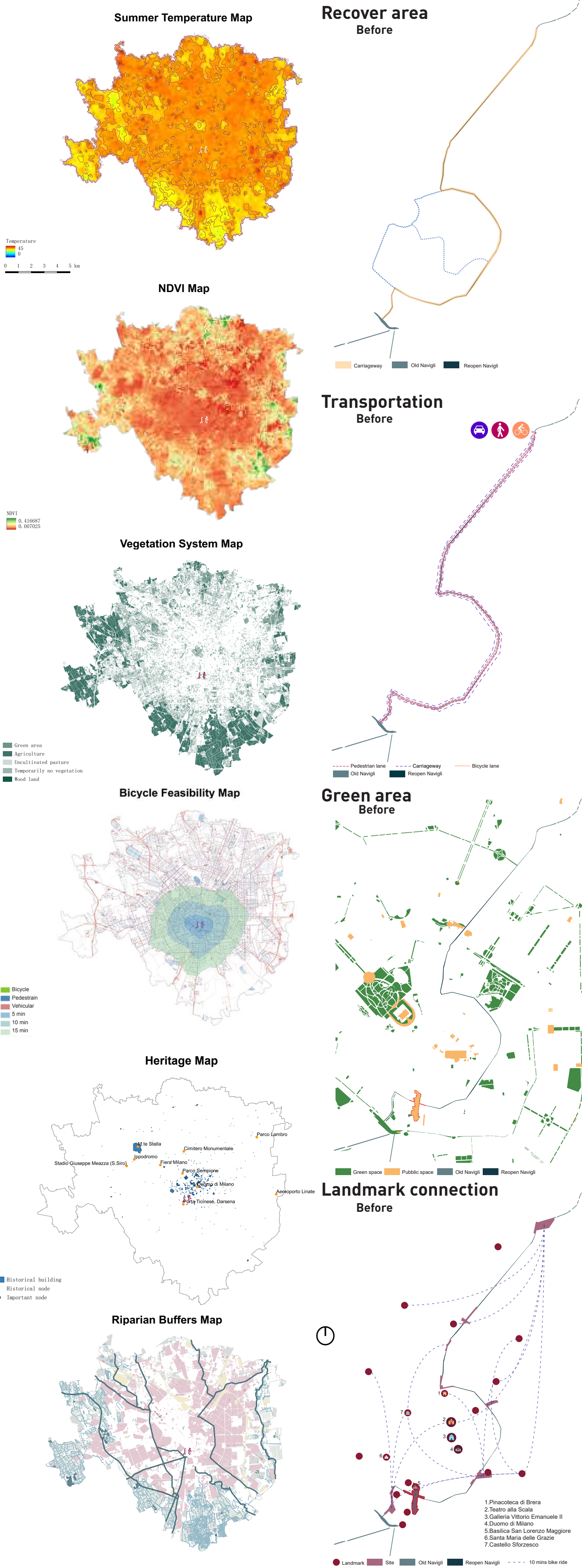


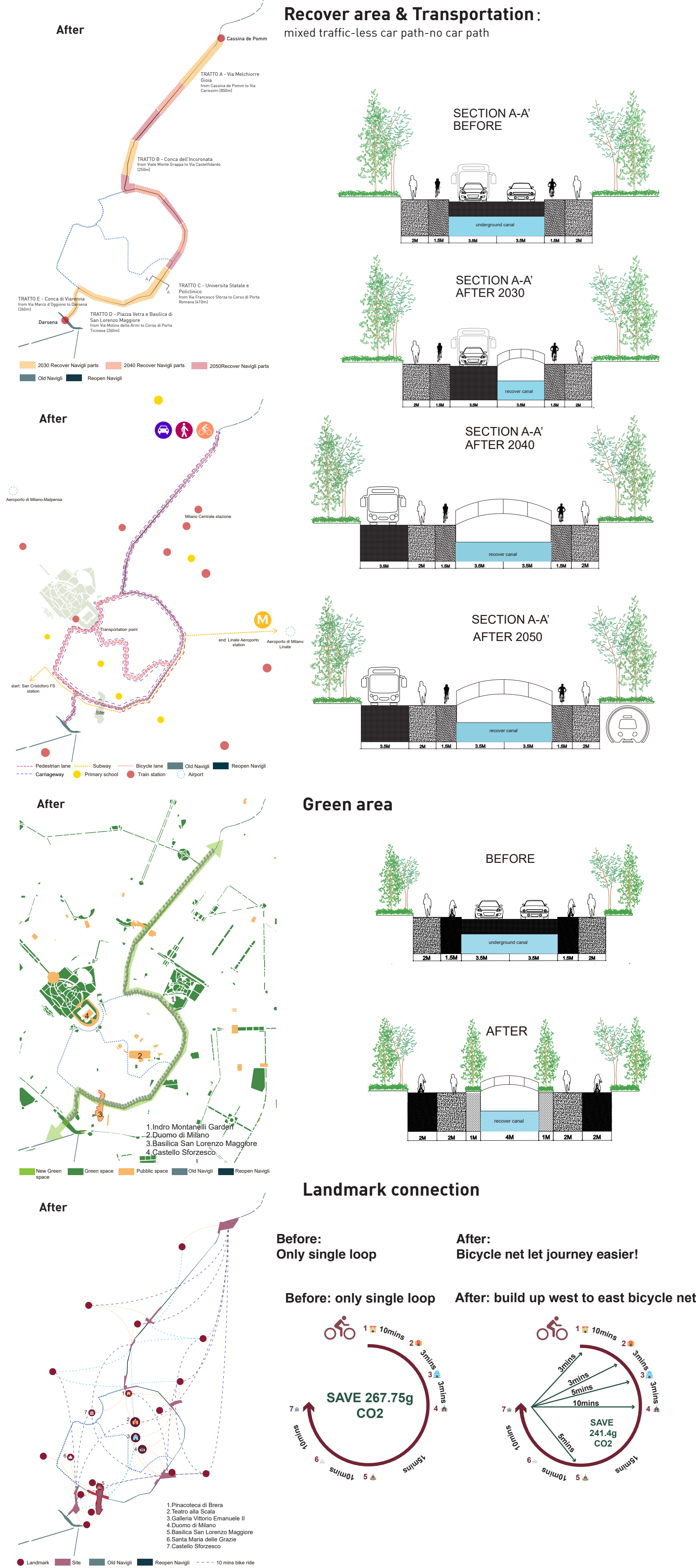
Navigli Master Plan



Milan Site Survey  
 Milan basic information



Naviglio strategy

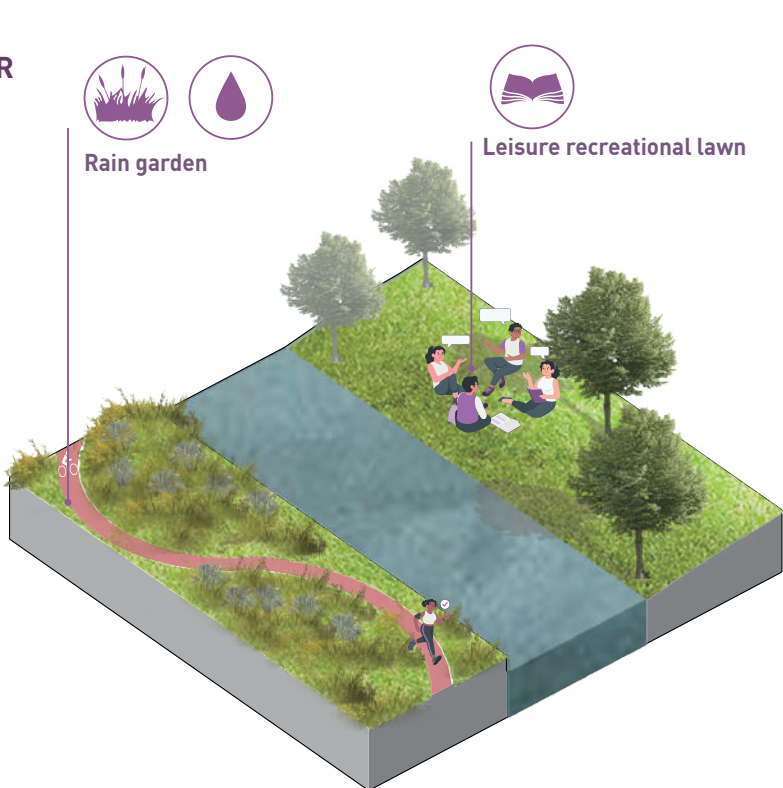
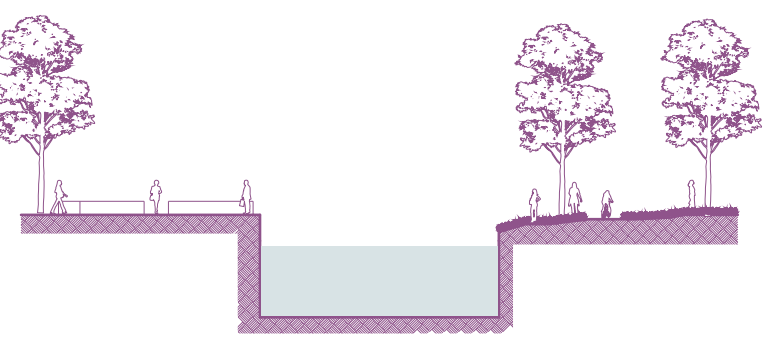




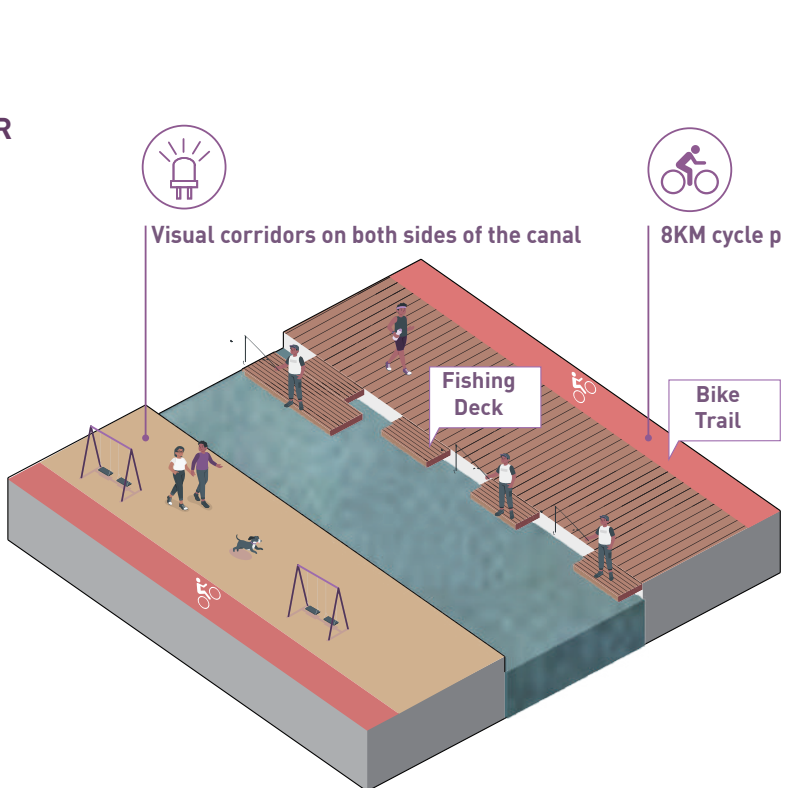
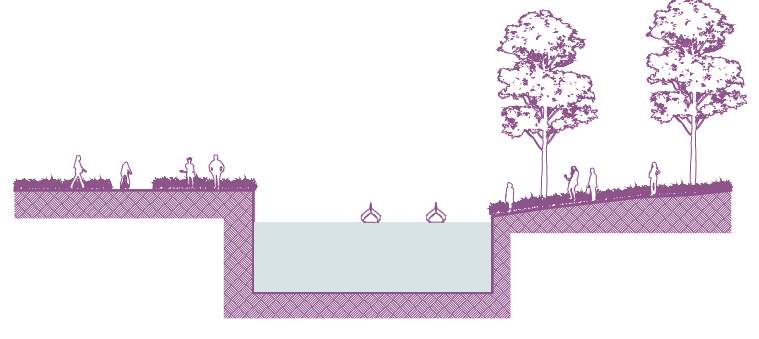
Navigli Diagram



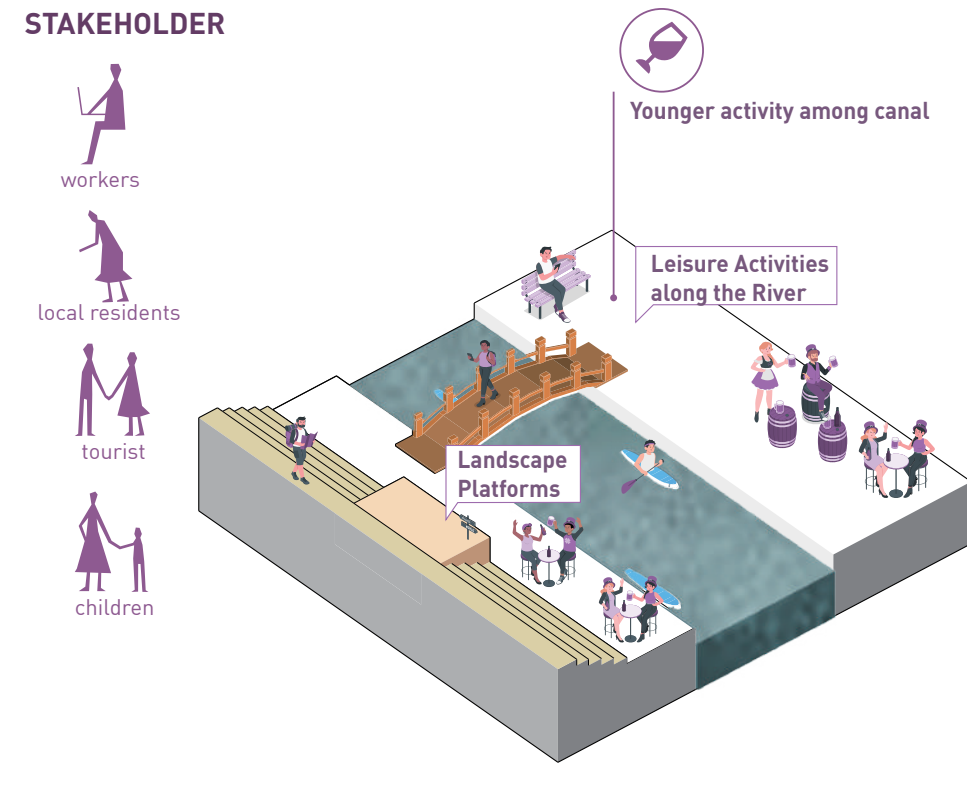
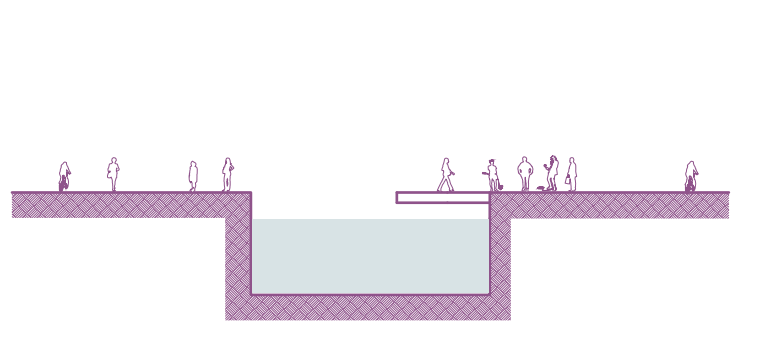
1. CANAL PLAZA



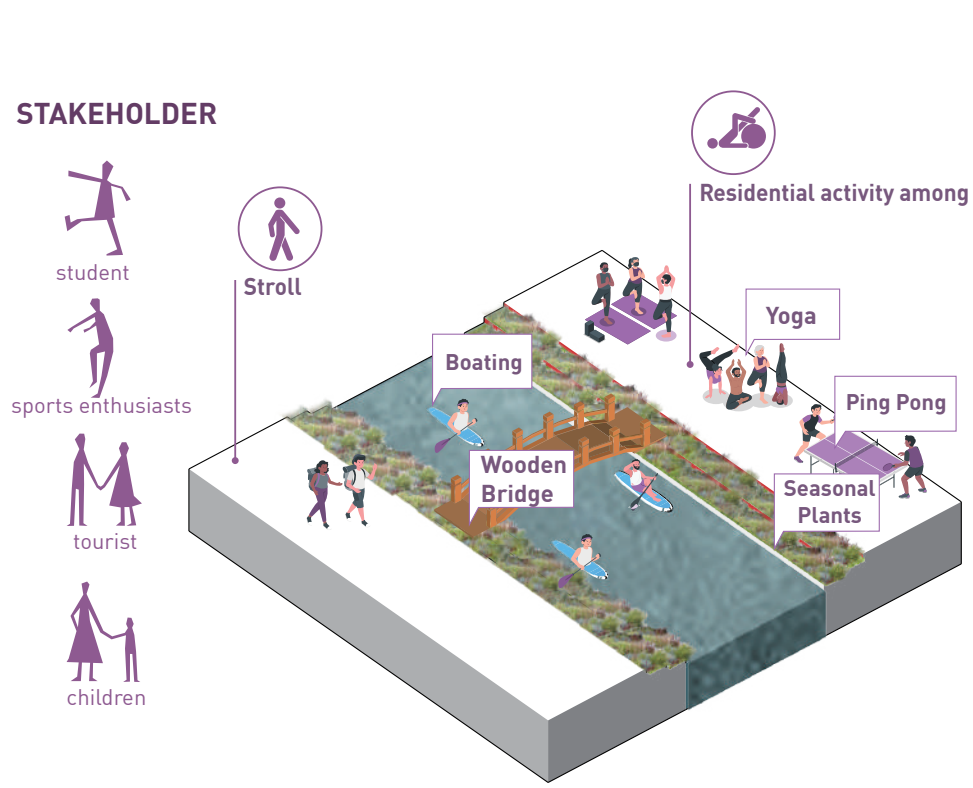
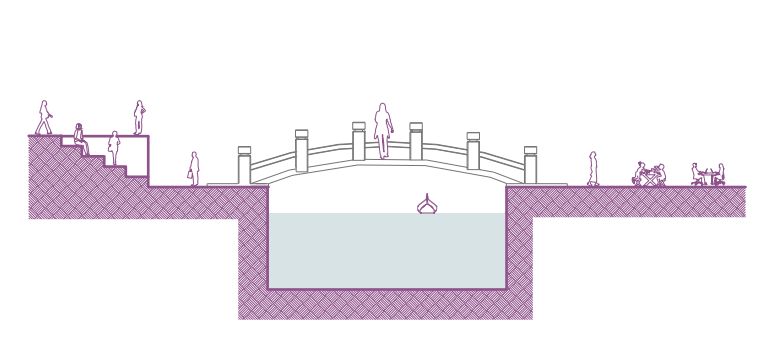
2. RIVER WALK



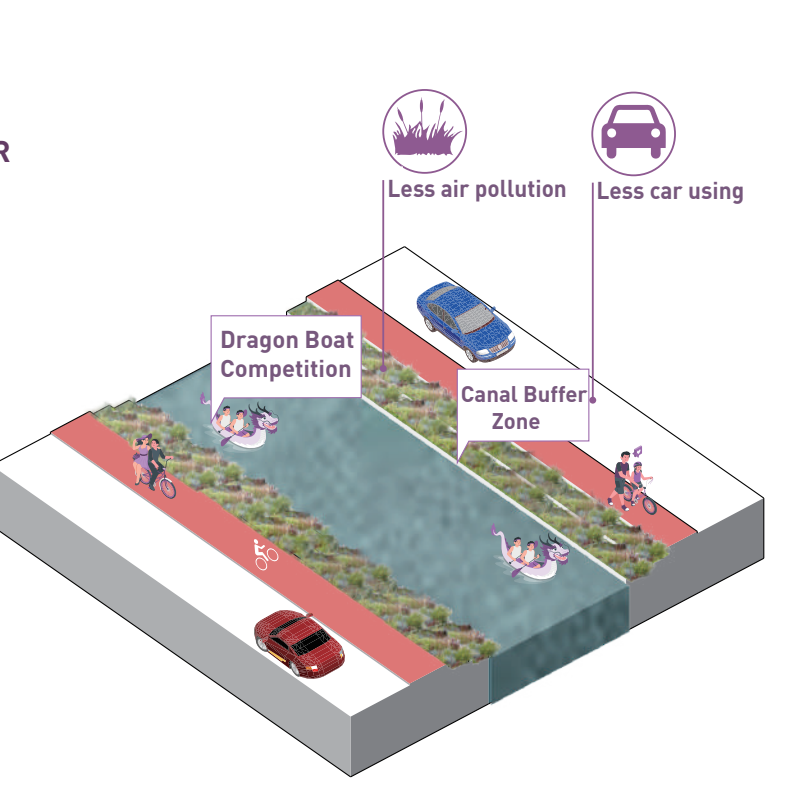
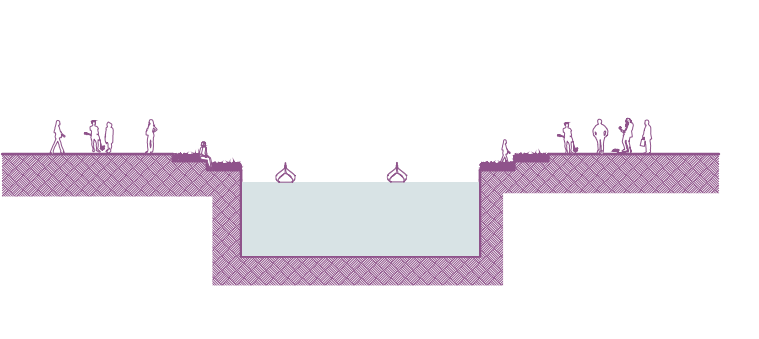
3. FISHING PLATFORM



