

Urban Regeneration
Railway area
San Cristoforo
Milano

New Museums
Respect a New
Network of
Public Space

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INDEX

1

ABSTRACT

- 1.1 Background
- 1.2 Urban Regeneration Railway Area
- 1.3 New sort of Museums

2

READING THE URBAN SPACE

- 2.1 Trace Layer Soil
- 2.2 New Networks of urban public space
- 2.3 San Cristoforo Milano

3

REPROGRAMMING

- 3.1 Limit Interval Sequence
- 3.2 General Strategy

4

PROJECT

- 4.1 Porta Genova Masterplan
- 4.2 Water Museum
- 4.3 San Cristoforo Masterplan
- 4.4 Gallery Bridge

1. ABSTRACT

The thesis studies the transformation of Milan's decommissioned railway space into the urban public space axis and creates a new urban public space network.

Based on this situation, we try to redefine the city's public space system in a sustainable way and propose a specific solution for the porta genova and san cristoforo area. The idea is to exploit the band of the railway embankment to create an ecological corridor along the tracks, hypothesizing on part of the areas the birth of naturalistic oases endowed with a more 'wild' nature that integrate and interact with the green areas public.

At the same time, the new museum will be placed in this buffer space. The building is no longer defined as a volume, but a new spatial function is defined by changes in the terrain. The museum is actually a system of exhibition space.

1.1 Background

Location

The city which we chose is Milan. Milan is a city in northern Italy, capital of Lombardy, and the second-most populous city in Italy after Rome. The wider Milan metropolitan area, known as Greater Milan, is a polycentric metropolitan region that extends over central Lombardy and eastern Piedmont and which counts an estimated total population of 7.5 million, making it by far the largest metropolitan area in Italy. Obviously, Milan is one of the most important metropolises in the world.

Historical Expansion

When we read the urban space in Milan, we can easily see the texture of the city. Although the ancient Roman walls are no longer obvious, the traces left by the medieval walls and the Spanish

walls are still clearly visible. The development of the city is like a circular expansion. In the past few decades, the pace of expansion has grown faster and faster. Since modern cities no longer need a military infrastructure like a wall, from the texture of the city we find that infrastructure such as railways and highways has become a new tool for defining urban boundaries. However, the expansion of the city has made the infrastructure that was originally on the edge of the city into the urban system. As part of the city's updated infrastructure was once again moved outside the city, the problem was that the abandoned infrastructure became a grey space in the city. We believe that by updating the abandoned railway space, the connection to the city can be effectively activated. It is a very potential project.

1.2 Urban Regeneration Railway Area

Seven disused railway areas

Object of the program agreement between the City of Milan, the Lombardy Region and the Italian State Railways are seven disused railway areas located along the railway belt, the by-pass and some exits from the city, often located near other areas undergoing transformation.

We analyze the history of the abandoned or underused railway yards located in the municipality of Milan, in the more general framework of Milan planning dynamics. The hypothesis proposed is that only by placing in this context the decision making process it is possible to identify design strategies and planning tools adapted to a completely new phase of urban transformation dynamics, not only in Milan but also in Italy and

Europe. The process of redevelopment of the railway areas will be interpreted starting from the links between Milan's political cycle. Railway space will be transformed into the axis of urban public space. Due to its urban location and spatial dimension, the Milanese railway stations represent an unquestionable potential of multi-scale urban transformation, constituting, together with the area that hosted the universal exhibition in north-west Milan and the system of disused and underused barracks, the last reserve of large areas available for processing.

Porta Genova





San Cristoforo

1.3 New sort of Museums

Architecture should be conceived as an integral part of the landscape. Glass, concrete or metal would in this case no longer be the elements that build architecture, but the territory, as it exists, as we relate to it.

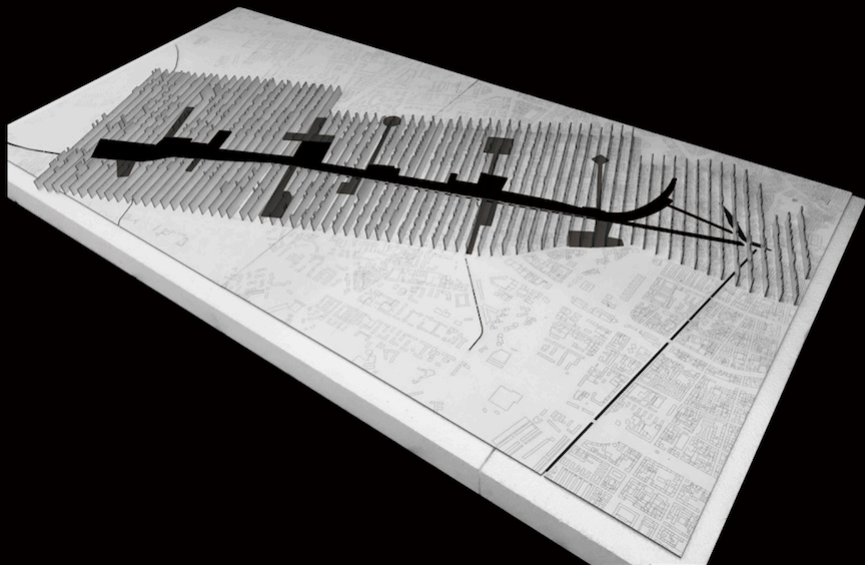
One of the commitments of an architect is to overwhelm the observable escalation in the production of contemporary architecture by introducing new situations, dialectic situations and experiences, between inside and outside, free and available spaces in-between what is public and what is private.

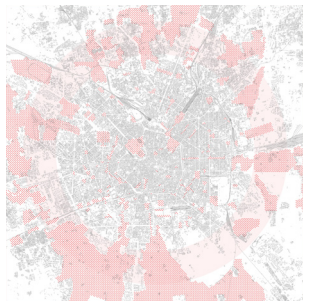
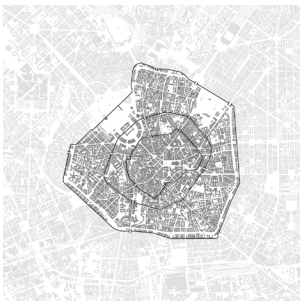
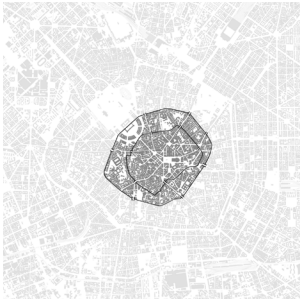
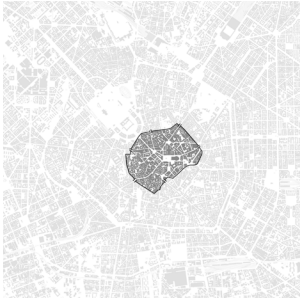
we make architecture disappear. We make it melt within the territory, blurring the lines between architecture and landscape, between physicality and immateriality, between presence and absence. The idea is not how can we put

the mass in the urban, instead we consider how can we insert the voids. Architecture must disappear, but it will be conceived as another type of the soil.

The museum we define is not so much a building as it is an urban space system with an exhibition function. This system is a public space from urban elements to natural elements. We regard the whole city as a terrain, through a cross-sectional sequence model. Find loose open spaces in the city and reorganize them into our venues. The first part of the space is a water museum. Since the north side of the site is an important satellite exhibition area during the Milan Design Week and the south side is the Grand Canal, the Water Museum is also an important node connecting the

north and south sides. The second part of the exhibition system is It is a landscape tower. As the end of the water museum, we think it is a vertical exhibition space and a landmark in the stadium. The third part is the gallery. We put it in a bridge. At the same time, it also becomes the gate of the city to the suburbs. The last part is the urban forest. It is the node connecting the natural space outside the city, conforming to the original Urban texture. Thus the new museum system has become a buffer zone for the city, integrating elements of humanity and nature.

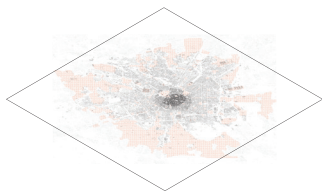
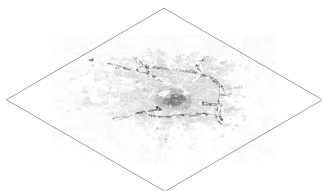
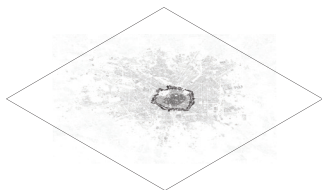
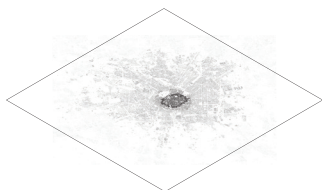




