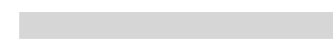
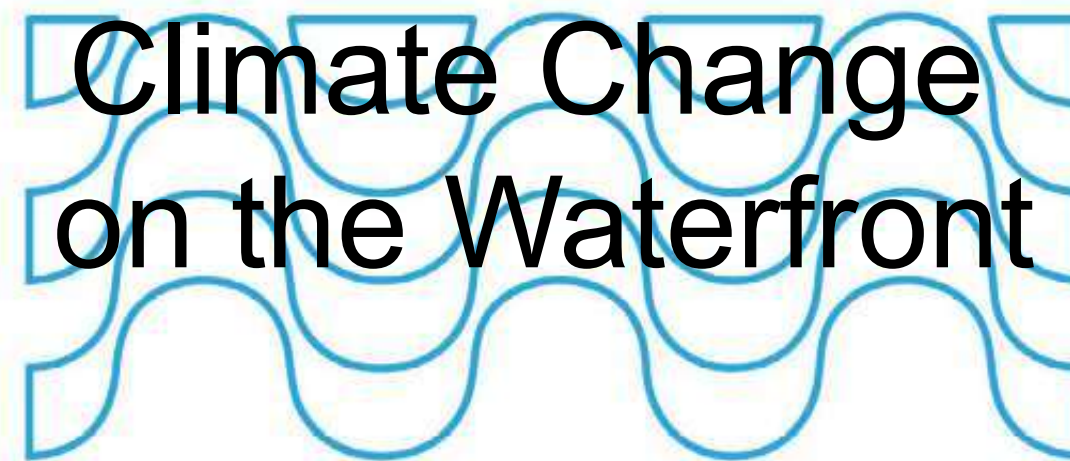


# WATERFRONT CLIMATE

**Sustainable Open Solutions**

SOS

Climate Change  
on the Waterfront





“

climate  
change  
impact  
on urban  
waterfronts

”



“vulnerable  
social  
groups  
&  
migrations  
mouvements”



“

growth of  
CO2  
emissions

&

waste

pressure


on nature


”




# participating organizations

---

 Lusofona University  
PORTUGAL  
coordinator

 Politechika Gdansk  
POLAND  
urban renewal

 Univ. Thessaloniki  
GREECE  
migrations

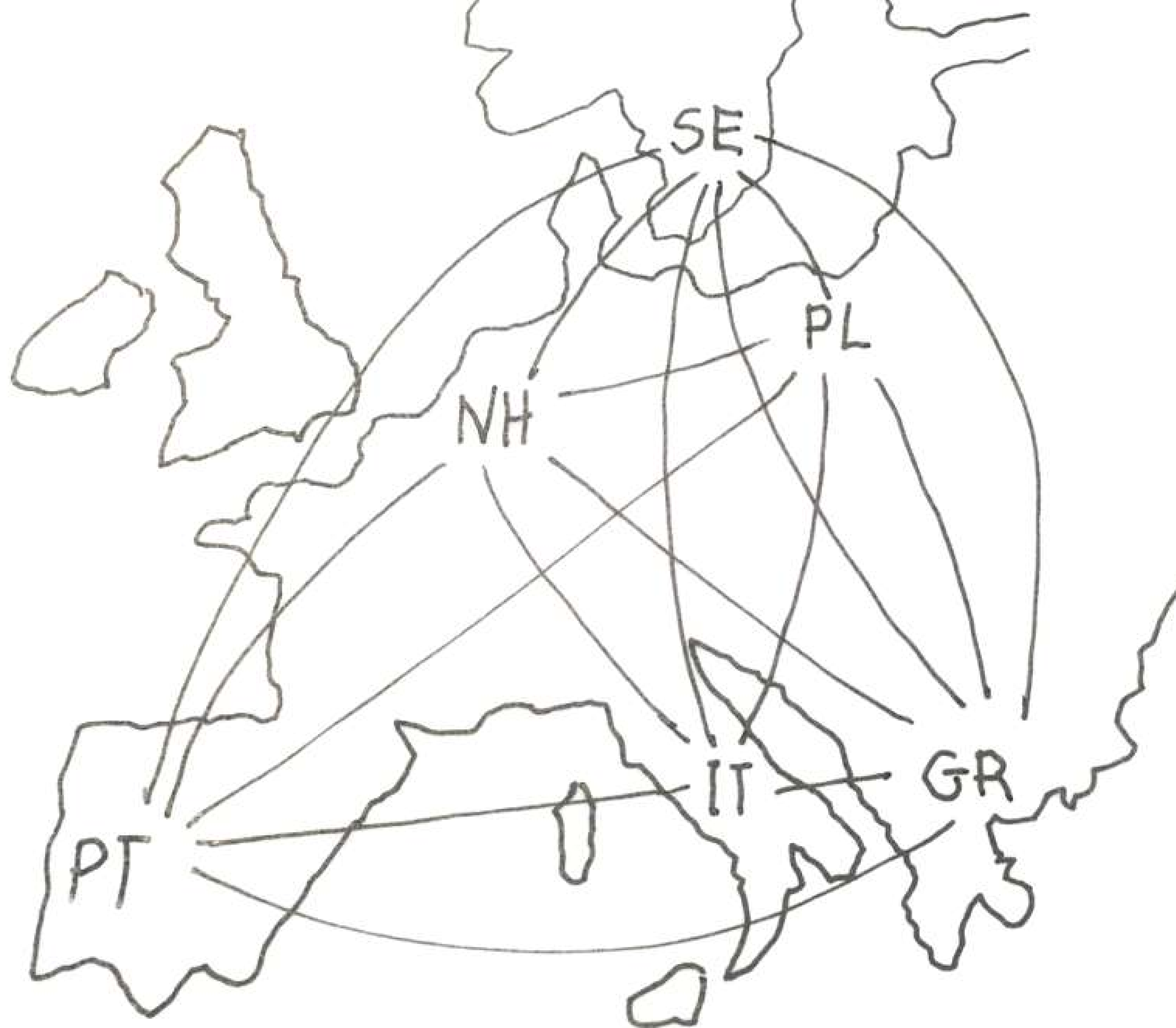
 Universita Firenze  
ITALY  
tourism

municipality  
POLAND  
 Gdansk Miasto

economics  
PORTUGAL  
 Chamber of  
Commerce

dessimation  
POLAND  
 Foundation  
River Cities

dessimation  
SWEDEN  
 Intercult



## WATERFRONT U

### ·ENVIRONMENT

STRATEGIES TO REDUCE CARBON EMISSIONS  
REUSE OF GRAY WATERS - WATER FILTRATION  
CLEAN GREEN SPACES  
FROM BROWNFIELD TO ECO FRIENDLY  
OPEN CHANNELIZED RIVERS  
NEW CANALS - TOPOGRAPHIC IMPROVEMENTS

### ·SOCIAL

IMPROVE ACCESSIBILITY  
ENHANCING PUBLIC SPACE  
SPORTS AND CULTURAL ACTIVITIES  
GREEN AREAS OVER URBAN INFRASTRUCTURES  
BLUR SOCIAL BARRIERS  
SURVEYS TO THE COMMUNITY

### ·ECONOMIC

TURISM  
HISTORIC / CULTURAL  
INDUSTRIAL / PORT ACTIVITY  
MARITIME TRANSPORTATION  
CLEANER INDUSTRIES  
RENEWABLE ENERGIES  
LOCAL JOBS



Nina Katchadourian



Do-it-Yourself Spiderweb Repair Kit  
Plastic box with foam and thread, tweezers, scissors and glue, 1998



A close-up photograph of a spider web. The web is primarily composed of thin, light-colored threads. A prominent feature is a section of the web where a thicker, vibrant red thread has been woven into a dense, grid-like pattern. This red section is roughly rectangular and is positioned in the upper-middle part of the frame. The background is a dark, blurred blue, suggesting an outdoor setting at dusk or dawn. In the bottom left corner, there is a small, bright yellow-green object, possibly a piece of grass or a small insect. The overall composition is centered on the contrast between the natural web and the artificial red thread.

collaboration with nature





impact

## Positive Impact

- urban planning strategies  
(large scale territories)
- social participation  
(organizations and communities)
- cultural adequacy



urban



# Urban Environment


- urban design projects  
(urban infrastructures)
- solutions for public spaces  
(survey, best practices)
- affordability



“

increasing  
number of  
natural  
disaster  
affect  
the built  
environment

”



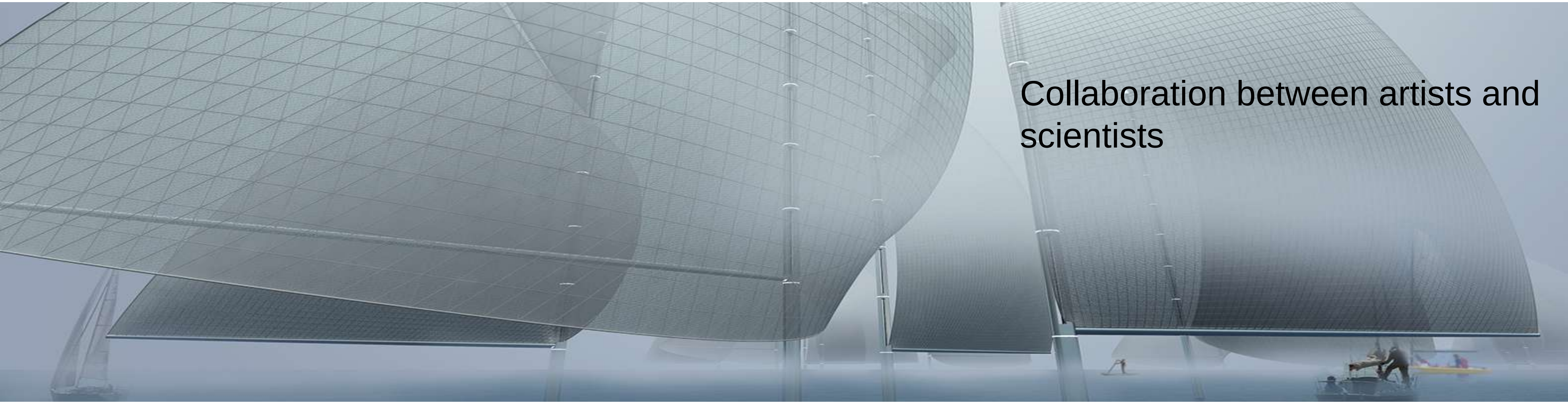
FOUR MAIN  
RESEARCH

- 1) ENVIRONMENTAL PLANNING
- 2) ECONOMIC IMPACT
- 3) CULTURAL INFLUENCE
- 4) DATA MANAGEMENT

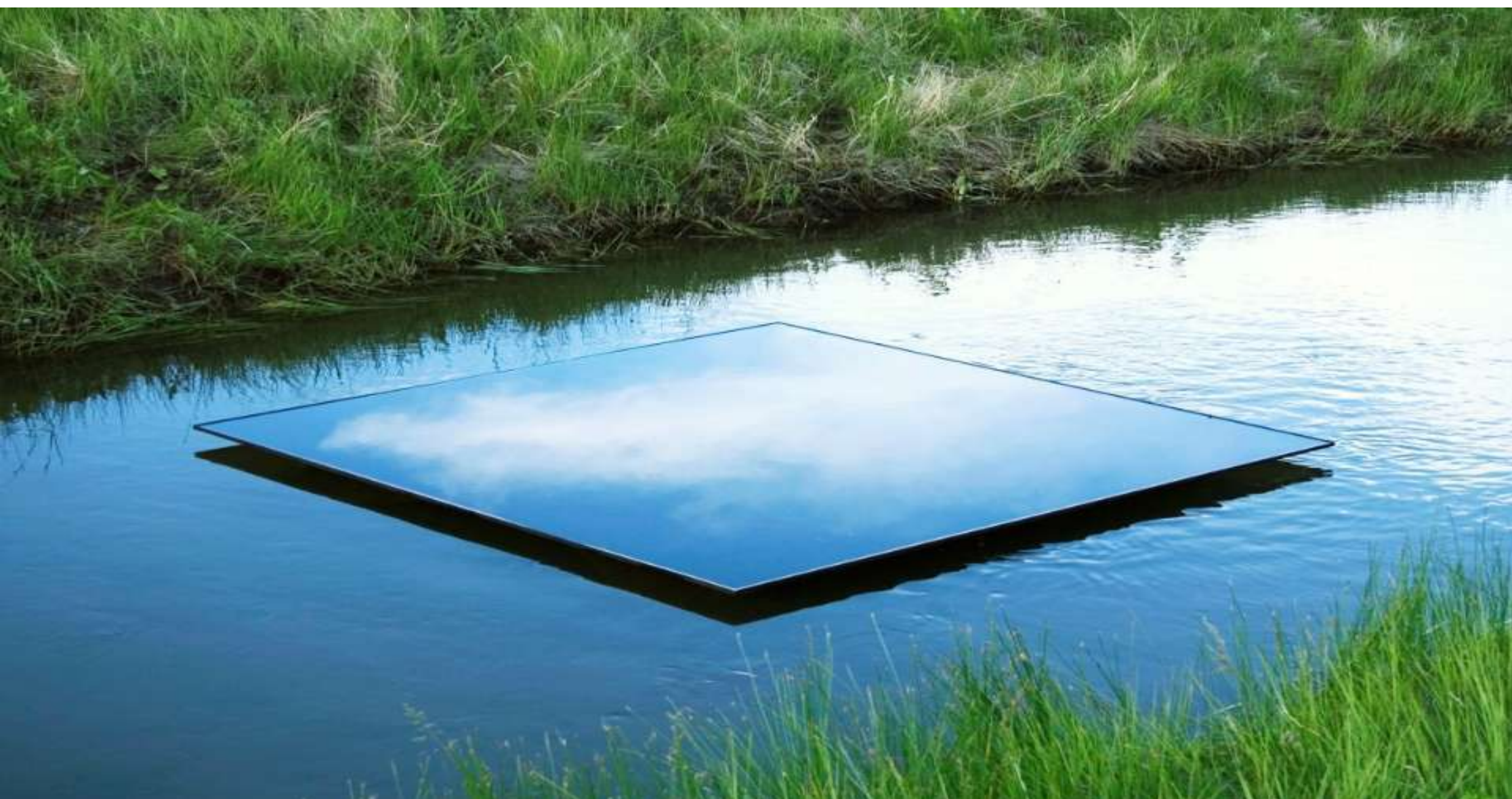
“ Knowledge  
sharing to  
achieve  
innovation  
objectives

”





Collaboration between artists and scientists





**‘Past’**

**‘Macro’**

**‘Present’**

**‘Urban’**

**‘Future’**

**‘Detail’**



# CASE STUDIES

**LARGE**

**SMALL**

**URBAN**

**SOCIAL**

**REGIONAL**

**ARTISTIC**

**TECHNOLOGICAL**

**ECOLOGICAL**

one



# Cultural impact of the research project

---

01

urban planning strategies  
(large scale territories)



02

urban design projects  
(urban infrastructures)



03

solutions for public spaces  
(survey, best practices)

04

architecture solutions  
(building materials)



05

integration of new technologies  
(prevention, data, A.I. devices)



06

social participation  
(organizations and communities)