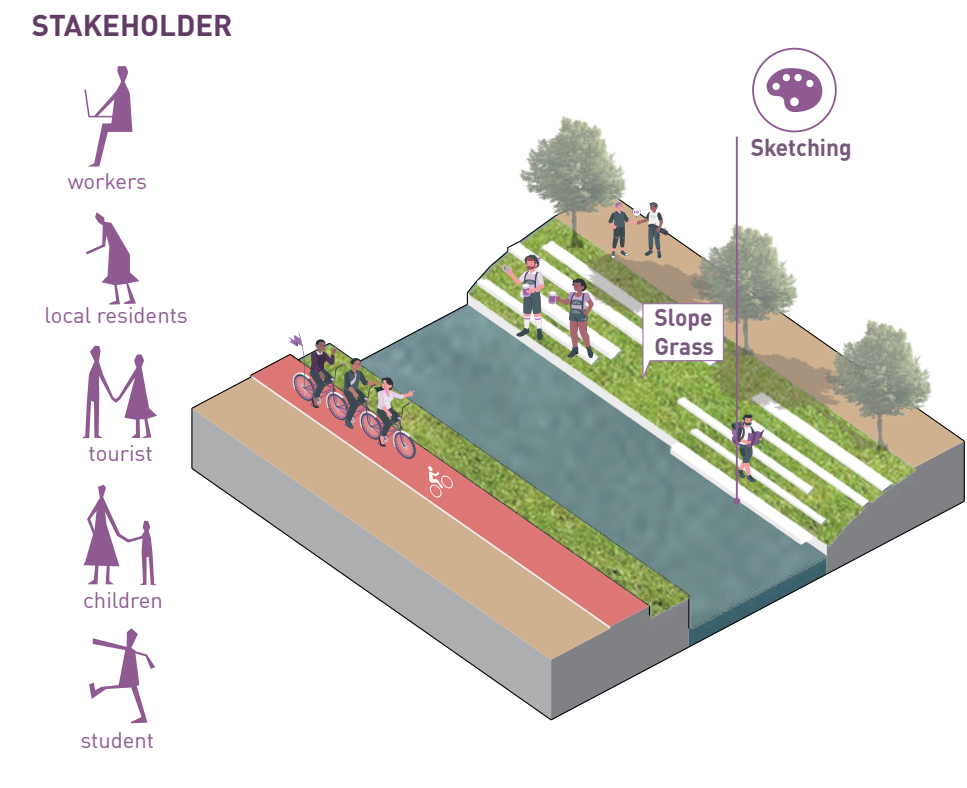
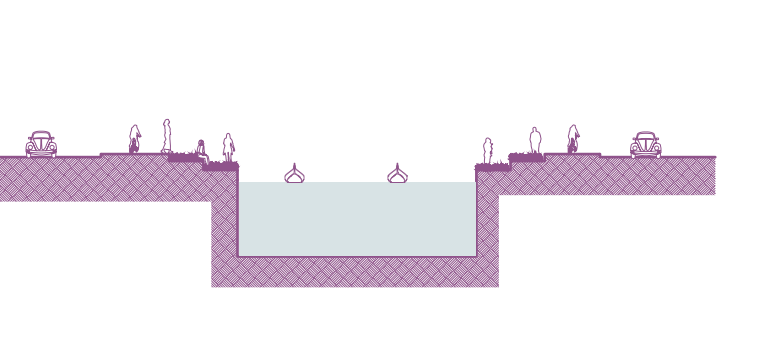
4. CANAL THEATRE



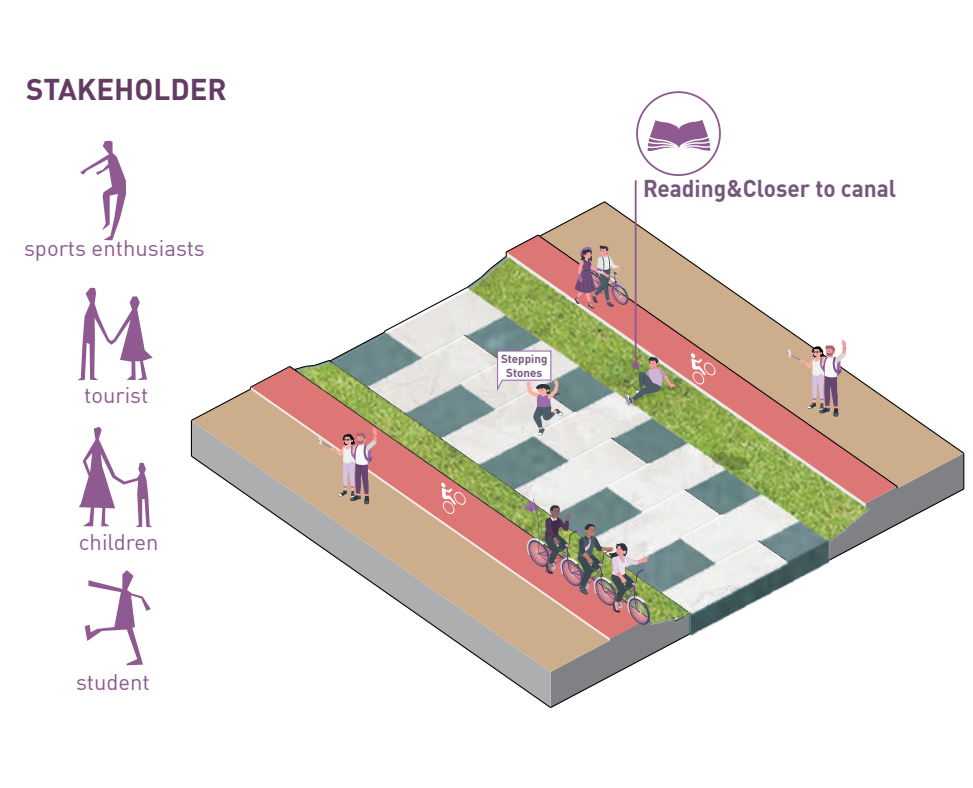
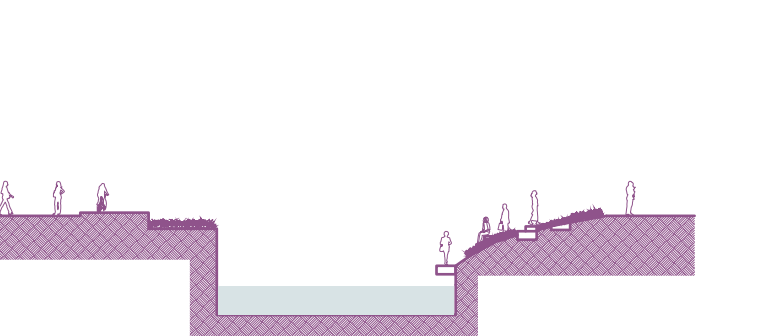
5. CANAL SPORTS STUDIO



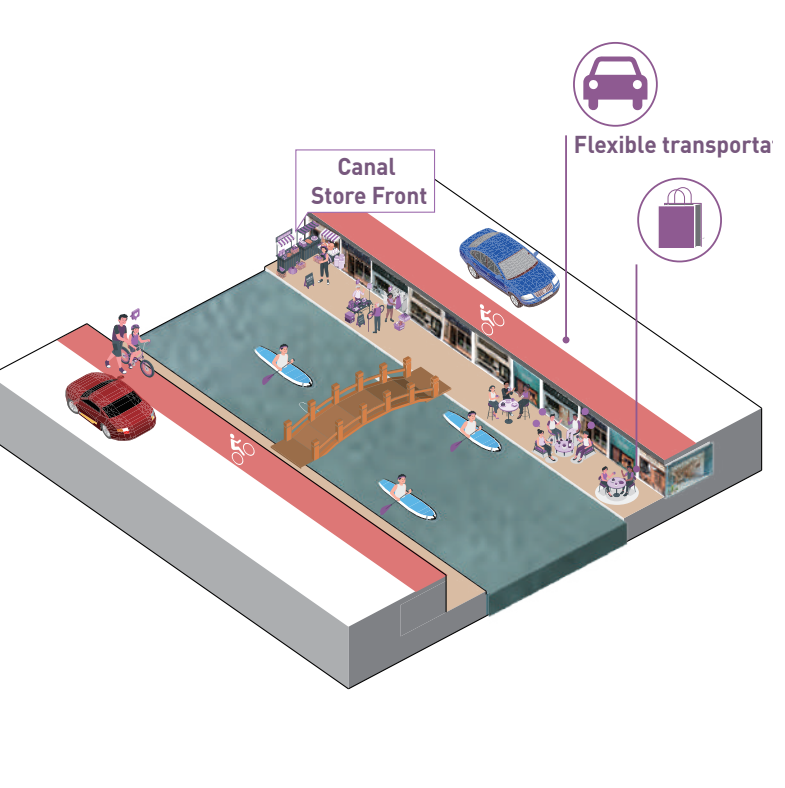
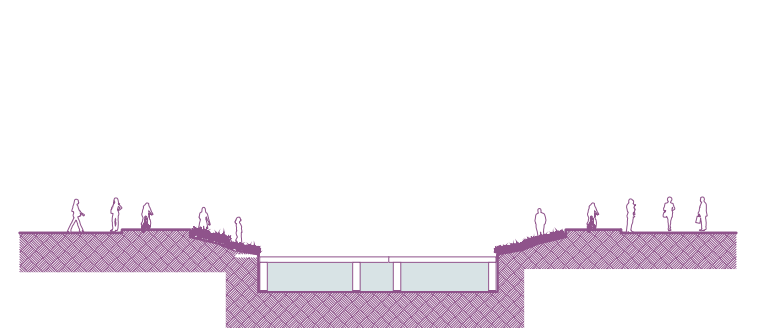
6. JETTY



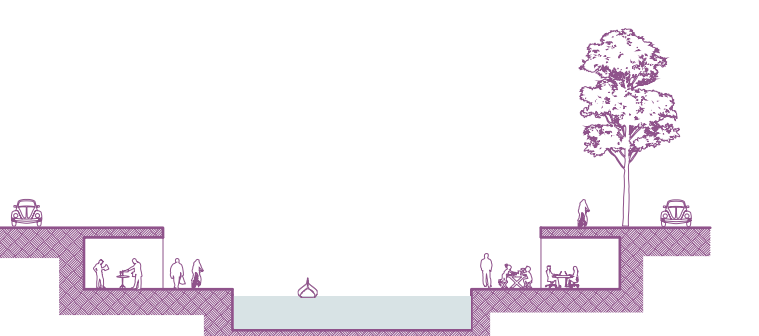
7. GRASS THEATRE



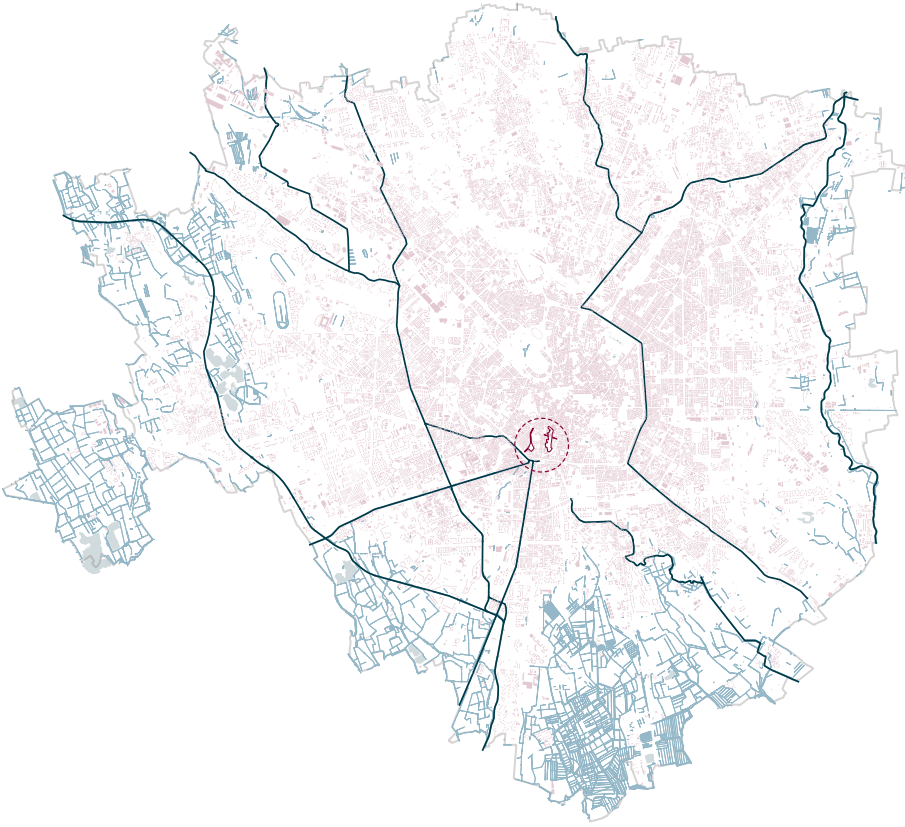
8. CONTEMPORARY BRIDGE



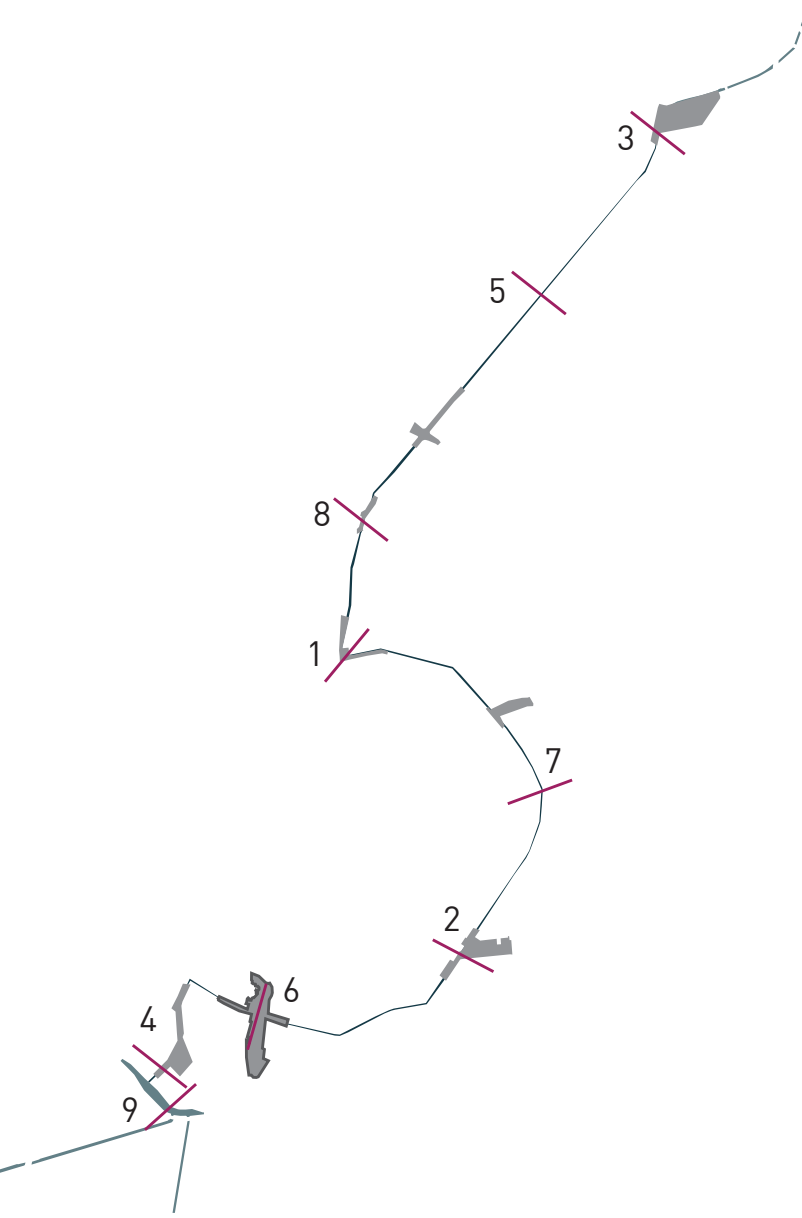
9. ELEVATED ROAD



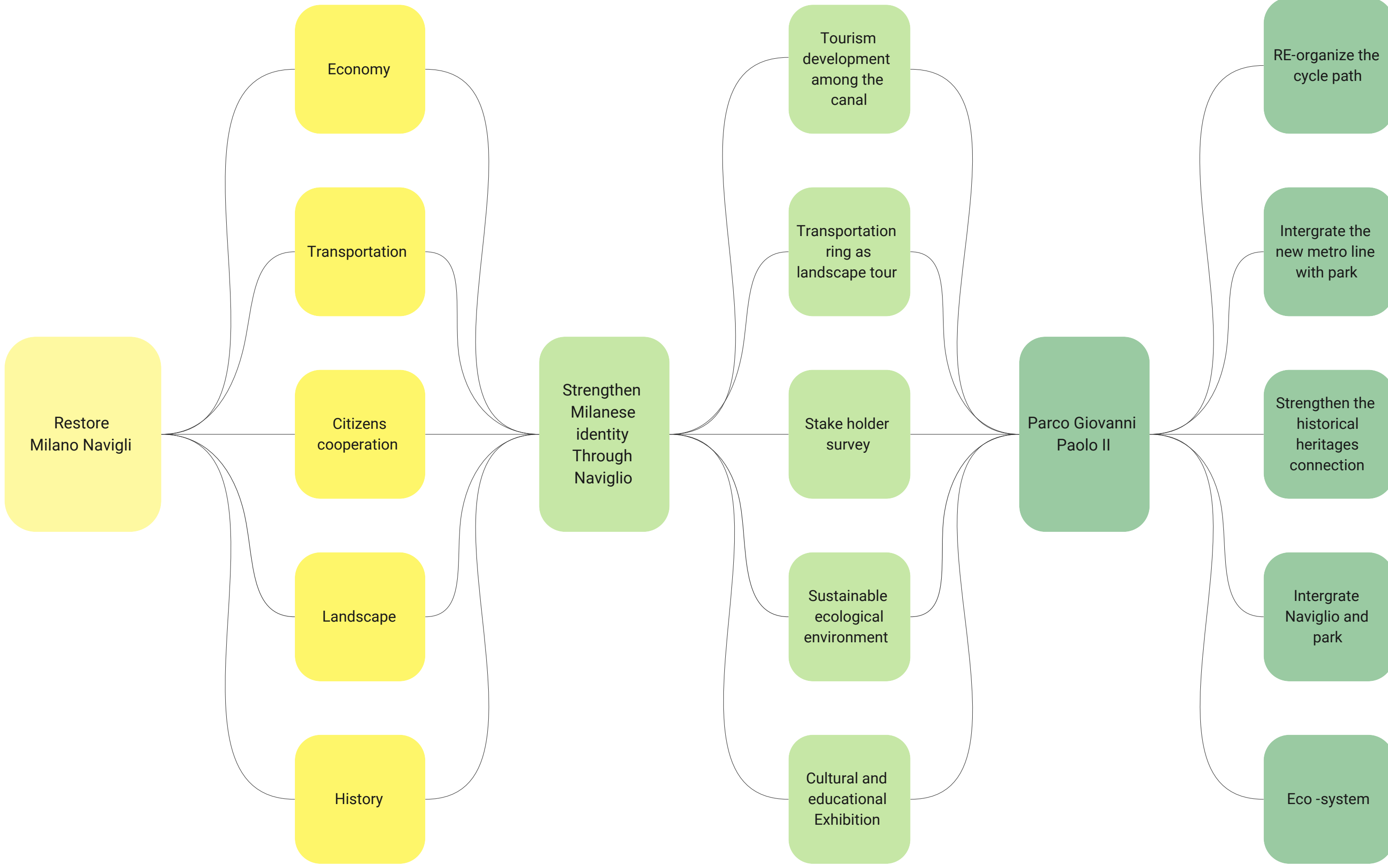
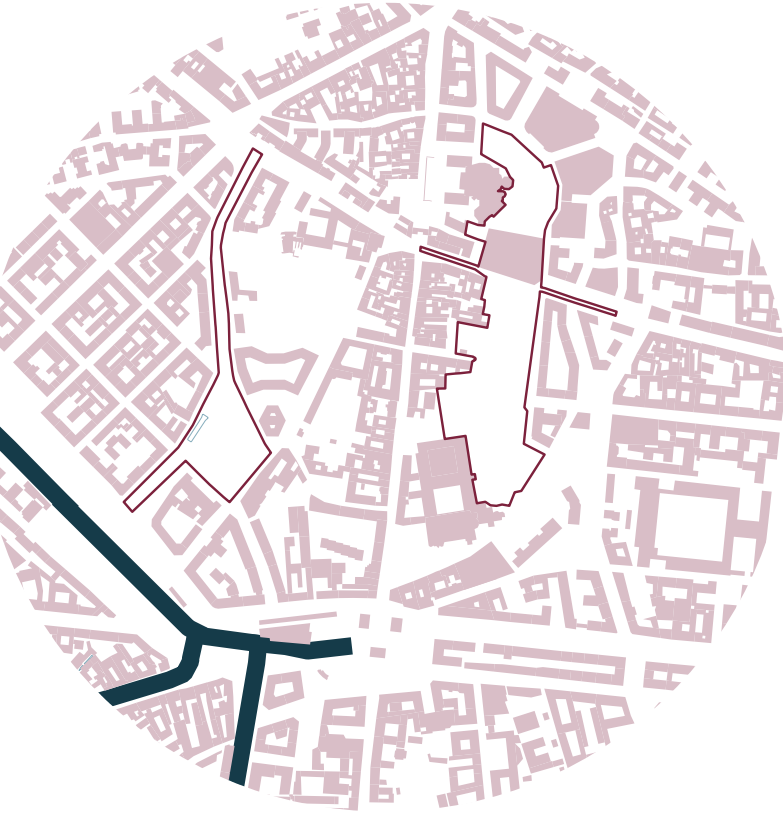
1.Basic Research of Milan