2.1 Trace Layer and Soil

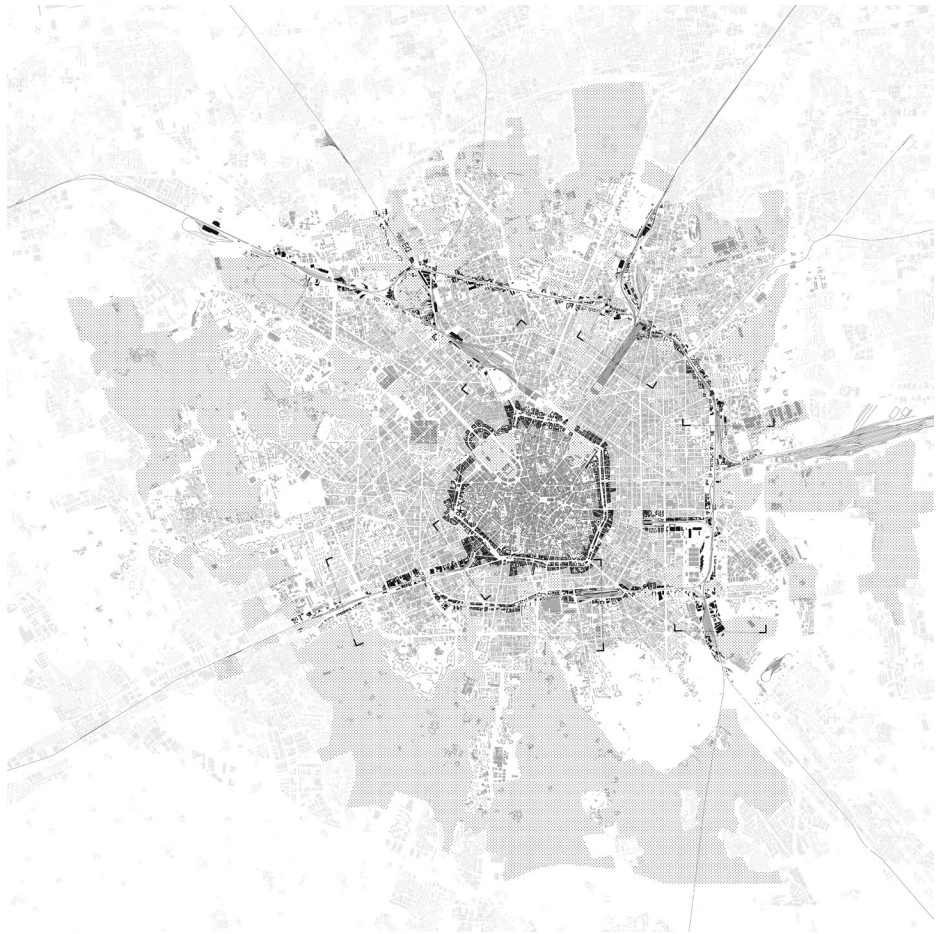
Since roman period, Milan has been growing in a radiate way by the trace of wall system. The main accesses reach to the city centre extended out with different direction while the city was expanding.

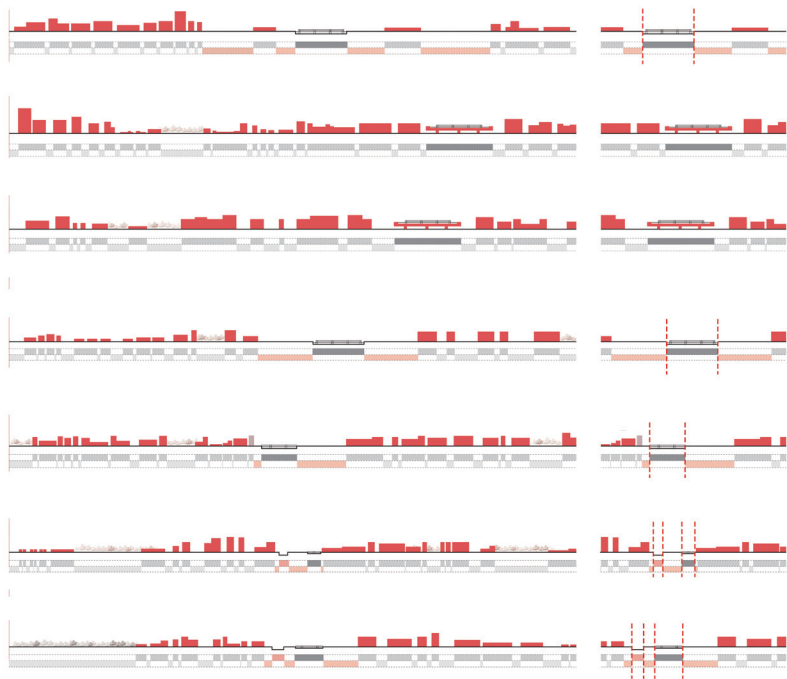
The street build upon former roman wall is connected as the first circle of Milan. The position of former roman gates that was ruined has become important intersection of streets. The circle system (from the wall of roman period, middle age, 17th century) is still developing and connecting each elements of the city by itself.



The growth of Milan started from the roman period and the city is shaped with a rectangular wall. Through centuries develop, the wall system has extended to 3 layers.

In the recent century, the railway system of Milan has become the new largest circle system. In the last two decades, with underused or even abandoned status of some of the railway stations, the circle system has lost its relevant to the city. It also becomes a limit between the urban space. In order to make up for the incomplete space of the declining railway station, involving the green system become a effective option to reunify the circle system of Milan.





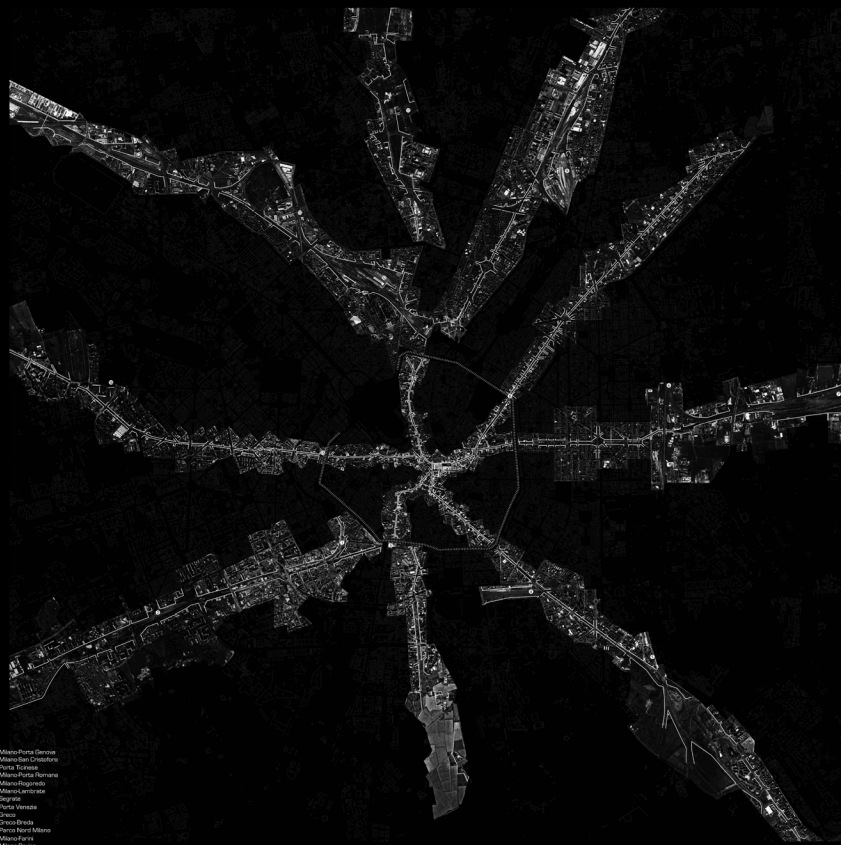


2.2 New Networks of Urban Public Space

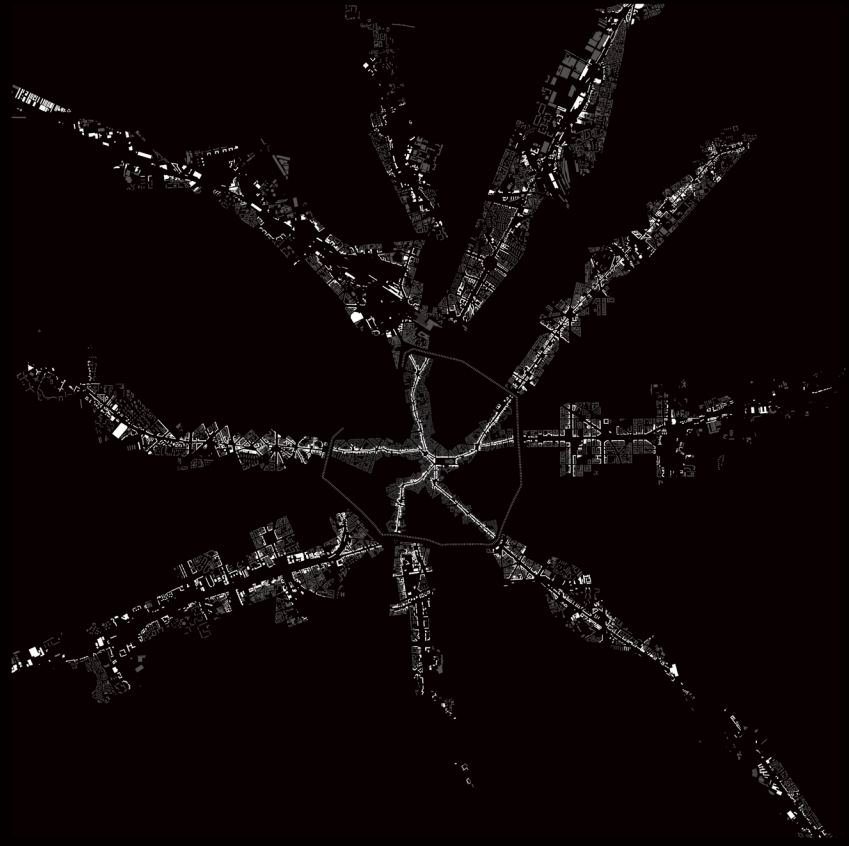
The seven railway stations are the bone of the circle system of Milan. And each one has its own space character.

By analysing the urban section of each railway station, we realise some common problem of the railway station spaces, like wall boundary, poor accessibility, pollution, the lack of squares, parks...There are also some specific problems like functional disconnection with neighbourhood, lack of productivity for the community, security.

Combining with the green system, We try to redefine the radiate axis that start from the third ring formed by 17th century and spread to the outskirts of Milan. Via these radiate belts, the growing edge will be connected to the existing circle system with serious of green spaces and cultural facilities.



