



56th ISOCARP
Virtual World Planning Congress
Post-Oil City
PLANNING FOR URBAN GREEN DEALS

2020 ISOCARP Student Award Special Mention

THE CANAL CANDIANO, 2100, Ravenna, Italy

Aslı Akcay, Dilara Kus, Emine Atabas, Sonam Batra

2100: SEA LEVEL RISE

According to the IPCC report, sea level will be rise +1 meter which will affect the whole region socially, economically and environmentally. The new coastline will occur, and many lands and industries will be under the sea level.

The canal has 11 km long and it ends at the Marina di Ravenna.

THE STUDY AREA
RAVENNA

THE CANAL CANDIANO

MARINA DI RAVENNA

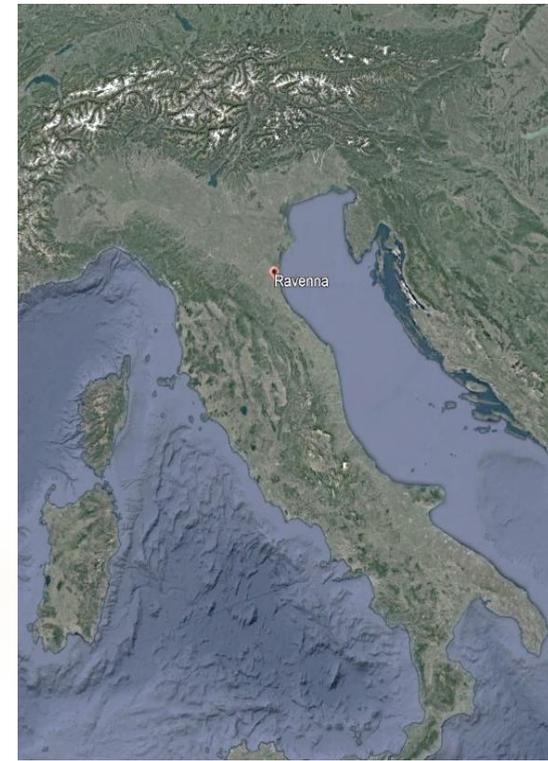
PUNTA MARINA

LIDO ADRIANO

LIDO DI DANTE

NEW COASTLINE

LAGOON



Ravenna, is located in the Emilia-Romagna region of northern Italy. It was the capital city of Western Roman Empire. The city had an importance about fossil fuel energy, especially in 70s. There were many factories and offshore platforms in Adriatic Sea.

GIS BASED ANALYSIS

BLUE SYSTEM



- Natural Water Course
- Water Channel
- Wet Areas
- Levee

The city center of Ravenna is surrounded by two river. Unita River has the natural water course characteristic. The other one is the Canal Magni. Inside the city there are many water channels.

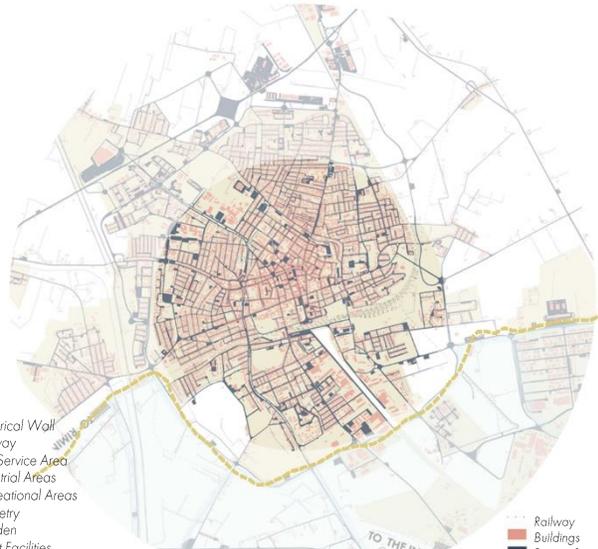
LAND USE



- Historical Wall
- Railway
- Port Service Area
- Industrial Areas
- Recreational Areas
- Cemetery
- Garden
- Sport Facilities
- Hospital Facility

The main function of the Canal Candiano is the industry. There is a headquarter of the port administration. Some of gardens are related with historical areas.