2. Naviglio strategy



3.Parco Giovanni Paolo II: A Case Study Analysis





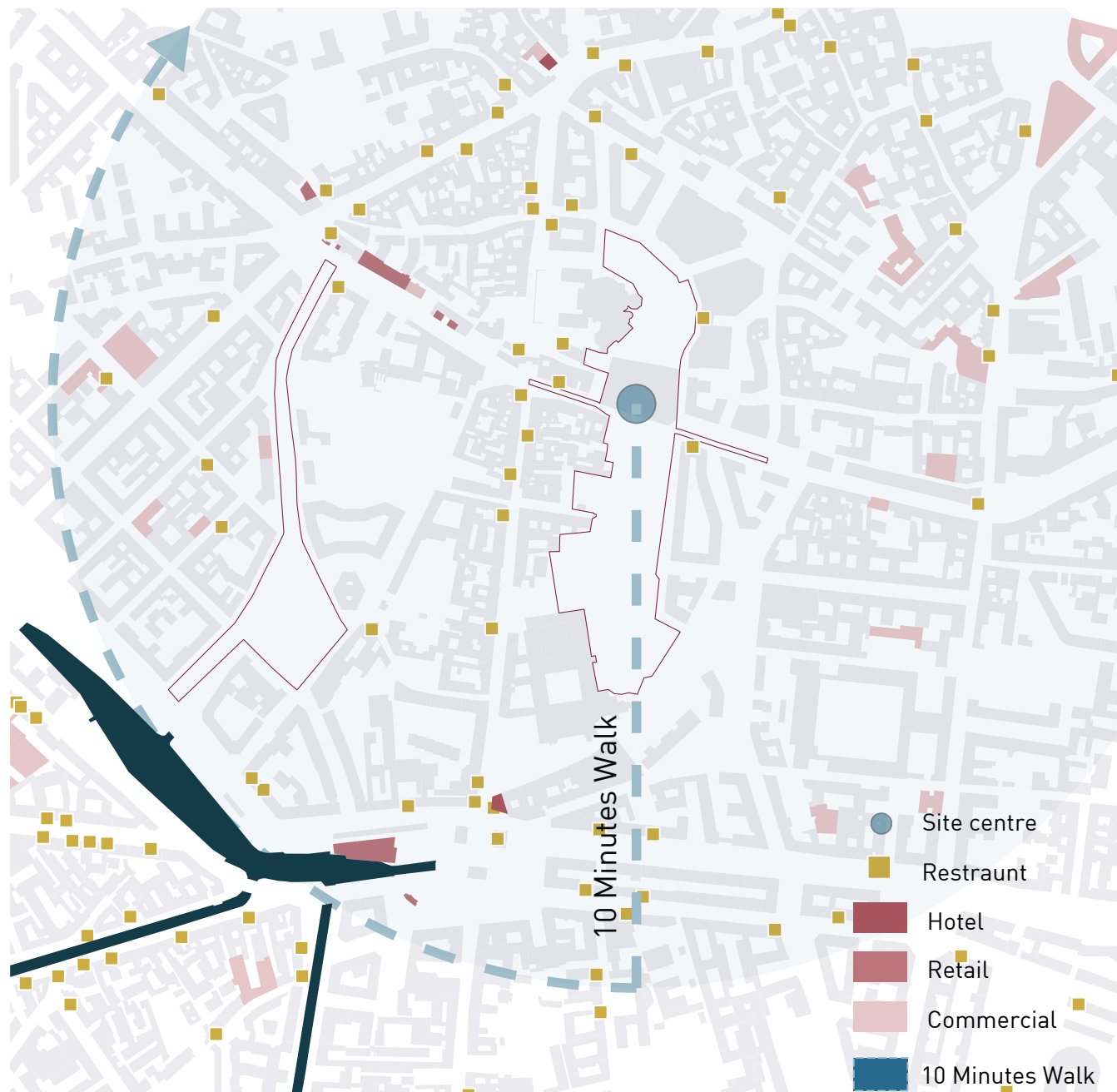
## Park Surrounding analysis



## Temperature



**NDVI- Normalized difference vegetation index**

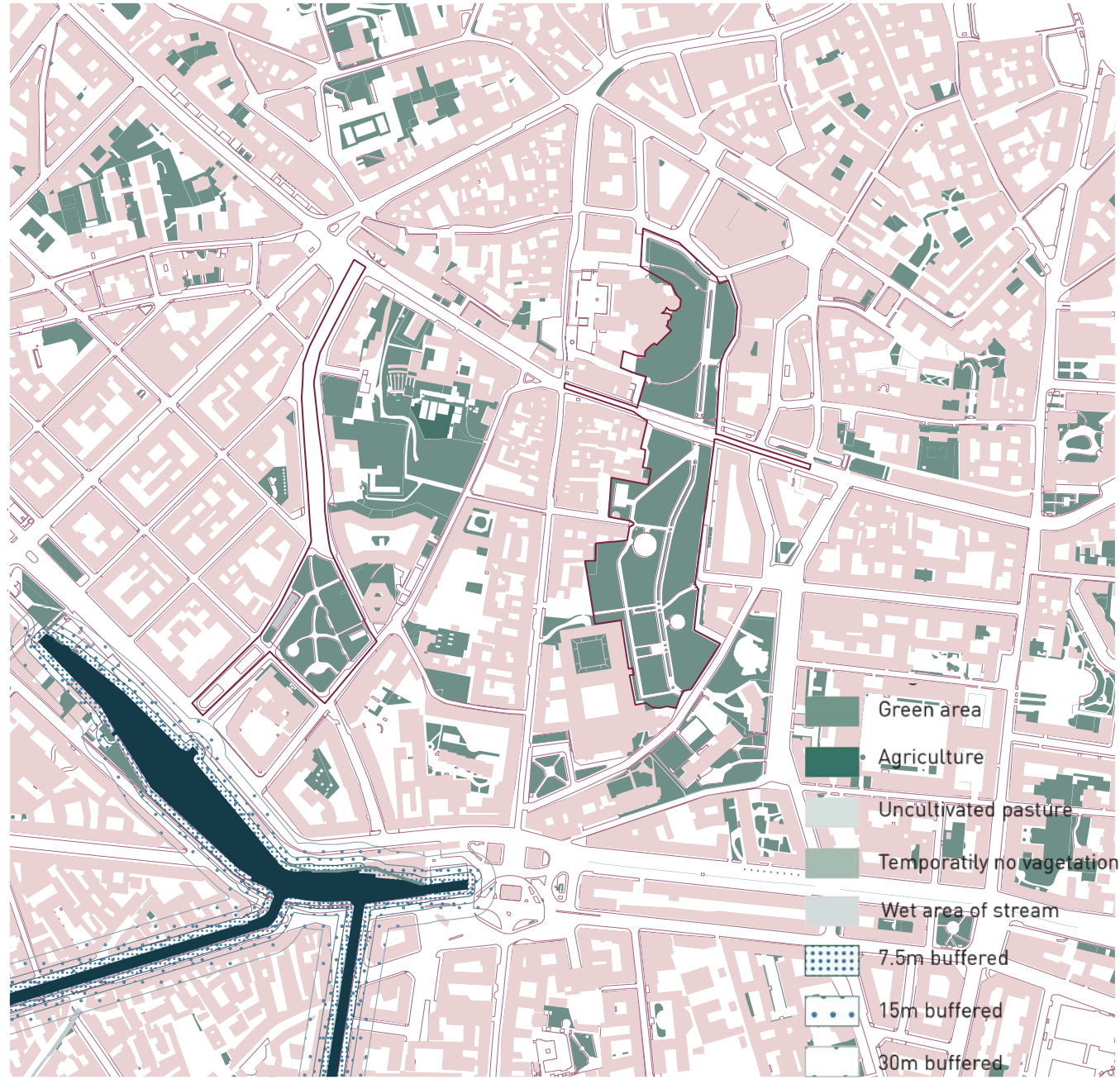


**Facility**

 **Politecnico di Torino**

Dipartimento di Architettura e Design

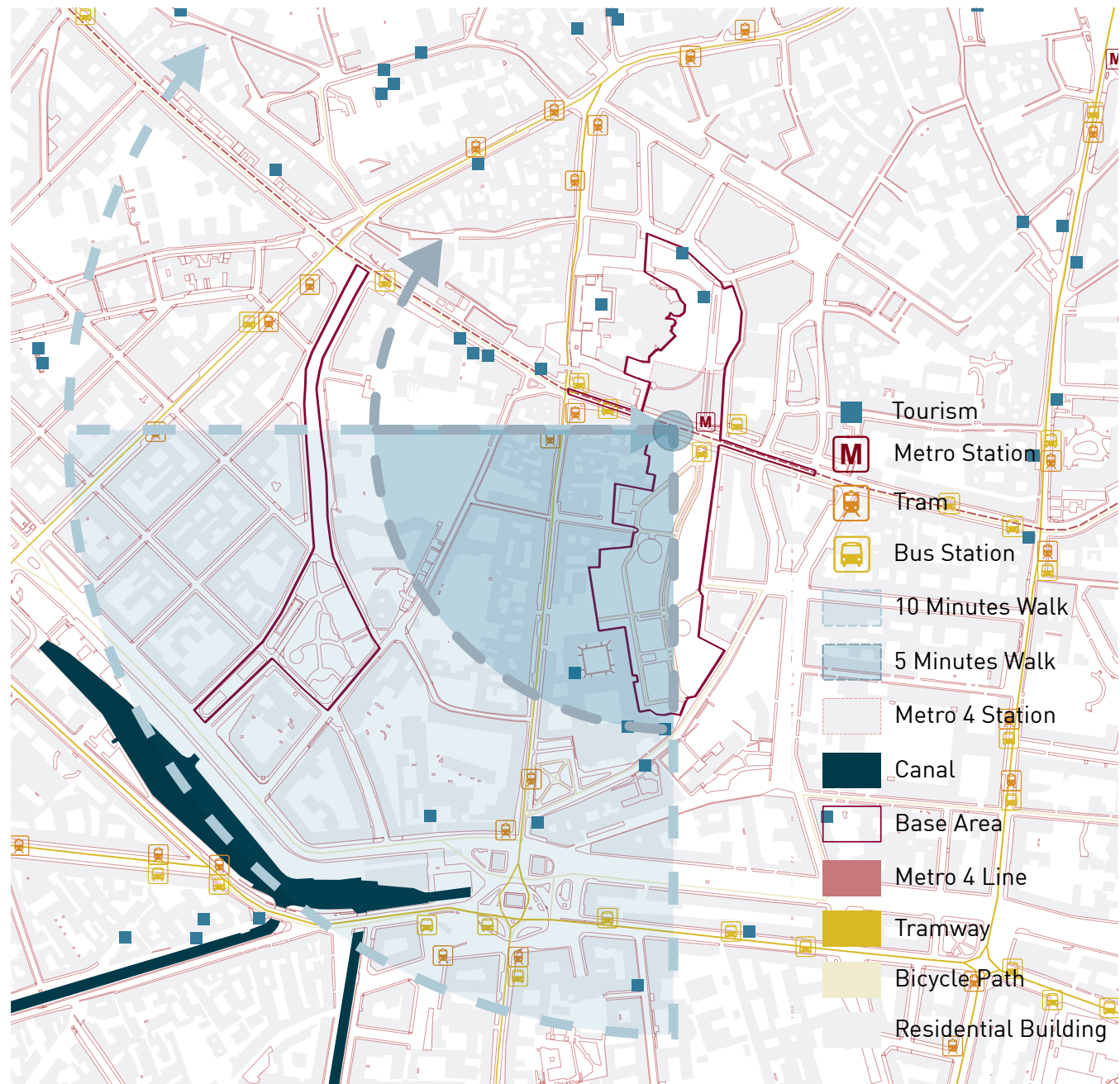
Final thesis: Preliminary urban design proposal for "Parco Giovanni Paolo II" site in Milan  
- A detail subject of Milan Navigli Canal Challenge



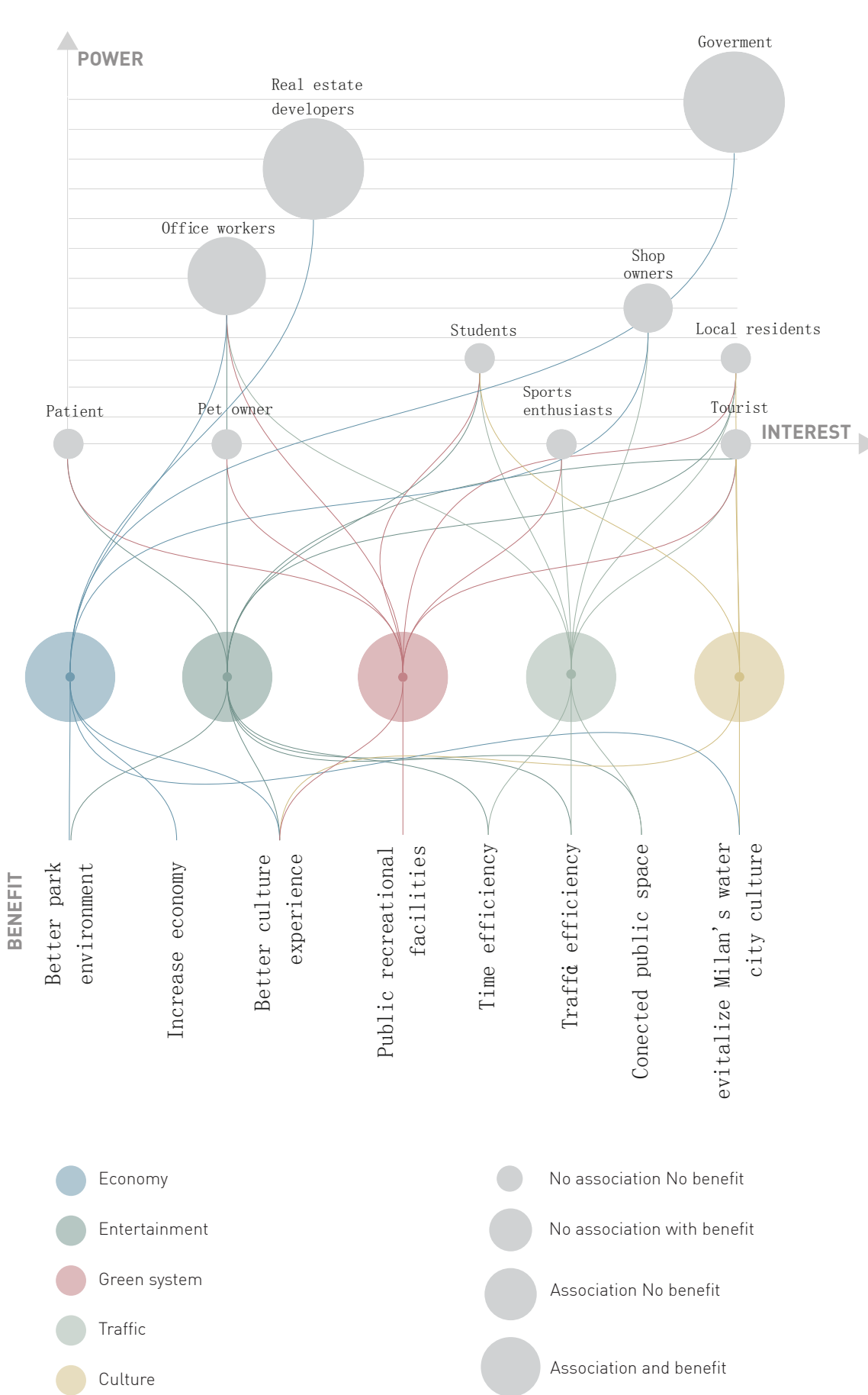
## Vegetation&Water system



## Architecture



## Transportation



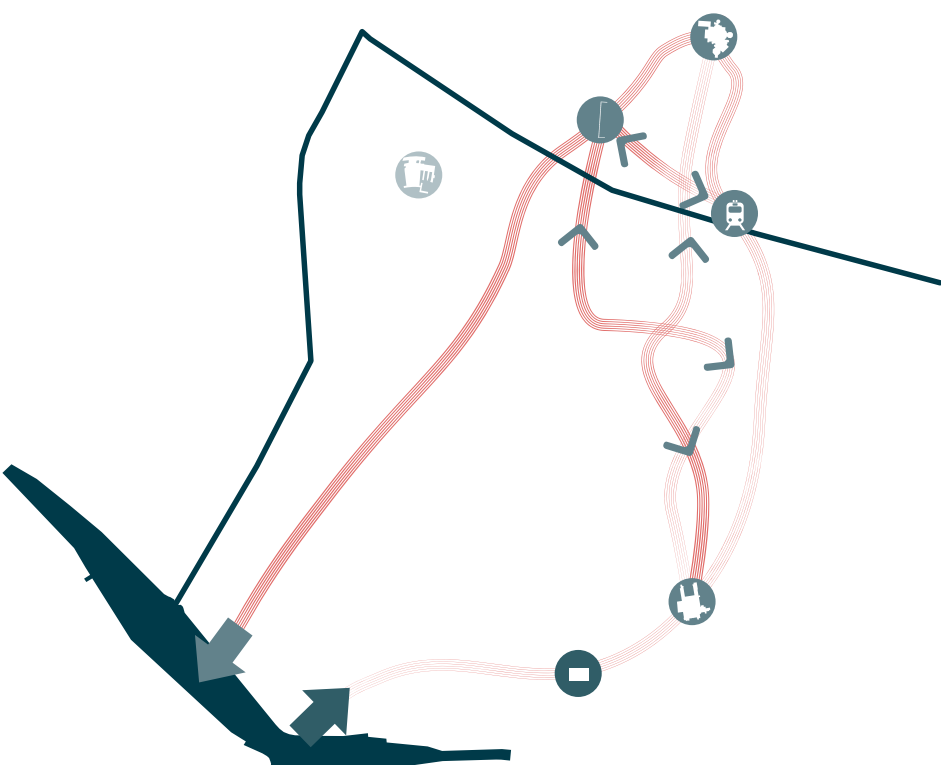
## Parco Giovanni Paolo II Analysis



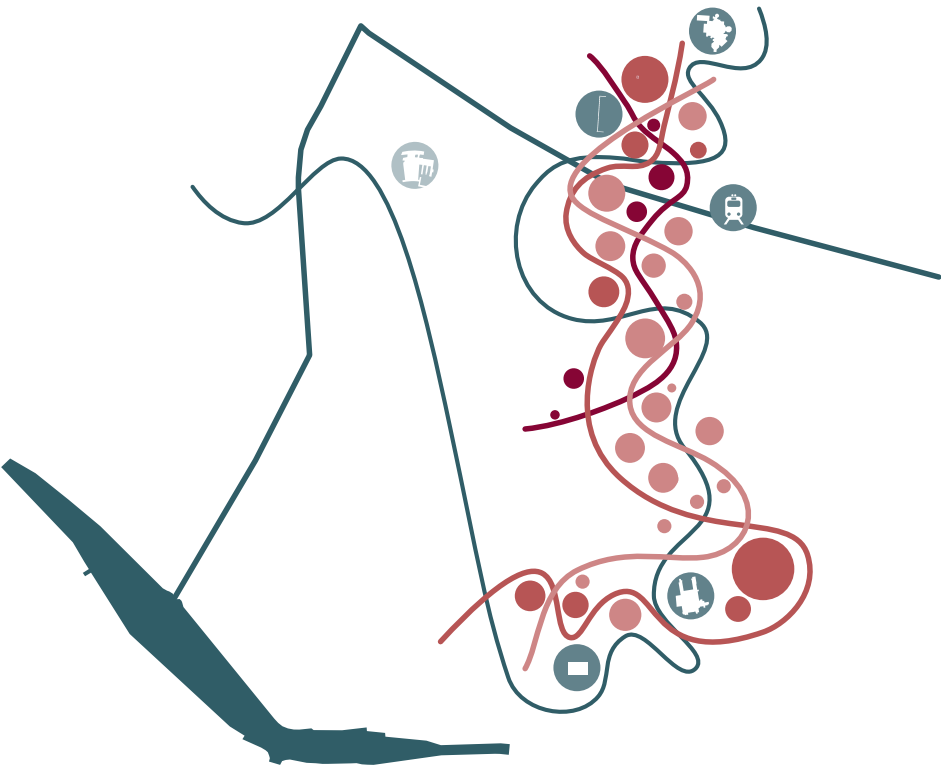
Student:	Supervisor:
Mao Jingtian	Artuso Mario
Yang Xiaoyu	Mellano Paolo