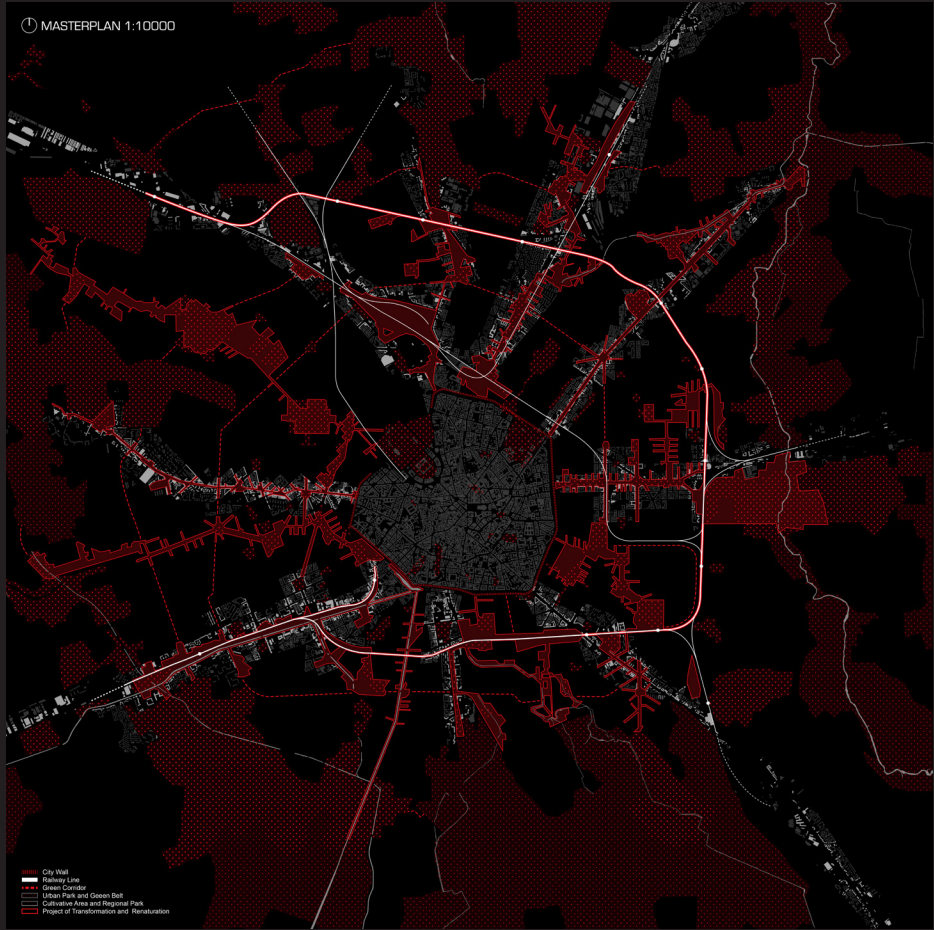
- Milano Porta Garibaldi
- Milano Città del Duomo
- Porta Ticinese
- Milano Porta Sarmata
- Milano Roggionello
- Milano Linate
- Segrate
- Porta Venezia
- Gratosoglio
- Cinisello Balsamo
- Milano Nord Milano
- Milano Sesto
- Milano Bovisio
- Rozzano
- Porta Vercellina
- San Siro



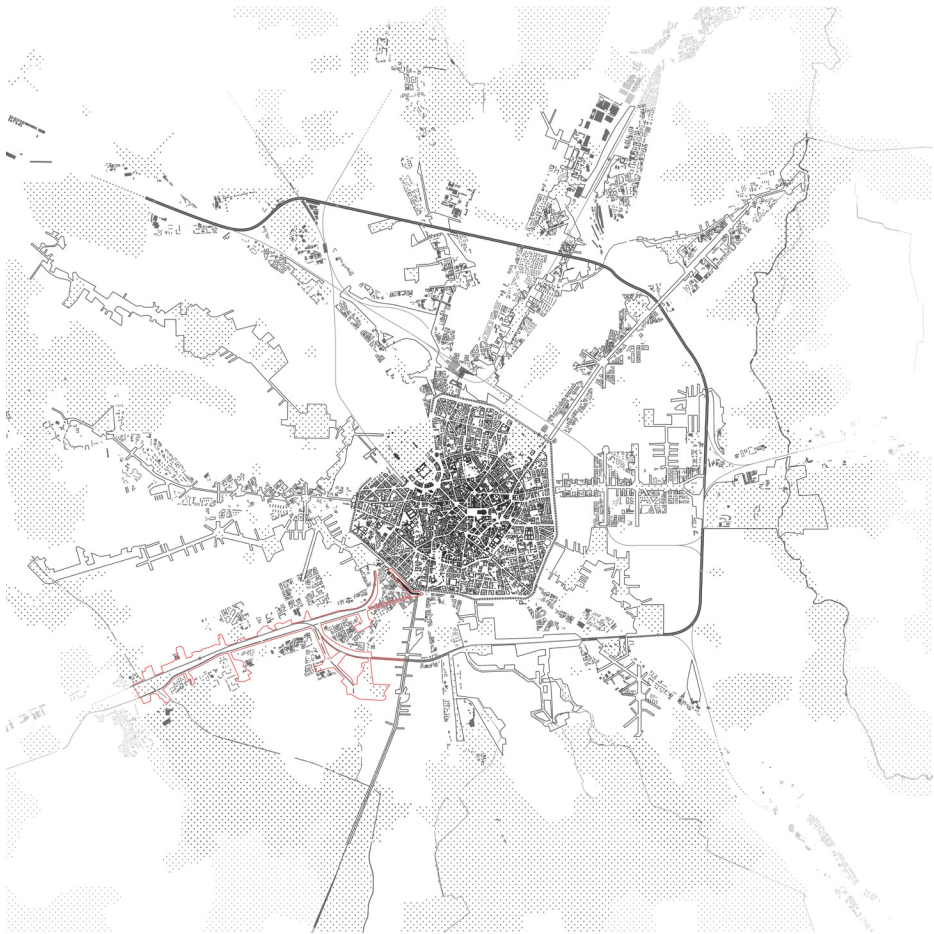


- Streets
- Urban Park
- Green Belt
- Collective Area

🕒 MASTERPLAN 1:10000



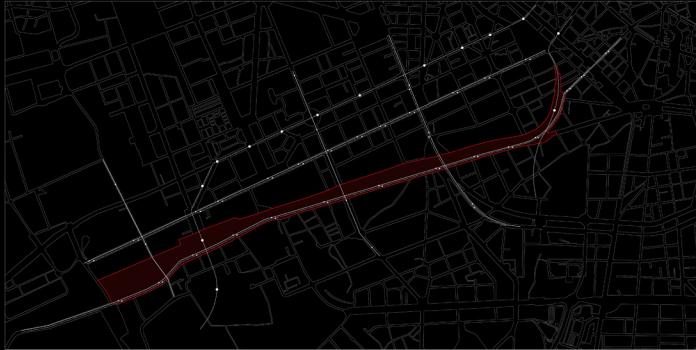
- City Wall
- Railway Line
- Green Corridor
- Urban Park and Green Belt
- Cultivable Area and Regional Park
- Project of Transformation and Renovation



2.3 San Cristoforo Milano

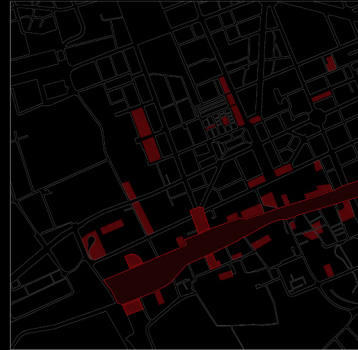
After we defined the new urban public space system, we chose one of the axes to go into depth, San Cristoforo Milano. Because it is a special radiate axis, there are two train stations Porta Genova and San Cristoforo and the Naviglio Grande. What's more, Tortona district is one of the most important exhibition area of Fuori Salone.

Therefore, we hope that while retaining the memory of the complete place, transform it into a city buffer space that combines humanity and nature, and activate the surrounding area.

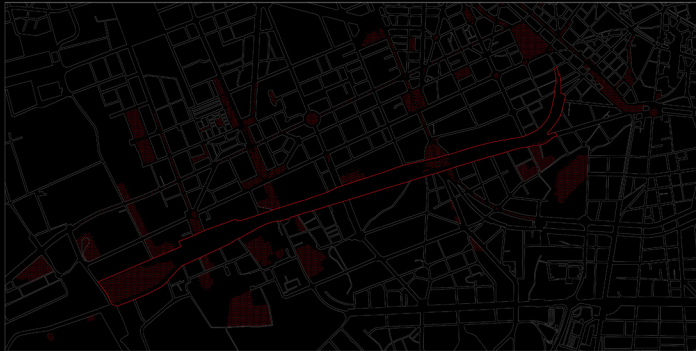


TRANSPORTATION

---◆--- Metro Line ---■--- Tram Line —●— Bus Line ■ Project Area

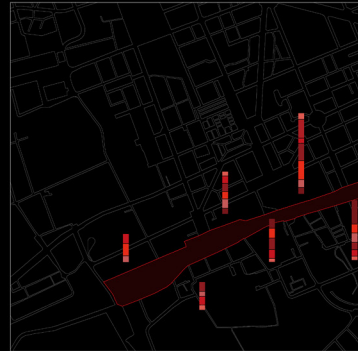


OPEN SPACE



GREEN AREA

■ Green Area ■ Project Area

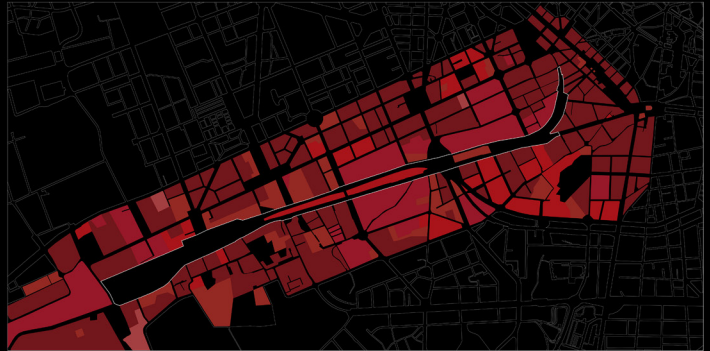


ACTIVITIES

■ Education ■ Business ■ Office ■ Culture



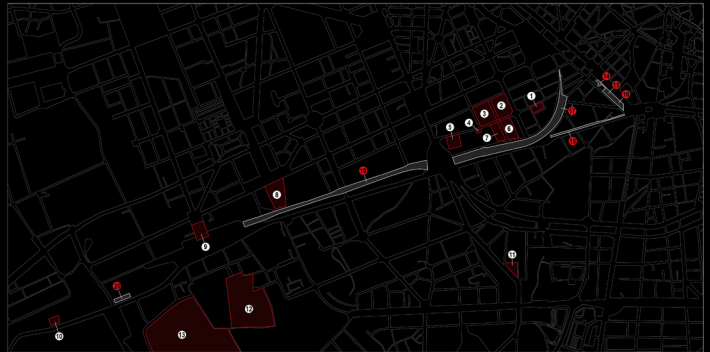
Public Space Potential Area Project Area