# Beton Hala Waterfront Center 2011

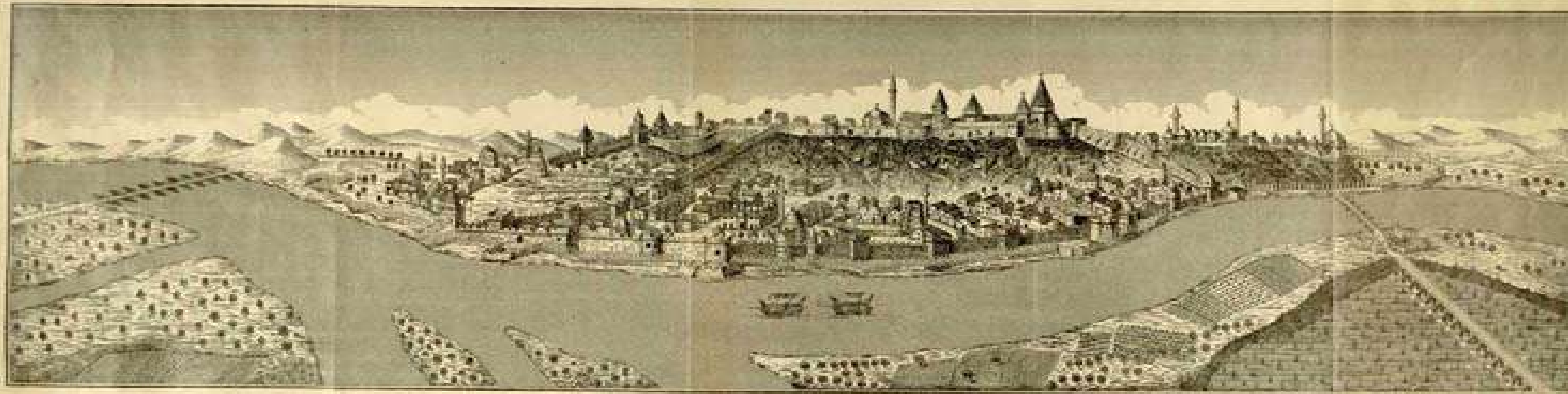
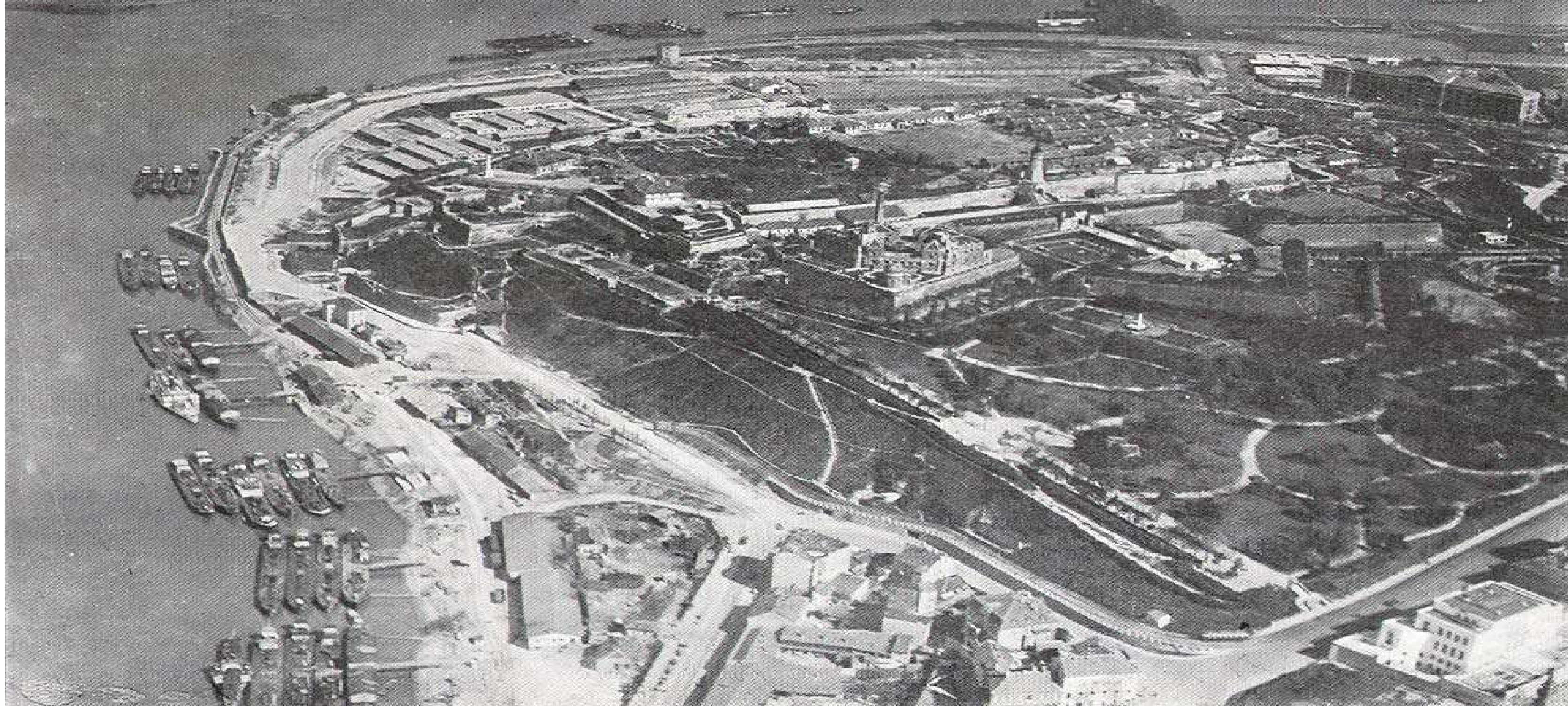


Aerial view of the site





Sava Port and Kalemegdan 1936



а. Земљик. б. Град. в. Добра вода. г. Одвојено утврђење.

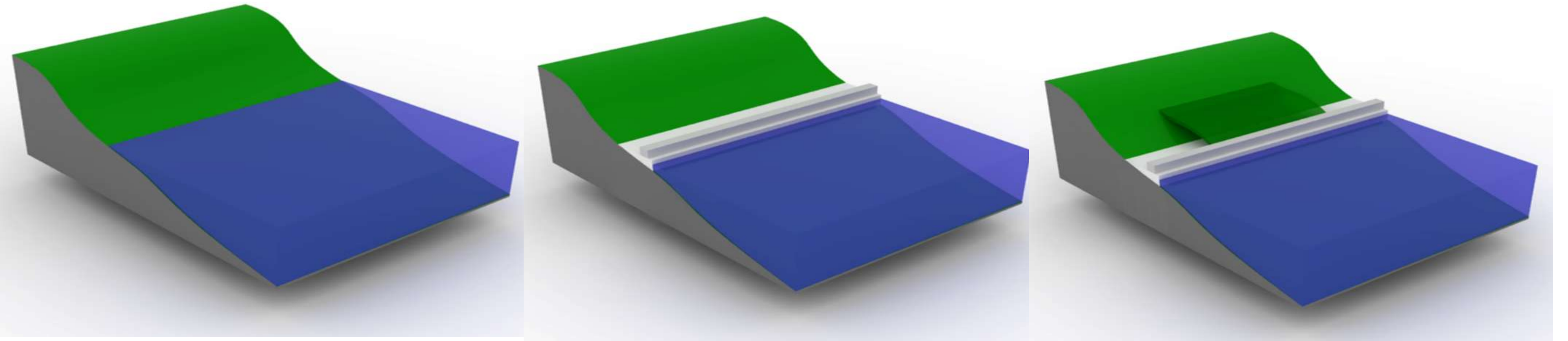
БЕОГРАД  
1788 год.

д. Придога утврђење. и. Командантско обиталиште. ж. Главна црква.

Belgrade panorama 1788 engraving

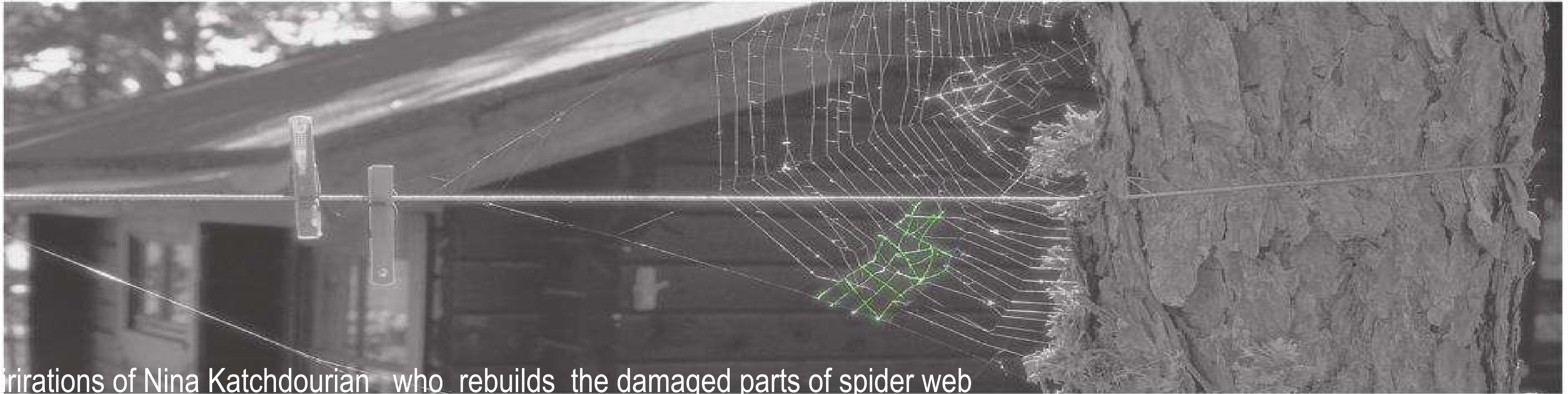


# |General concept



The waterfront as the doorway to the city

## |General concept



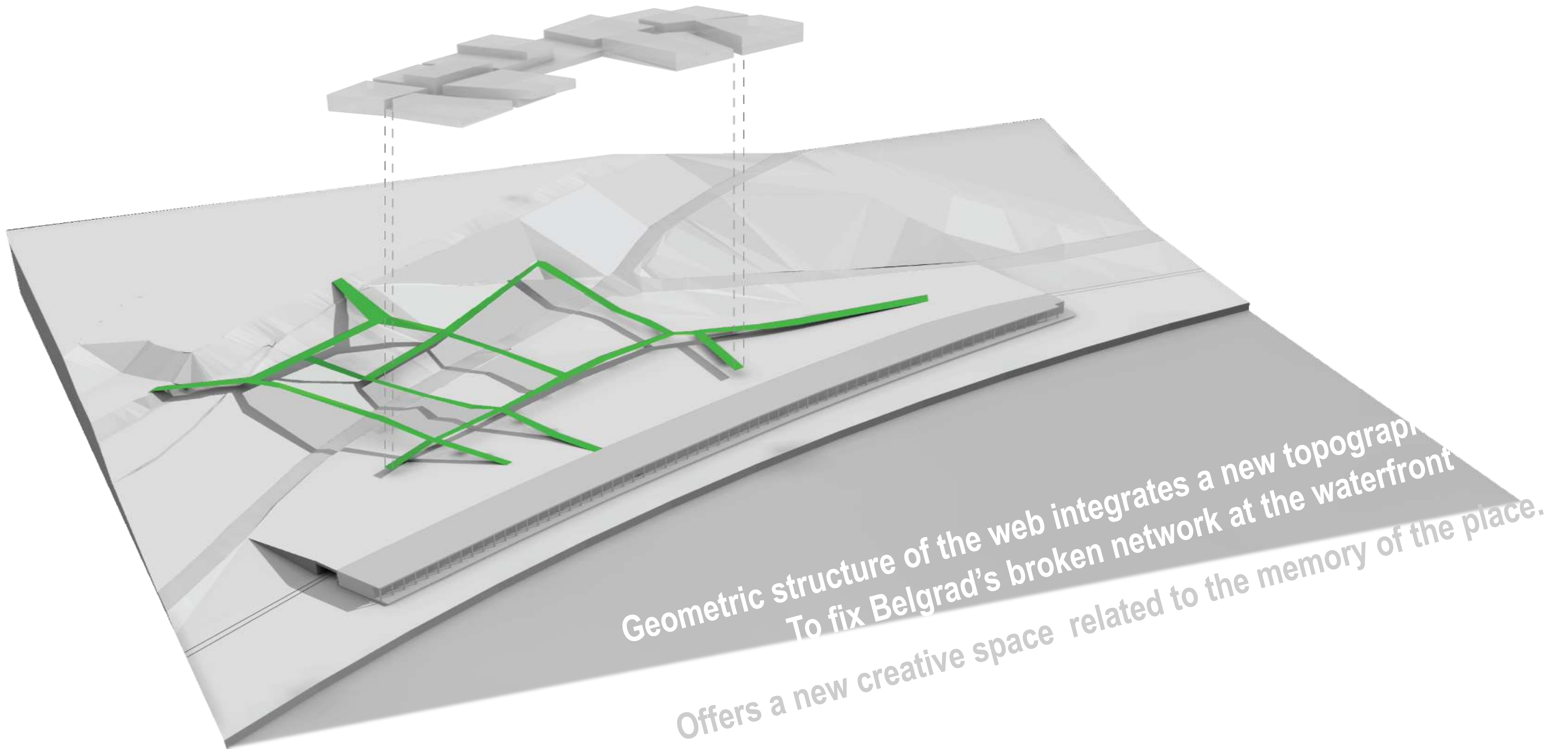
Inspirations of Nina Katchdourian who rebuilds the damaged parts of spider web

Nina's Katchdourian intend to fix the broken network. The author tries to repair what is damaged, symbolically representing human's attempt to restore nature.



Kit used to fix the broken network of the spider





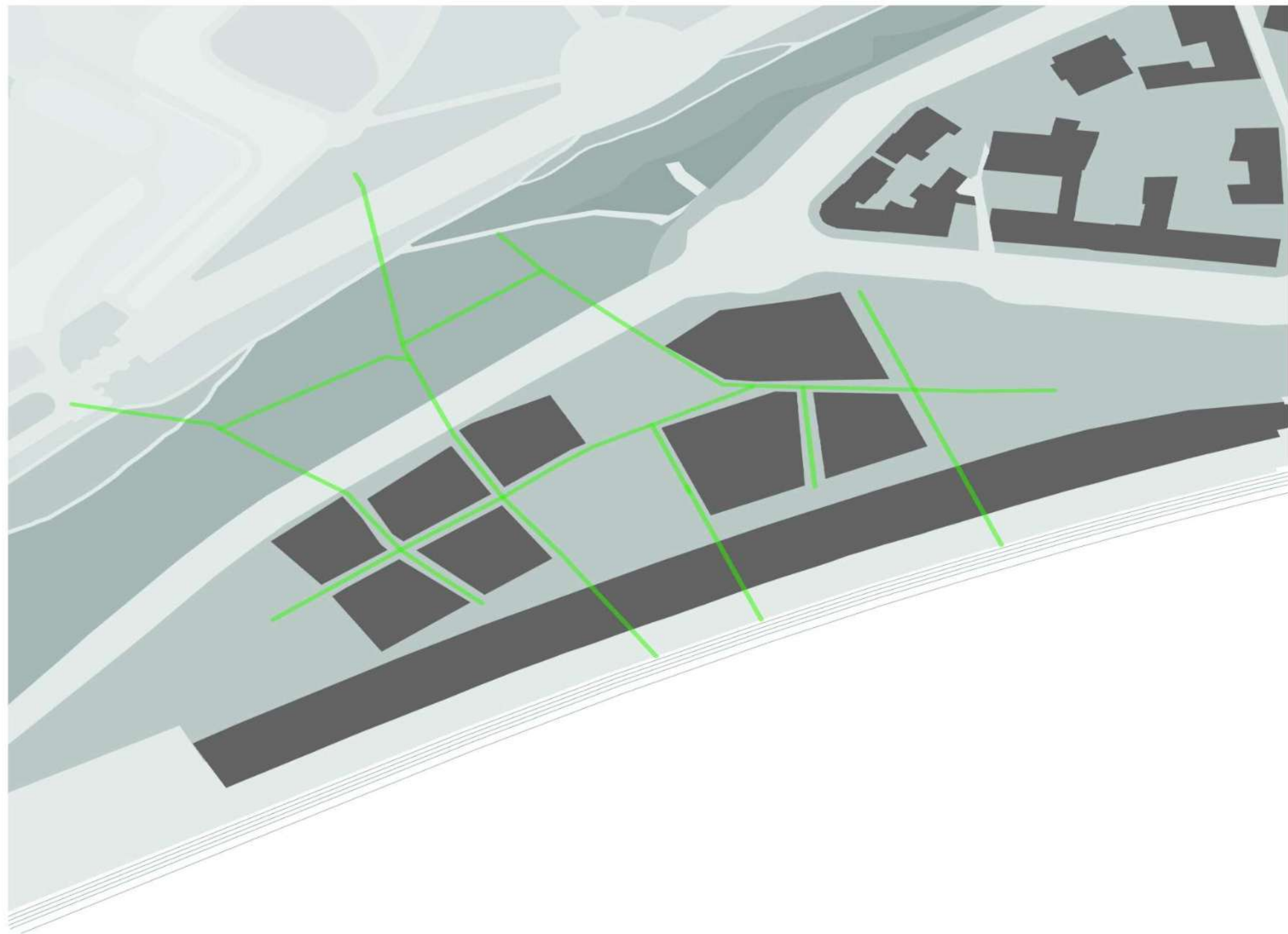
Geometric structure of the web integrates a new topography  
To fix Belgrad's broken network at the waterfront  
Offers a new creative space related to the memory of the place.



