

“THE TRANSFER”

Final thesis project
Master in advanced architecture
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Bridges are by design meant to
bring people together. All we
have to do is let them.

Remei Capdevila-Werning

01. Introduction

Problem

Bridges as we know them are meant to cross obstacles, take us from A to B avoiding the factor they are crossing. In the history there are examples of bridges with a programmatic space, but after cars are introduced to our lives they become mostly a transportation hub with no other function. They should become public spaces and connect to the obstacle by influencing the environment in a positive manner, or extracting green energy from it, by benefiting from existing forces around them.

Question

Could we rethink purpose and functions of bridges and take advantage of the knowledge we have nowadays and implement it in a way that makes the bridge structure assets with a program, that none of the other structures in an urban environment can host.

Hypothesis

The area of the outfall of river Besos, is located in former industrial zone north of Barcelona, during the last decade the area has developed into a modern city neighborhood. Retrofitting the abandoned thermoelectric plant would be the next step to take and add this territory to the neighborhood and become a valuable public sea front area.

The proposal for the outfall of river Besos is to become a new public space for the whole area, new node, new centrality, new attraction point.

By connecting the three parks (Forum, Besos and the Factory park) we gain not only connectivity along the coast line, but also a new centrality for the region and the people of Sant Adria de Besos and Badalona.

The outfall of river Besos is an obstacle separating the coast line and the potential public area of the neighborhood. Flow of people could be ensured by easing the access to the former industrial zone and crossing the obstacle of river Besos. The place is one of two disconnectivity points along the coastline north of Barcelona.

By introducing a bridge structure, that not only takes us from one point to another, but also creating a valuable public space, the goal is to have an urban element designed with advanced architecture knowledge, merged with the environment in a way, that reflects the modern vision, needs and options available.

02. Historical Framework

INFLUENTIALS

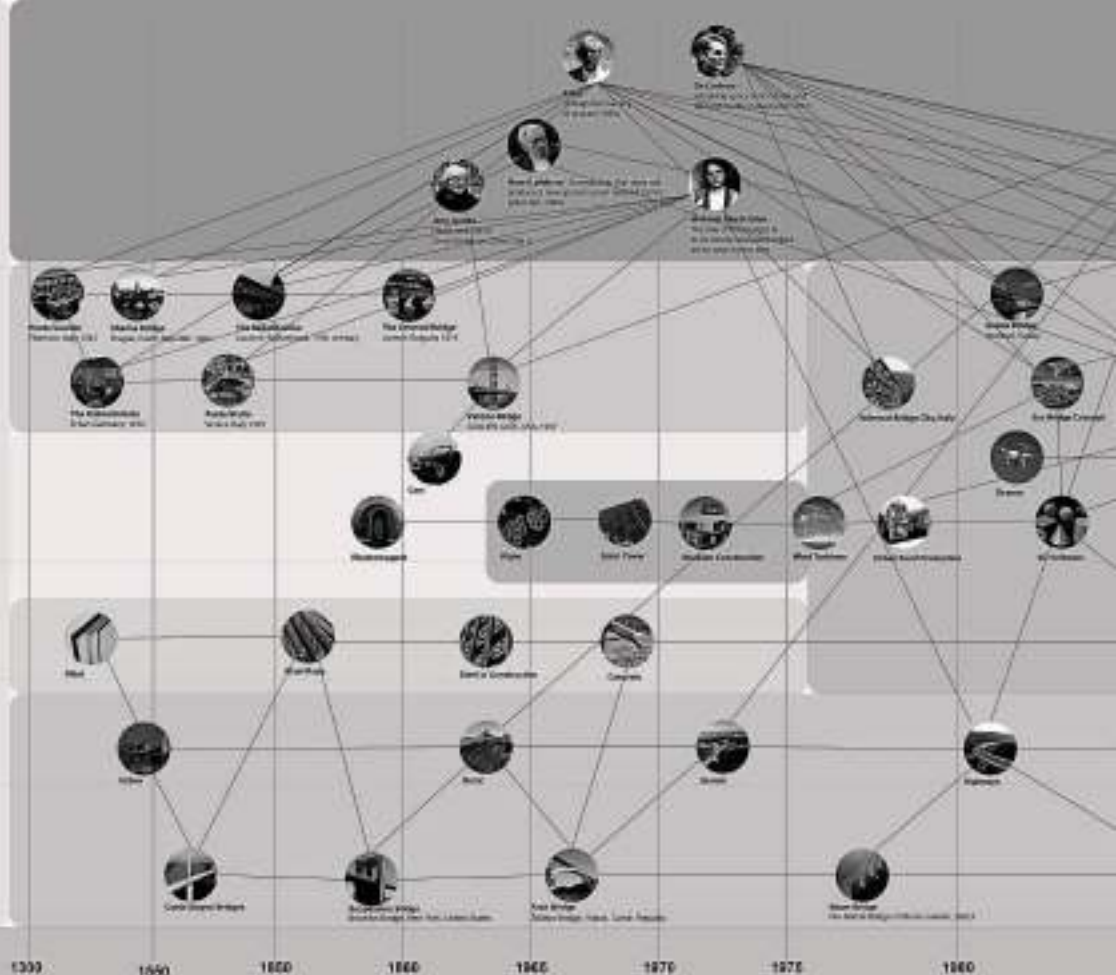
HARDWARE (SPATIAL INNOVATION)

ADVANCEMENTS & DEVICES

MATERIALS

CONNECTIONS IT MAKES

HARDWARE (CONSTRUCTION)