LANDUSE Residential Commercial Productive Public Services Mixed-use Project Area



Cultural Activities Catering Outdoor Activities Project Area



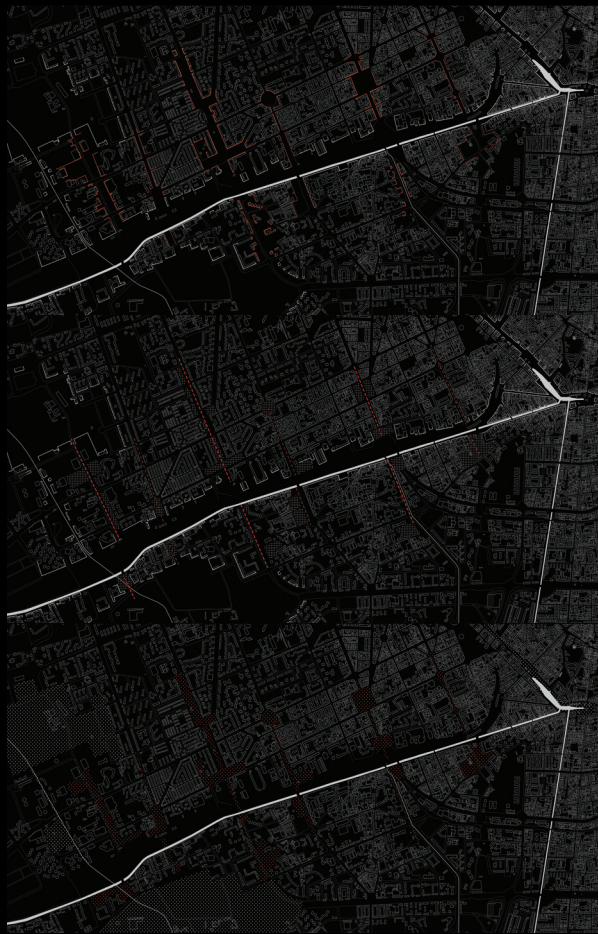
ON-GOING Proposal Project

3. REPROGRAMMING

Based on all previous analyses, we re-integrated the space within the site. Further research on site space through three keywords, limits, intervals, and sequences.

The railway line is a significant linear barrier to pedestrian movement. The walls along the railway prevent access, physically and visually. While there are several open spaces scatter near the site, including public parks, squares, gardens ect. In the future it will become the most important buffer in the city.

Urban buffer zone gradually transitions from urban elements to natural elements. We put nodes in both in porta genova and san cristoforo, a water museum and a bridge gallery. We see them as the two gates of the city and the suburbs. Darsena and urban forests serve as the beginning and end of the site respectively.



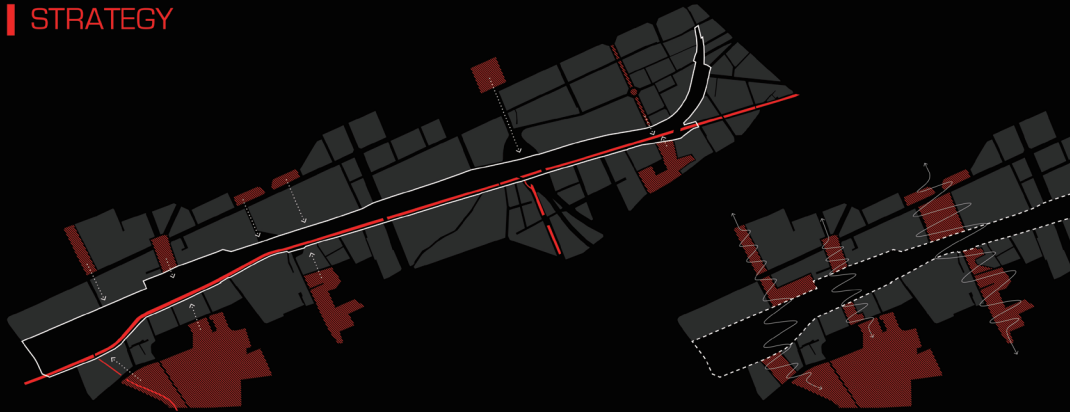
3.1 Limit Interval Sequence

The limit of this area represents the availability of territorial resources and the sense of balance of the ecosystem in which the architectures are immersed. The harmony between the site and the surroundings.

Urban place is a symphony composed of different rhythms formed by collection of buildings, voids, functions... This map shows the harmony of arrangement of linear voids (street) and the proportion between building blocks and voids. The rhythm will be enhanced and play an important role in future project.

Interval intends to transform large-scale problems to large-scale solutions. Our aim is to make visible the infrastructures that today become waste, extend the useful life of existing resources, and redirect materials in ways that benefit society by design.