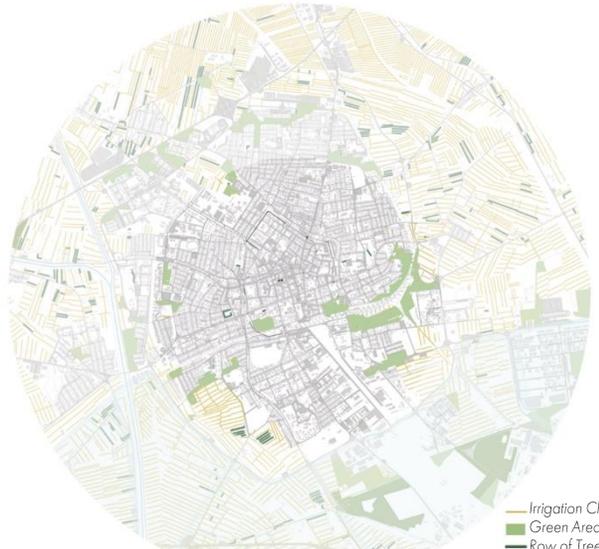
GREY SYSTEM



- Railway
- Buildings
- Primary Roads
- Urban Areas

As an infrastructure, the railway passing through the city center and continues to the industrial areas which will cannot be using.

GREEN SYSTEM



- Irrigation Channels
- Green Areas
- Row of Trees
- Agroforest

In the city center, green areas consist of sport areas and other urban facilities. Many streets have isolated trees. The city center is surrounded by agricultural fields.

PROBLEMS & POTENTIALS

POTENTIALS



There is a University of Fine Art, which has a potential of making the site more attractive.

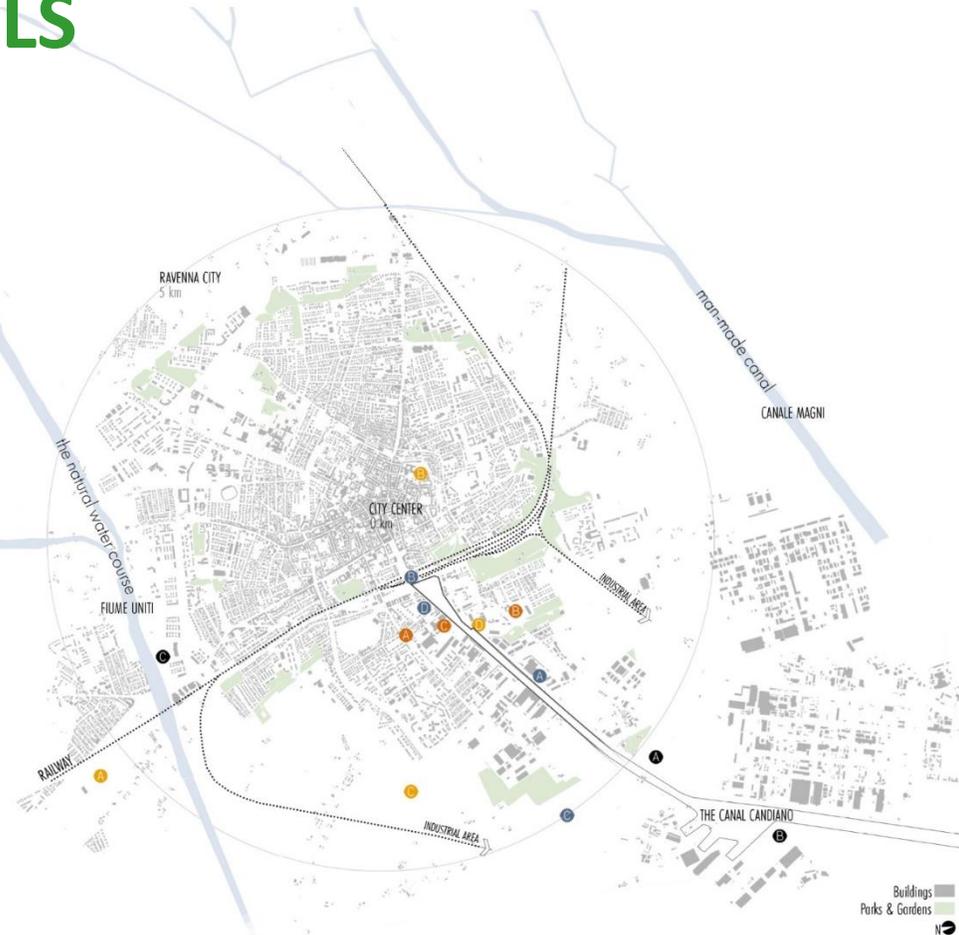
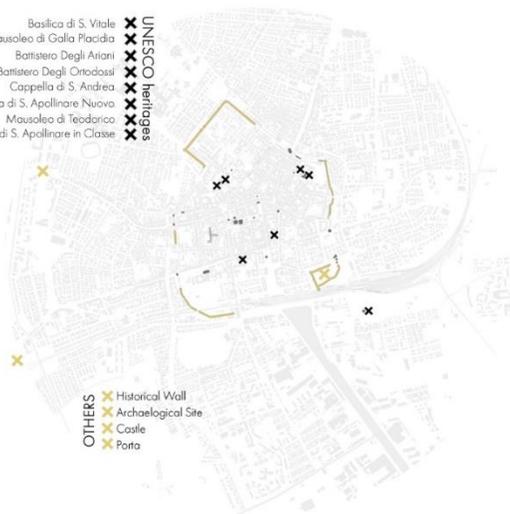