## |Urban plan

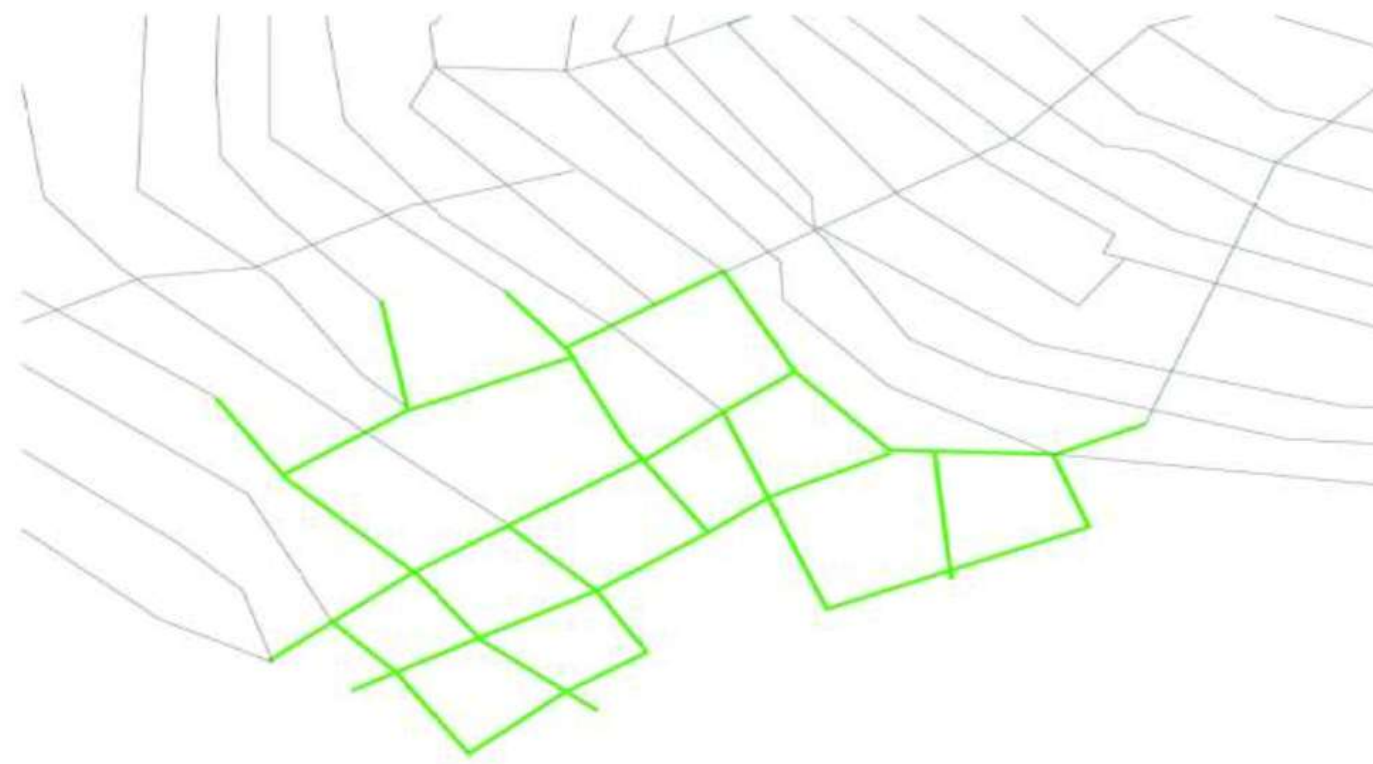
\_Waterfront square presents with a very slope encourage city inhabitants to meet those arriving from river