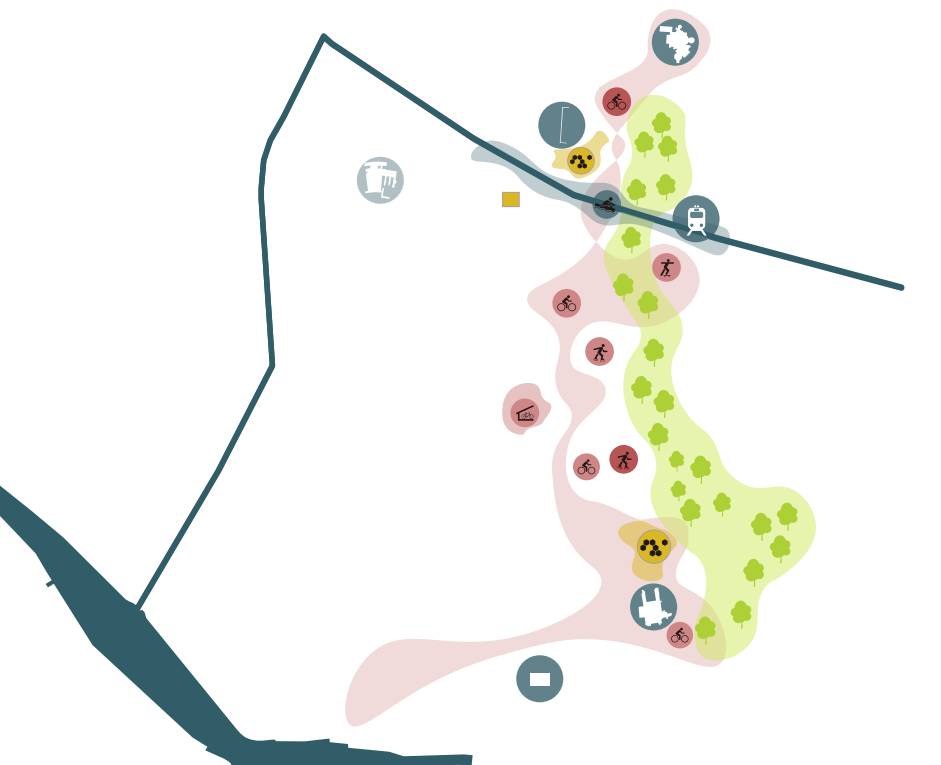
Park Concept



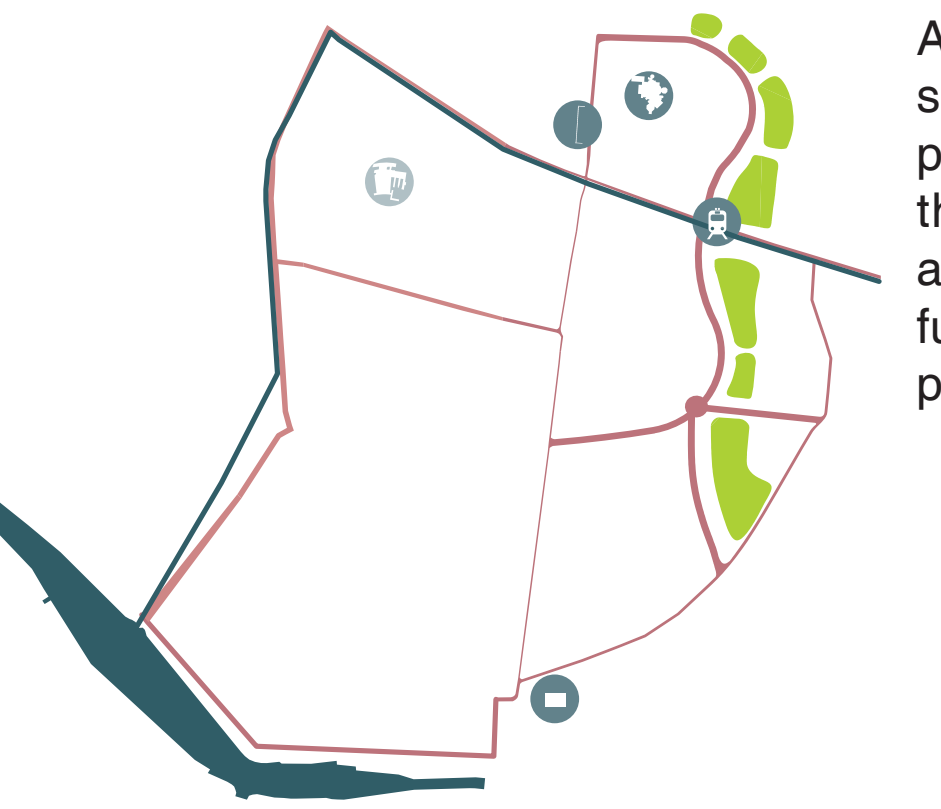
1.Connections between important spots



2. Activities Penetration in park



3.Function allocation accroding to stakeholder



4. Onsite allocation

Establishing links between important buildings and the canal

It has the advantage of next to archaeological park and the university, there will be historical, sporting and educational activities taking place on the site

The design elements are taken from the curved form of the river and the range of activities is set according to the distribution of activities

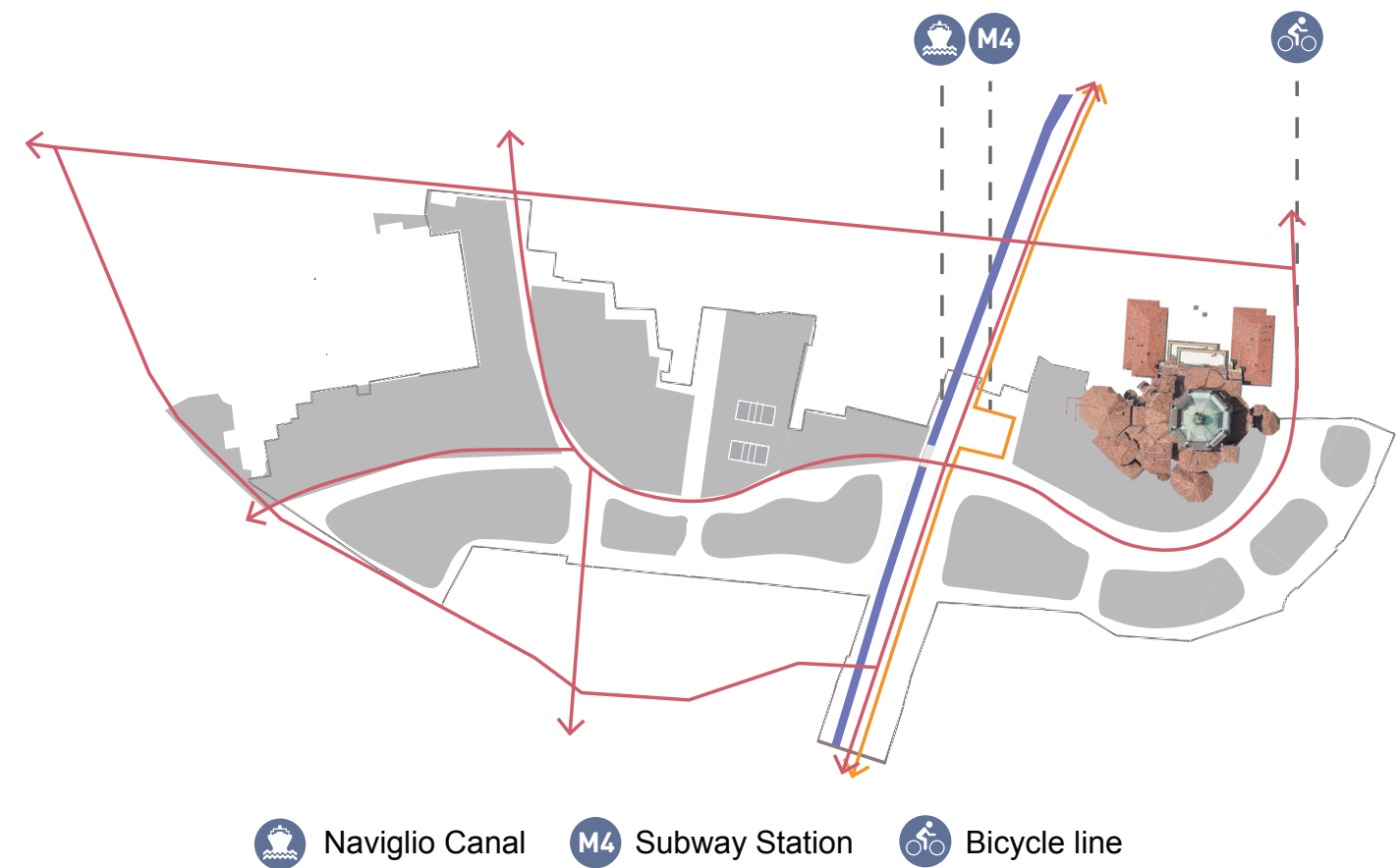
A cycle path will run through both parks, strengthening the connection between the public spaces and regulating the use of the footpaths and cycle paths, meanwhile according to the bike path make the specific function area. Make the users visit the whole park easily.

Parco Giovanni Paolo II Design Proposal Master plan



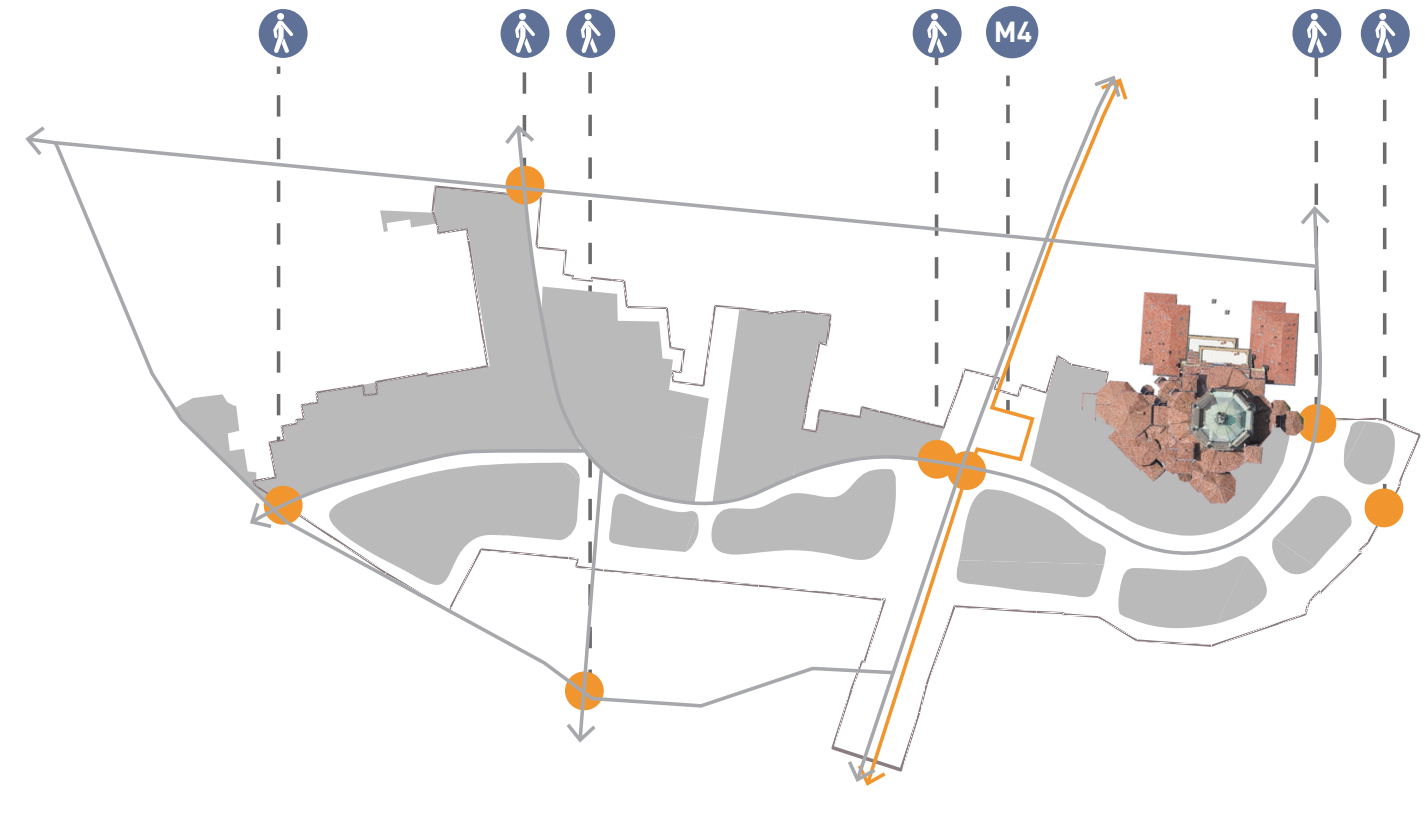
- New design**
- 5 Pet park
  - 6 Ecological Educational Garden
  - 7 Red bicycle path
  - 8 Subway station
  - 9 Water font
  - 10 Skateboard plaza
  - 11 Grass ground
  - 12 Fitness area
  - 13 Bicycle Parking
  - 15 Outdoor exhibition
  - 16 Bar
  - 17 Book bar
- Historical building**
- 1 Porta Ticinese Medievale
  - 2 Colonne di San Lorenzo
  - 3 Basilica San Lorenzo Maggiore
  - 4 Cappella di Sant'Aquilino
  - 14 Museo Diocesano
  - 18 Basilica di Sant'Eustorgio

Mobility lines



- Naviglio Canal
- M4 Subway Station
- Bicycle line

Access



- Entrance
- M4 Subway Station
- Padestrain

General Zoning



- 1 Education
- 2 Exhibition
- 3 Sport
- 4 Green space
- 5 Naviglio canal
- 6 Plaza
- 7 Commerce

Programming



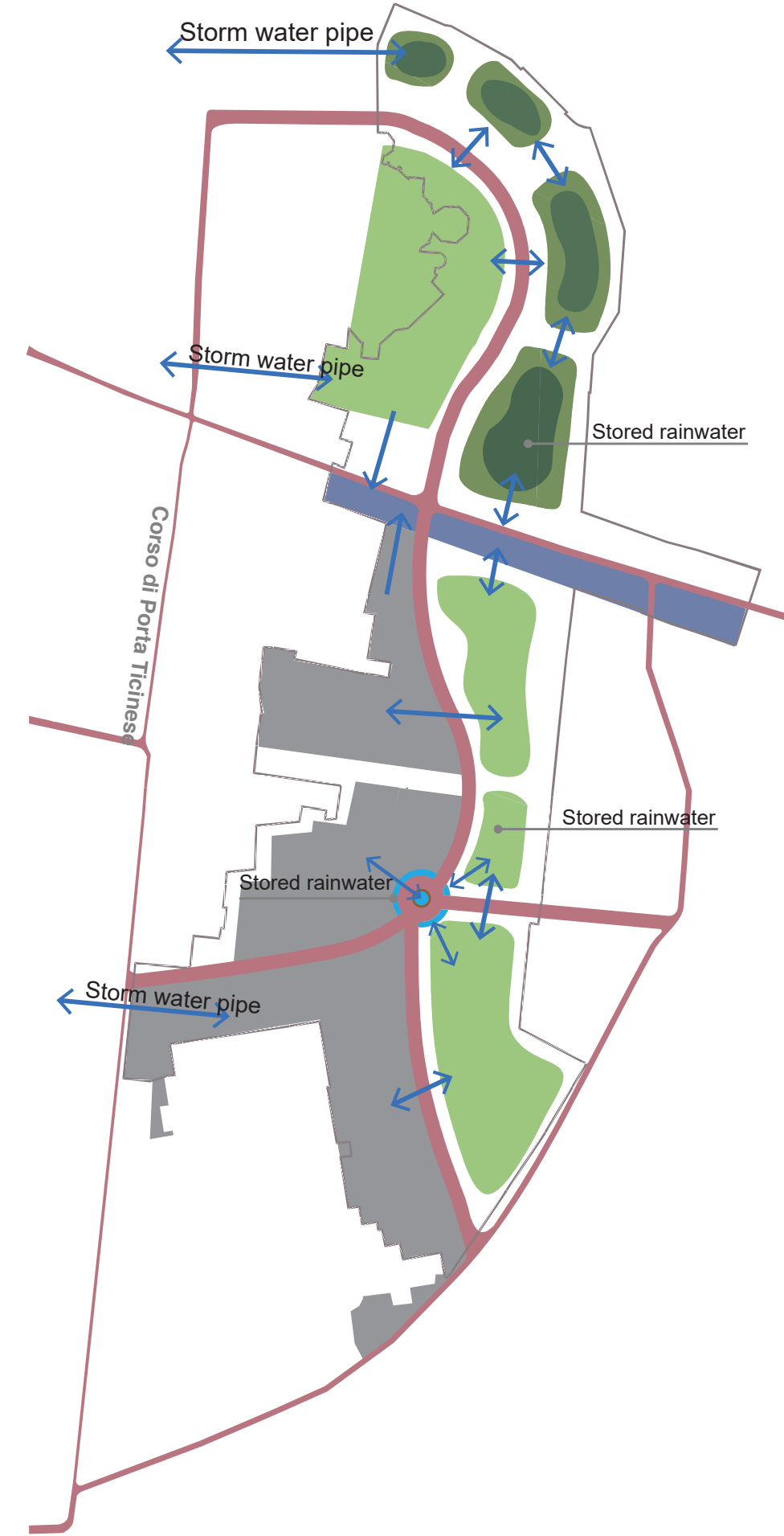


Master plan



Why sponge city?

Water flow

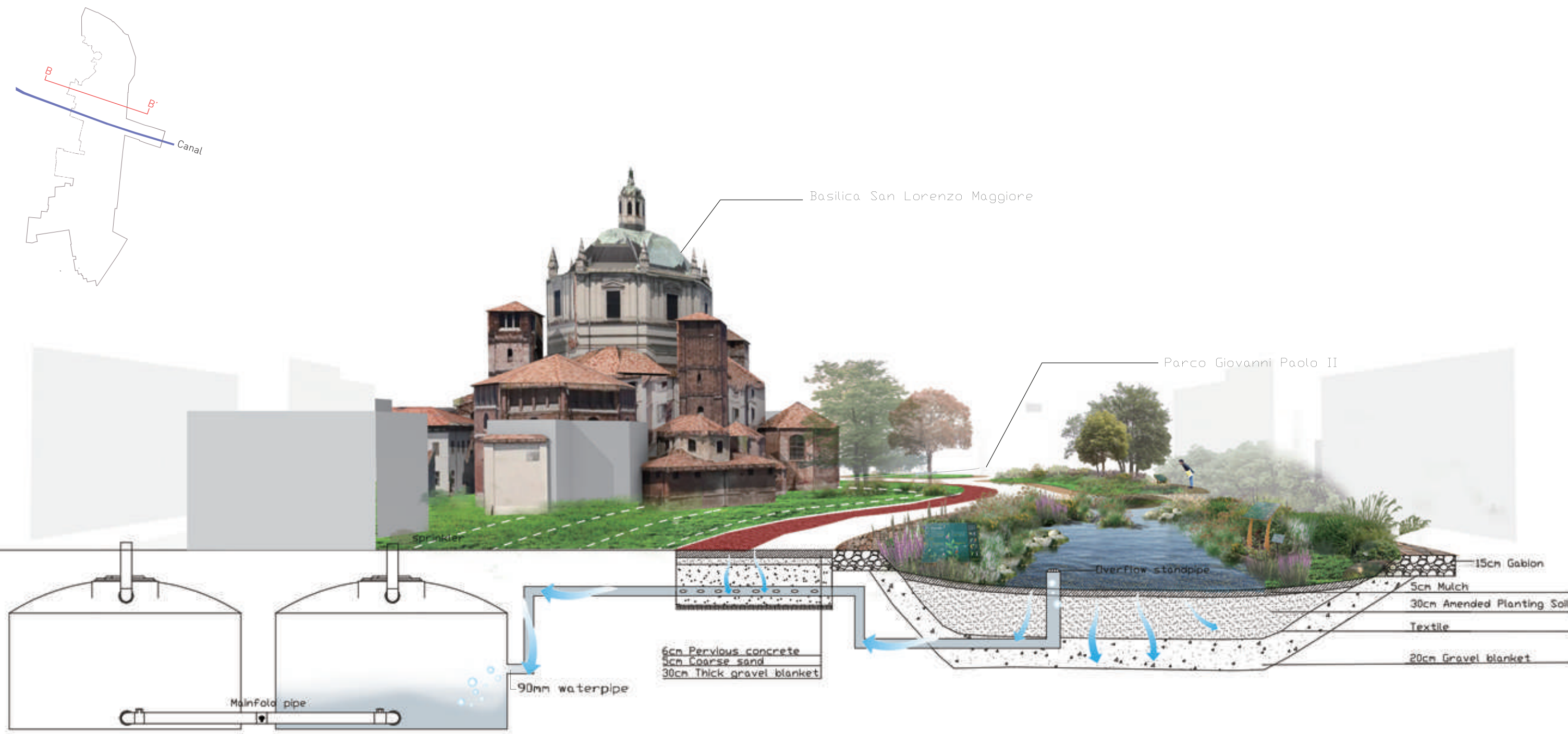


There are **407** properties in Milan that have greater than a **26%** chance of being severely affected by flooding over the **next 30 years**