STRATEGY



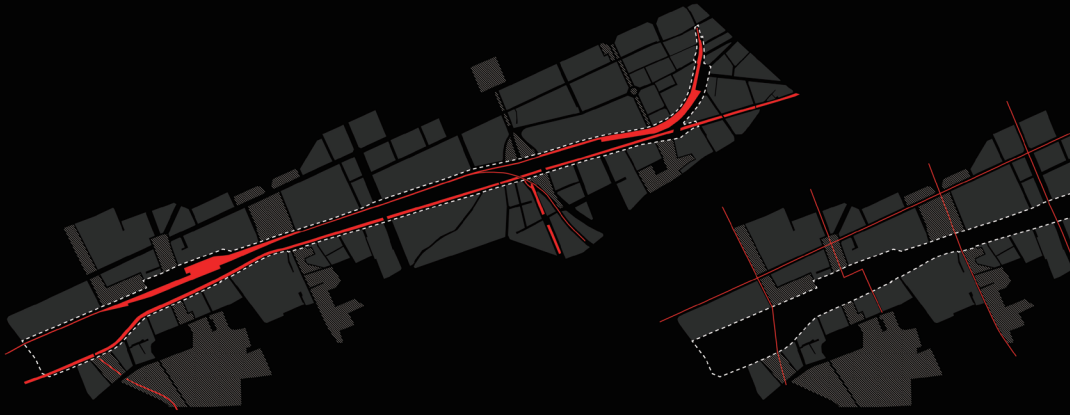
SPACE TRANSFORMATION

space available to be transformed

linkage of northside

←····· Site Edge Connection ■ Transforming Space ■ Canal □ Project Area

↔ Linkage ■ Transform



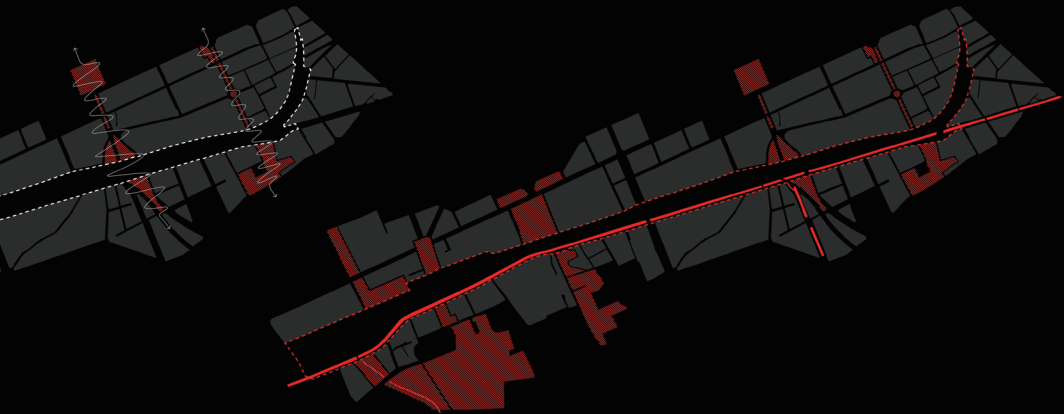
RECONNECTION

two linear barriers in the site

demand of accesses

■ Barrier ■ Transformed Space □ Project Area

— Accesses ■ Transform

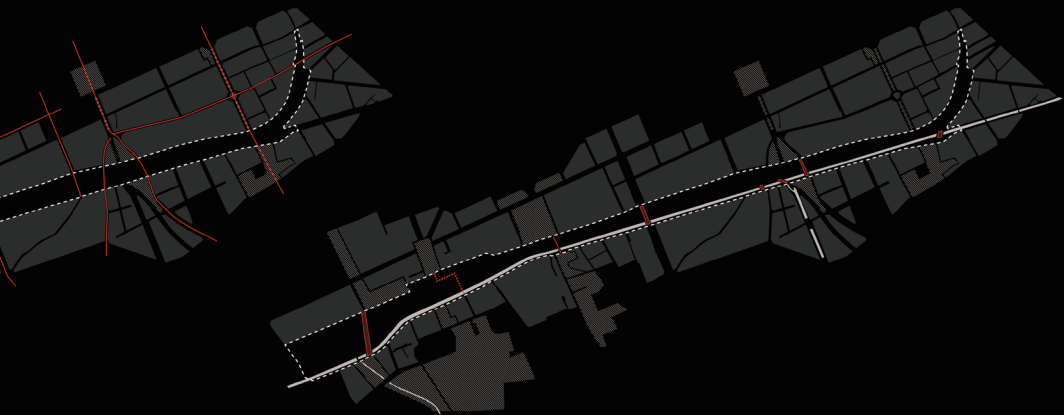


and southside area

transformed space in urban fabric

ing Space (-----) Project Area

Transformed Space Canal (-----) Project Area



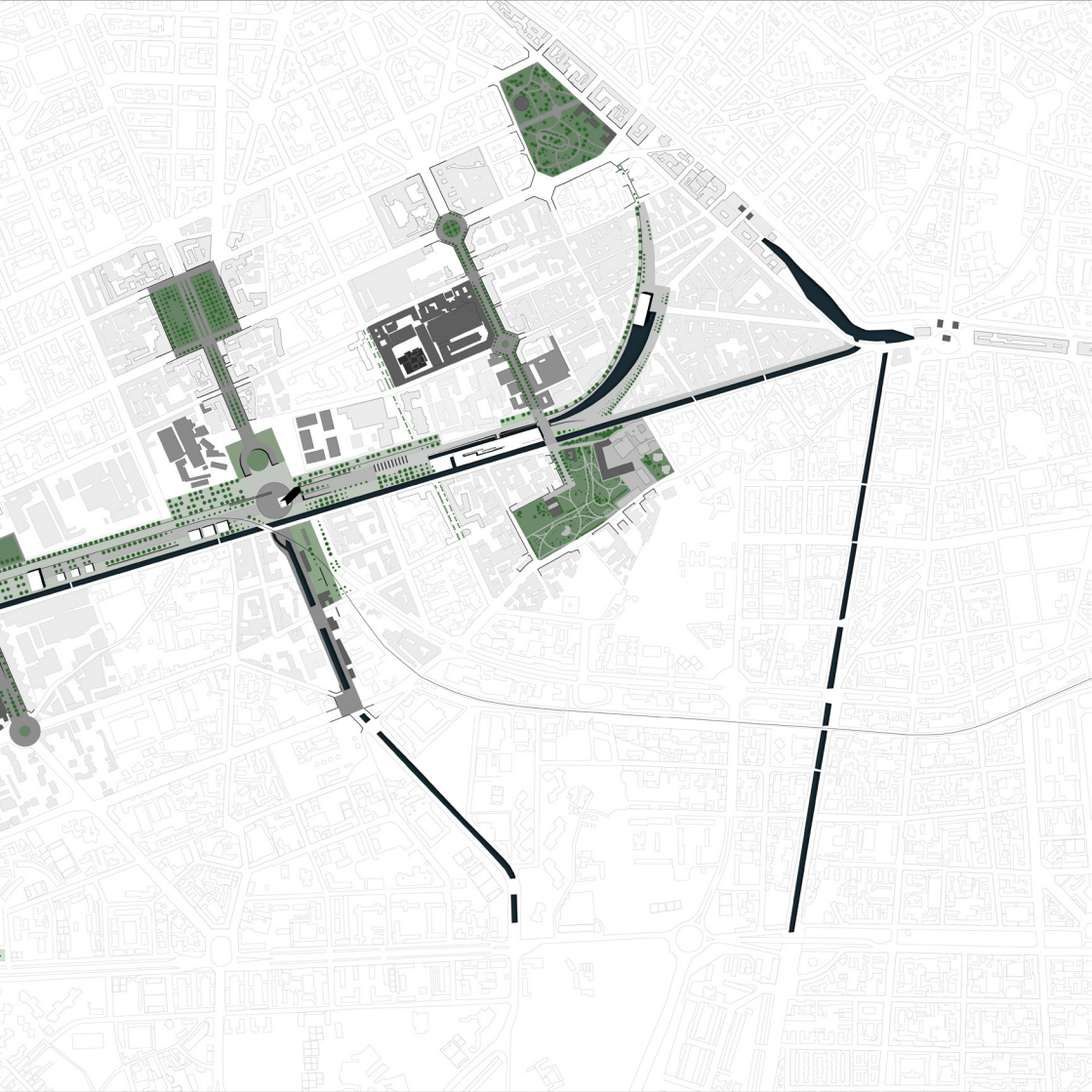
s between each side

breaking barrier with new connection between each side

med Space (-----) Project Area

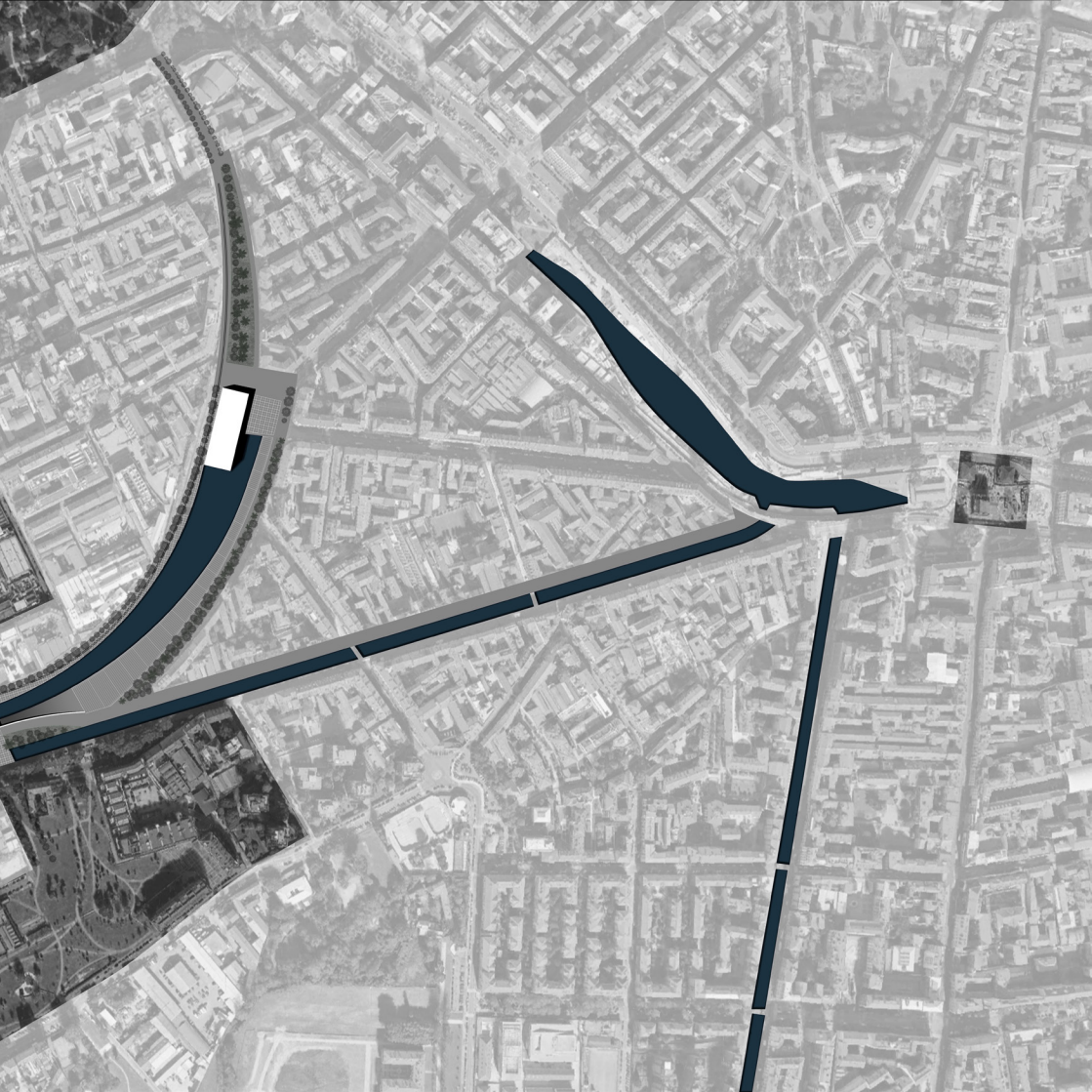
Bridge Tunnel Access Inside Building Transformed Space (-----) Project Area





4. PROJECT





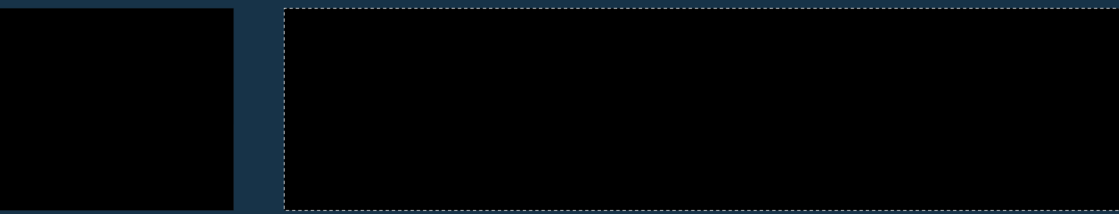
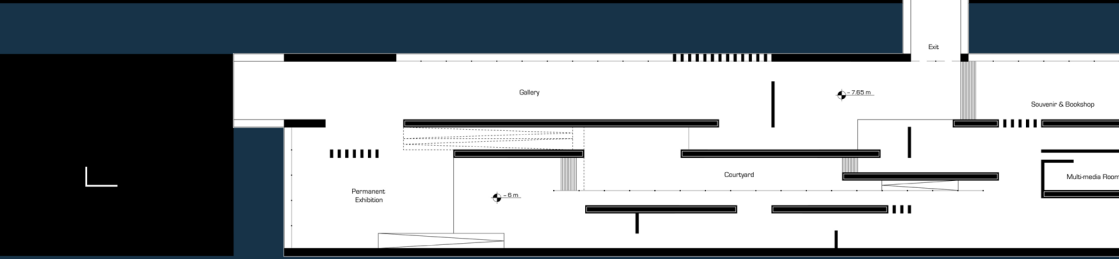
4.2 Water Museum

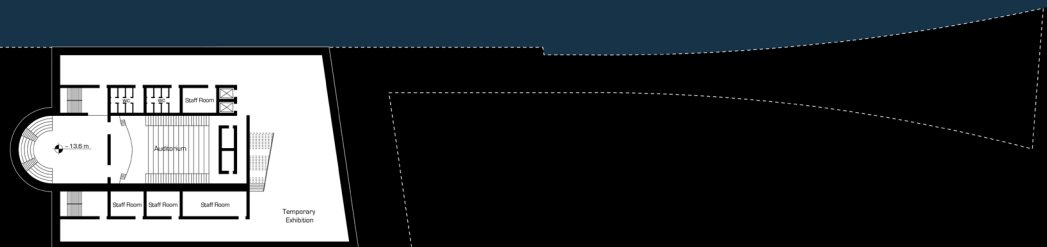
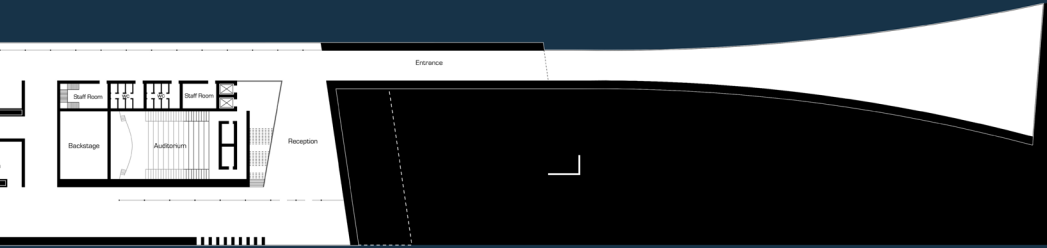
A new sort of connection

Museum are serving as an urban connection, as well as providing visitors another different sections of the museum. By wrapping the old railway area with the museum program we preserve the heritage structure while transforming it into a courtyard, bringing natural light and air into the heart of the submerged museum. Keeping the regenerated public space, we felt the need to remain completely invisible and underground - but at the same time we wanted to create a structure that could attract visitors with a strong public presence. Interpreting the basin as an urban abyss, we provided the museum with an internal façade facing the void and at the same time the citizens of Milanese have at their disposal a new public space set at 5 m below canal level.