\_ It functions as the doorway to the city

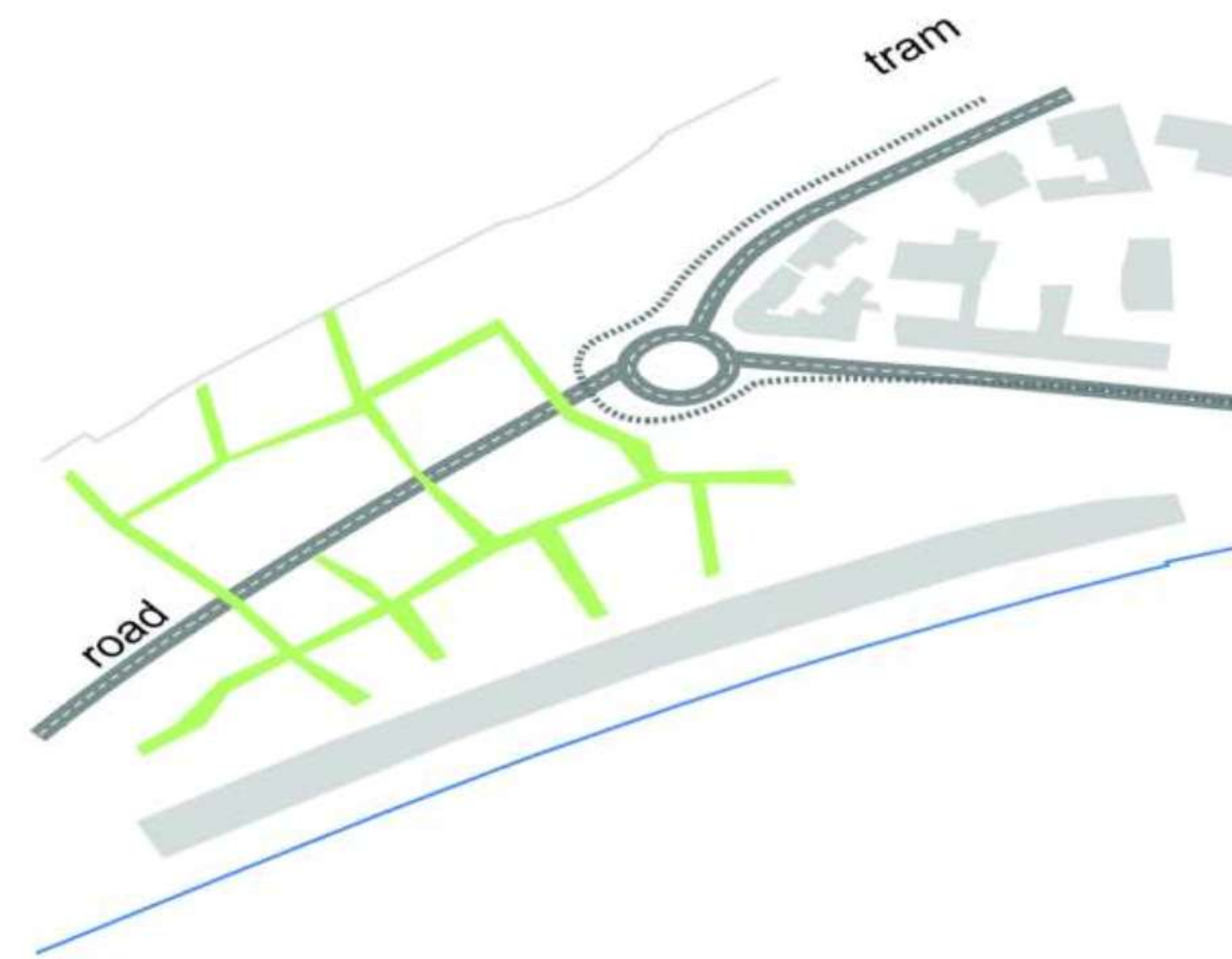




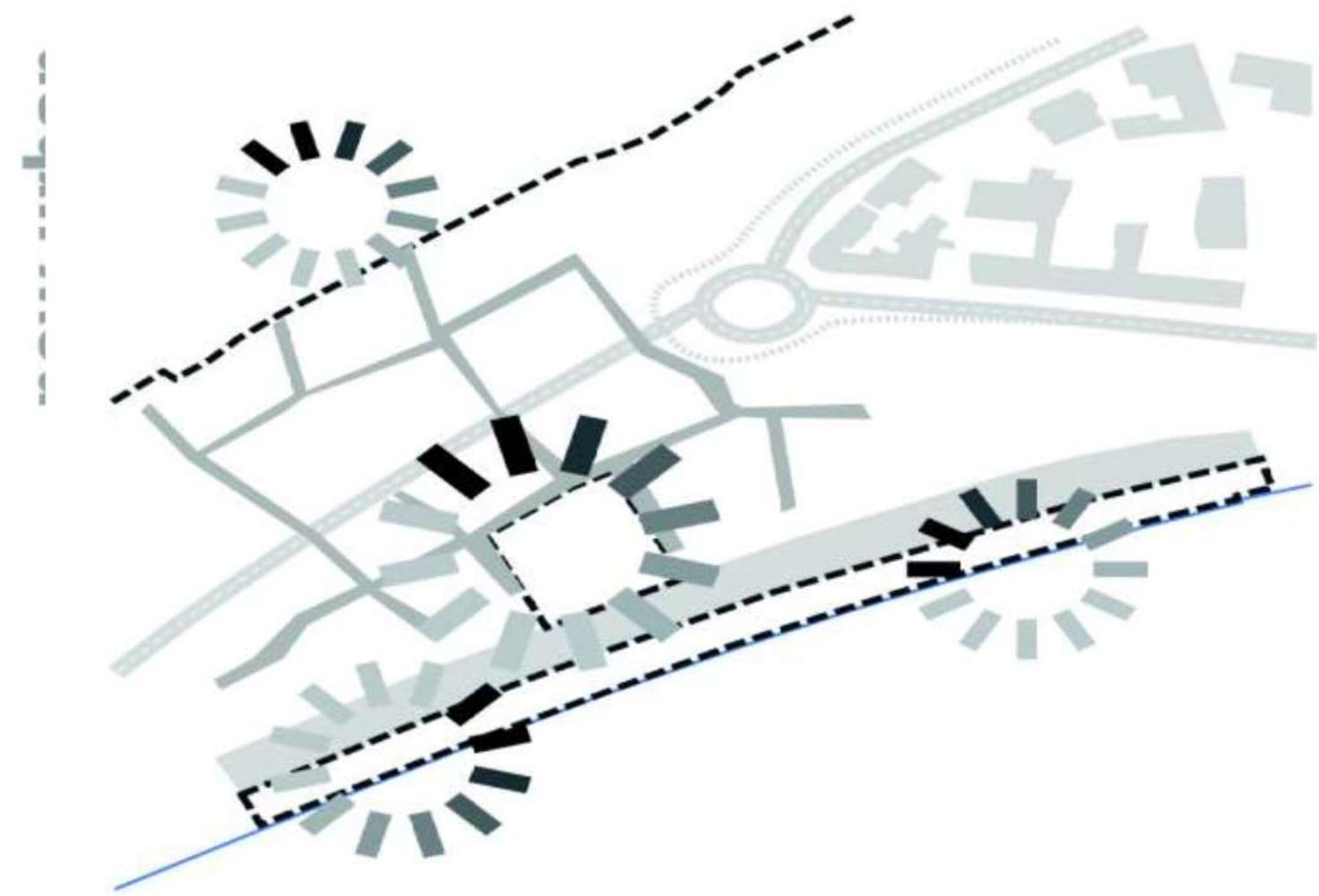
# |Diagrams



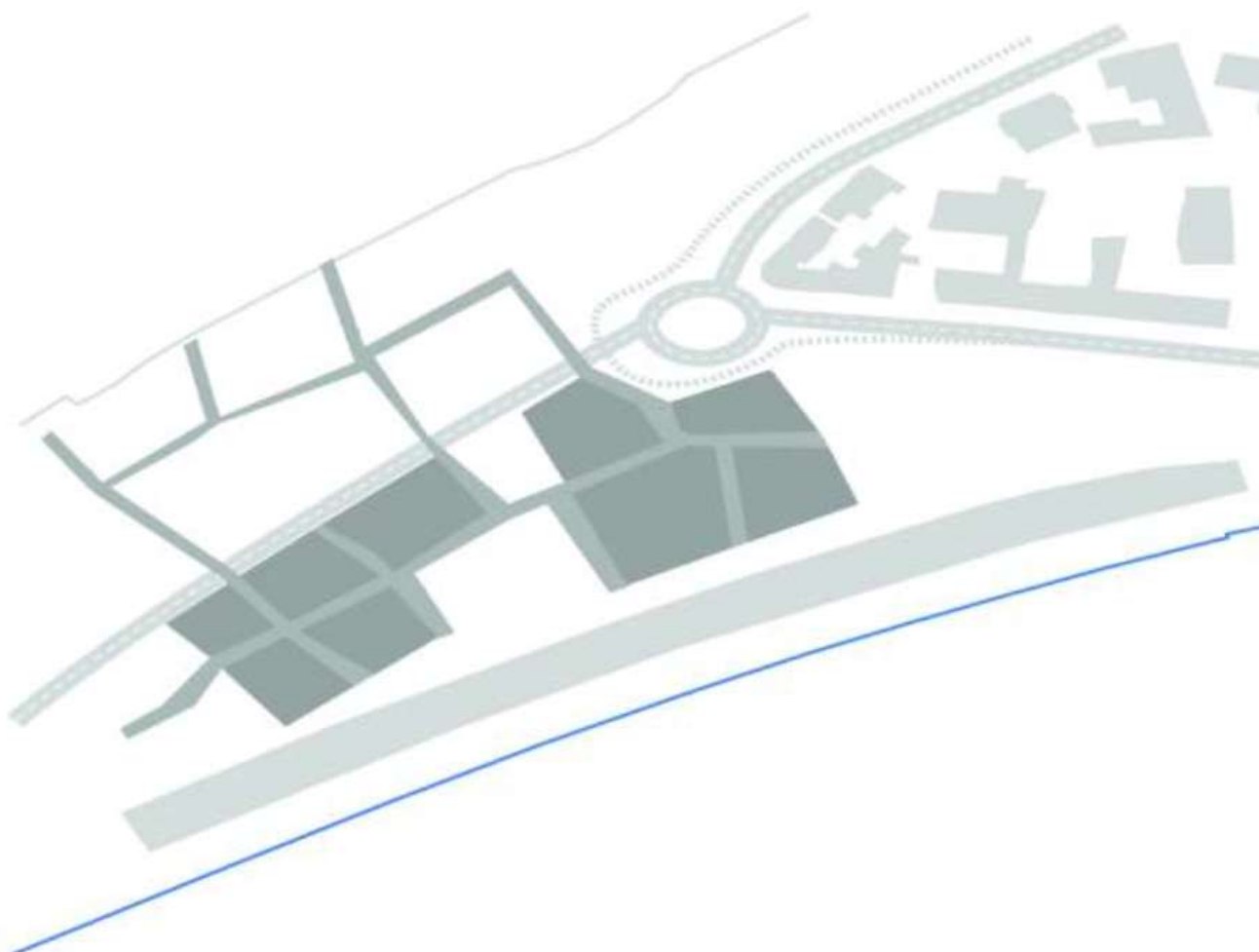
Web



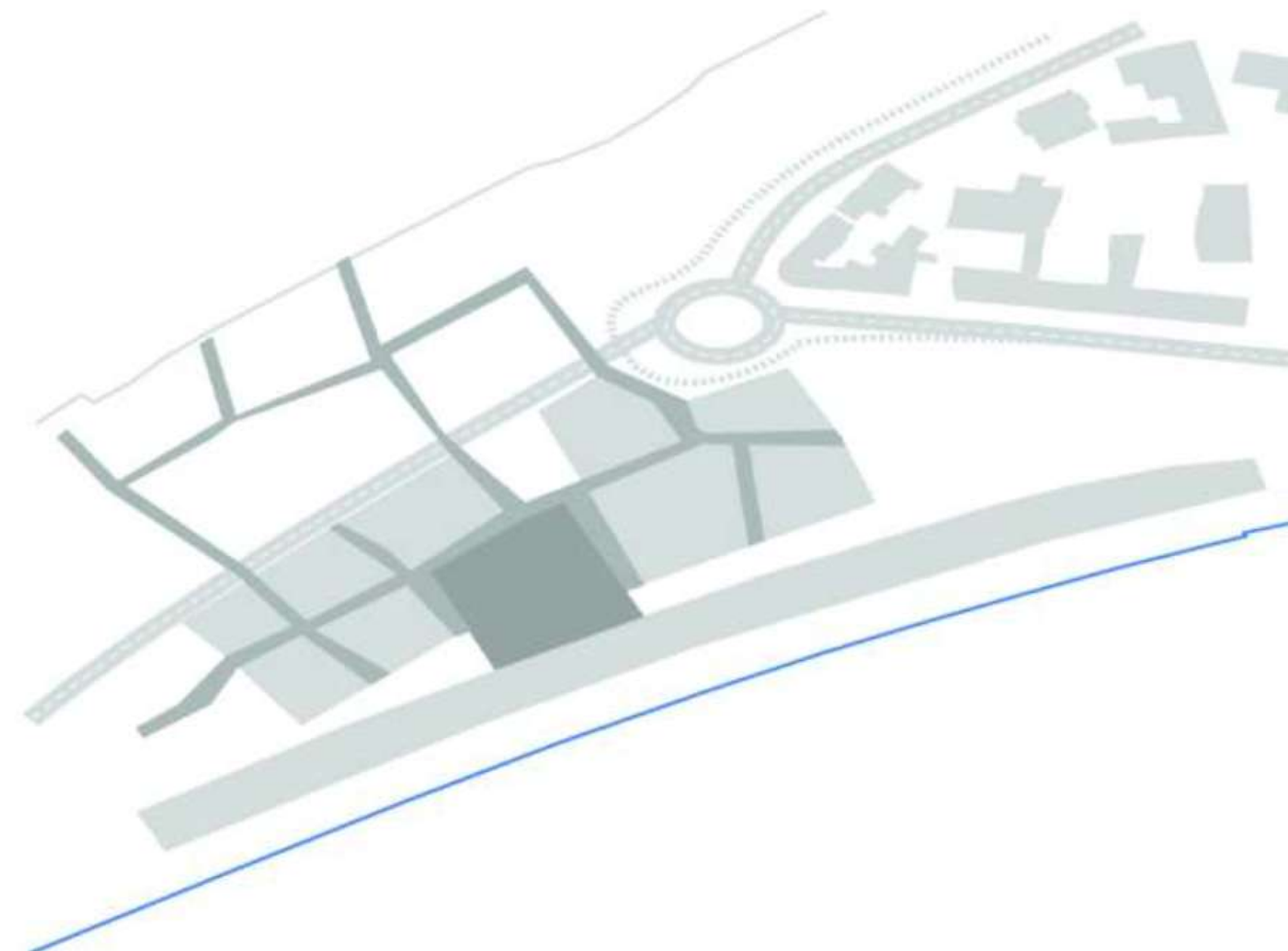
New urban connections



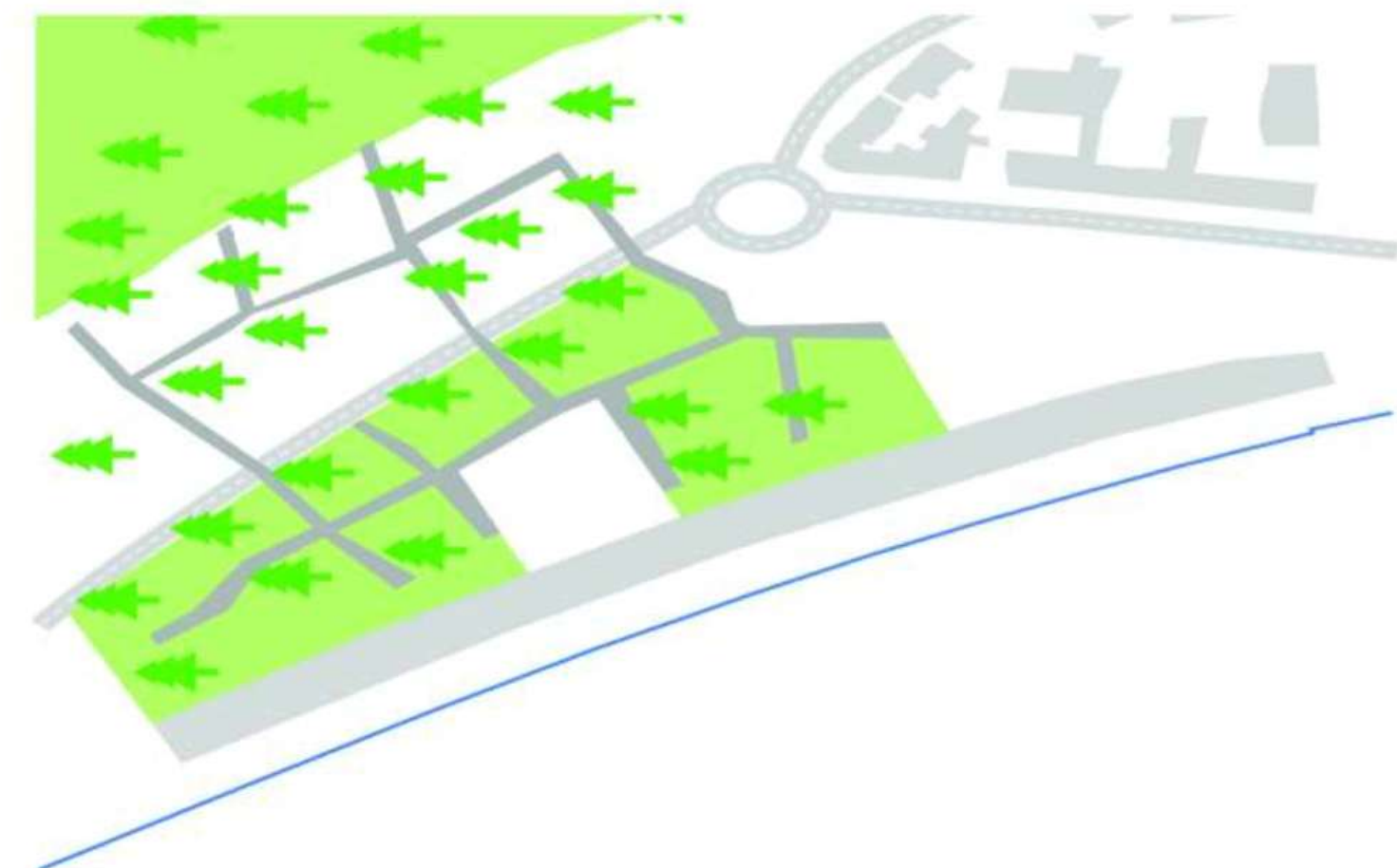
New public spaces



New building



New waterfront square



Green Infrastructure



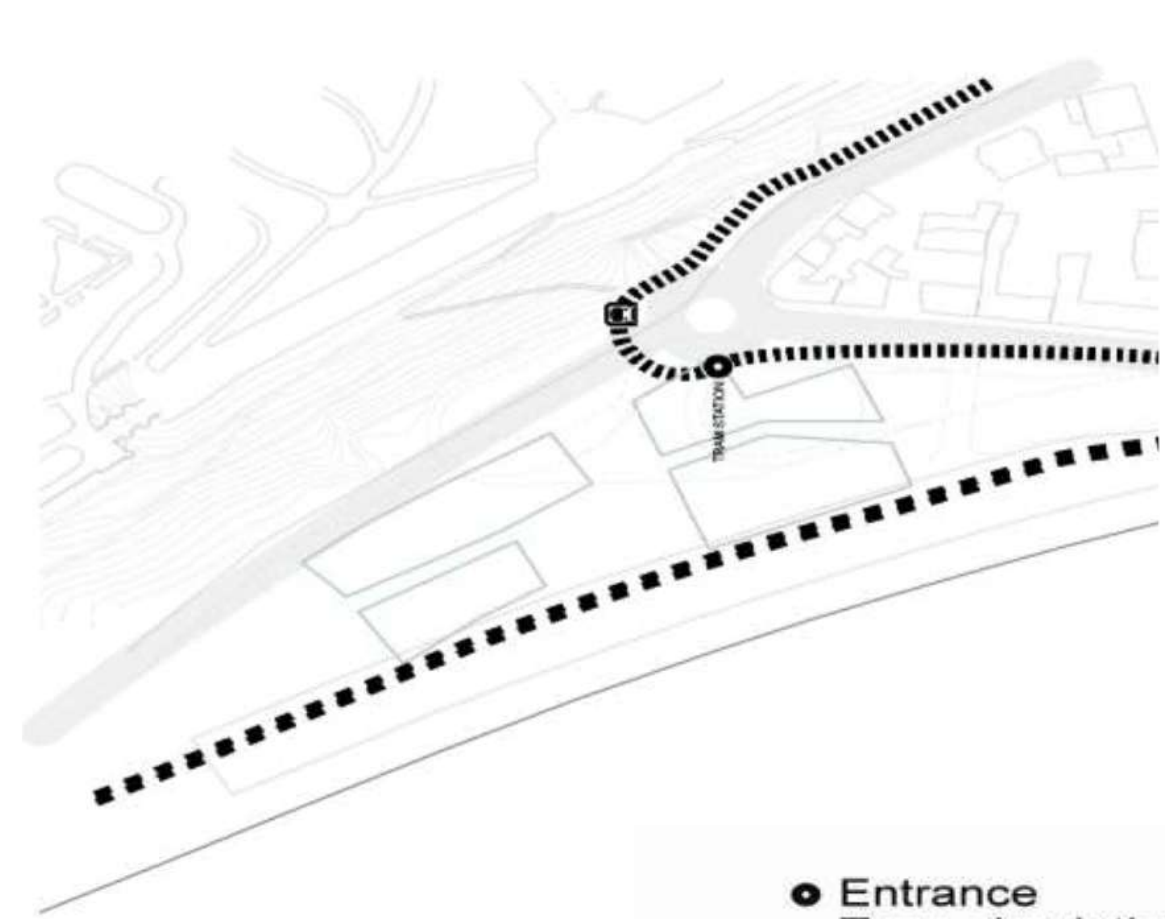
## |Urban plan

\_Connects the different flows of tourist buses, the tram stop and the pedestrian walking up to the fortress

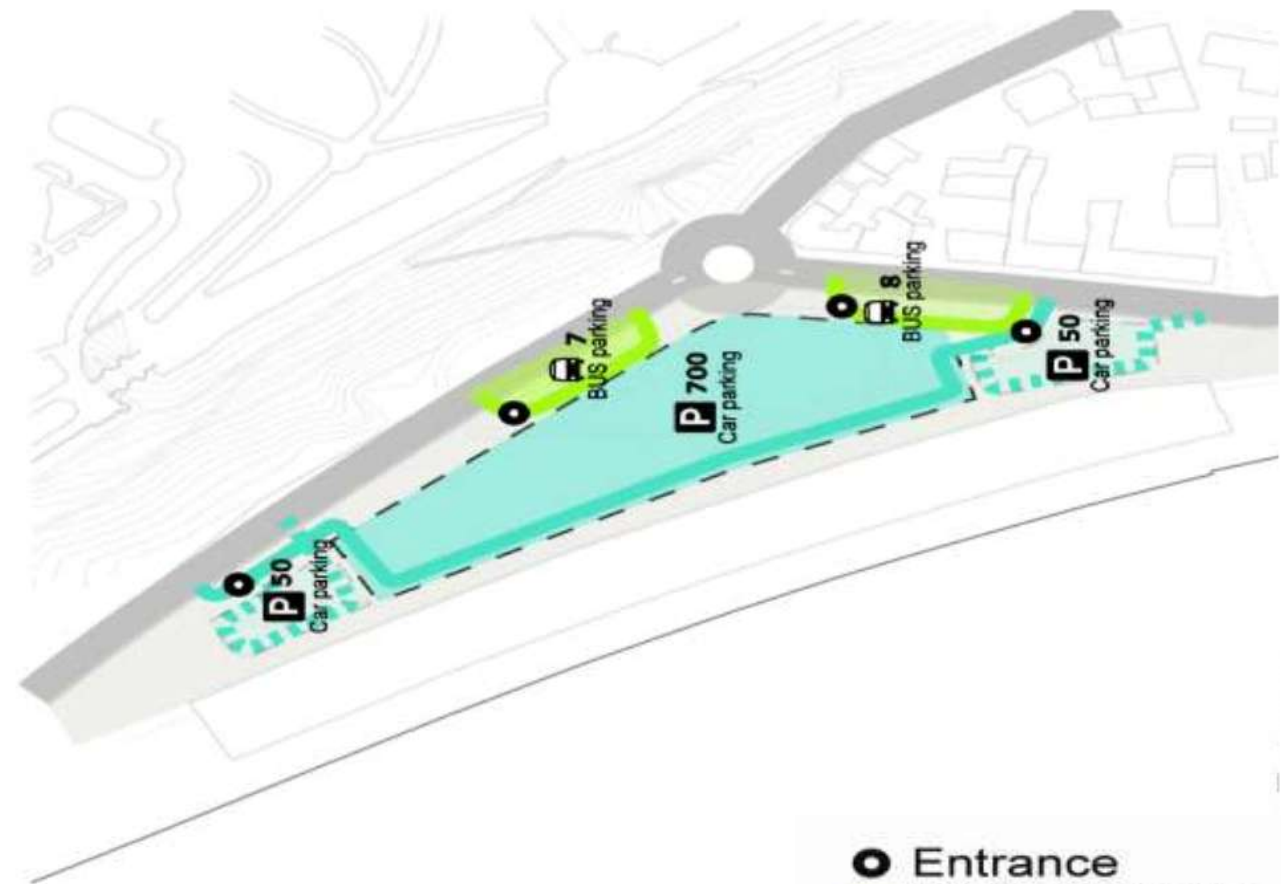




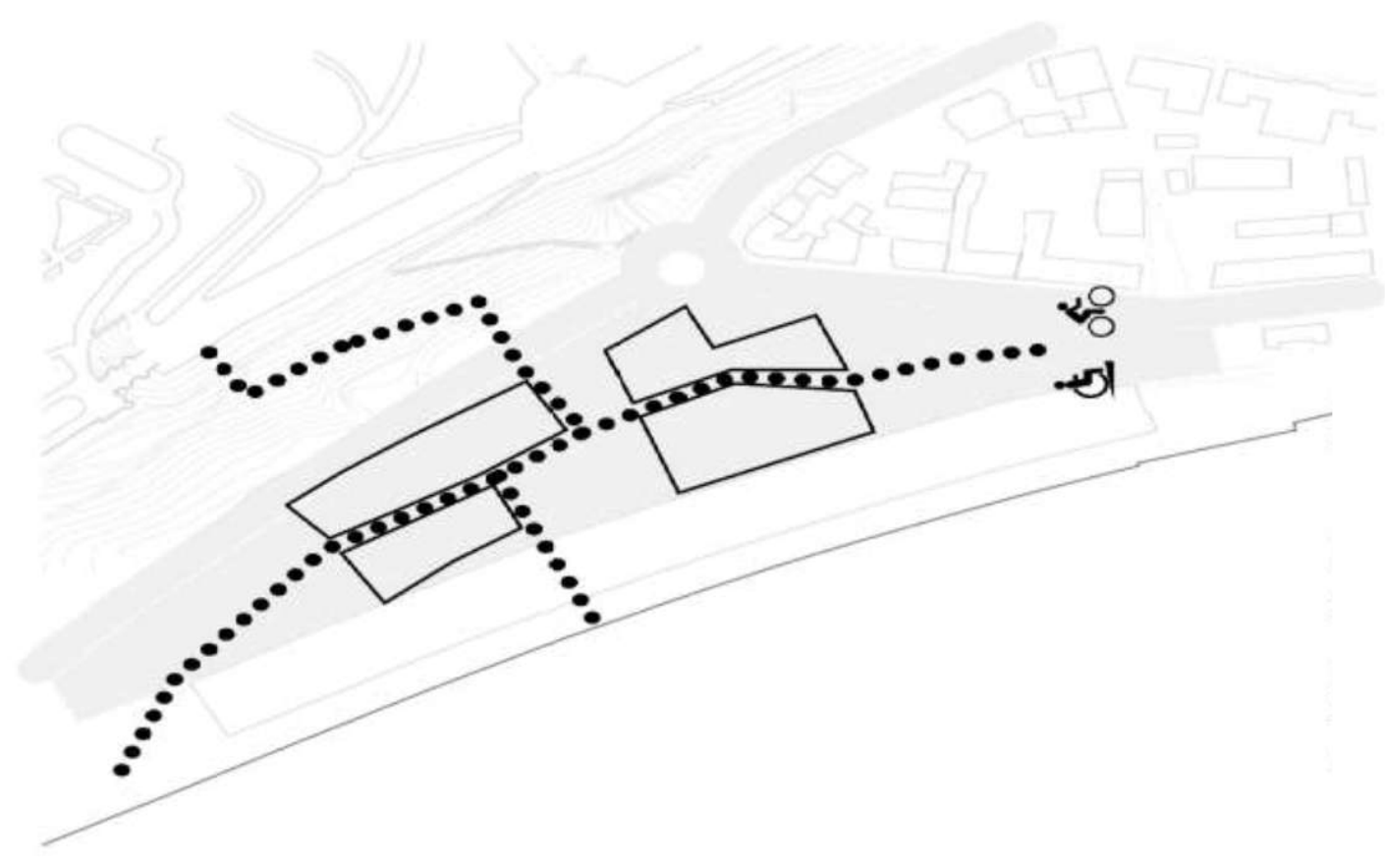
# |Communication schemes



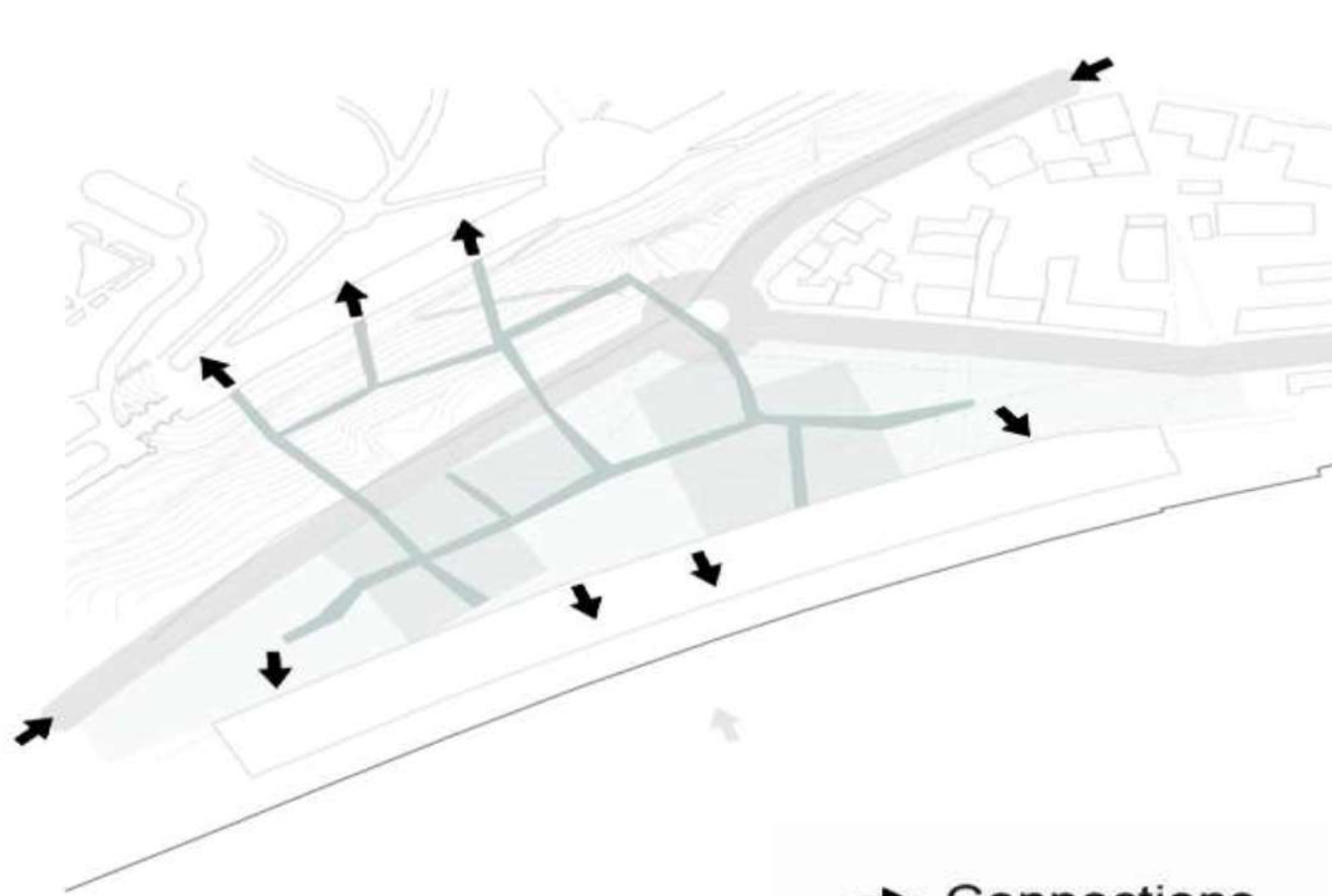
- Entrance
- Tram circulation
- - Train circulation