UNESCO heritages are consists of eight buildings. They are under protection but also should be connected with the daily urban usage.

- Basilica di S. Vitale
- Mausoleo di Galla Placidia
- Battistero Degli Ariani
- Cappella di S. Andrea
- Basilica di S. Apollinare Nuova
- Mausoleo di Teodorico
- Basilica di S. Apollinare in Classe

UNESCO heritages

- OTHERS
- Historical Wall
- Archaeological Site
- Castle
- Porta



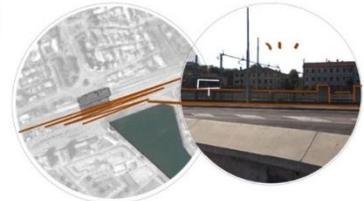
PROBLEM



Along with the canal, abandoned industrial buildings are exist. The condition of buildings are not good but they reflect the characteristic of the industrial area.



Undefined areas and improper physical structure at the canal edge.



The train station and railway is a barrier between the canal and the city center.

Main problems of the site are that the interruption between the historical city center and the canal and the flood risk of rivers. There are many abandoned industrial buildings along the canal and landscape is neglected too.

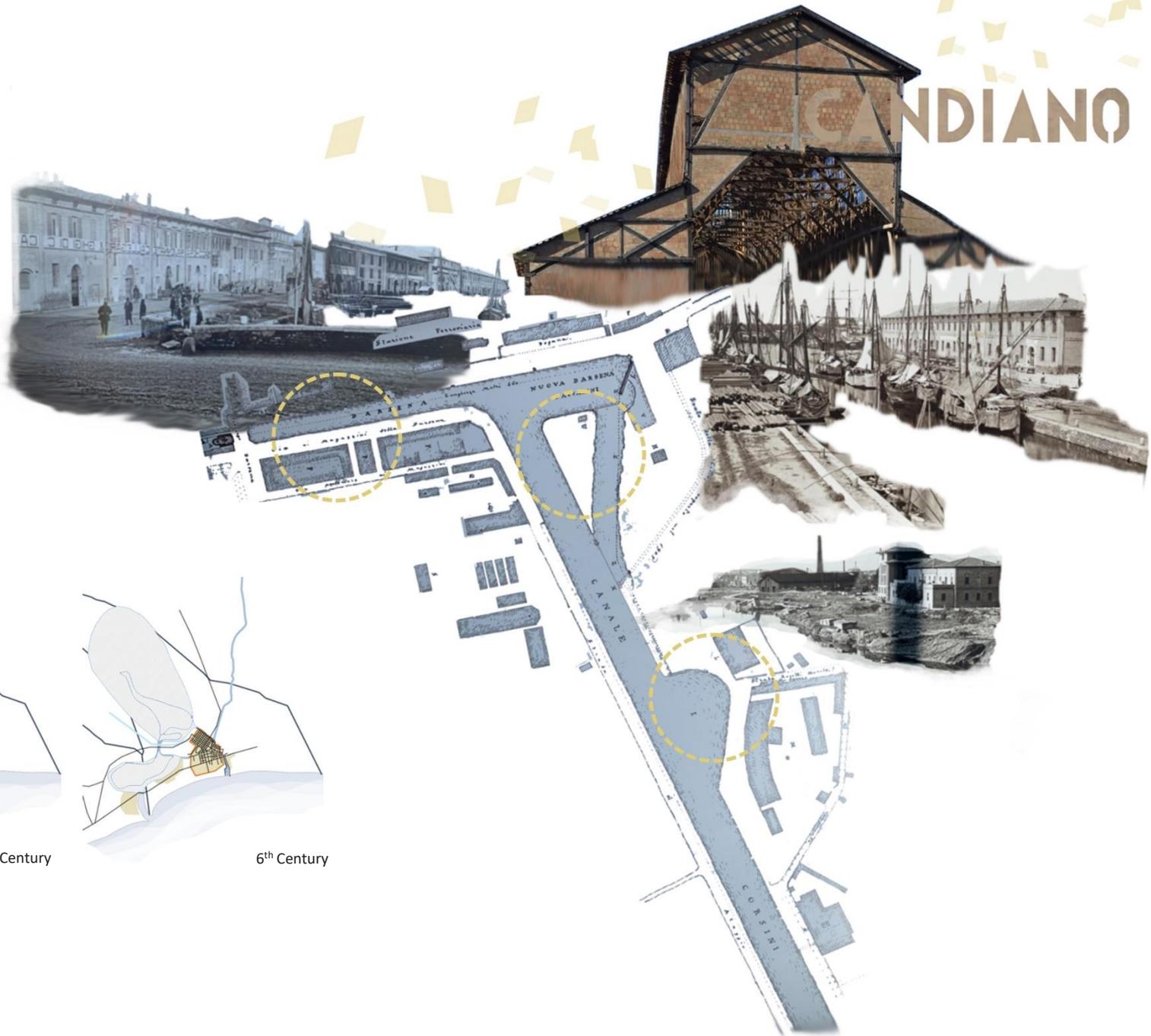
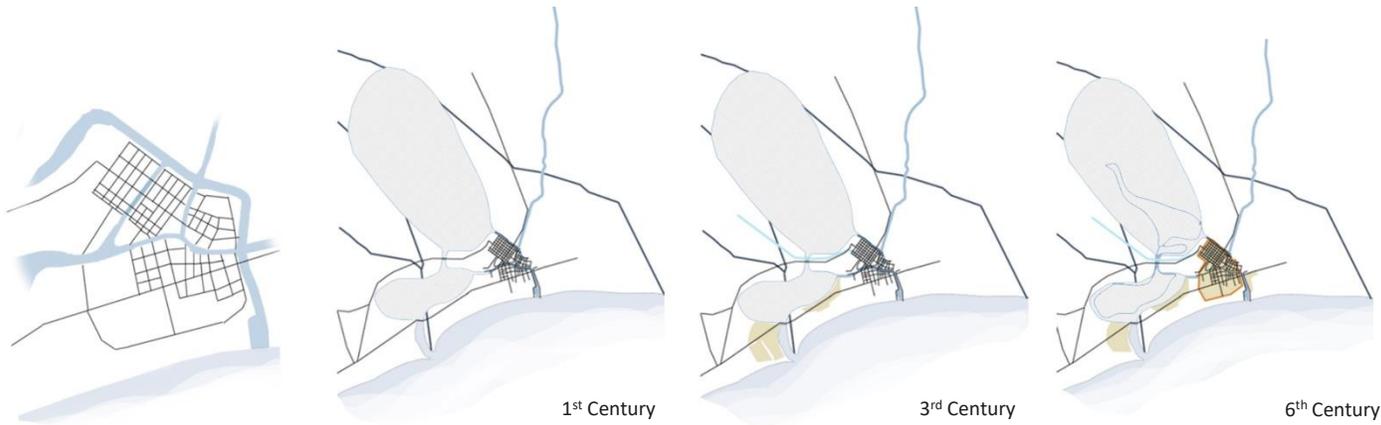
Potentials of the site are continuous tourism potential, archeological sites, and heritages. There are also some new functions and facilities around the canal such as pop-up and wall art spaces.

THE CONCEPT

The city structure shows us the importance of water not only as resource but also as trade, industry and recreation. The water gives the identity to the city of Ravenna.

Aims of this project are

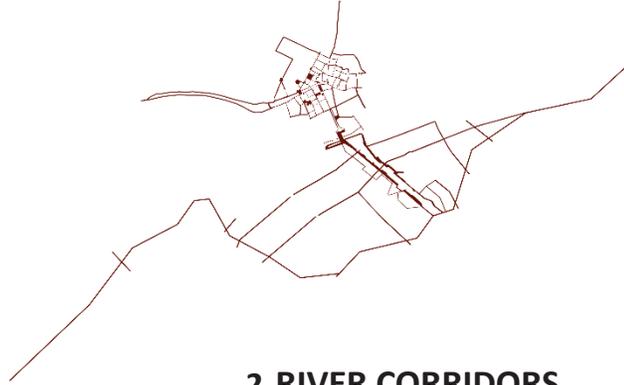
- to enhance the connection between people and the city
- to emphasize the old pattern of the canal
- to improve the water management system
- to collect & connect the human memory in the design process.