Sponge City  
How sponge city works



Section A-A' Drawing not in scale



Section B-B' Drawing not in scale

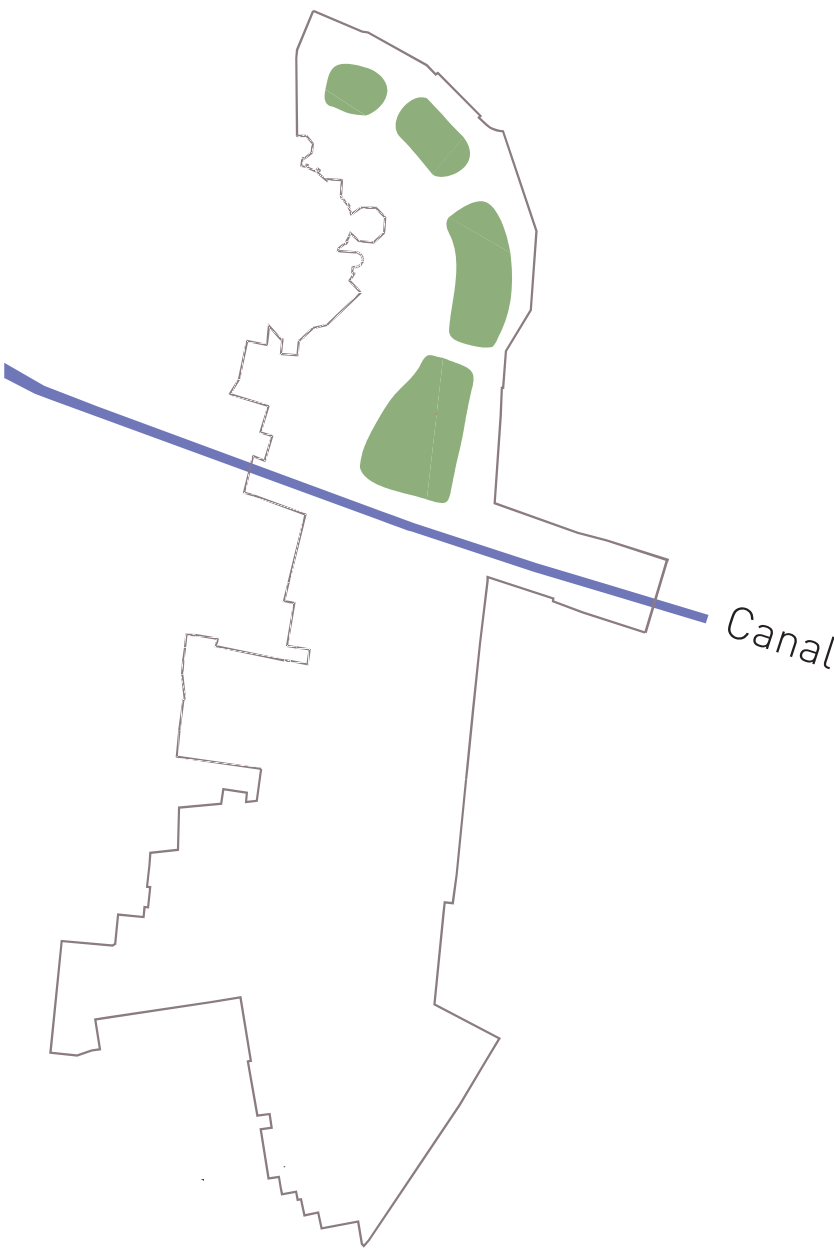


Master plan



Educational Garden  
Why educational garden? How the educational garden works?

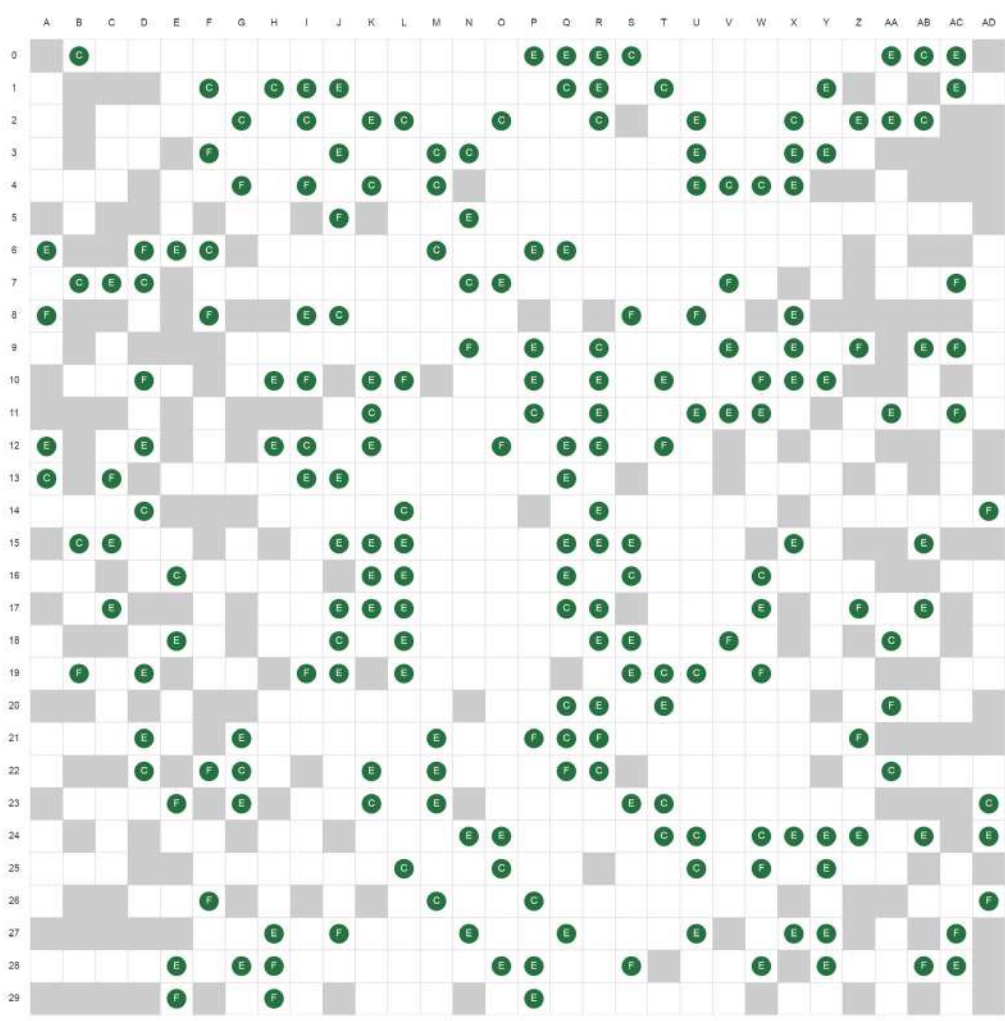
Park position



Plants position



Grass matrix

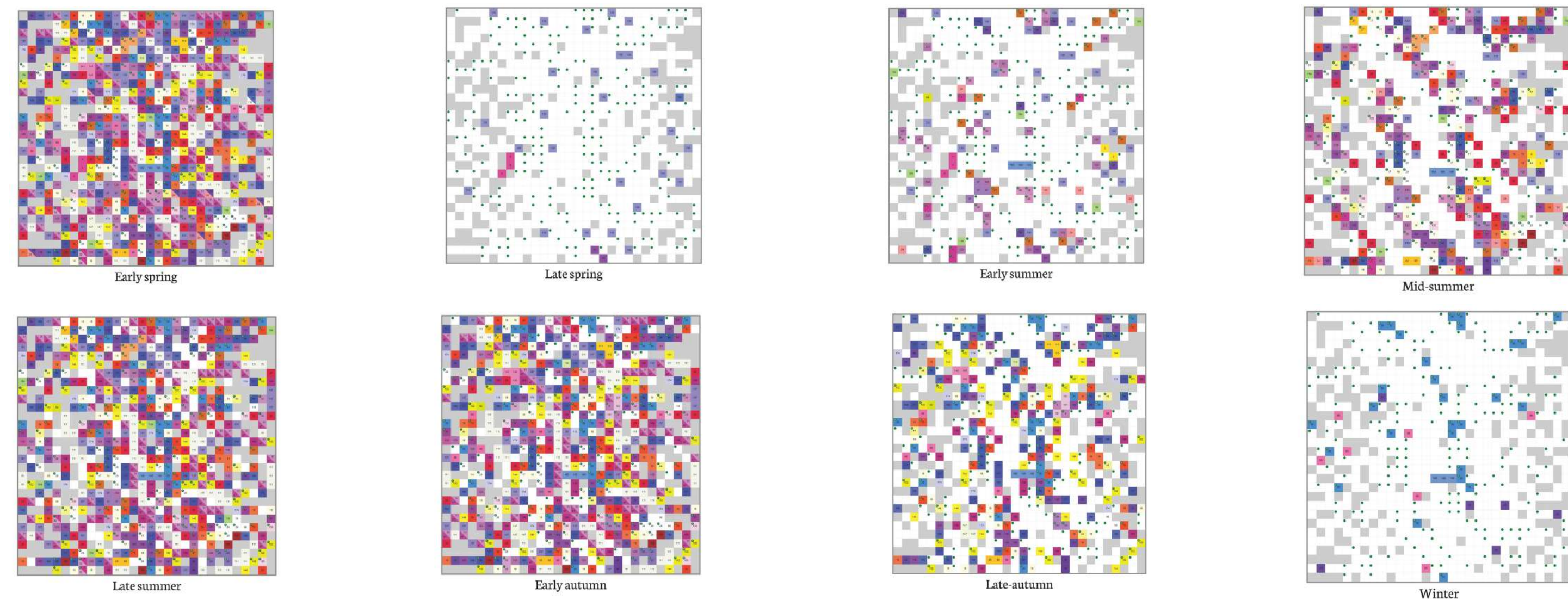


Green dots show where to place grasses. These are planted under certain plants that lose theirleaves quickly.This grassy matrix' helps to prevent weeds spreading over bare soil and provideshabitat for pollinators and other wildlife.

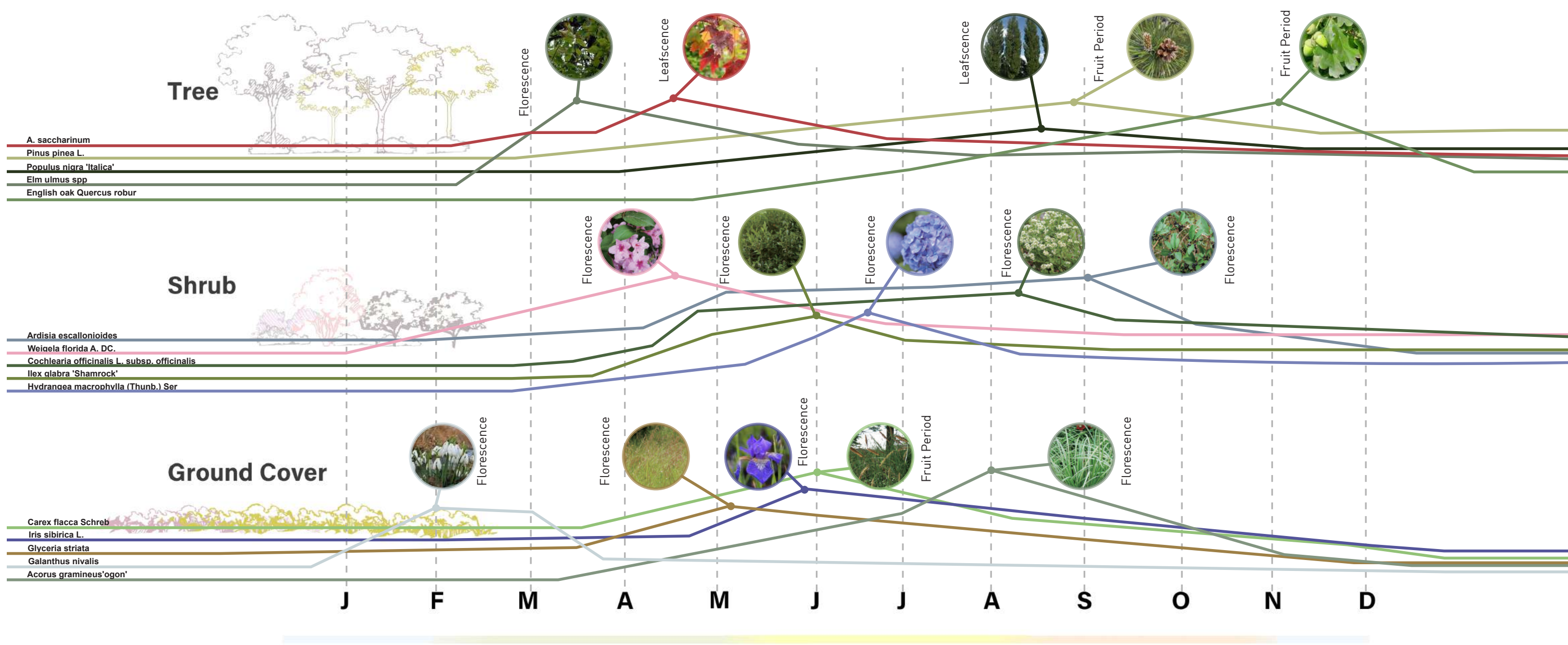
From the information research about an citizen requests vote we found out that for Milanese, the most important function of the park is educational function.

Therefore, we intend to place rain gardens with educational functions around the church to educate students and visitors in the neighborhood by showing the cycles and habits of local plants in Milan.

Sesonal views



Growth cycle(Main reprenstive)





# Parco Giovanni Paolo II Axonometric View

Ariel view



New design

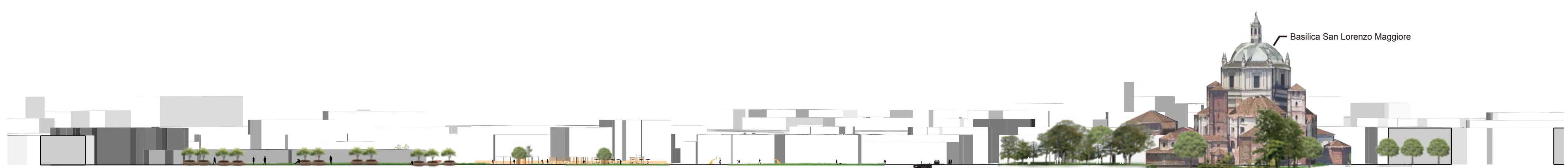
- 5 Pet park
- 6 Ecological Educational Garden
- 7 Red bicycle path
- 8 Subway station
- 9 Water font
- 10 Skateboard plaza
- 11 Grass ground
- 12 Fitness area
- 13 Bicycle Parking
- 15 Outdoor exhibition
- 16 Bar
- 17 Book bar

Historical building

- 1 Porta Ticinese Medievale
- 2 Colonne di San Lorenzo
- 3 Basilica San Lorenzo Maggiore
- 4 Cappella di Sant'Aquilino
- 14 Basilica di Sant'Eustorgio
- 18 Arco di Porta Ticinese