Canal memory

As the urban development, canal was covered by roads, by streets, by railway. There is less water landscape in the city. So we hope that we could create a new space for people who could re-memory the feeling of canal. when people walk around in the museum, they can always feel the relation with water, whit this connection should not be simple or single, but should be changeable. so we keep changing the height of the space to response the water. A hybrid spaces.









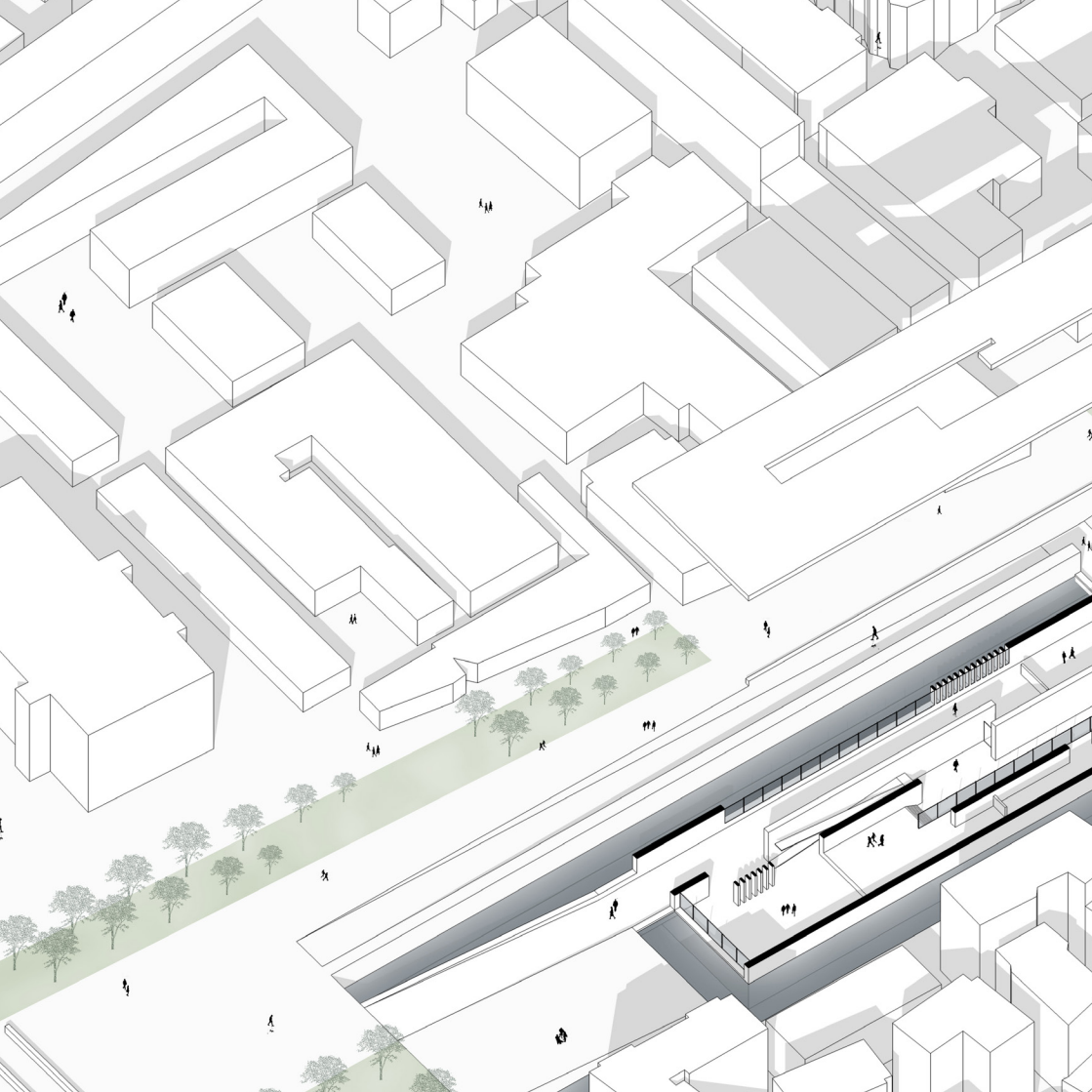
Changing internal terrain difference

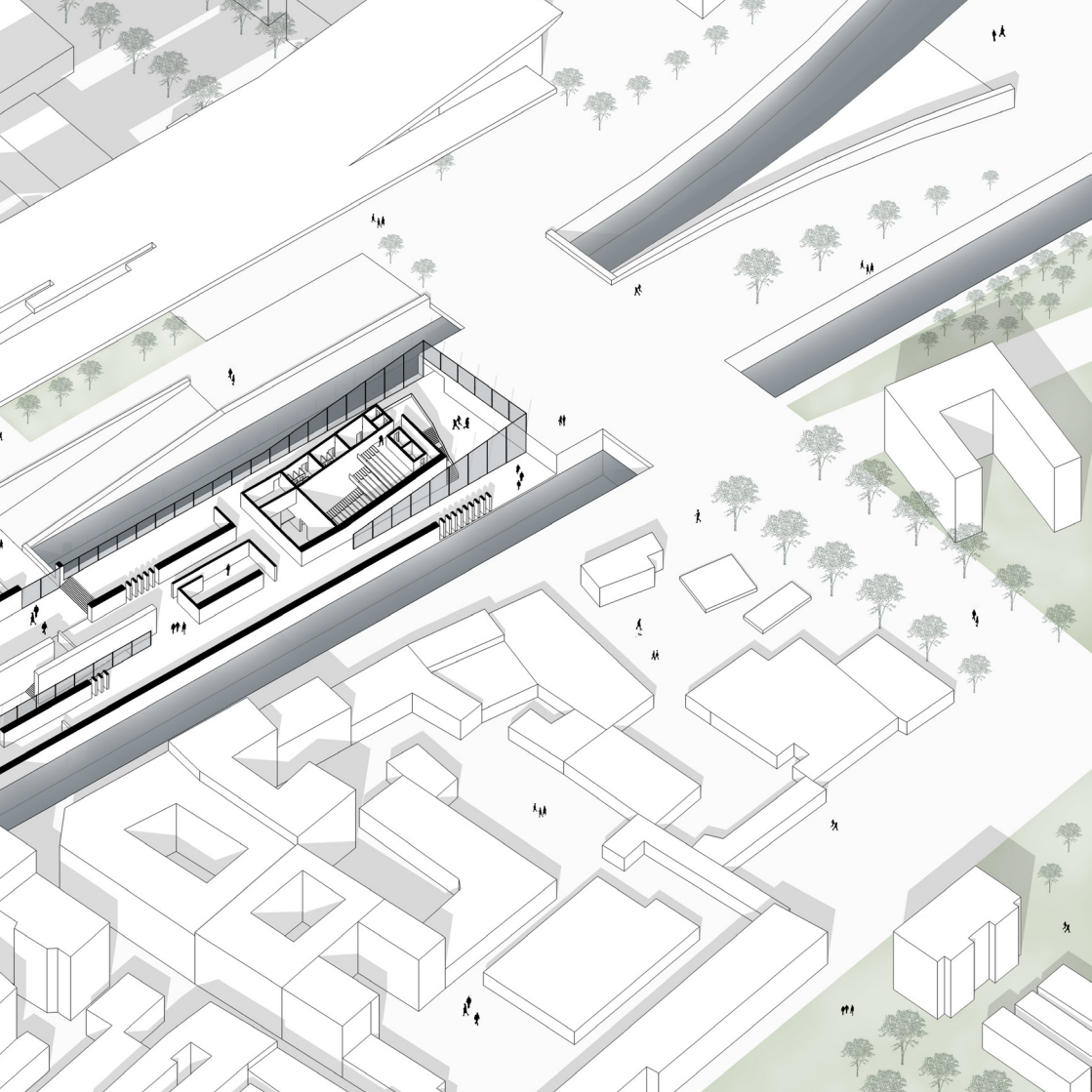
change the ground level as the soils could be the importing element of the architecture. Establish the height difference of the ground floor level layer to respond to the tower and the site. People can walk freely in the roof garden and interact with the interior of the museum through the courtyard.

A hybrid space

In the planar organization, we mainly use the Bearing wall in the horizontal direction to emphasize the direction of the internal space. Three of the main walls through the atrium which make the atrium and the ground layer establish a connection. The exhibition hall is separated from the lecture hall, and the exhibition hall is organized around the atrium, so that the indoor and the outdoor space are mixed with each other.