THE STRATEGY

1. CONNECTOR

The main aim of this strategy is to create a constant link in between other strategies. It focuses on enhancing the quality of public spaces and green areas with considering the needs of social activities.



2. RIVER CORRIDORS

Uniti River and Magni Canal are very connected with the city center. The aim of this strategy is to decrease the flood risk, and to improve the water management system.



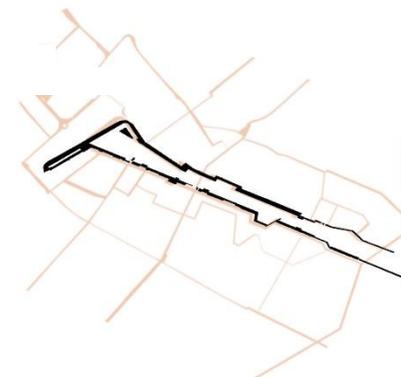
3. NEW COASTLINE

Due to the sea level rise, the coastline will change by time. The aim of this strategy is to create a larger buffer zone with wetland areas which is not isolated from the people but at the same time has limited accessibility.



4. THE CANAL CANDIANO

The main aim is to adapt the built and natural environment for the future with considering to keep the strong characteristic of the Canal Candiano and to create a new space for the socio-econ



RIVER CORRIDORS

Proposal Green System



Proposal Connector



REHABILITATION OF THE RIVERSIDE

Due to the flood risk, the both sides of the two rivers are enlarged with the natural vegetation. These areas are collecting and filtering the water. In the surrounding of the Canal of Magni, the natural vegetation is added to increase the permeability of the surface.



WETLAND

Wetland vegetations are crucial, When the sea level rise is happen, new coastline will occur as wetland areas which will be connected with the river corridor.



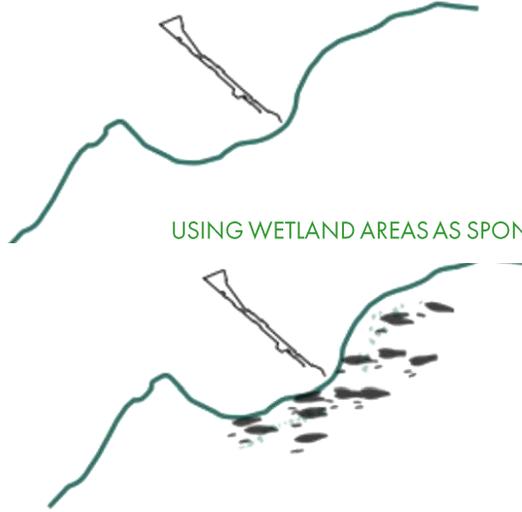
RECREATIONAL AREAS

The Uniti River is connected with the city. Inside the river corridor, recreational areas will improve this connection.



