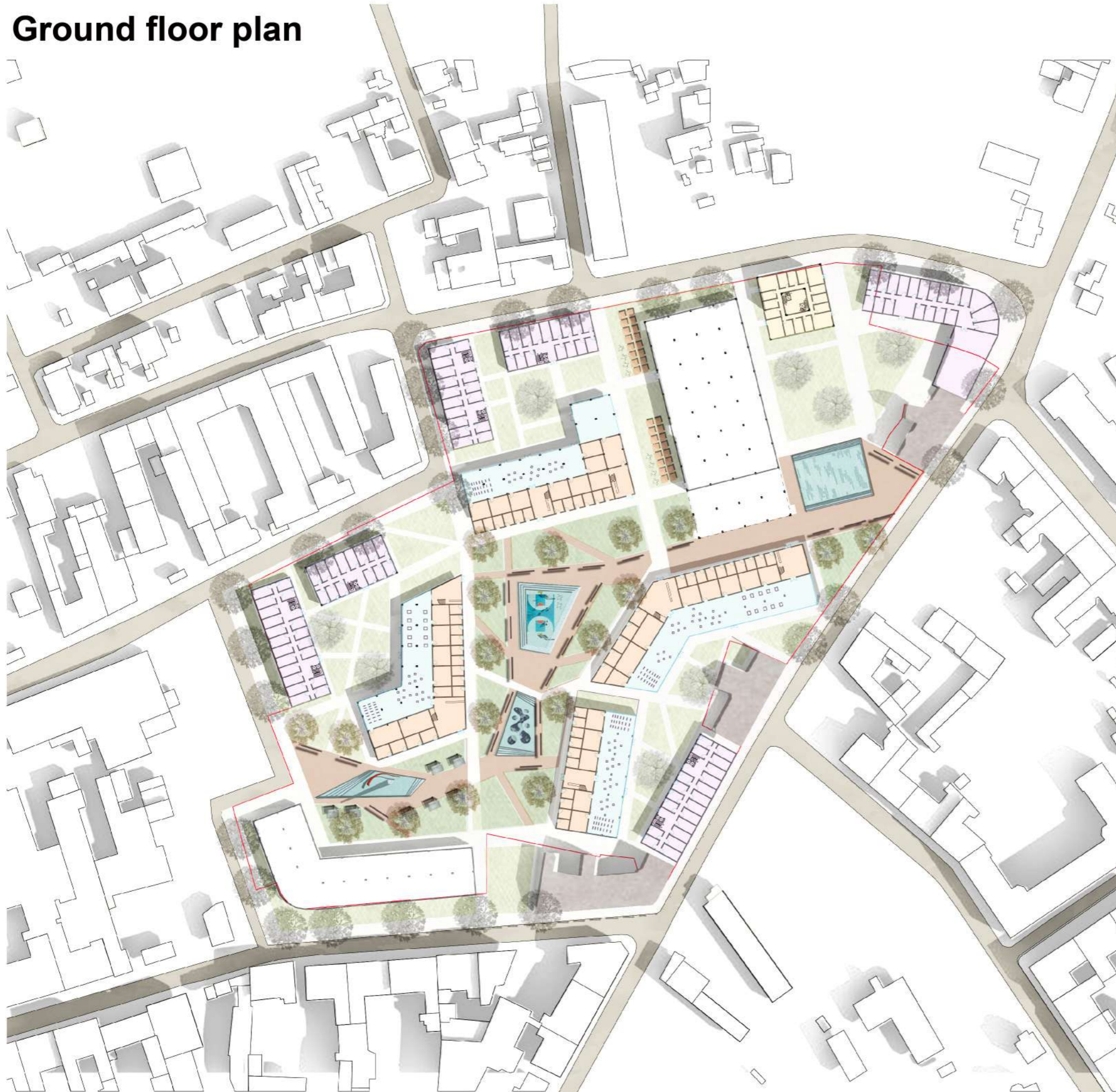
# Circulation & Entrance



**Model details**



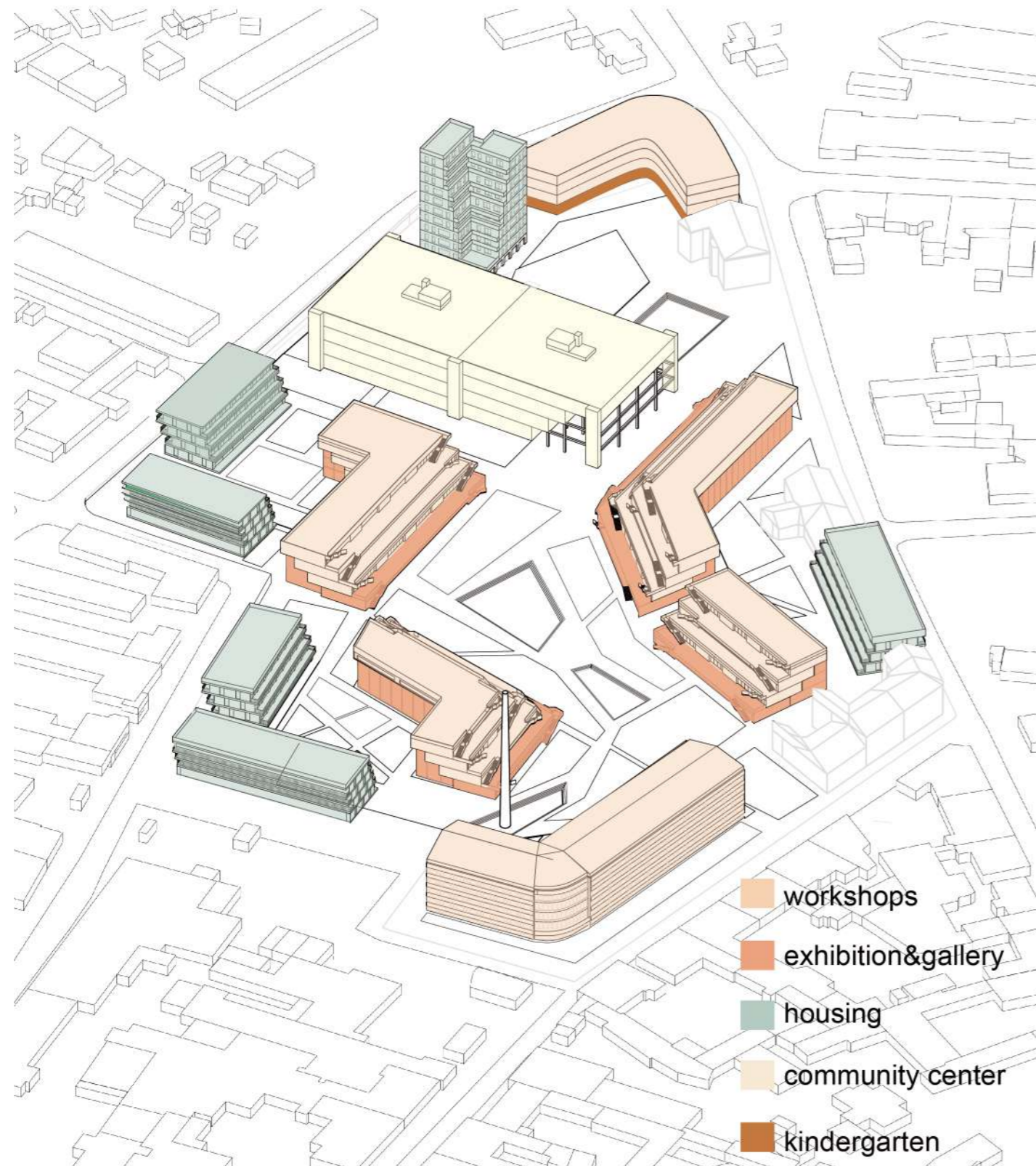
# Ground floor plan



-  commercial
-  exhibition
-  workshops
-  housing



# FUNTION&FIGURE



Area Figures	Workshops (29000m <sup>2</sup> )	Living (14100m <sup>2</sup> )	exhibition (8220m <sup>2</sup> )
Area of the Plot 44300 m <sup>2</sup>			
Total Floor Area 78240m <sup>2</sup>			
Floor Area Ratio 1.76			
	community center (11930m <sup>2</sup> )	education &care center (1130m <sup>2</sup> )	green space (13860m <sup>2</sup> )

People figures	Workshops (820 - people)	Living (400 - people)	exhibition (800 - people)
Area of the Plot Without green space around			
2860 - people			
Total Area around			
4046 - people			
	community center (340 - people)	education &care center (500 - people)	green space (1186 - people)