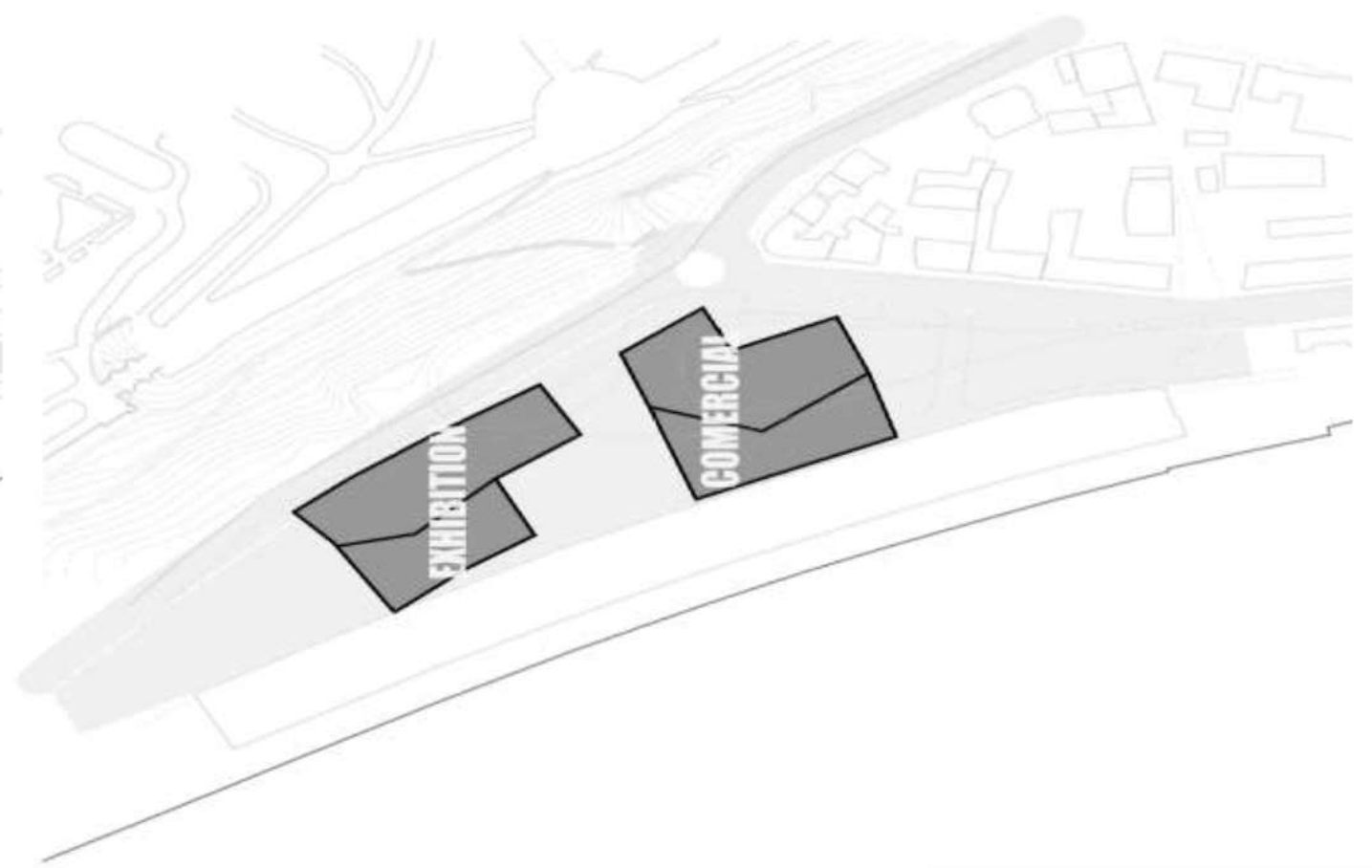
- Entrance
- BUS parking
- Car parking
- Road



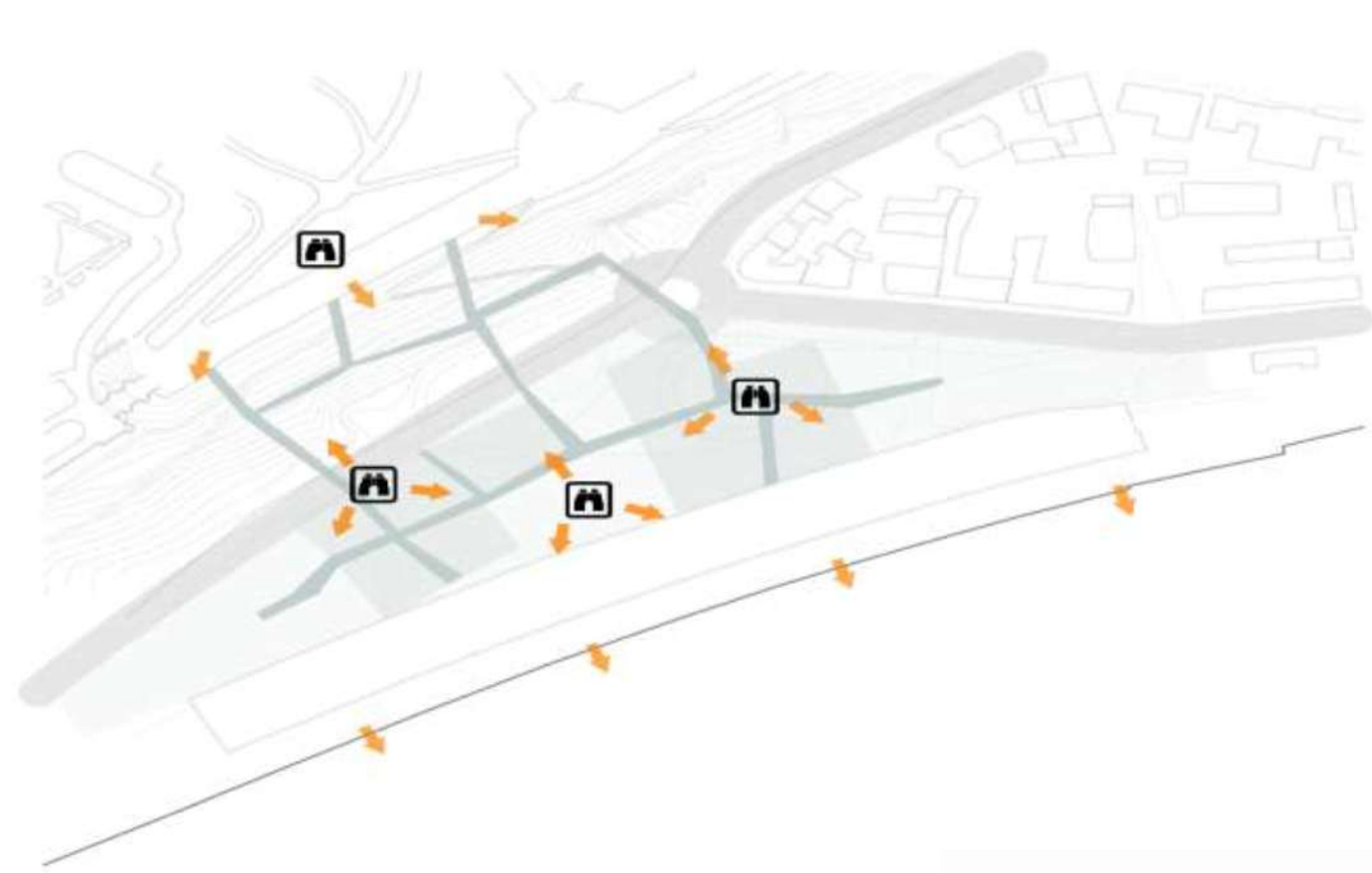
... Mobility with 5% gradient



→ Connections



Uses



📷 View Points

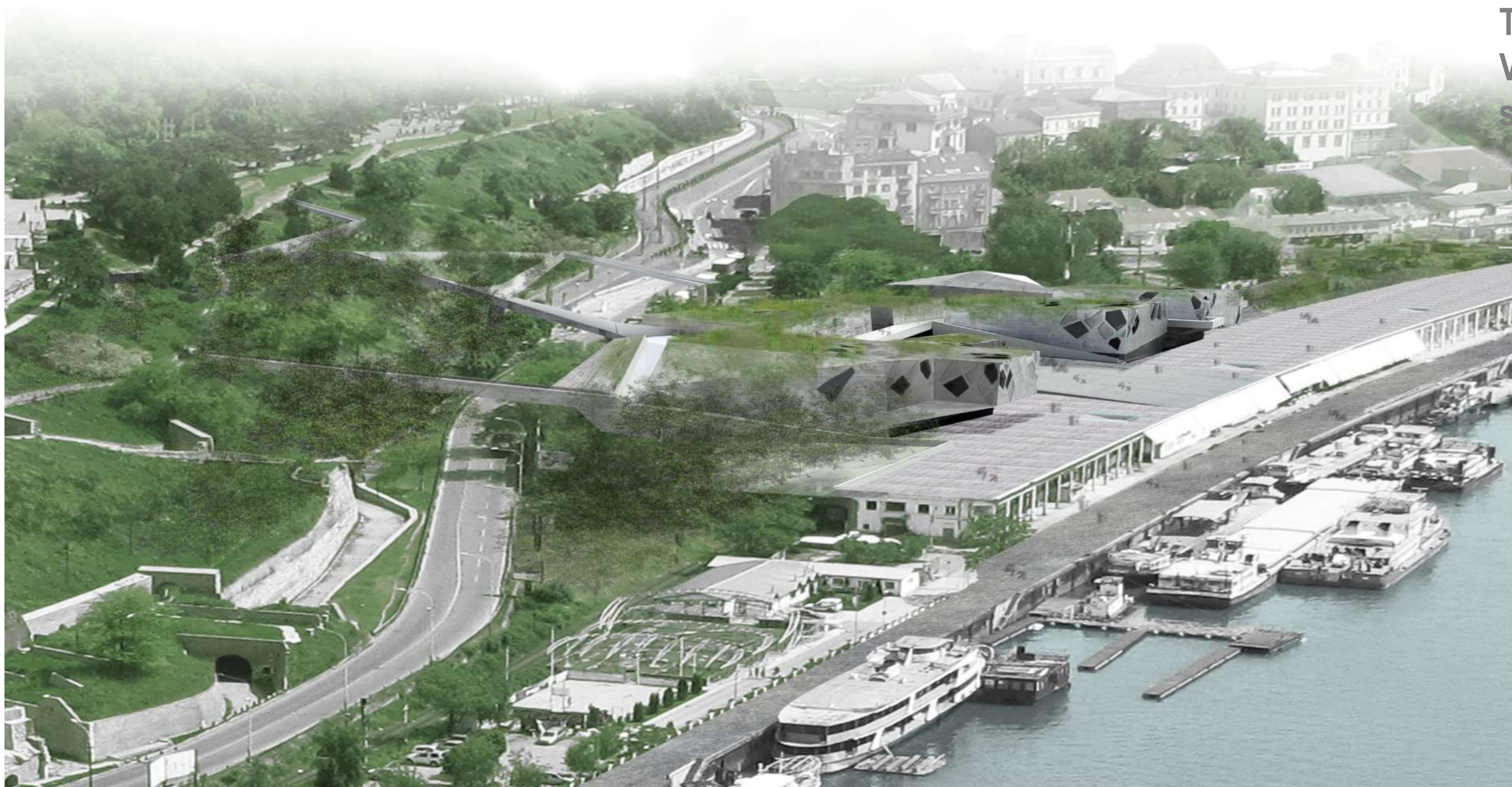


# |General View





# |Urban Morphology



The quality of the site is Valued by three public spaces:

Kamlemegdan Park

Waterfront square

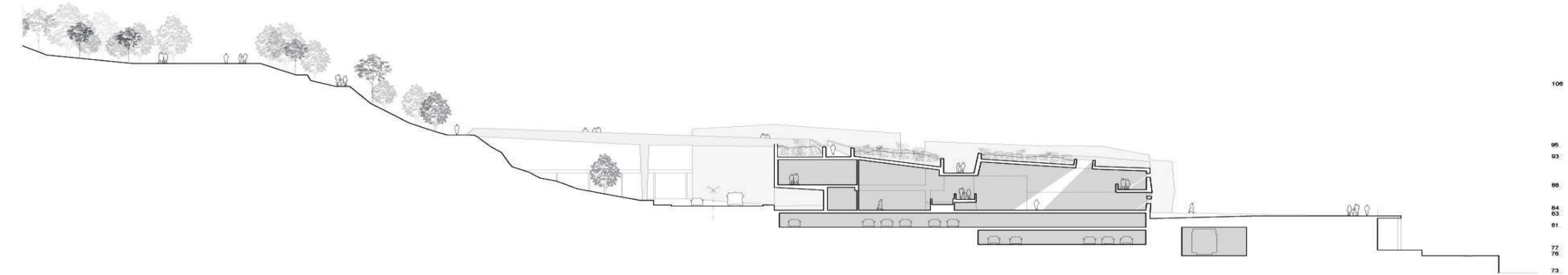
Beton Hala Promenade

The three are linked by the pedestrian network

Create innovative civic spaces that break with the conventional traditions that separate architecture and public Spaces

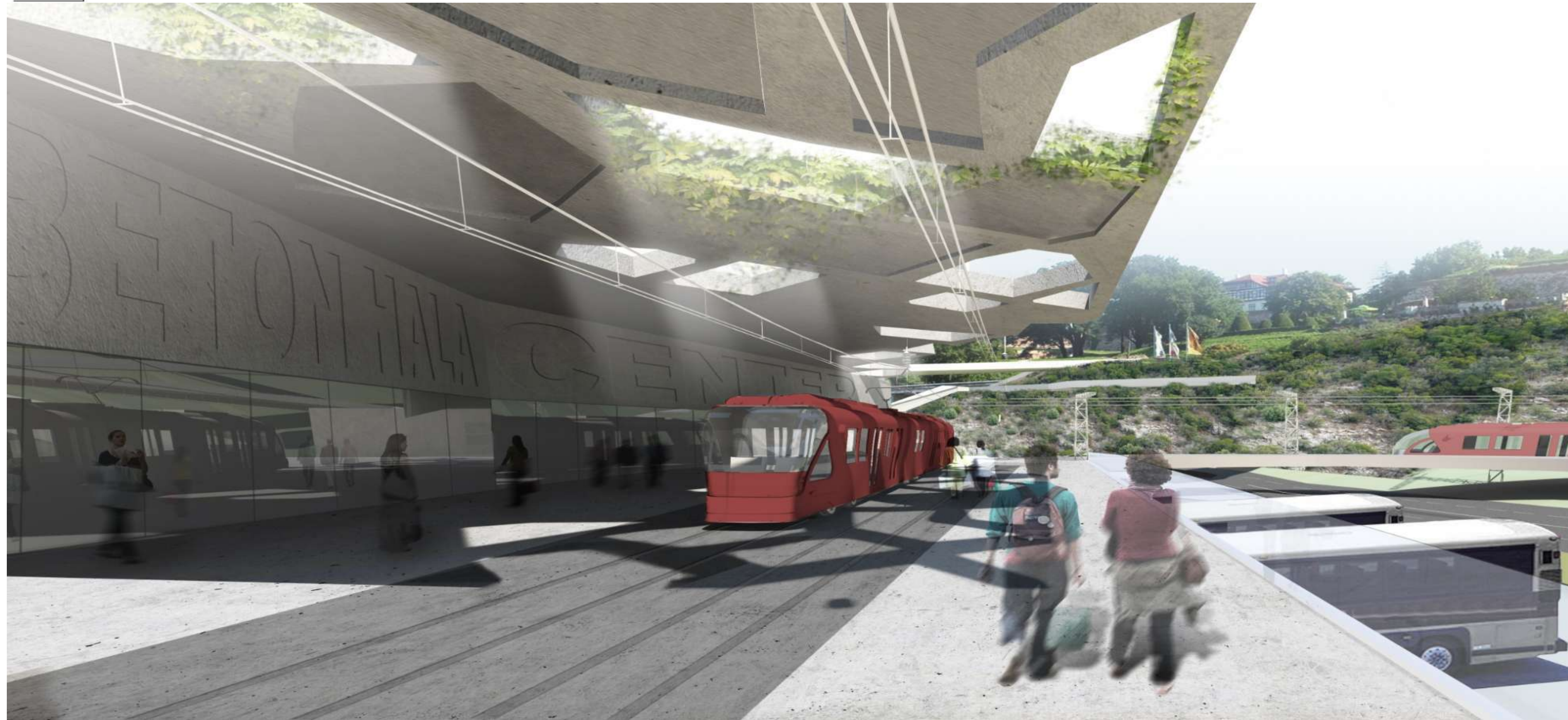
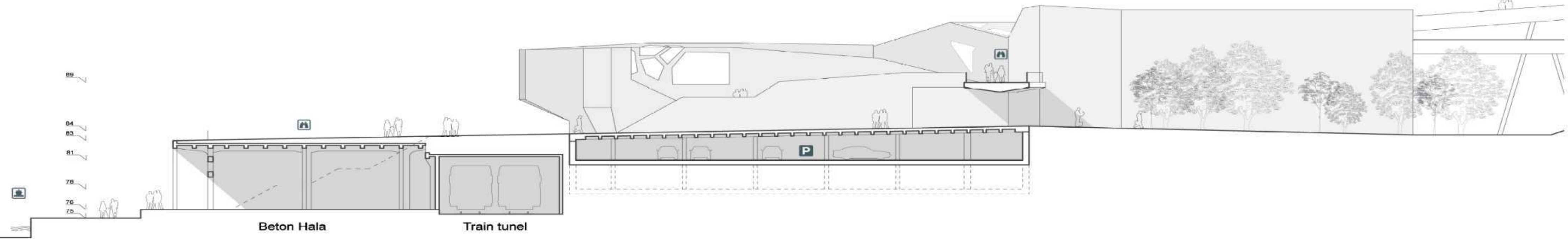
Public space will regenerate the Waterfront with 5% sloping roof