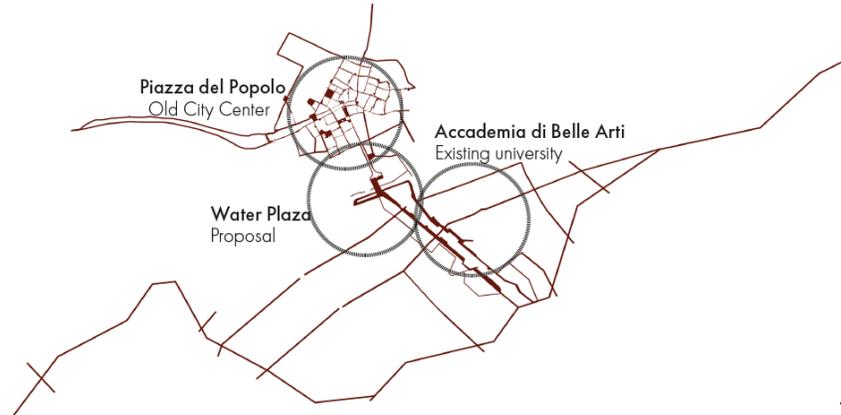
NEW COASTLINE

EXPANDING BUFFER ZONE IN NEXT TO THE NEW LAGOON EDGE



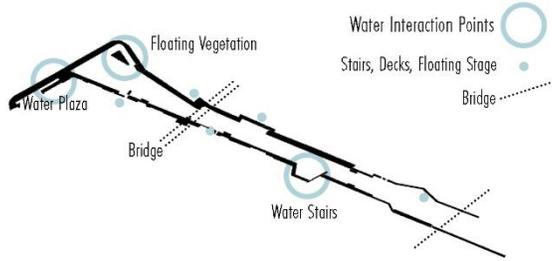
USING WETLAND AREAS AS SPONGE CONCEPT

DESIGNING WETLANDS WITH ACTIVITIES & RECREATIONAL AREAS AND CONNECTING WITH CITY CENTER AS A MEMORY

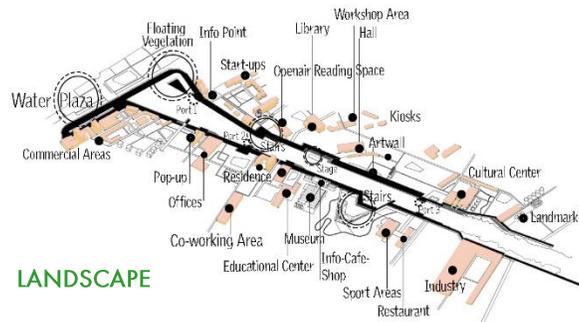


THE CANAL CANDIANO

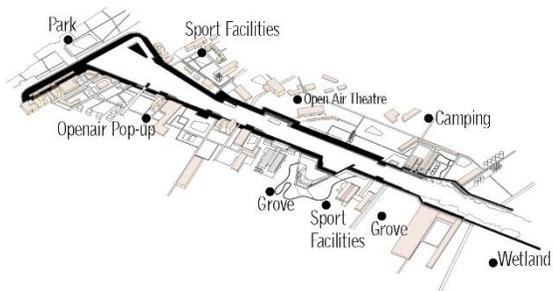
HUMAN MEMORY & WATER



NEW FUNCTIONS OF ABANDONED BUILDING

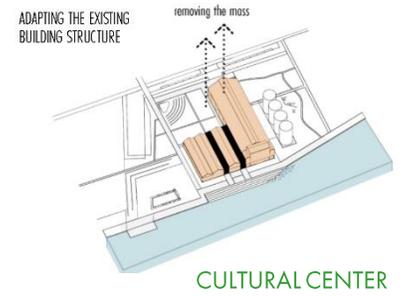
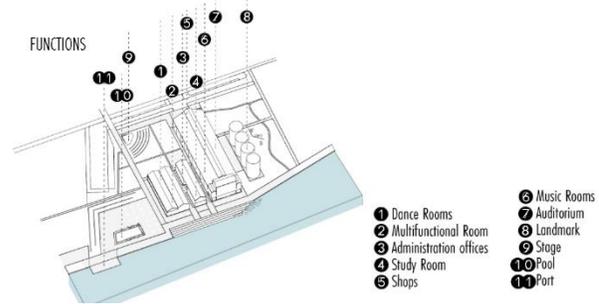
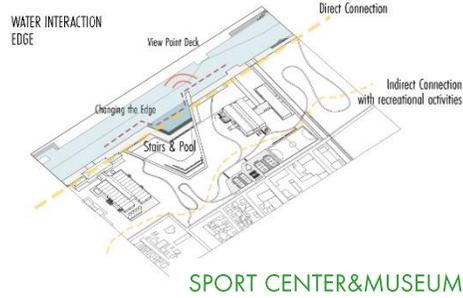
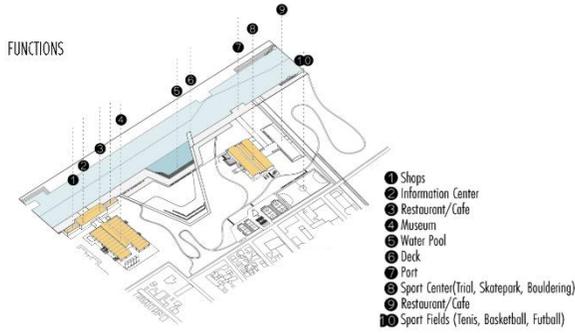


LANDSCAPE



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TRANSFORMATION OF THE ABANDONED SITES