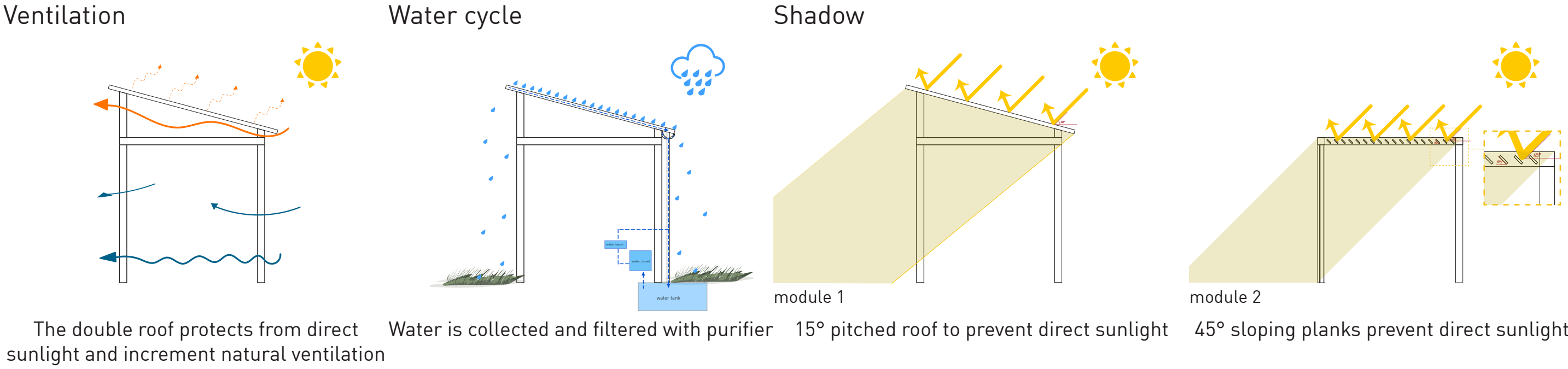
Section C - C' 1:500

Section D - D' 1:500

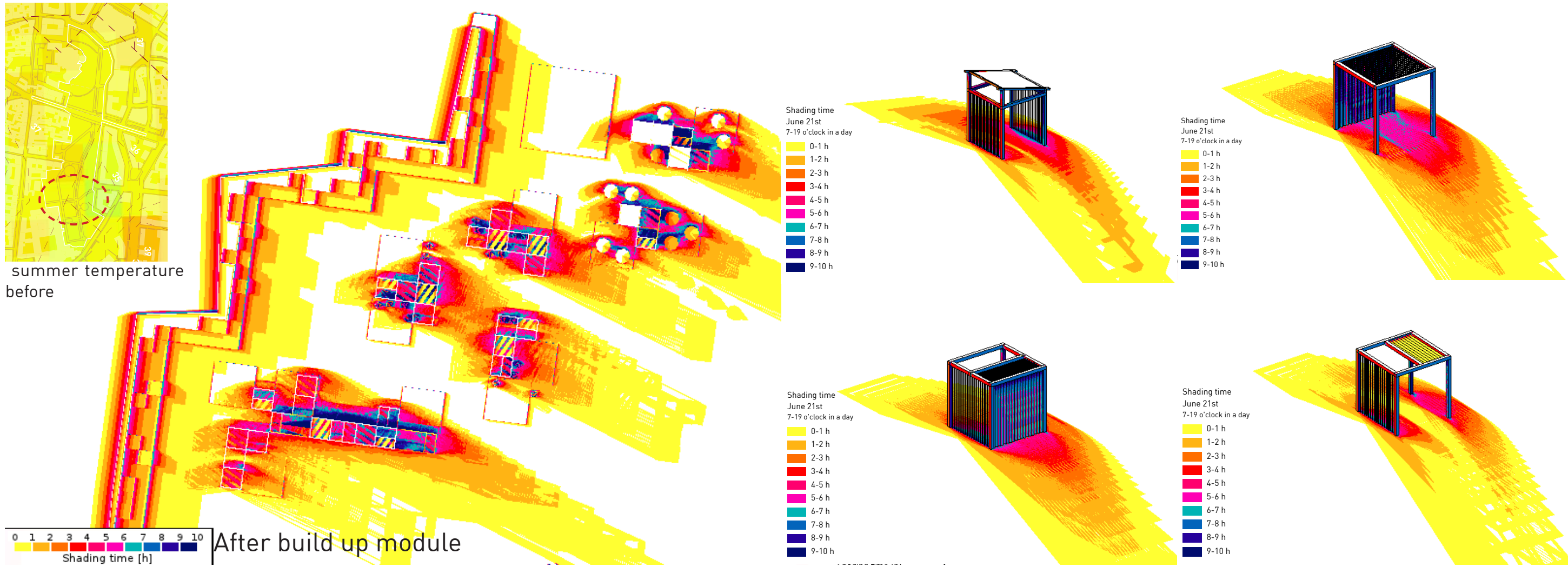




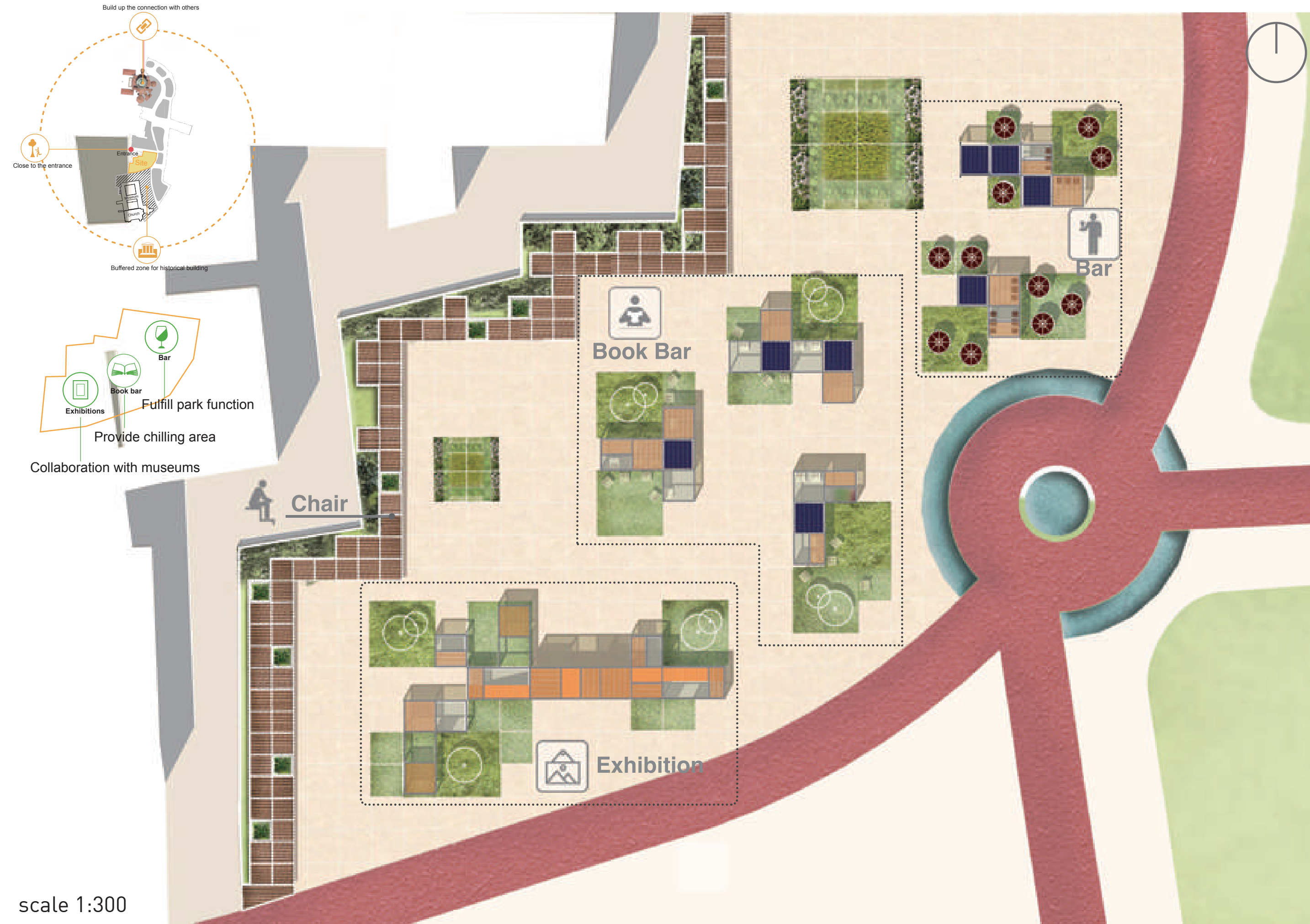
Module sustainable analysis



Shading analysis



Square plan



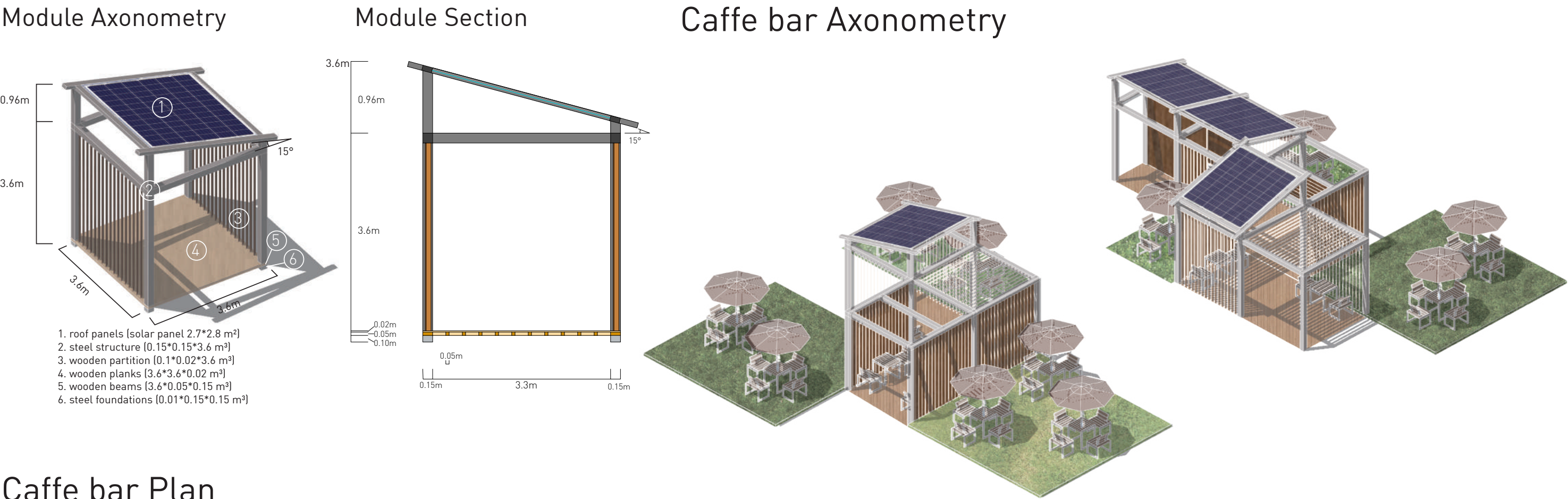
scale 1:300



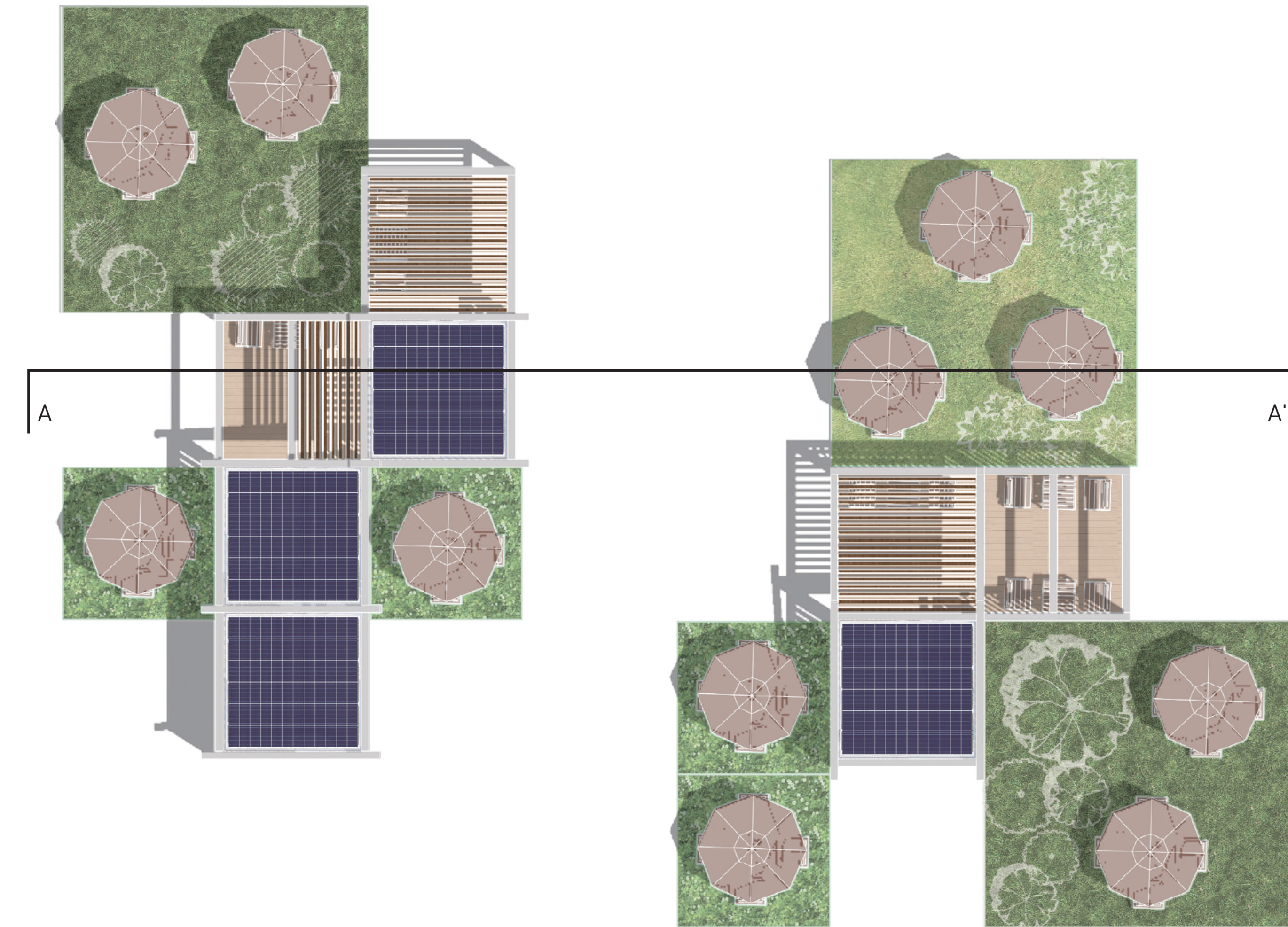
Final thesis: Preliminary urban design proposal for "Parco Giovanni Paolo II" site in Milan - A detail subject of Milan Navigli Canal Challenge

ARCHITETTURA PER IL PROGETTO SOSTENIBILE

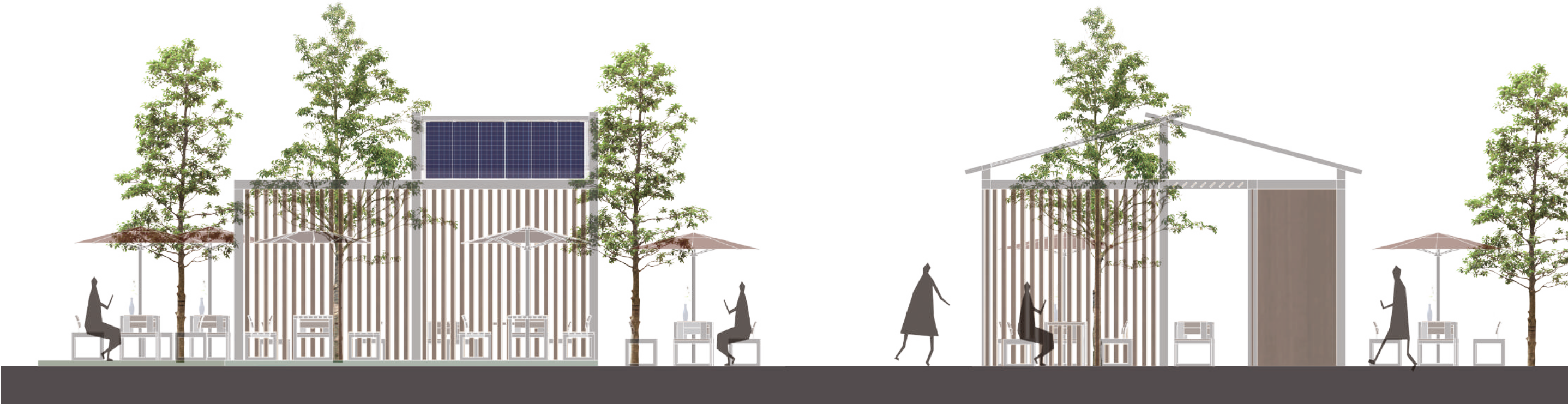
Square Design Proposal  
Module 1



Caffe bar Plan



Caffe bar section A-A'



Student:  
Mao Jingtian  
Yang Xiaoyu

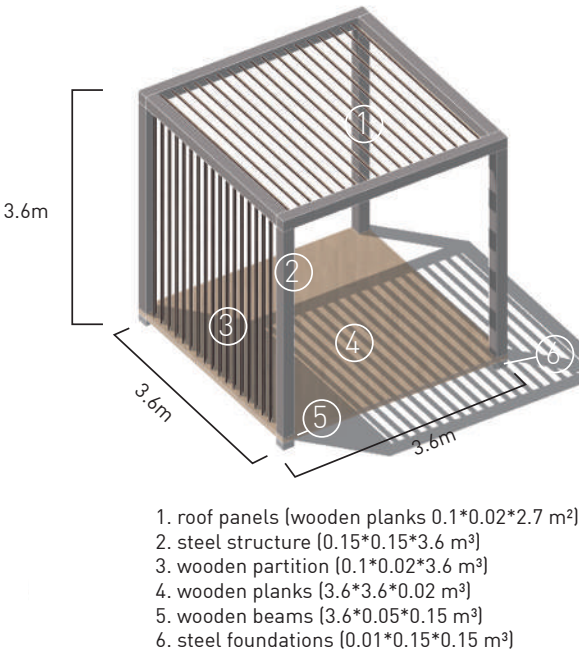
Supervisor:  
Artuso Mario  
Mellano Paolo



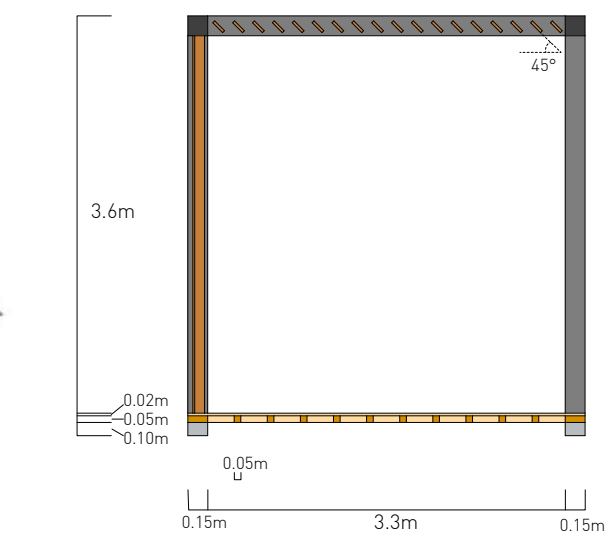
# Module Design Proposal I

## Module 2

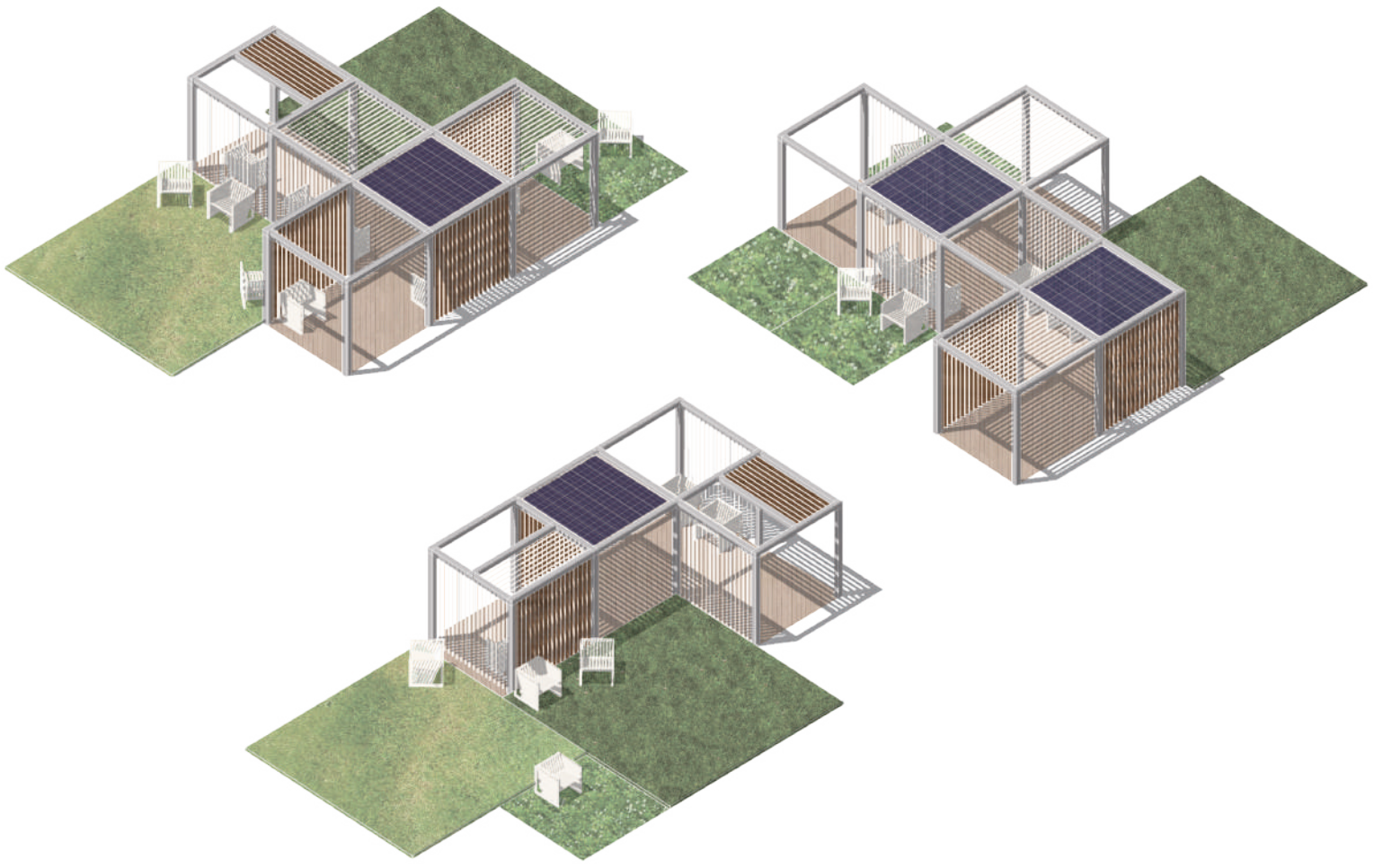
Module Axonometry



Module Section



Book bar Axonometry



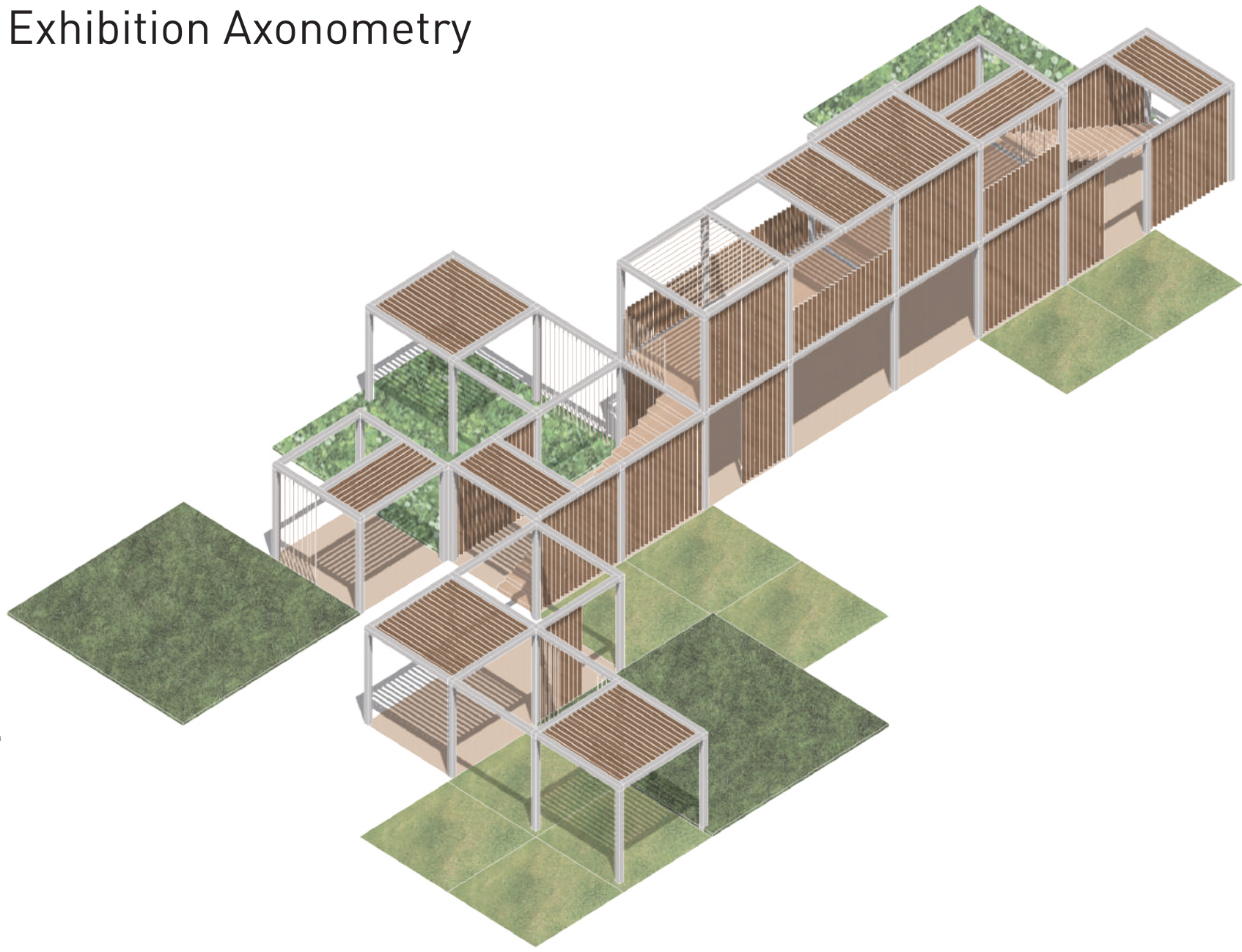
Book bar Plan



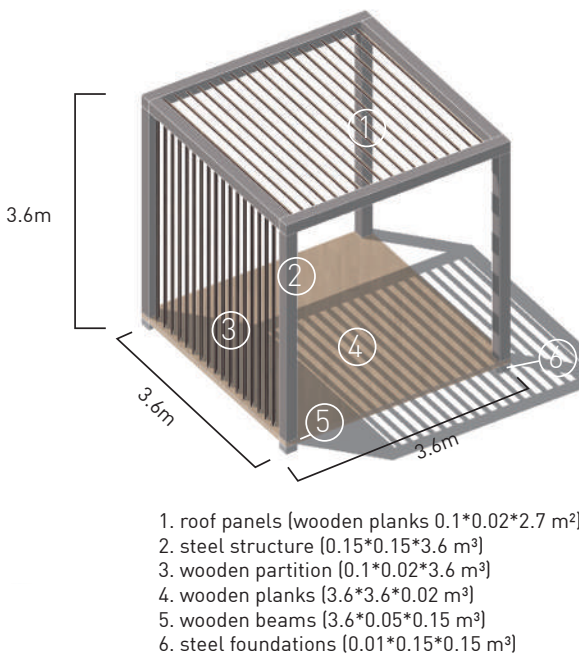
Book bar section A-A'