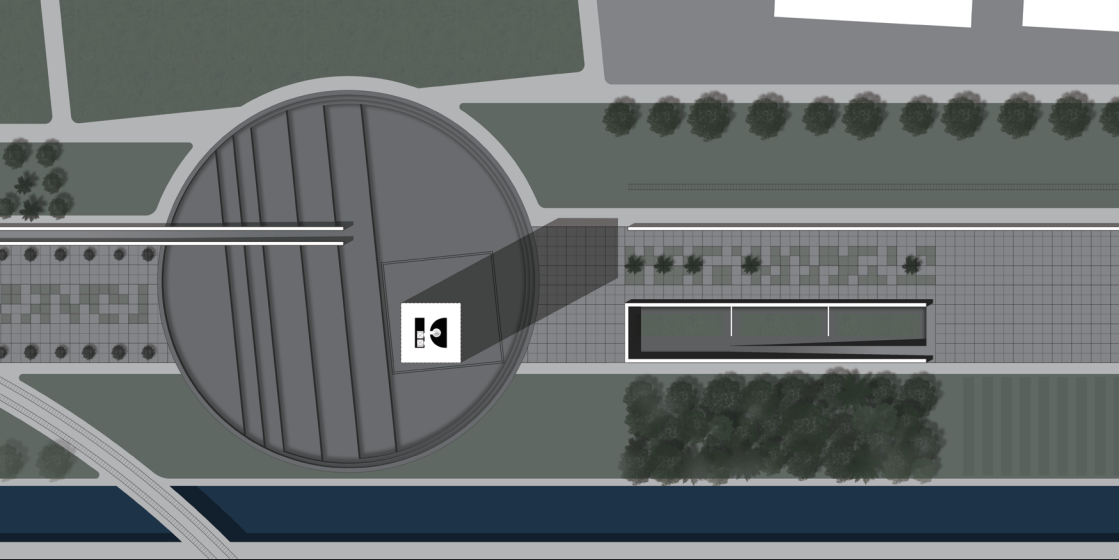




Tower

Spatial ductility: The idea of arranging nature on autonomously acts as both a continuation of the existing landscape and a symbol of its artificiality. For regeneration railway area we provides multi-level public space as an extension to existing public spaces. At ground level it allows for visibility and accessibility. For the unexpected, for “nature” means spatial events and cultural events populate it in section. It exists as a monumental multi-level park that takes on the character of a happening.

2. Shape and space ideas: The tower contains nine floors. To extend the typologies offered by the tower, a series of systematic variations is applied: rectangular plans alternate with wedge shapes, the orientation of the rooms alternates between panoramic city views to the north, or narrower views in opposite directions, east and west. Togeth-

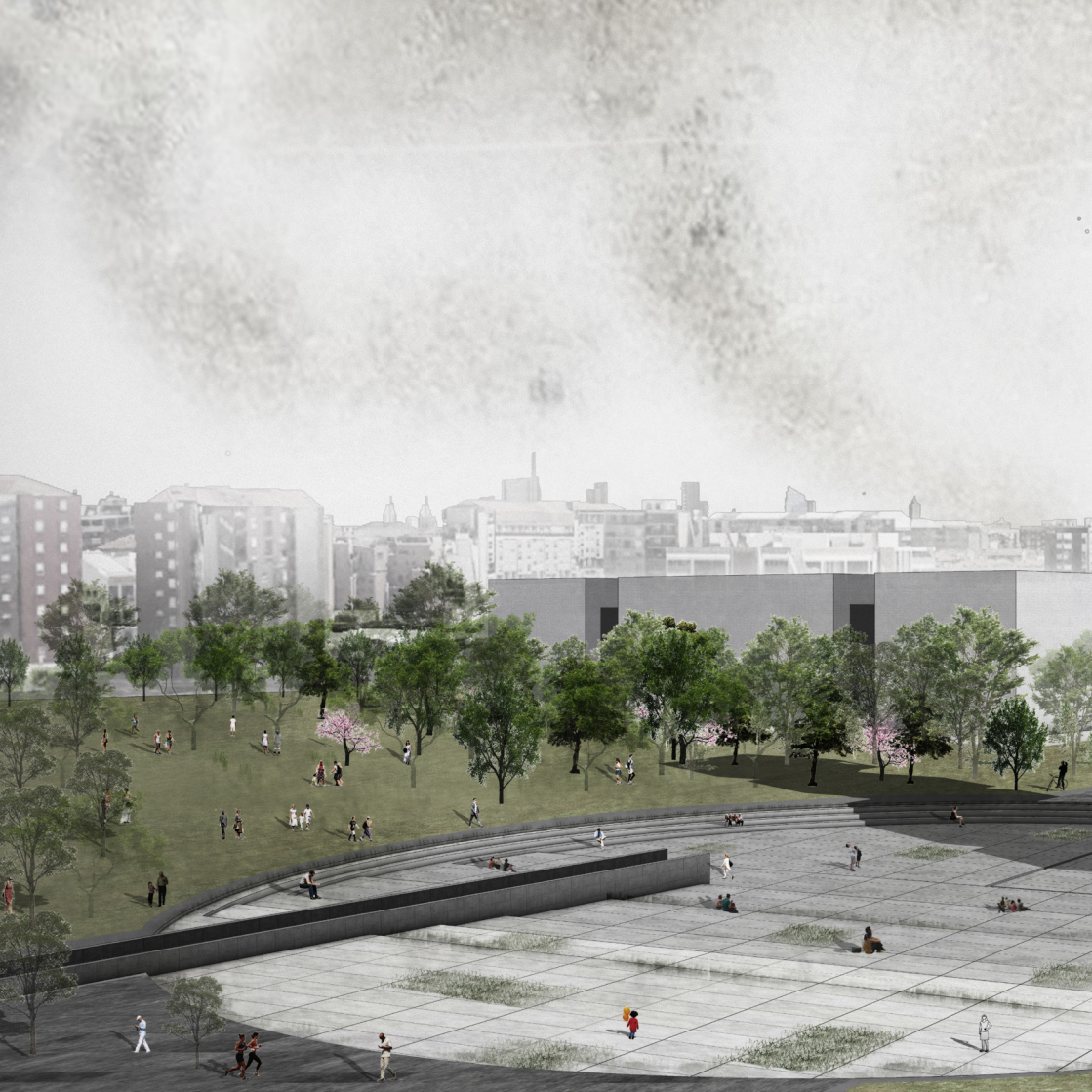




er these variations produce a radical diversity within a simple volume – so that the interaction between the spaces and specific events or works of art offer an endless variety of conditions. A wide slot cut through the top of this angular structure allows the exterior glass elevator to pass through, giving visitors wide-ranging views of the compound and the city stretching out below them

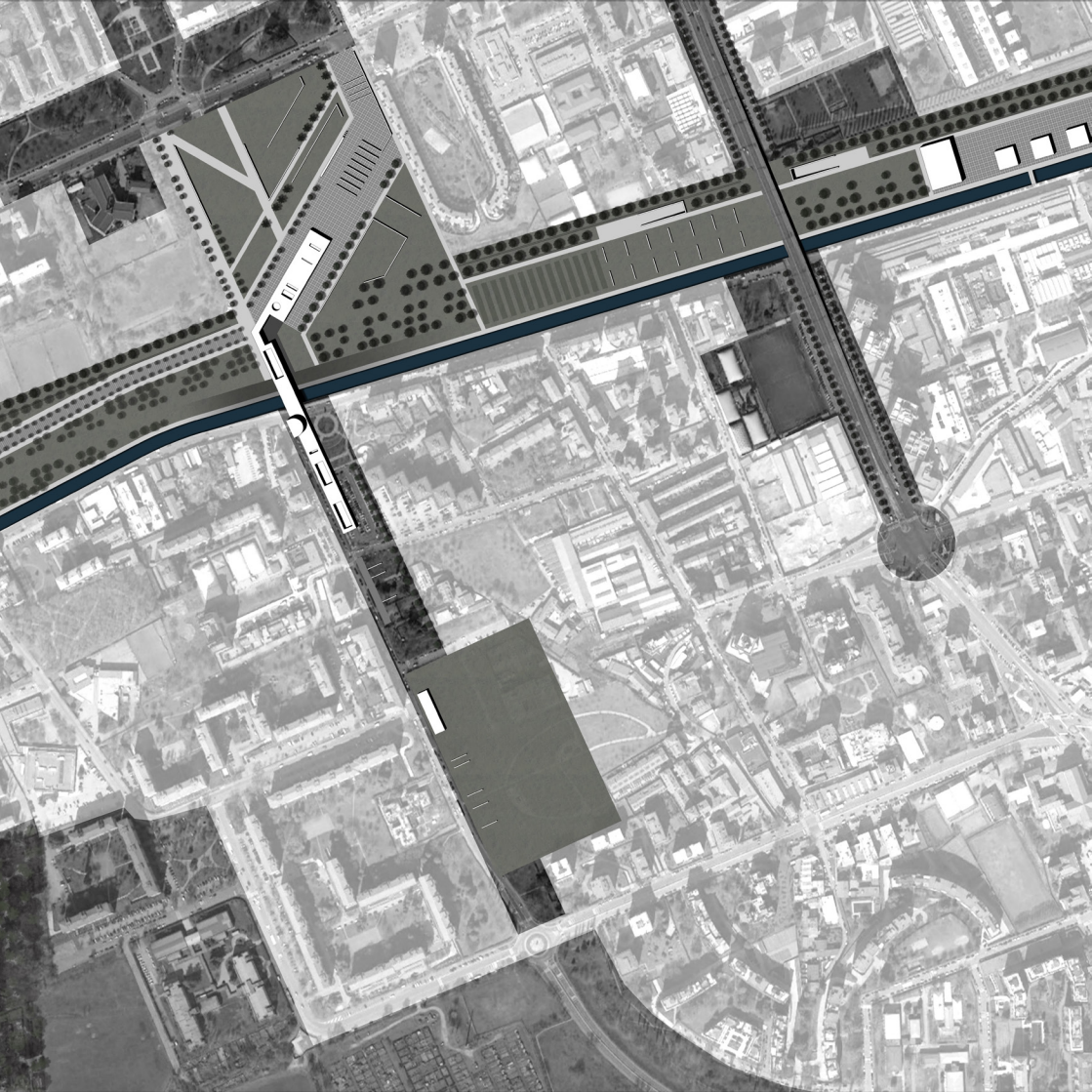
3.

Vertical Forest: Six stacked Milanese landscapes form an independent eco-system communicating Italian cultural sustainability: the combination of progressive thinking and contemporary culture with traditional values. The architecture suggests Milan open-mindedness whilst referencing stereotypes associated with the Milan landscape.