# Building typology

1 Symbolized building

- Commercial space
- Office and working space
- Housing

2 Creating building

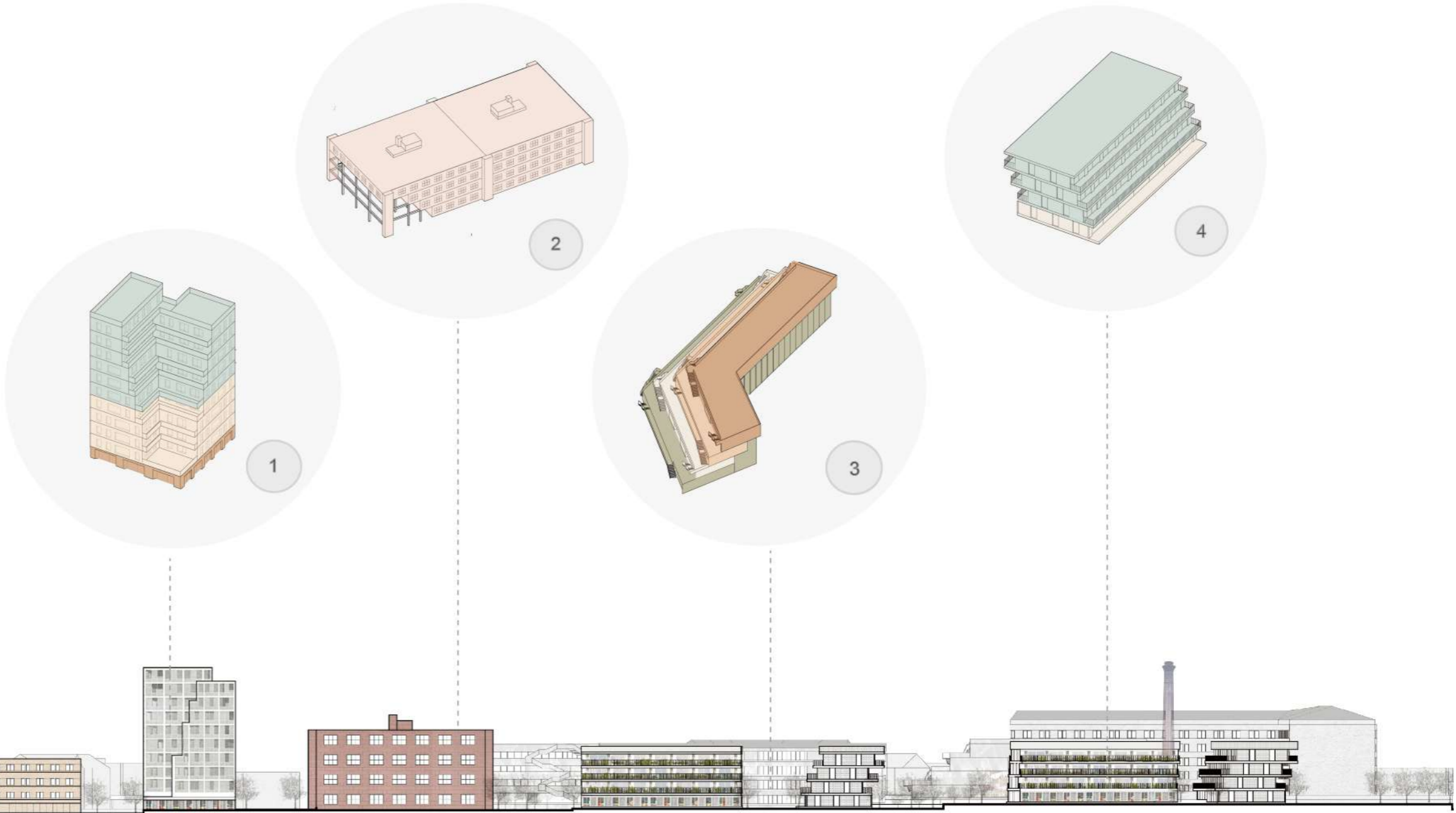
- Office space

3 Multifunctional building

- Art Gallery - Exhibitions
- Office and working space
- Workshop / Cafes
- Workshops and Photo studio

4 Private space

- Office and working space
- Housing



Kindergarten&care center

Symbolization

Creative hub

Multifunctional terrace buildings

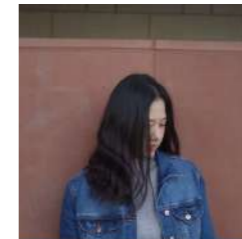
Office&Apartment





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