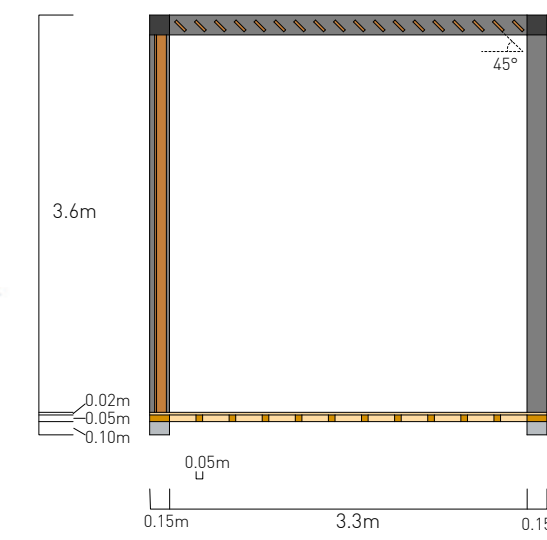
Exhibition Axonometry



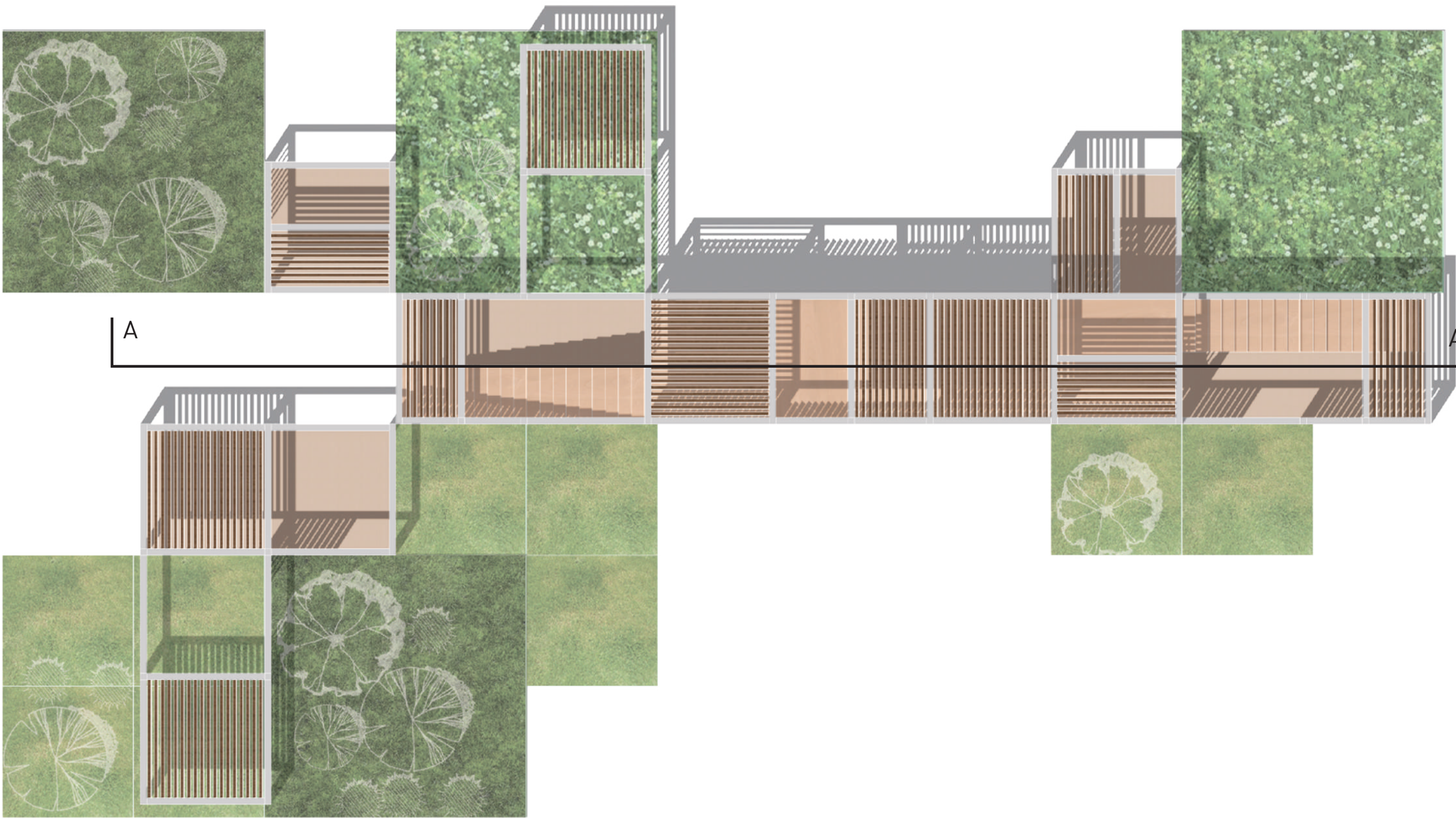
Module Axonometry



Module Section



Exhibition Plan



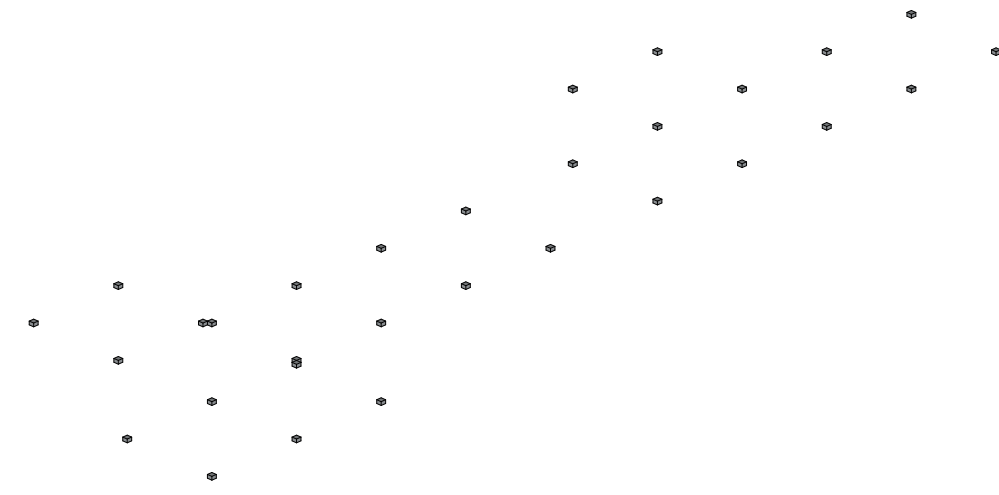
Exhibition section A-A'



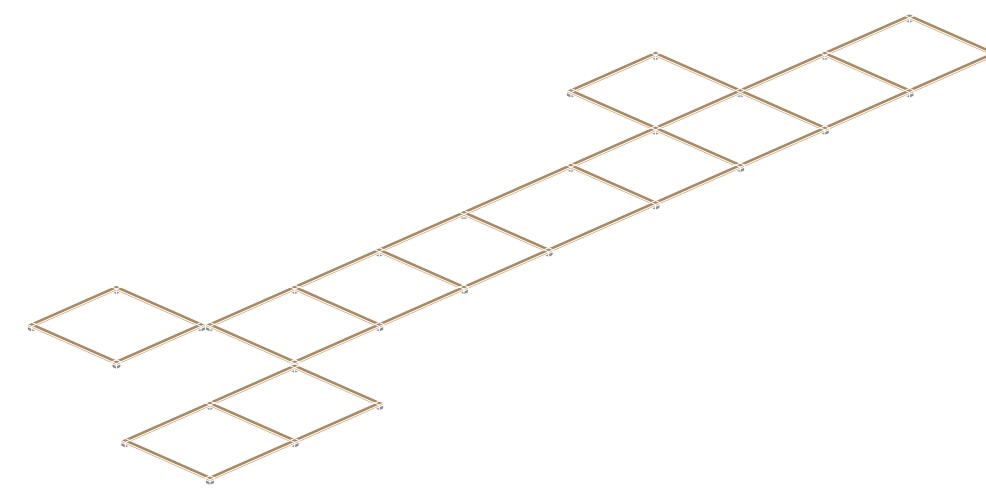


# Module Design Proposal II

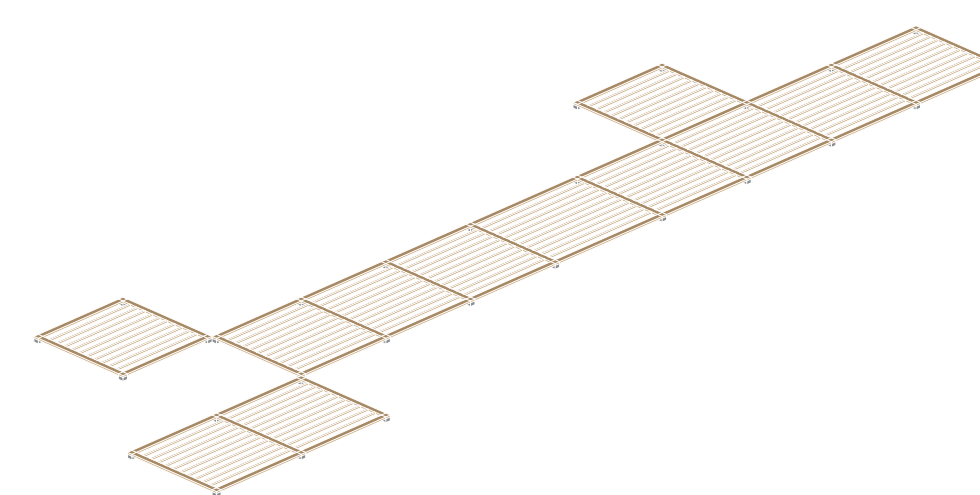
## Construction Step



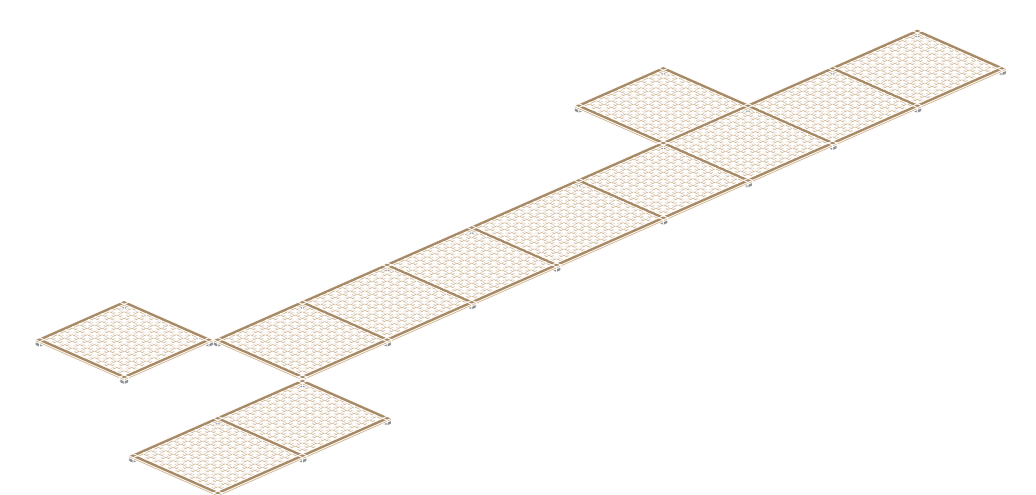
01. Positioning and installation of foundations



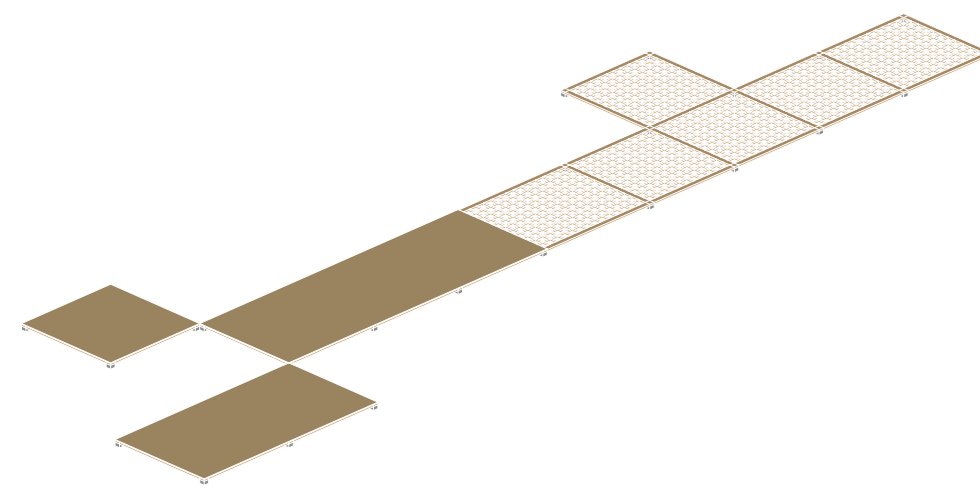
02. Placement of the main beam structure of the lower floor



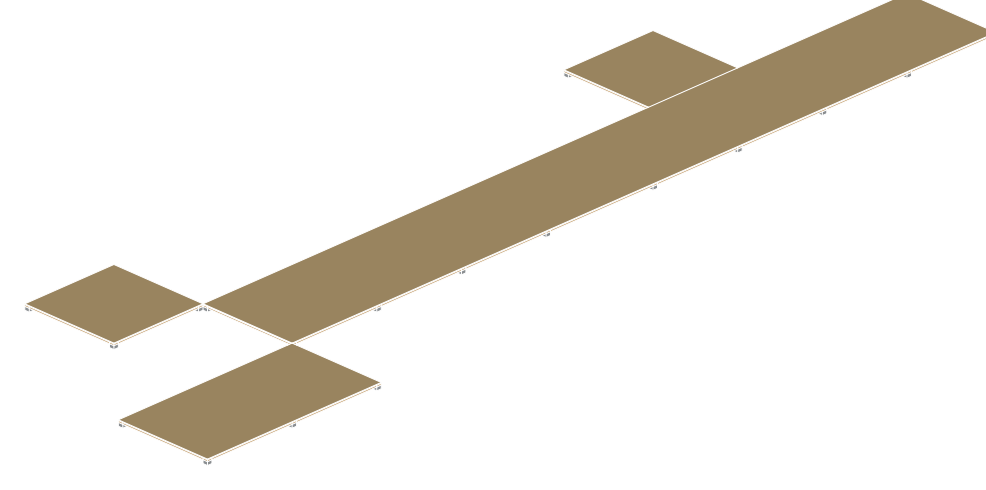
03. Placement of the secondary beam structure of the lower floor



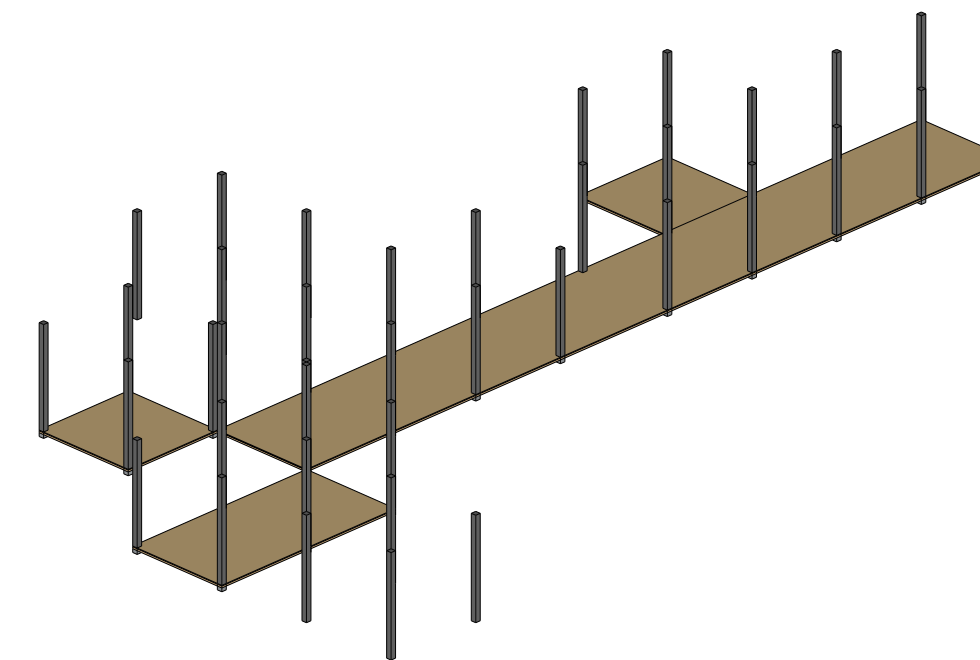
04. Placement of the secondary beam structure of the lower floor



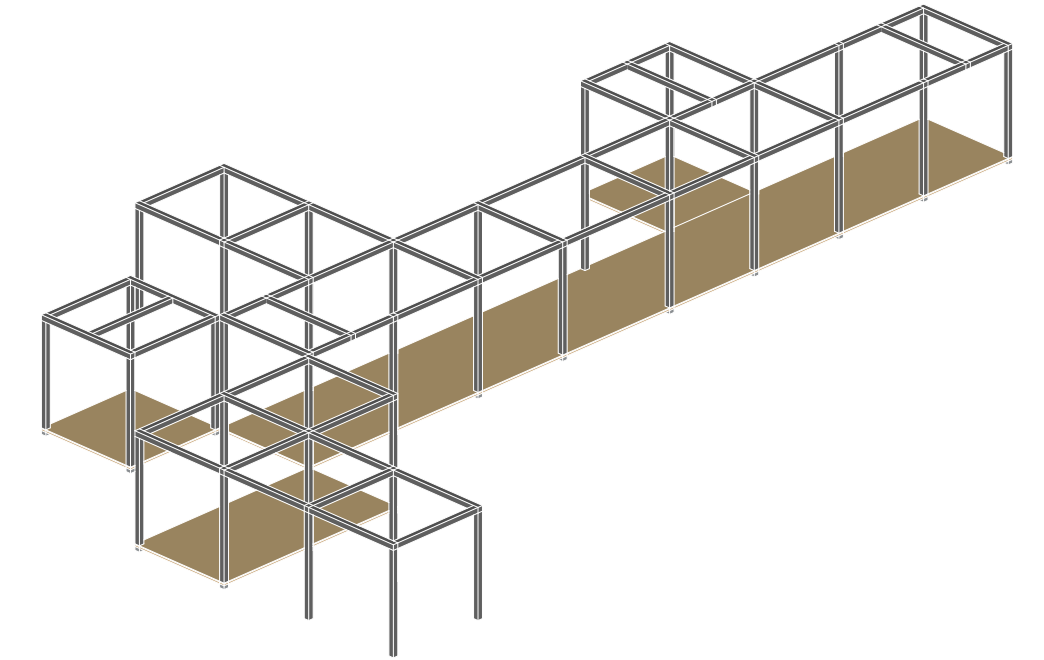
05. Fix the wooden planks on the foundation beams



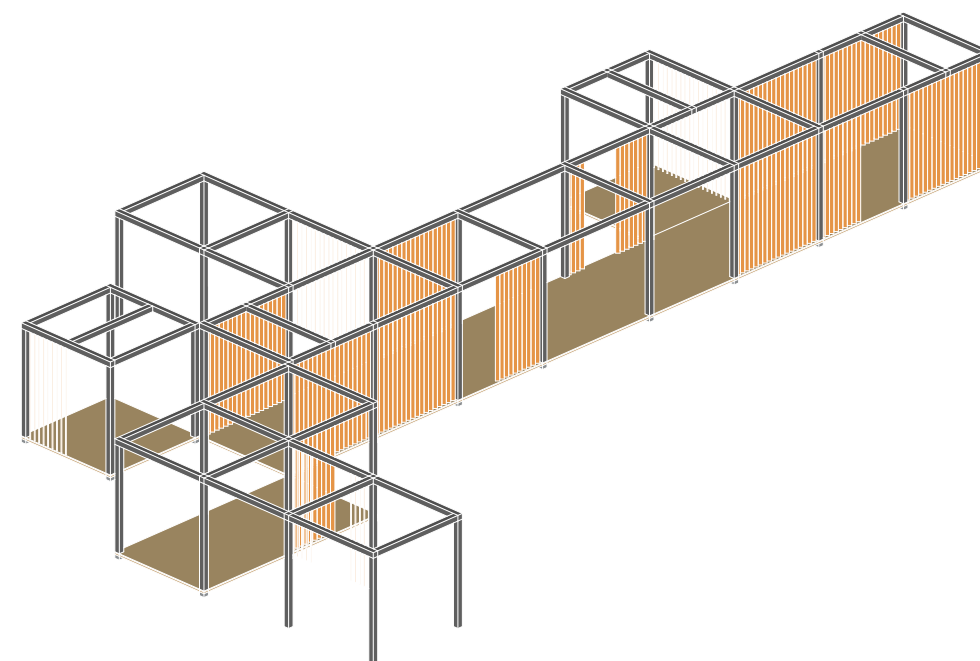
06. Fix the wooden planks on the foundation beams