CHURCH

CHURCH

CHURCH

CHURCH

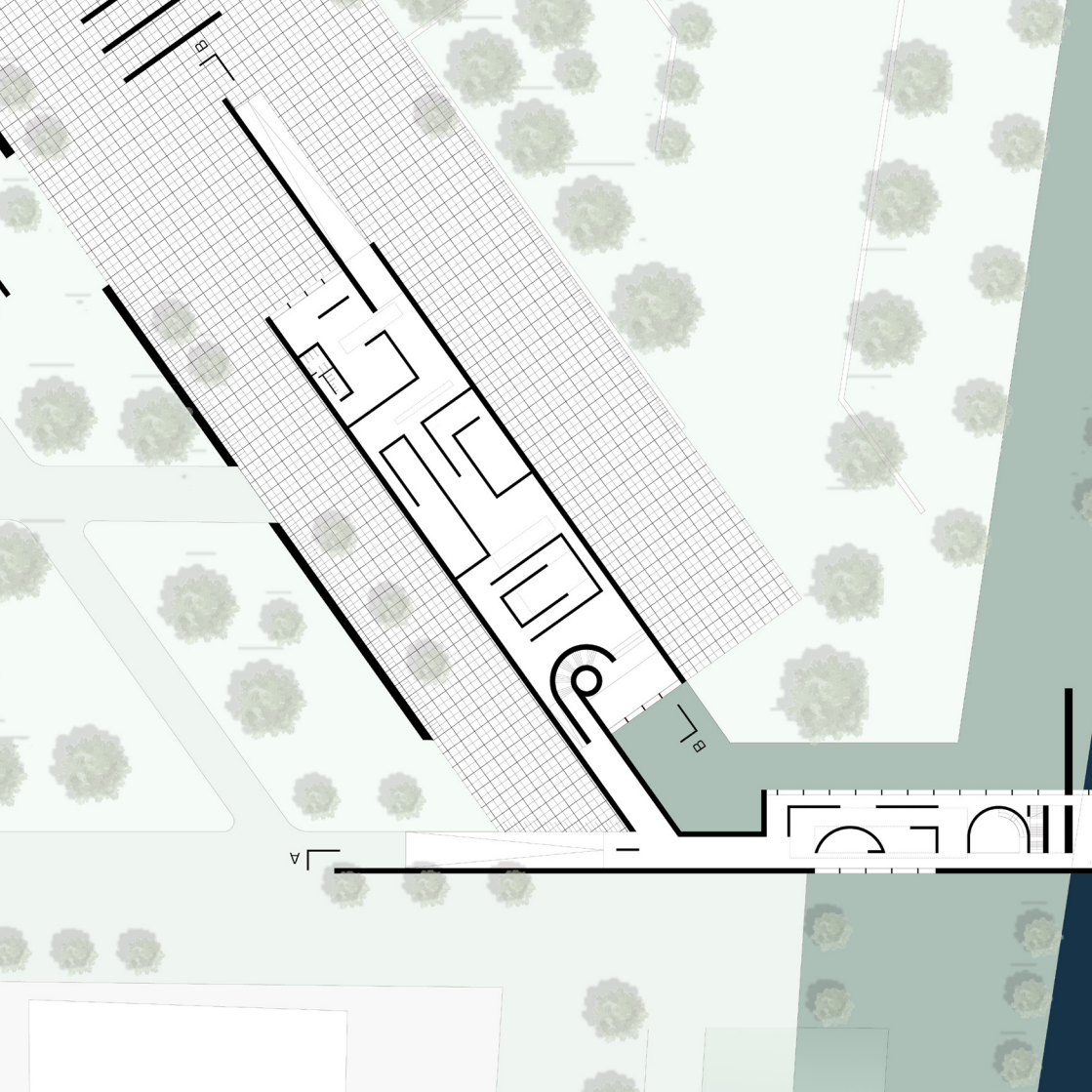
4.4 Gallery Bridge

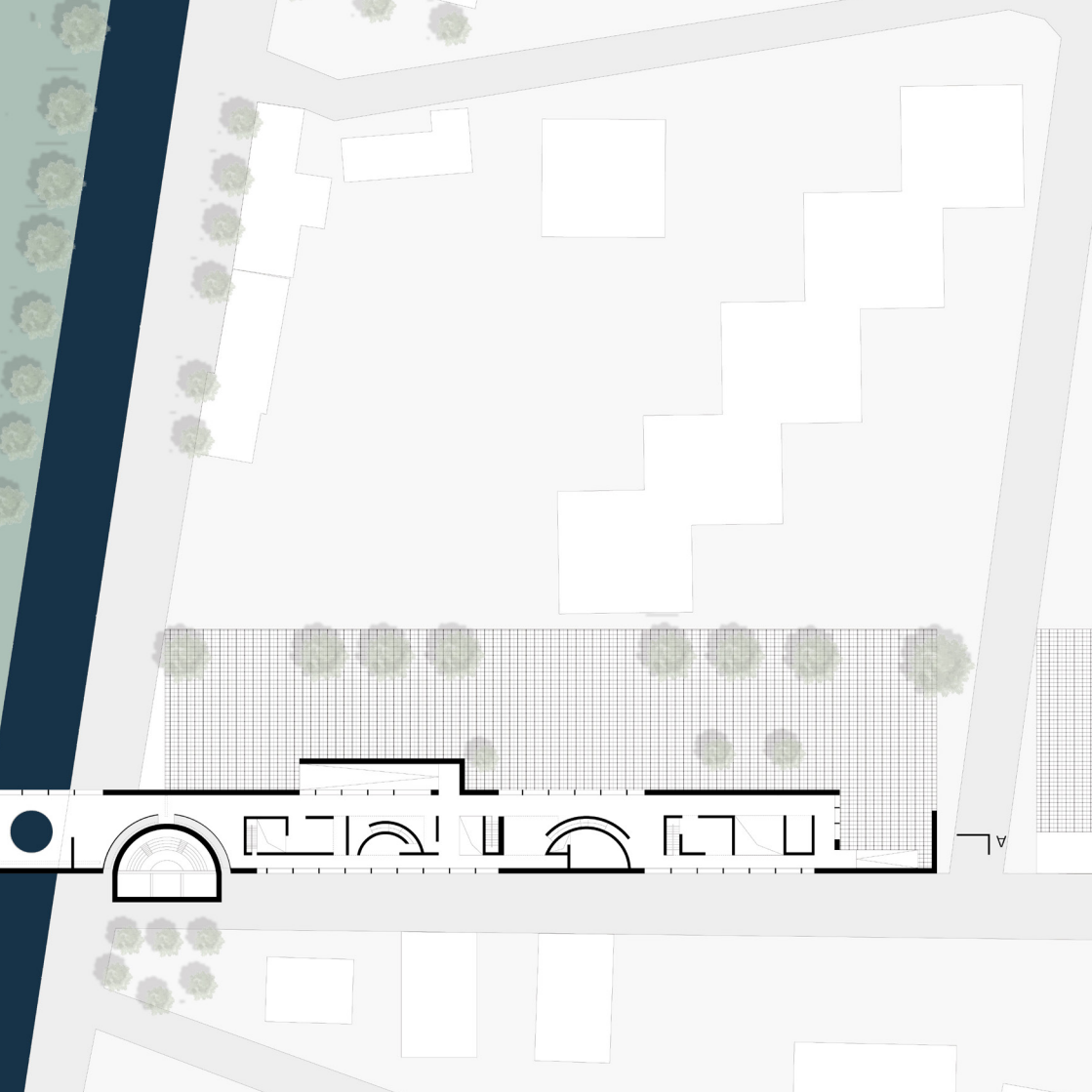
Block coherence: Given that the bridge should establish a relationship with its historic and calm surroundings, the height of the proposal was kept intentionally low. The vertical alignment of the bridge allows for a sense of lightness but results in a graceful low curve inside the bridge that enrich the internal space. To encourage visitors to spend time on the bridge and neighboring communities throughout the year, The bridge provides a gateway to events with strong roots in the adjacent communities.

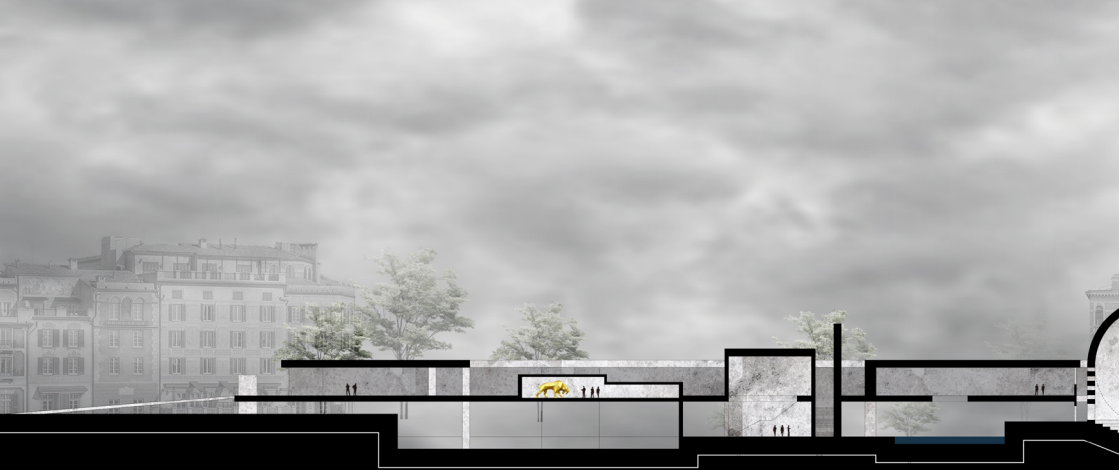
Accessibility within the bridge: Paths from each side of the river operate as springboards – sloped ramps that elevate visitors to maximized look out points to landmarks in either direction. The temporary and permanent exhibition space should be in the central of

the building, so the path will be on both sides of the bridge. Extending over the canal, the paths join to form a loop, embracing the path from the public square side and linking the opposing agriculture in a single gesture. The resulting form of the bridge creates an peaceful meeting.

Contact with the ground: Forming another space on the vertical plane, changing the terrain, while the ground floor level are also the important elements for the exhibition space. in this case, it could create several grand spaces.







SECTION A-A



SECTION B-B