1\_500 SECTION





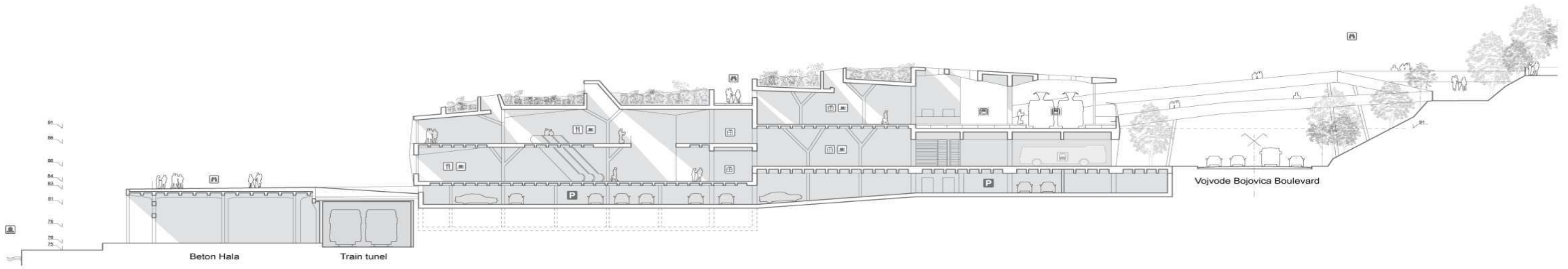


# |General View





# |Spatial relations inside the building







|Aerial views







| Inside views

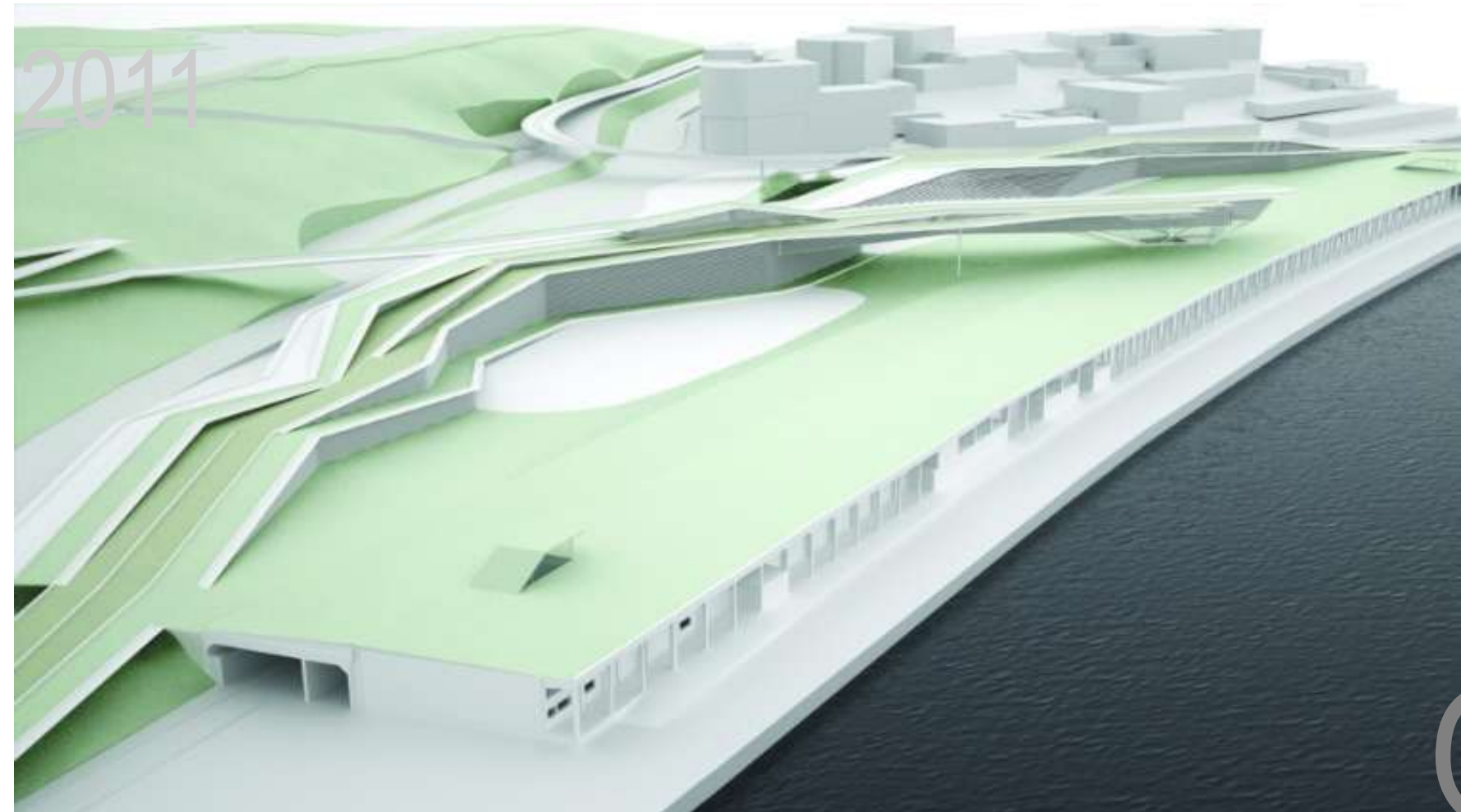


CULTURE CENTER



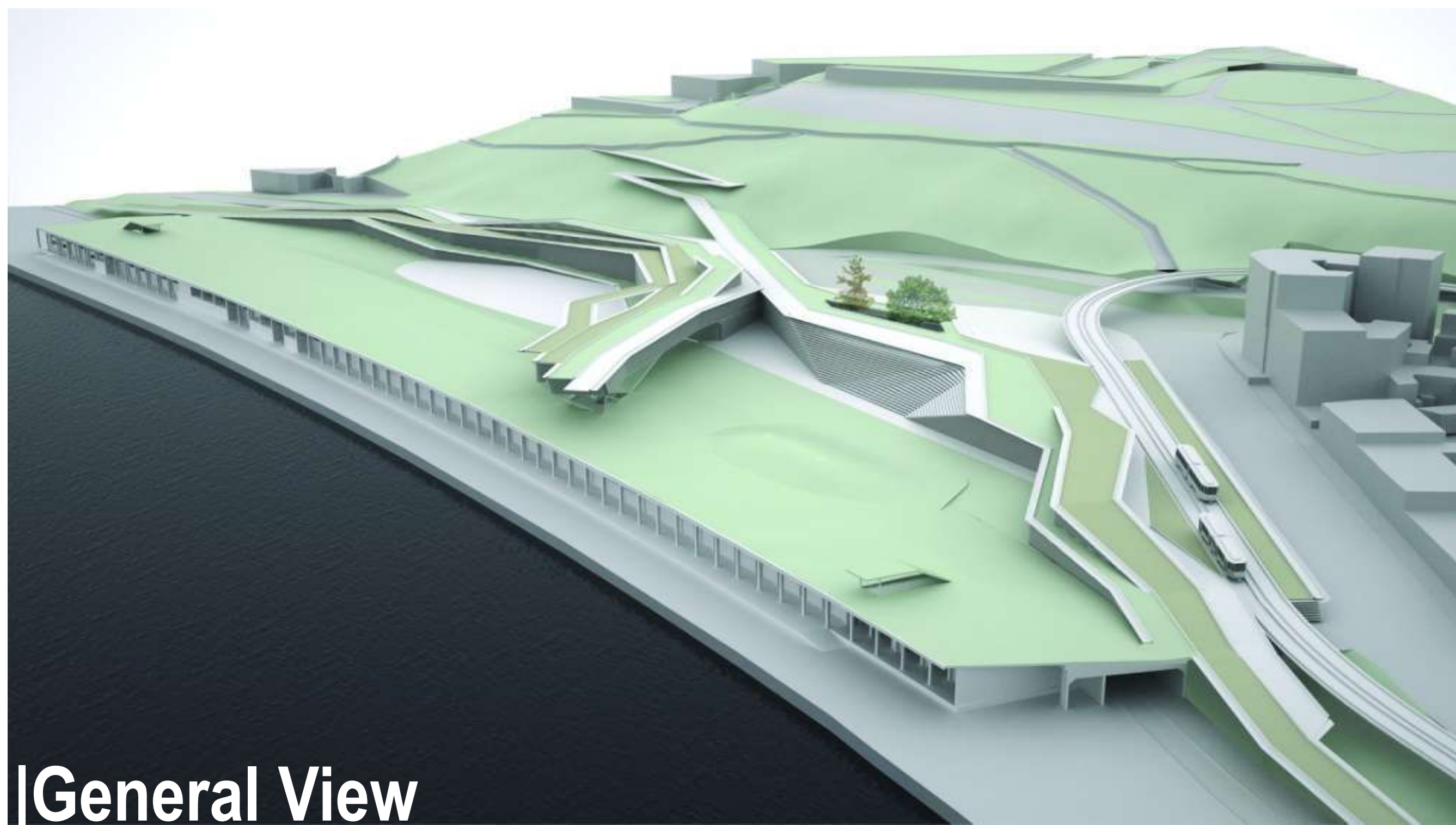
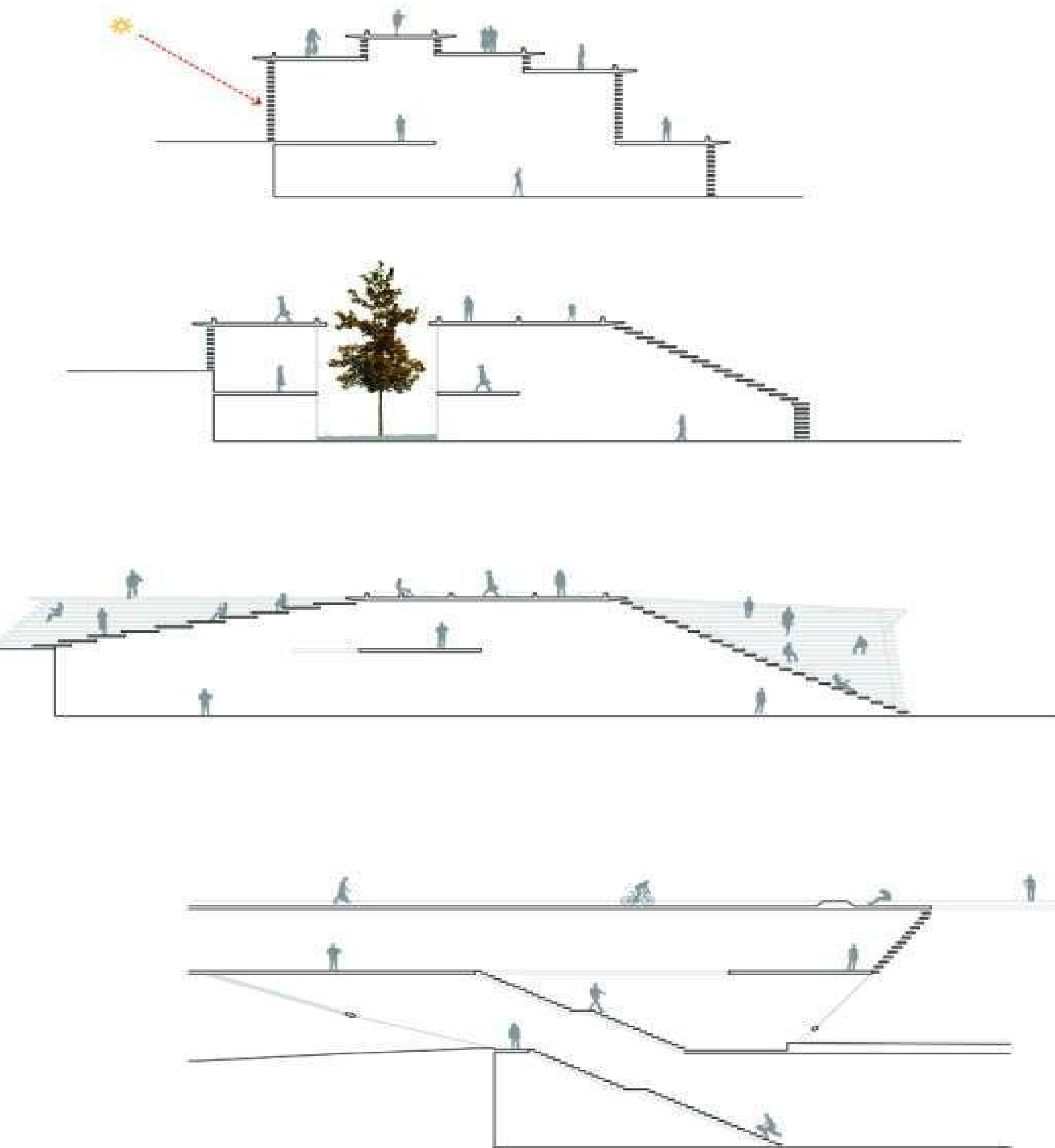
# |Beton Hala Waterfront Center

2011



Office Redux

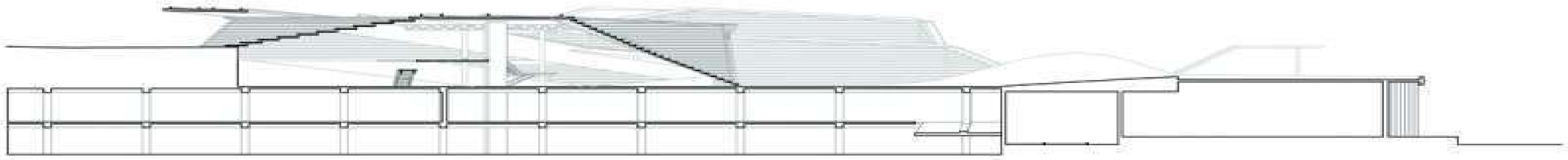
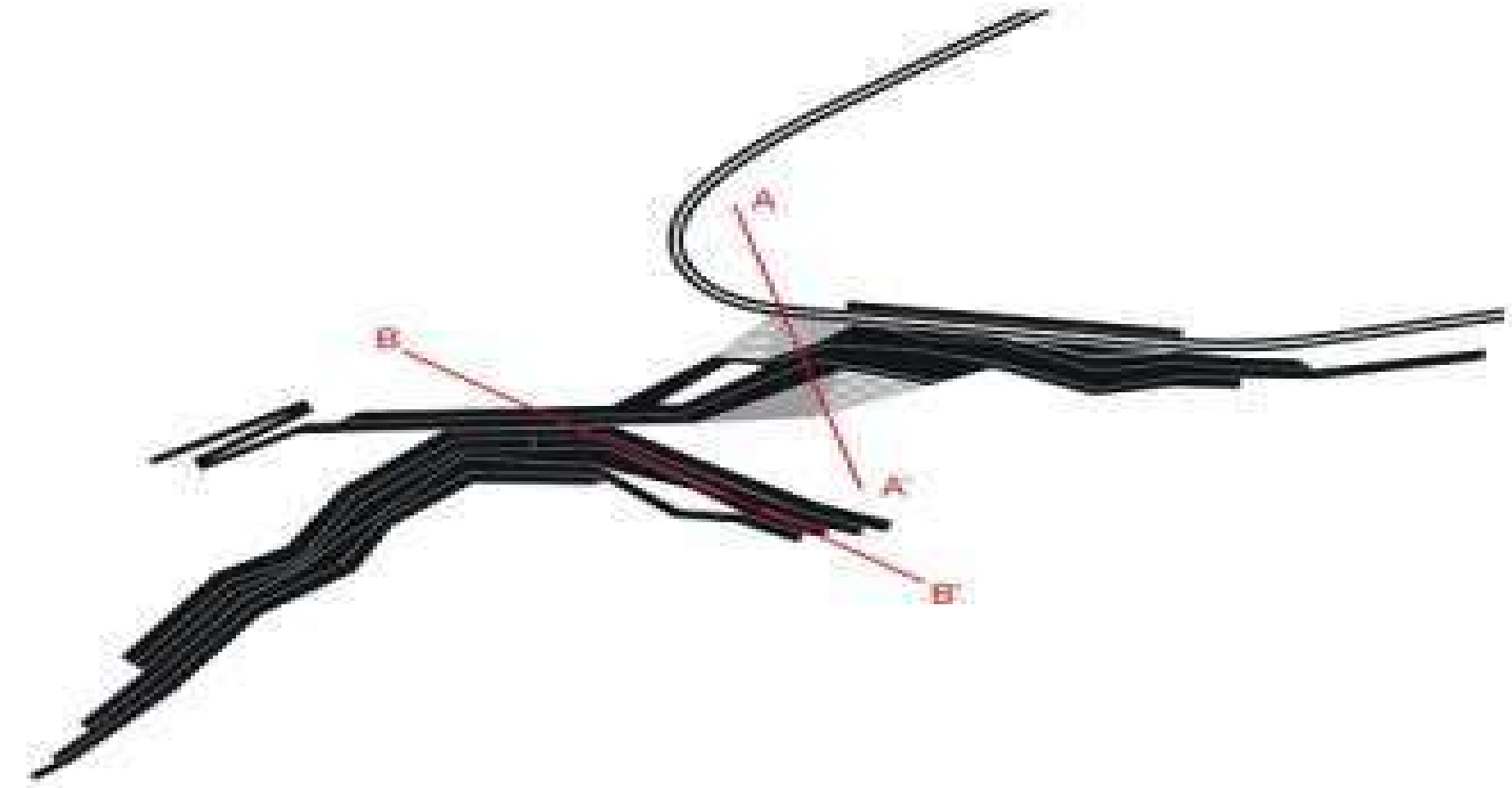