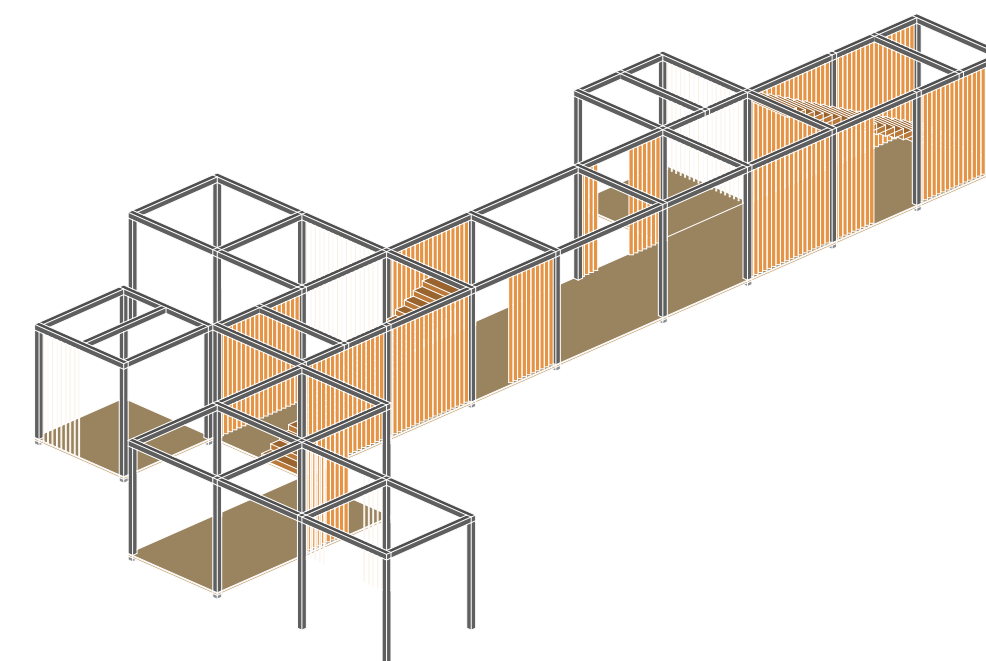
07. Fitting and fixing of composite pillars



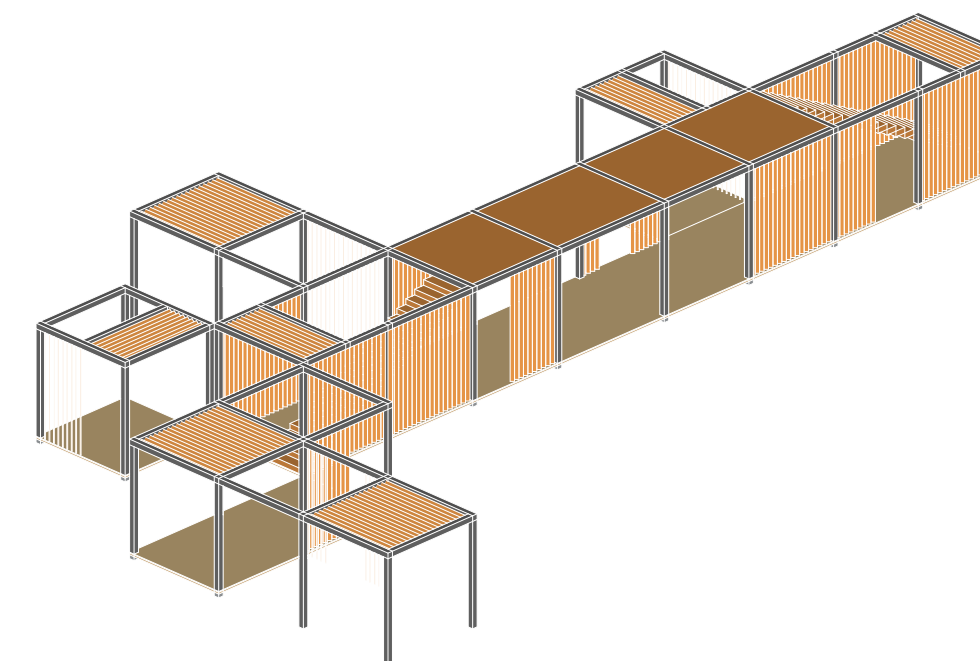
08. Assembly of beams



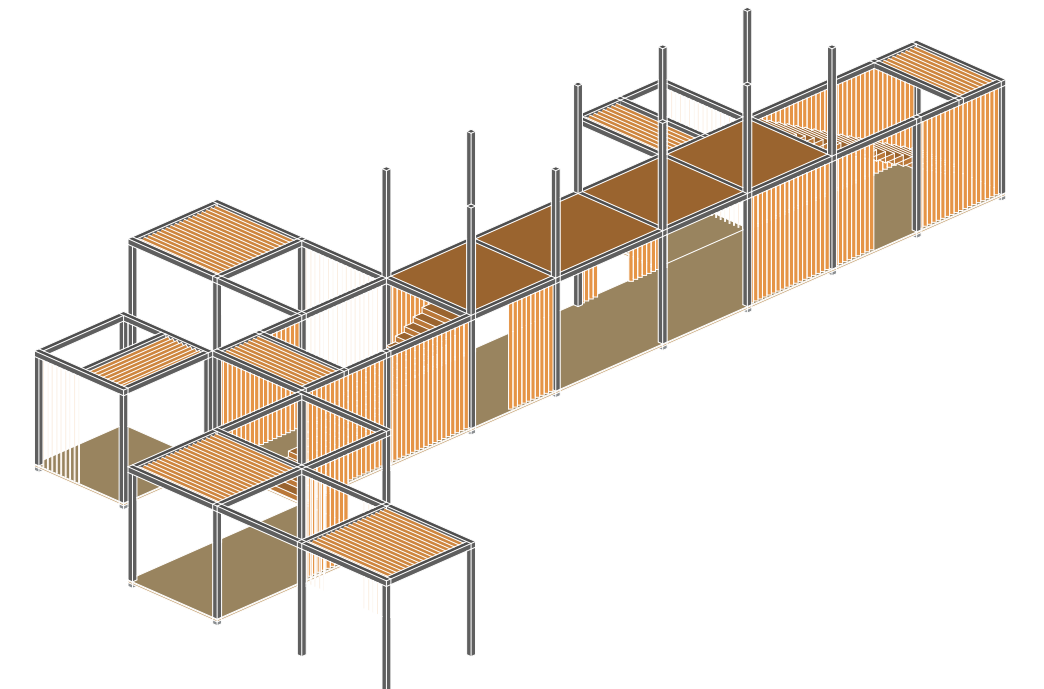
09. Place the partition and nail them to the base



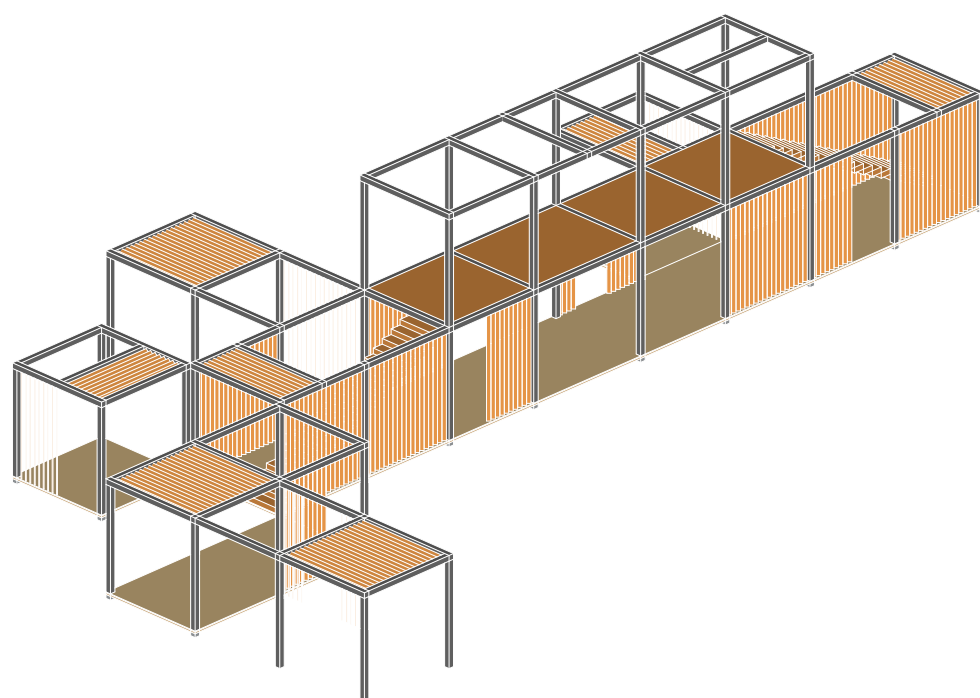
10. Place and Install Stairs



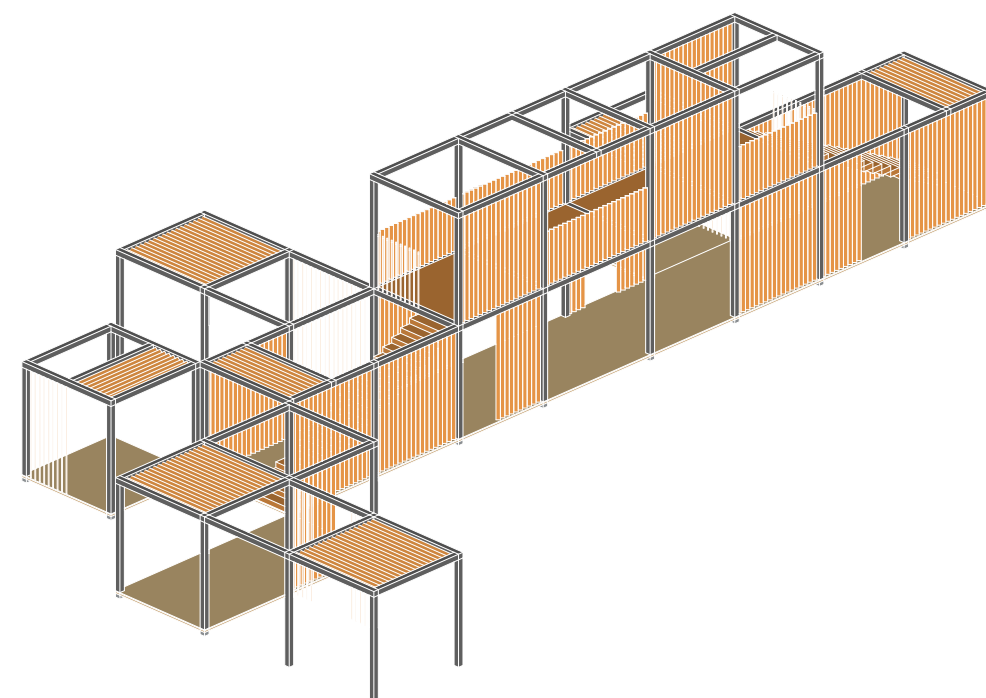
11. Adding the slabs



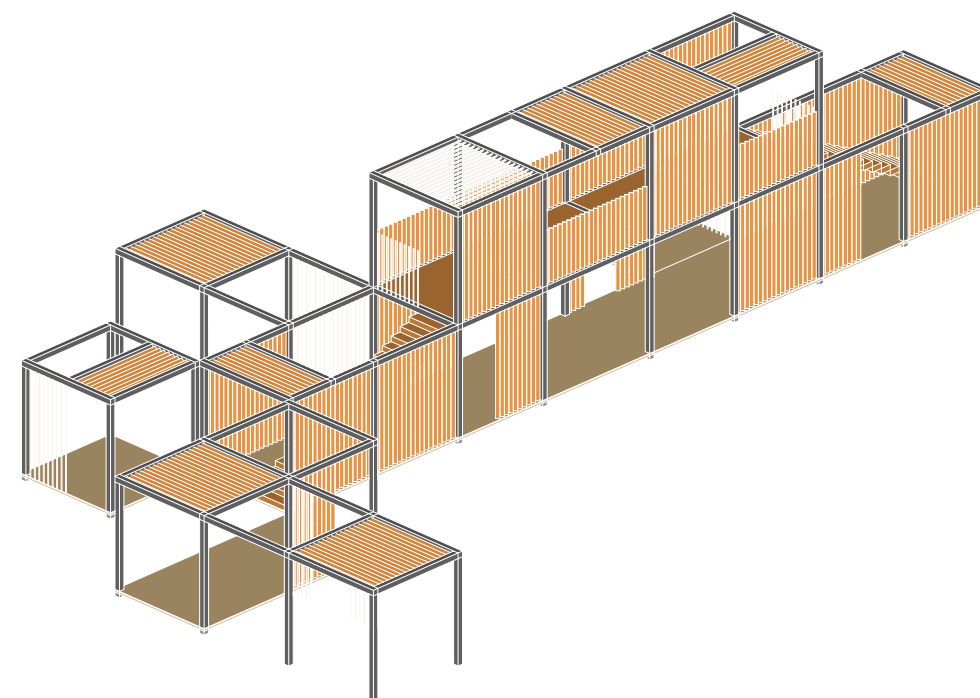
12. Fitting and fixing pillars on the second floor



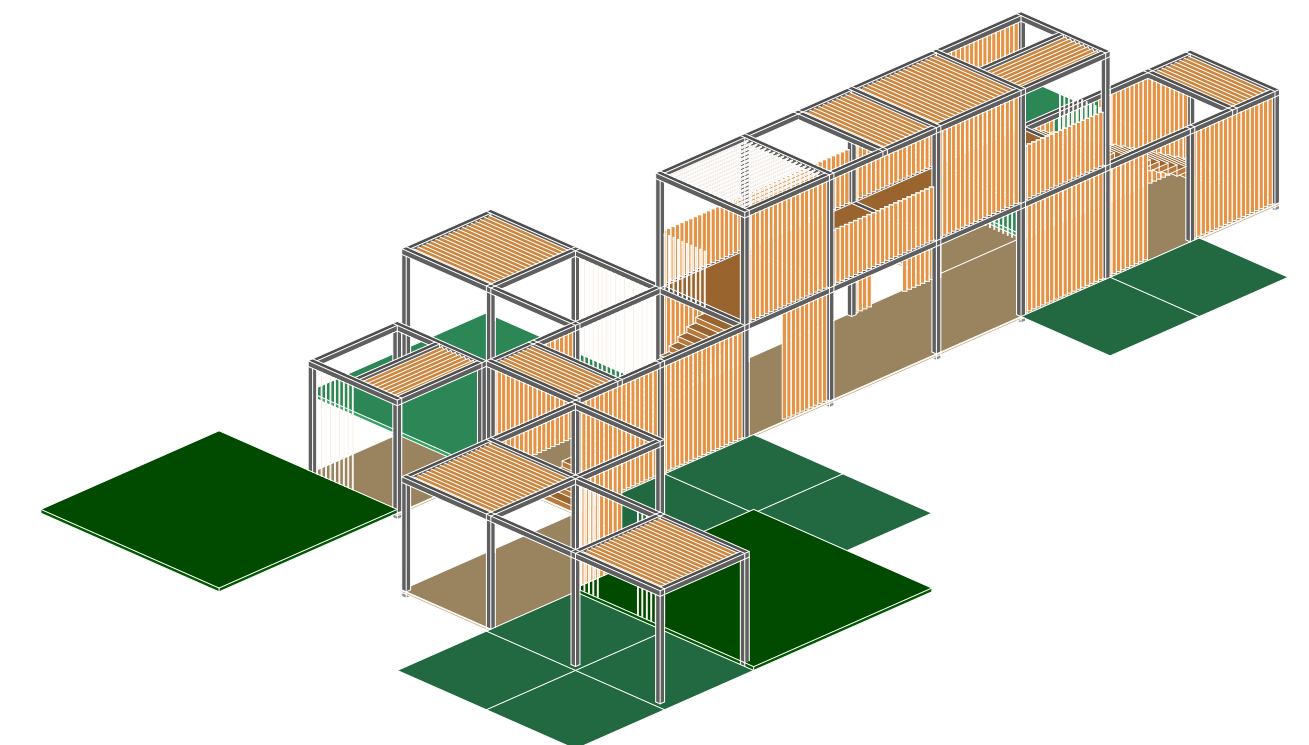
13. Assembly of beams on the second floor



14. Place the partition and nail them to the second floor



15. Adding the roof panels



16. Place green areas around Module structures

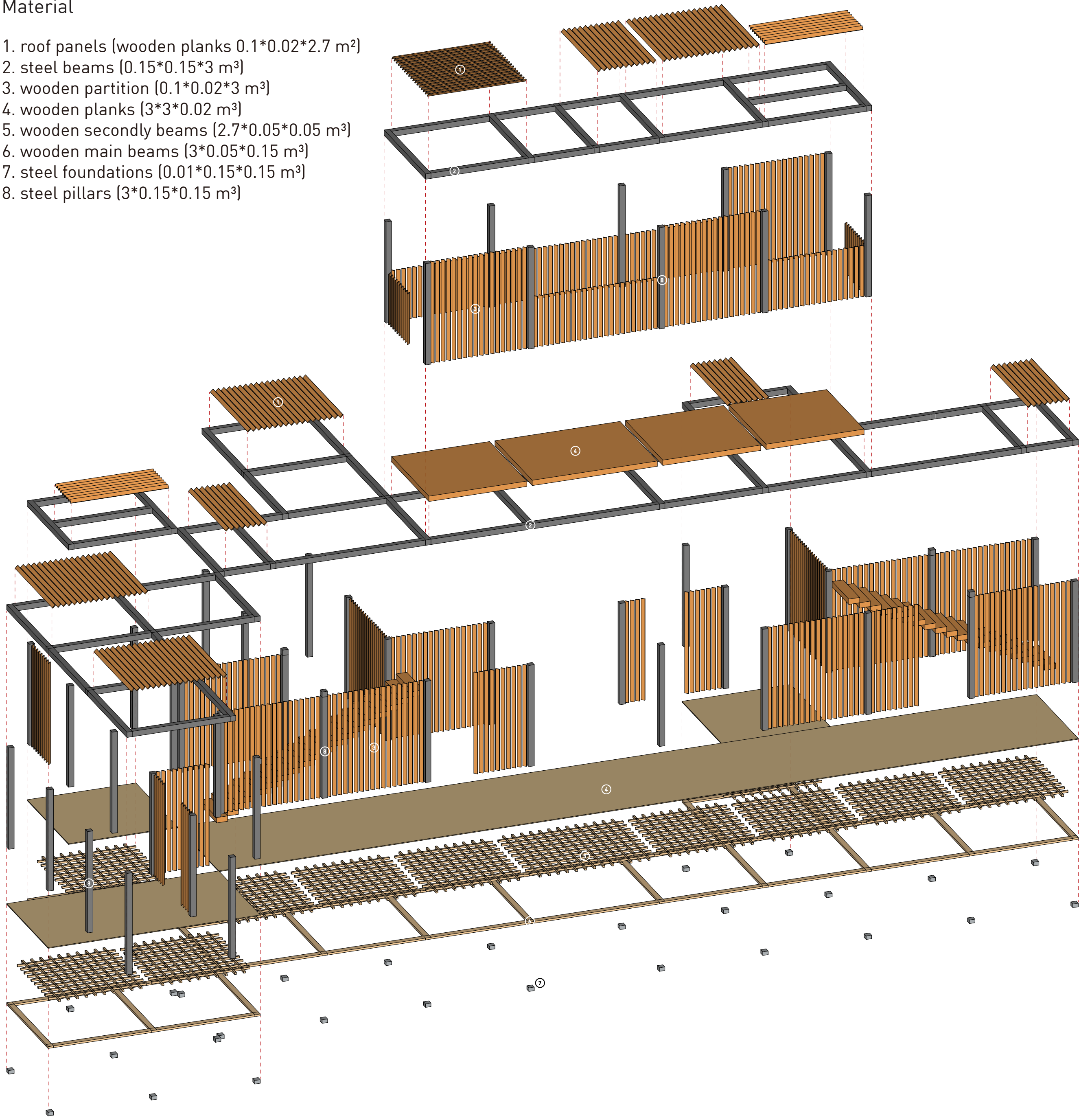


# Module Design Proposal III

## Explosive view

### Material

- 1. roof panels (wooden planks 0.1\*0.02\*2.7 m³)
- 2. steel beams (0.15\*0.15\*3 m³)
- 3. wooden partition (0.1\*0.02\*3 m³)
- 4. wooden planks (3\*3\*0.02 m³)
- 5. wooden secondly beams (2.7\*0.05\*0.05 m³)
- 6. wooden main beams (3\*0.05\*0.15 m³)
- 7. steel foundations (0.01\*0.15\*0.15 m³)
- 8. steel pillars (3\*0.15\*0.15 m³)



Render 1 Square



Render 2 Coffe Bar