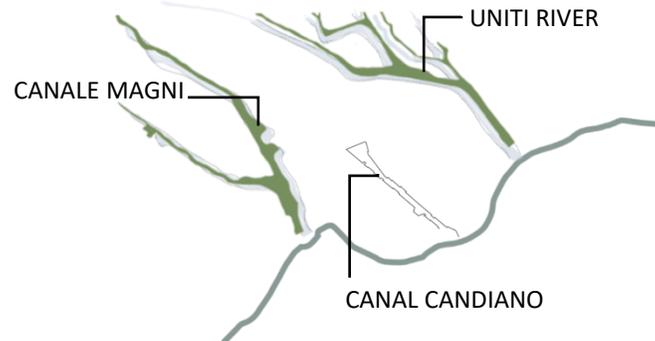
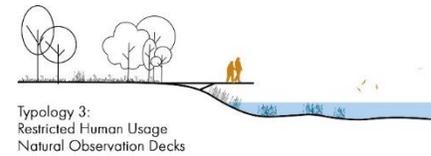
REDESIGN OF THE EDGES

UNITI RIVER EDGES

Existing Edges



Proposal Edges

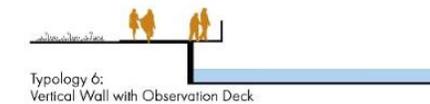
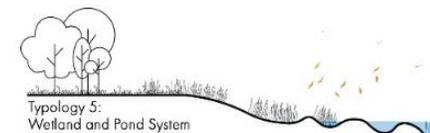
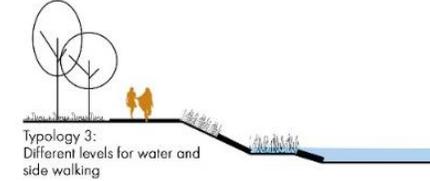
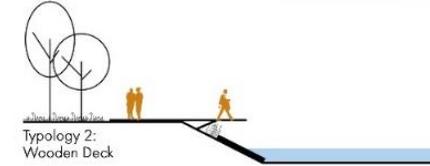


CANALE MAGNI EDGES

Existing Edges



Proposal Edges

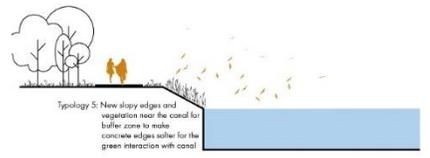
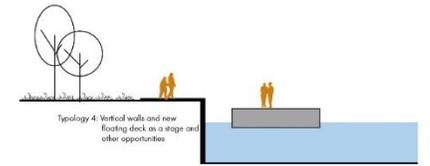
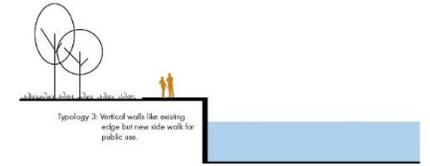
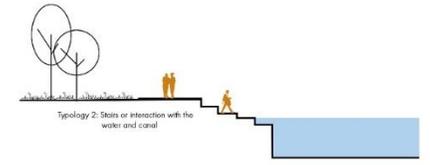
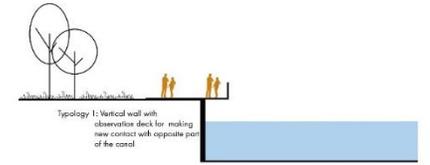