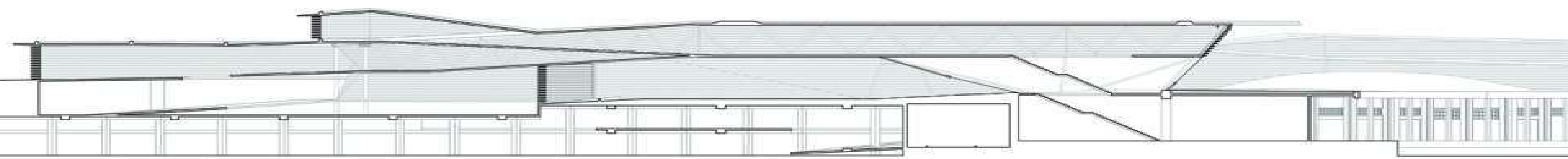
General View





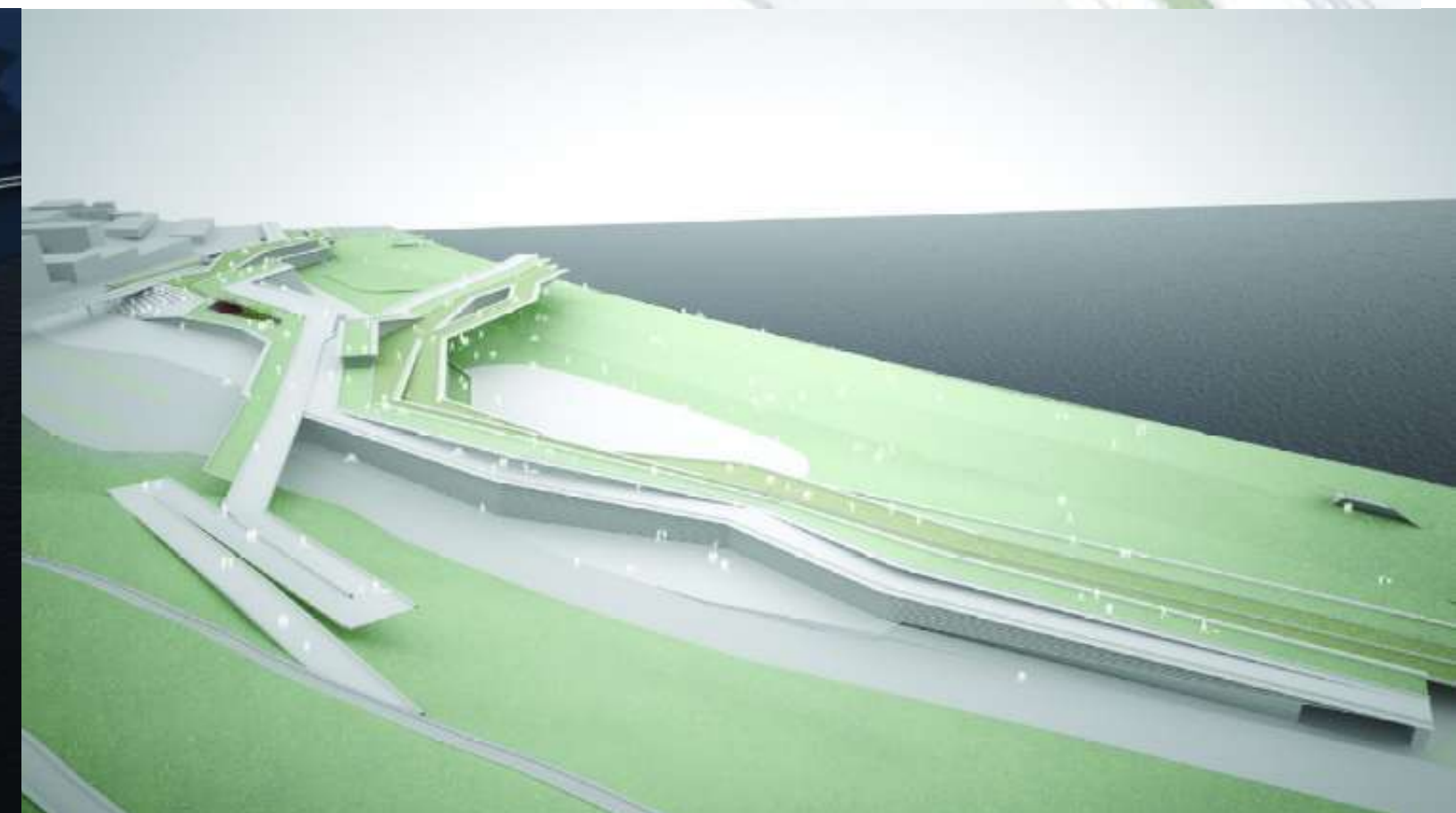
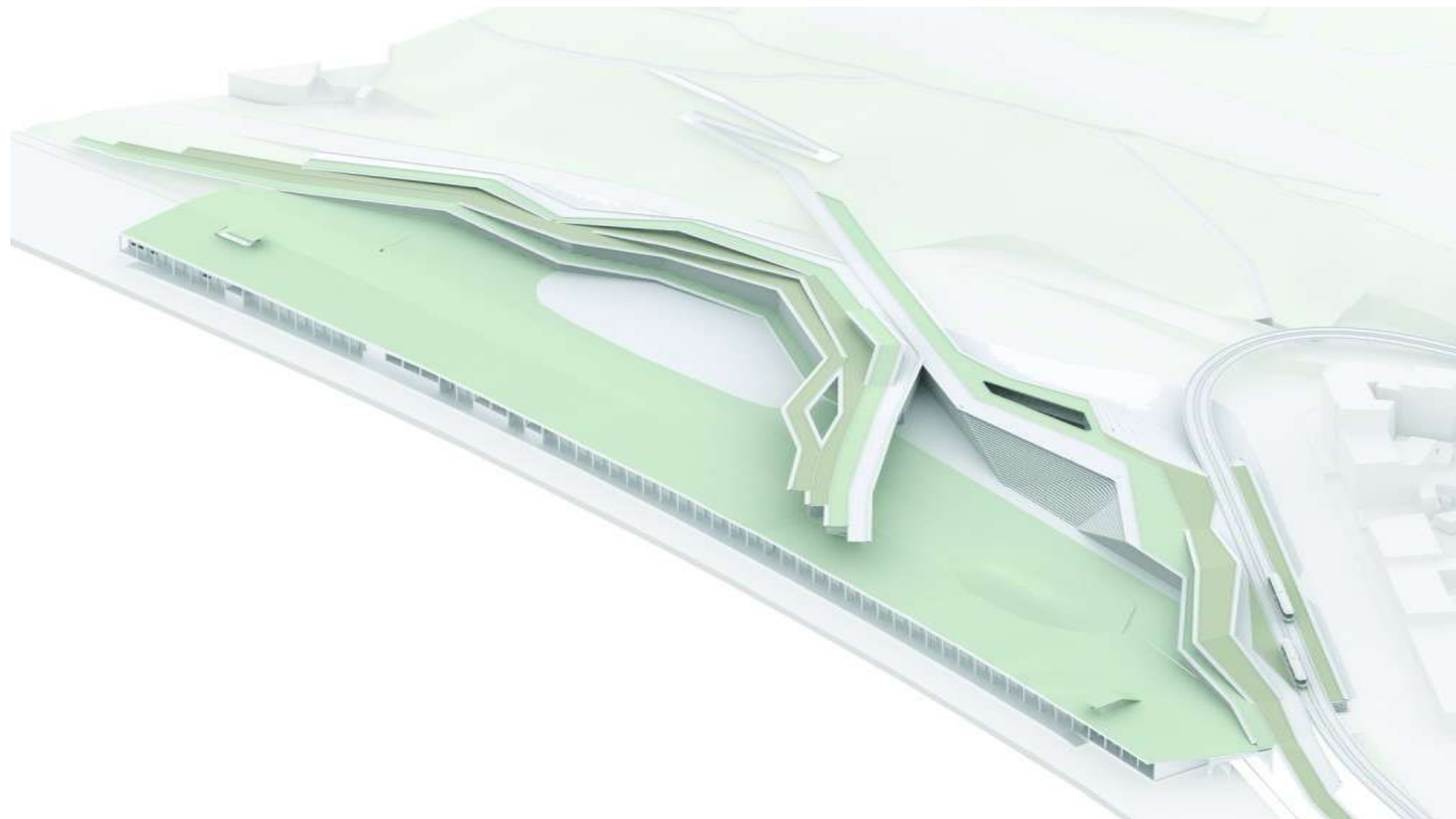
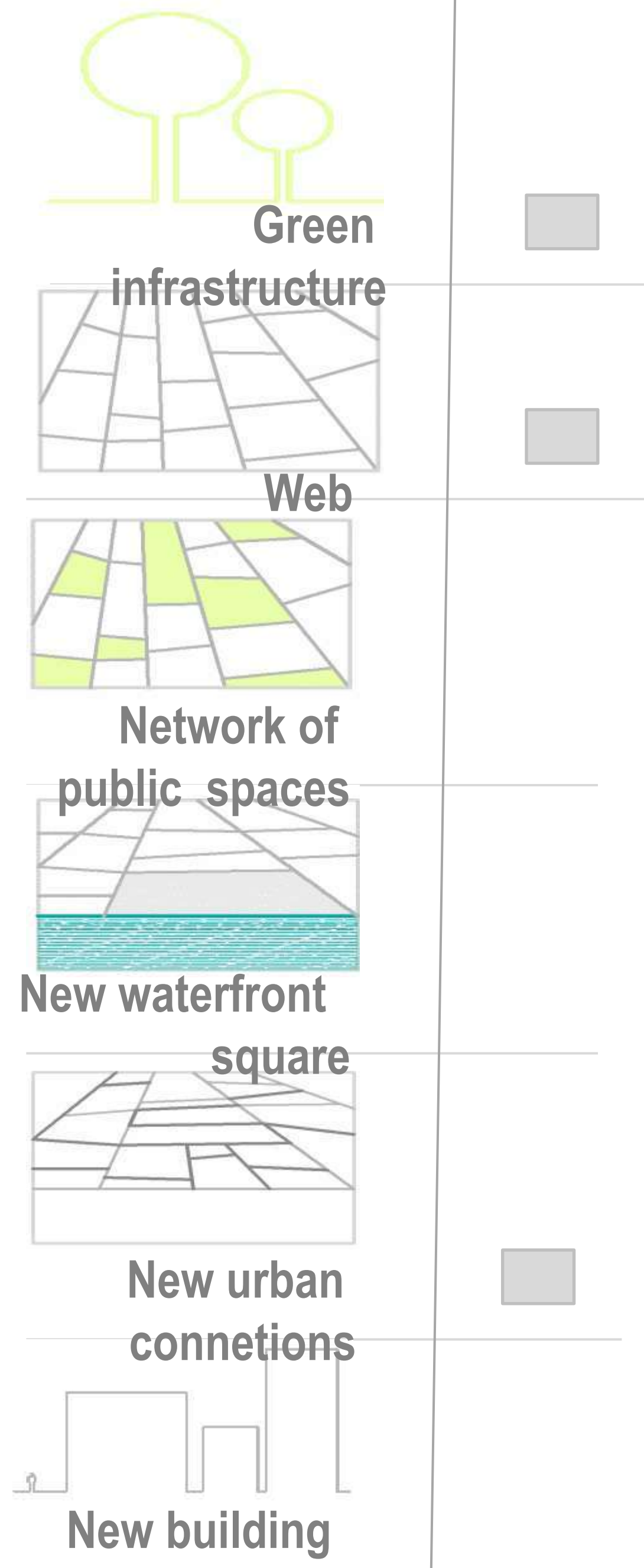


Section A-A'



Section B-B'







# |Beton Hala

Waterfront Center



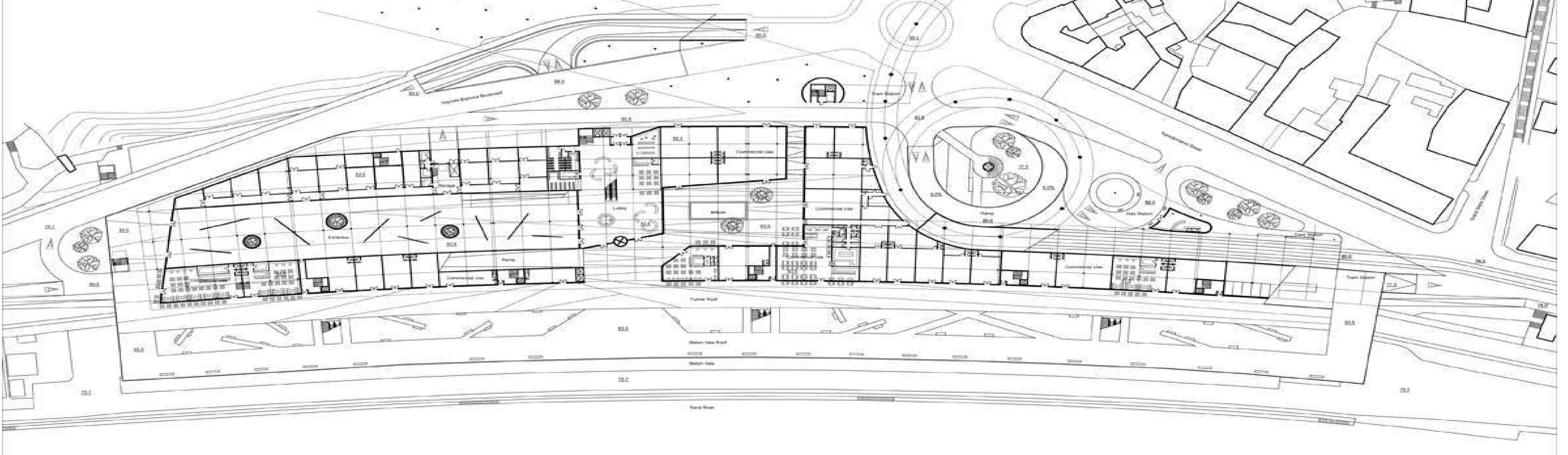
Aleksandar kekovic\_Marjan Petrovic\_  
Bojan Stojanovic\_Srdjan Sakan