CANAL CANDIANO

Existing Edges



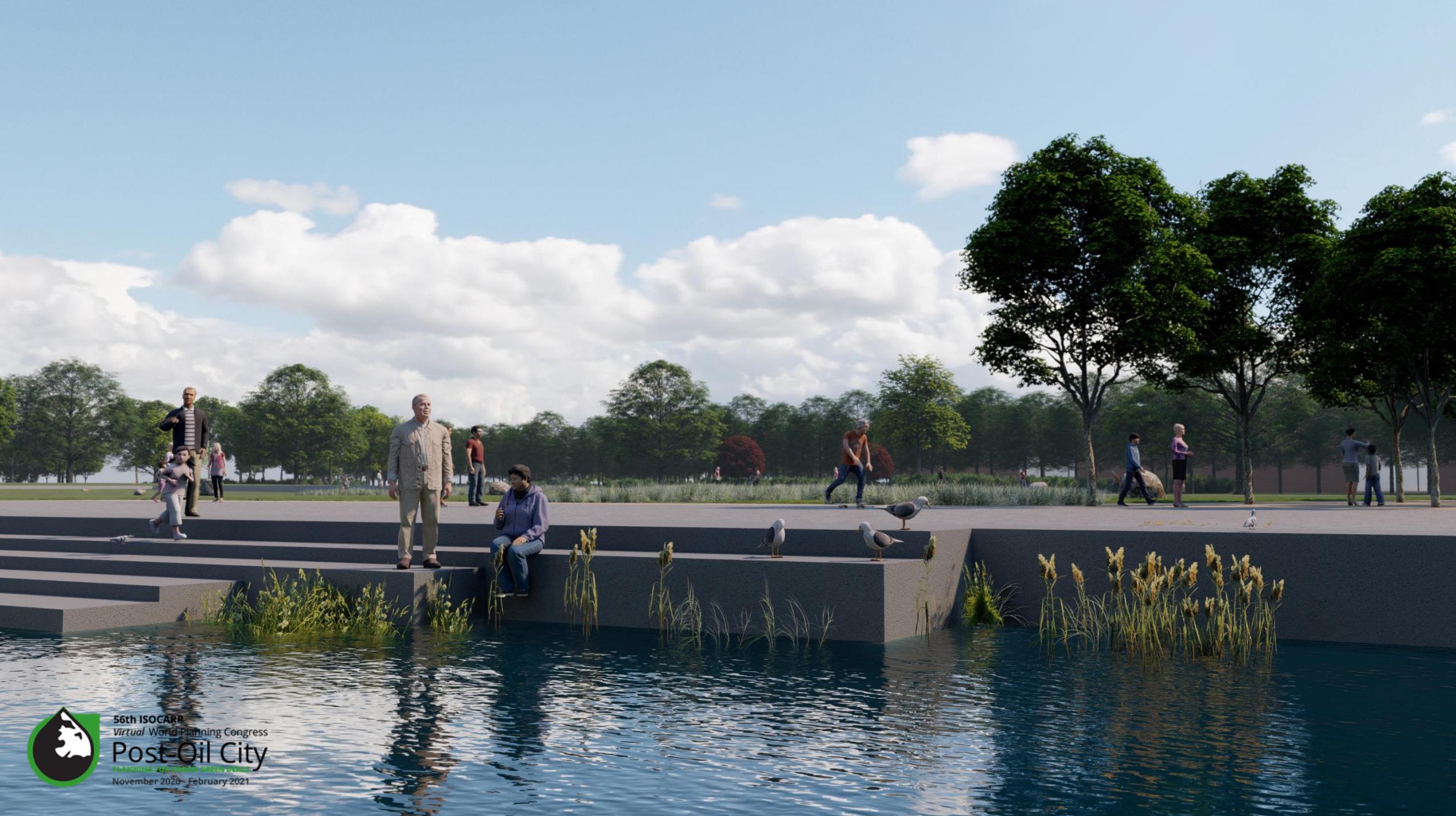
Proposal Edges



Natural Environment

Built Environment

Social Interaction

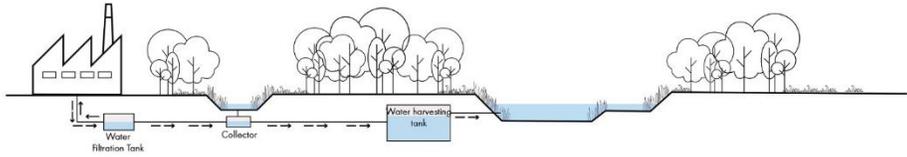


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FUTURE DEVELOPMENT

GENERAL PURIFICATION SYSTEM

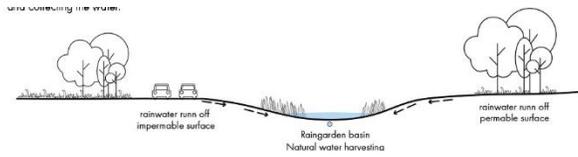
Purification and Collection of the Industrial Water



Canal Candiano Water Purification System



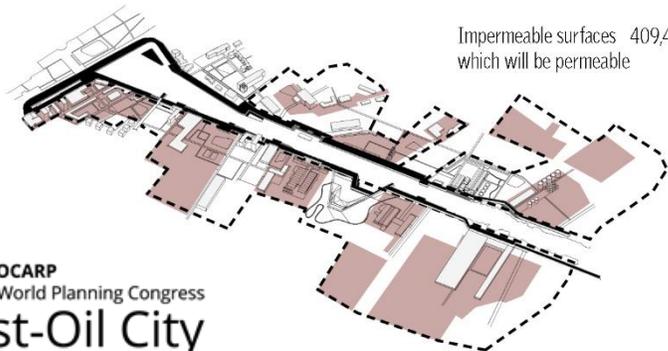
Raingardens and Wetlands



FROM IMPERMEABLE TO PERMEABLE SURFACES

--- Industrial Areas 947,450 m²
 --- Concrete Surfaces 508,980 m²

Impermeable surfaces 409,400 m²
 which will be permeable



Dry Season Extreme Conditions





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