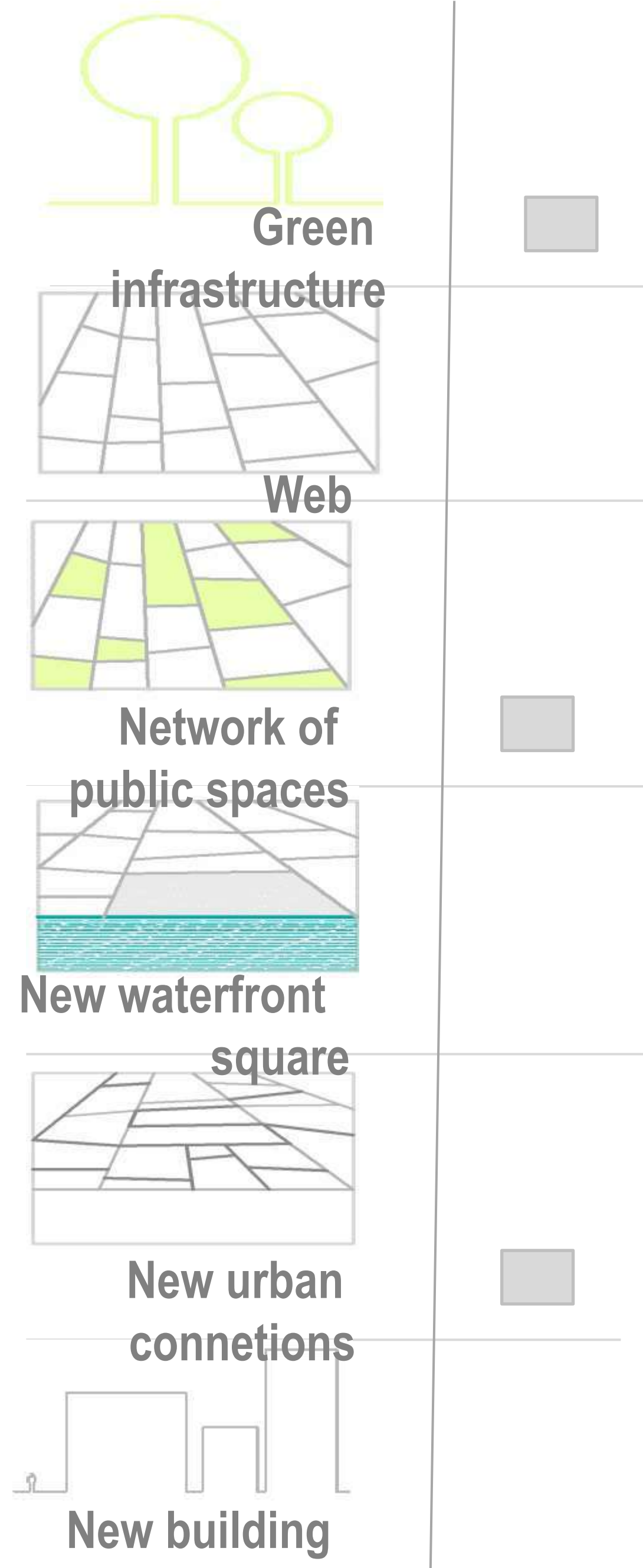
|Aerial view





Cross Section 1:500







|Beton Hala  
Waterfront Center  
2011

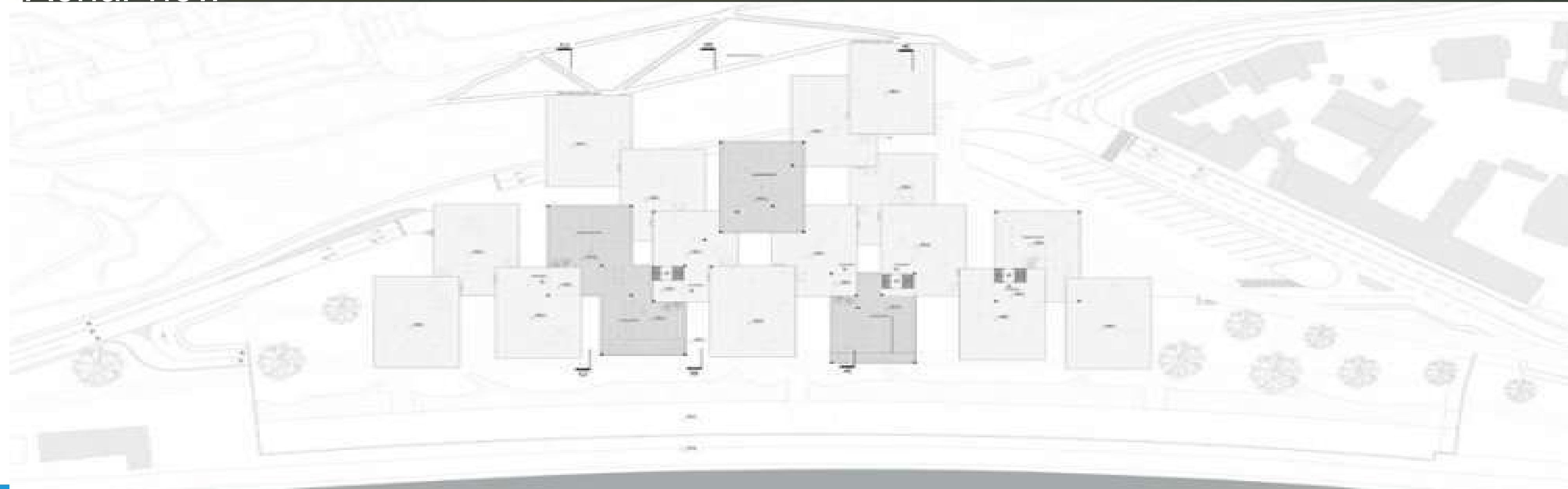


Sadar+Vuga





Aerial view







|Aerial view

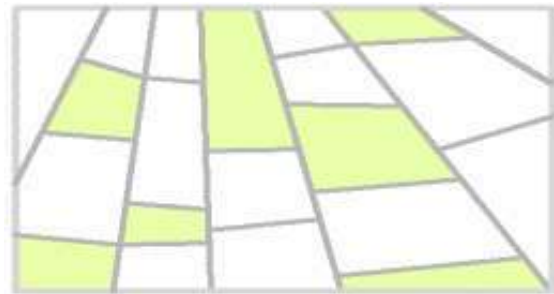




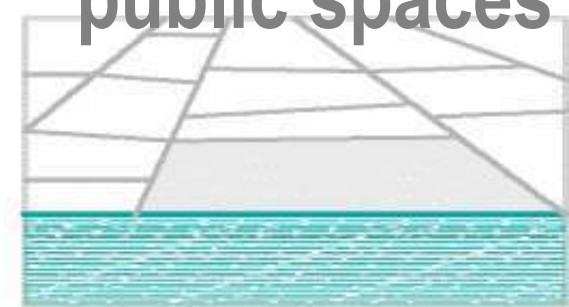
**Green environment**



**Web**



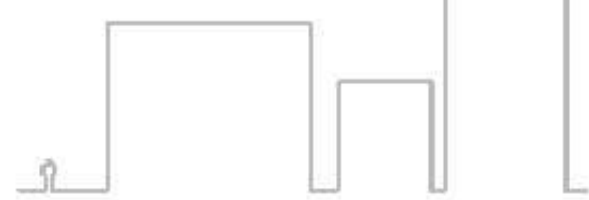
**Network of public spaces**



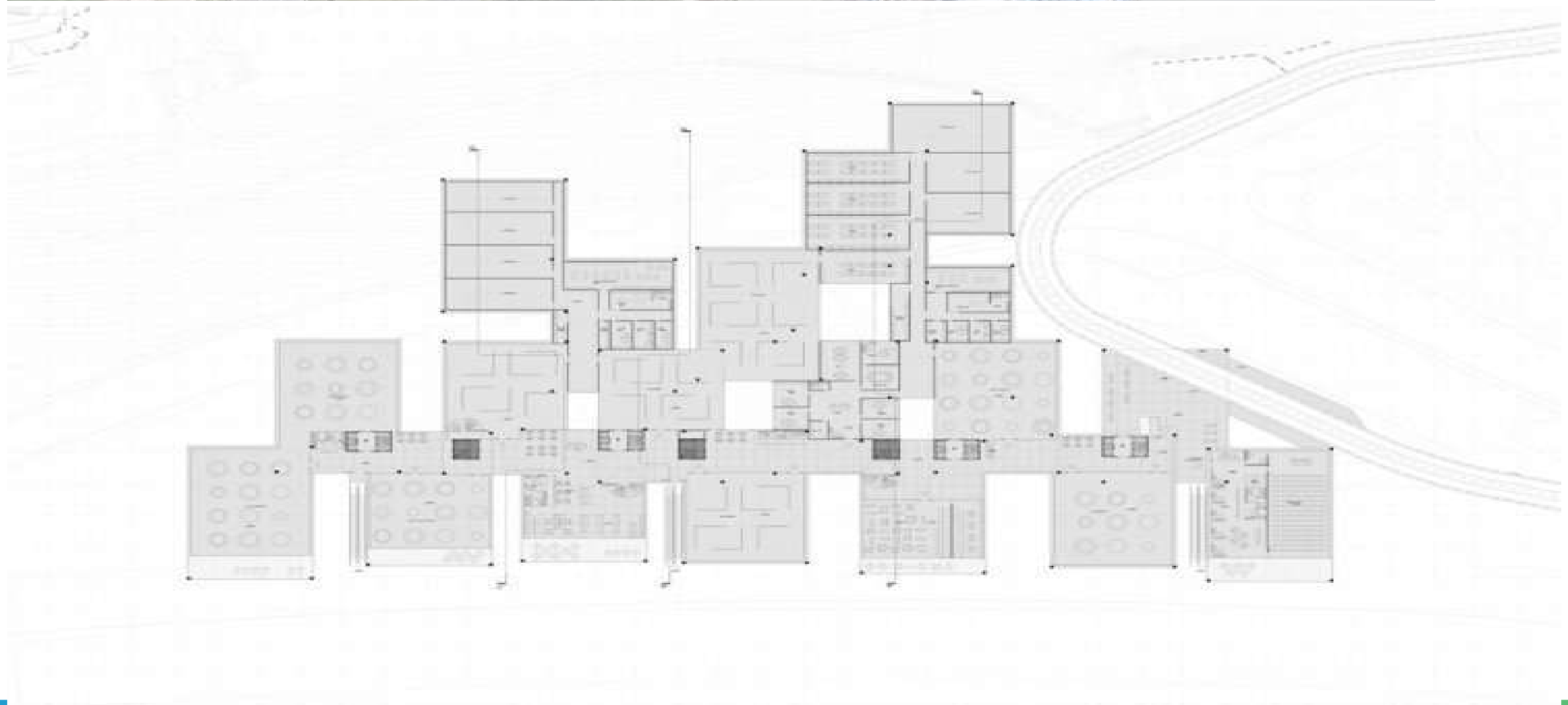
**New waterfront square**



**New urban connetions**



**New building**





|Beton Hala  
Waterfront Center

2011



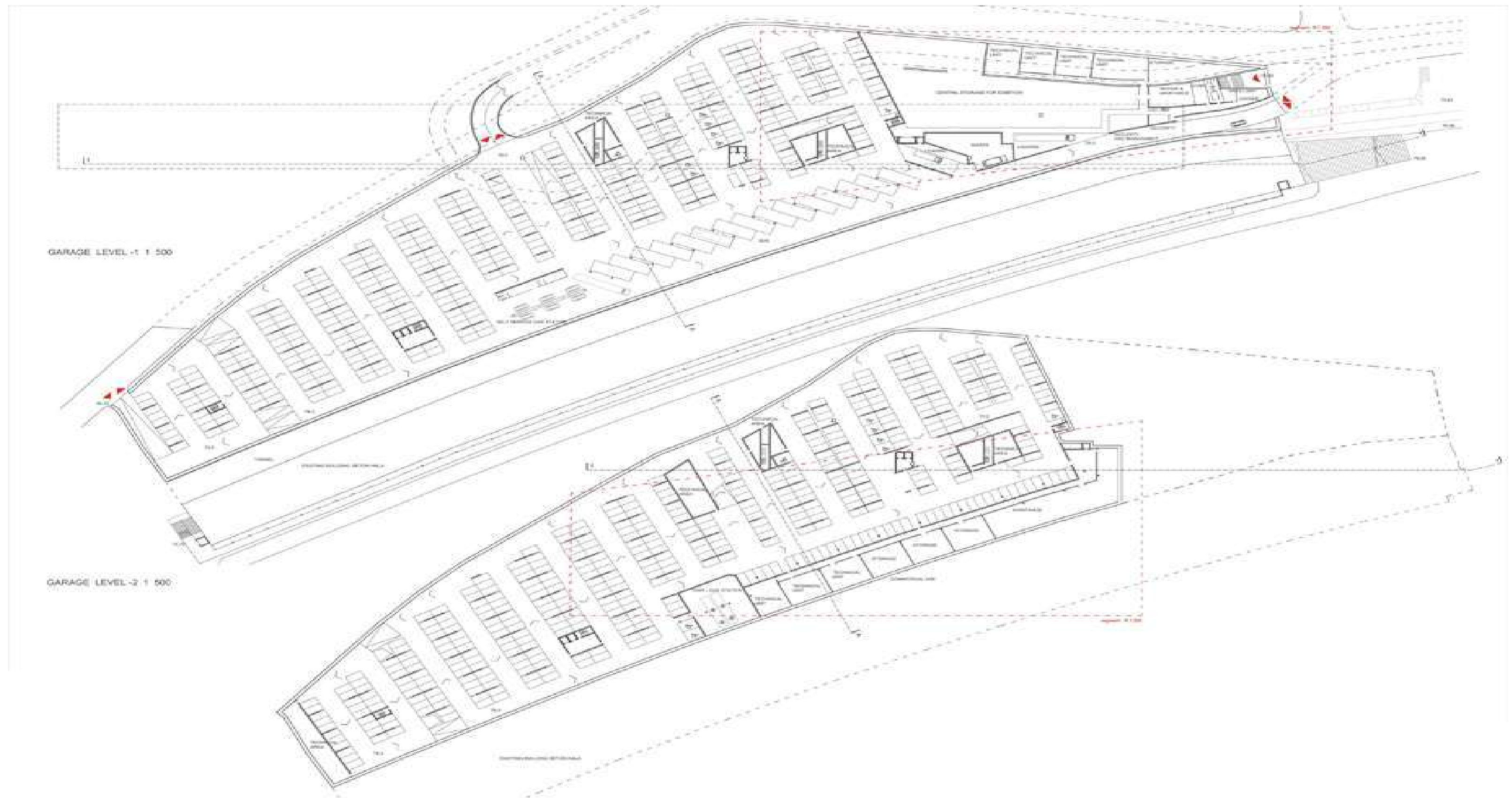
Studio ARCVS\_1st prize



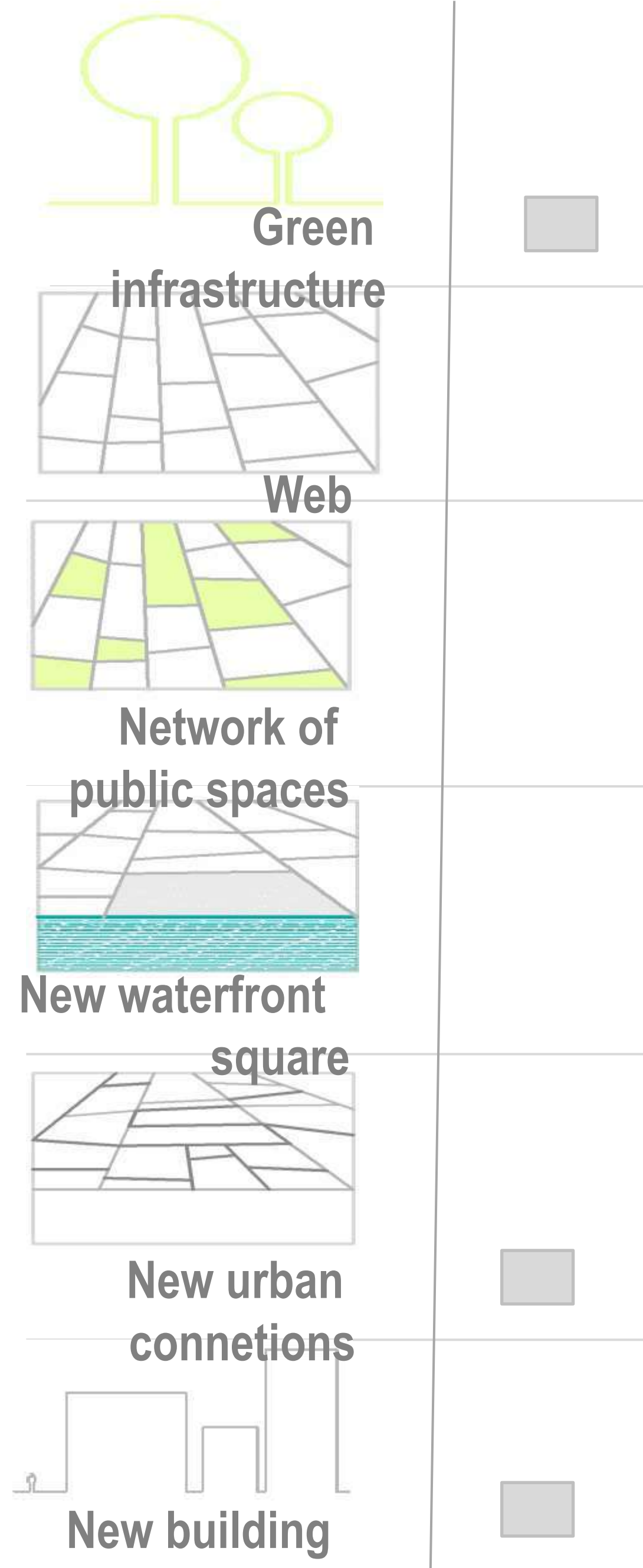


|Aerial view











Thank you.

Pedro Ressano Garcia