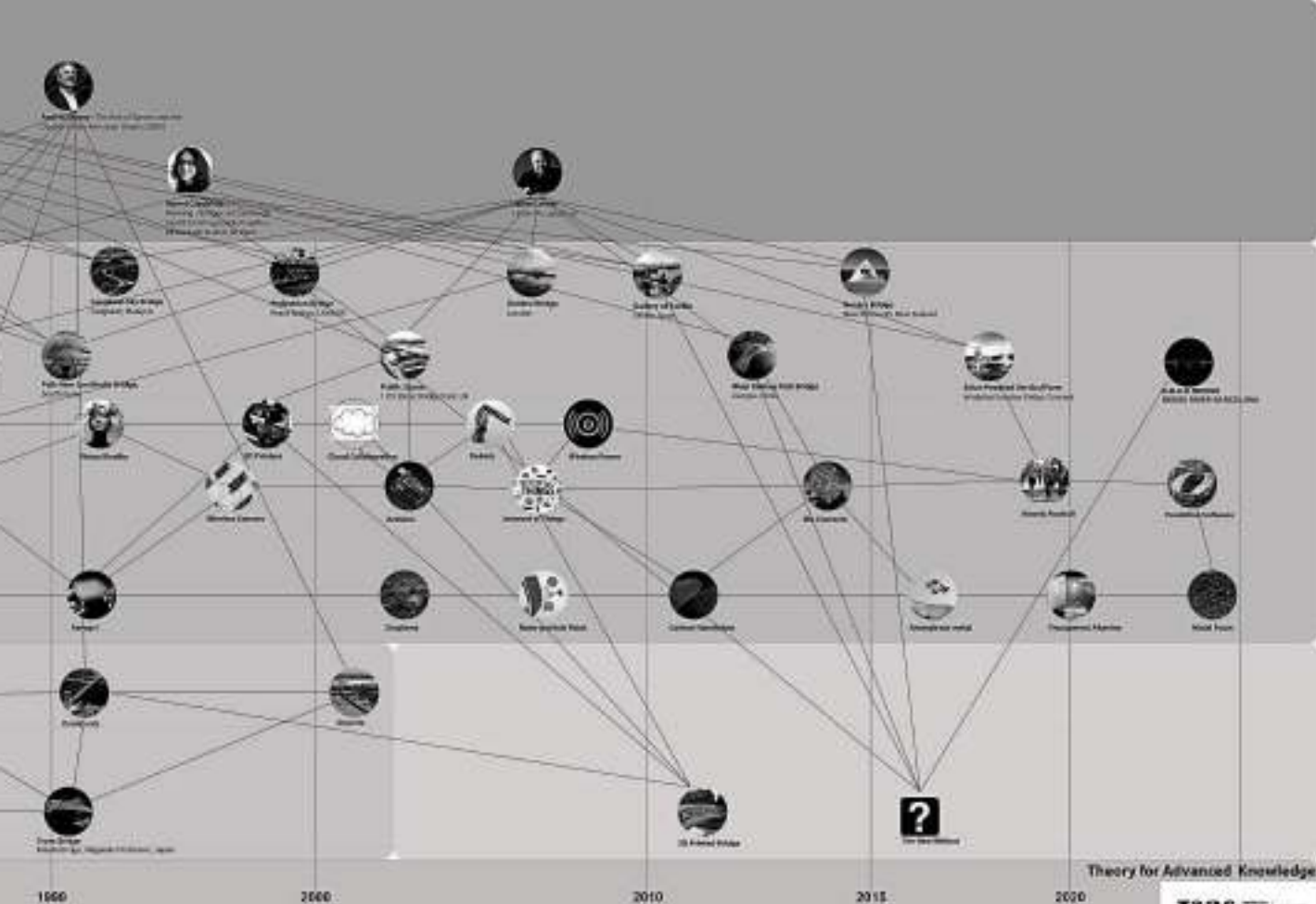


Theory for Advanced Knowledge

Student: Martin Hristov

Director: Manuel Gausa

Assistant Professor: Jordi Vivaldi Piers



Analyzing the attached Time field, we could notice some patterns and relations. Historically bridges have been used par excellence as a connection, hub, infrastructure, but not so often as a public space, as a programmatic space, as space that is meant to keep people there. We have only very few examples throughout history of bridges, that had a program. The reasons for this historical fact vary, from legal obstacles to not fully understanding the potential of this potentially public space, which has the ability to provide many advantages to host a program. Also a reason, that causes bridges to remain mostly as a infrastructure tool is the appearance of cars. When cars and vehicles become used in our daily life, that distances the public from the bridge as a structure, as space to enjoy the scenery while crossing it. Cars become capsules, that are protecting passengers from the surrounding environment, passing quick and meaningless. Mobility becomes fast and not dedicated to the environment around but only covers needs of transportation and is not anymore an experience, that connects us with the surrounding that we are passing. All that leaves the bridge an unexplored territory. On another hand contemporary bridge proposals more often include a programmatic space for public use, visible from the Timeline, a lot of the new concepts for bridges are dedicated to the potential programs, that a structure like this can host, depending on its location and surroundings. The bridge's inhabitation adds layers native to the materiality of the bridge. Then it begins to shelter and accommodate certain activities besides enabling passage over an obstacle. It contains ease as well as allowing movement. It attends to inhabitants in addition to passers by. This dual existence is conducive to raising questions about its perception at two levels. Although the property of inhabitation is not related to its 'bridgeness', the inhabited bridge this way becomes

"Bridges are by design meant to bring people together. All we have to do is let them"

vs.
↔

"The fate of the bridges is to be lonely; because bridges are to cross not to stay"



Ponte Vecchio, Florence 1345



Covered Bridge, Lovich 1874



Irvine Bridge California 2008



John Seigenthaler Bridge 1998



The Kapellbrücke, Lucerne, 17 c.



Galata Bridge, Istanbul 1994



Pedestrian Bridge I-235, 2005



Ponte Rialto, Venice 1591



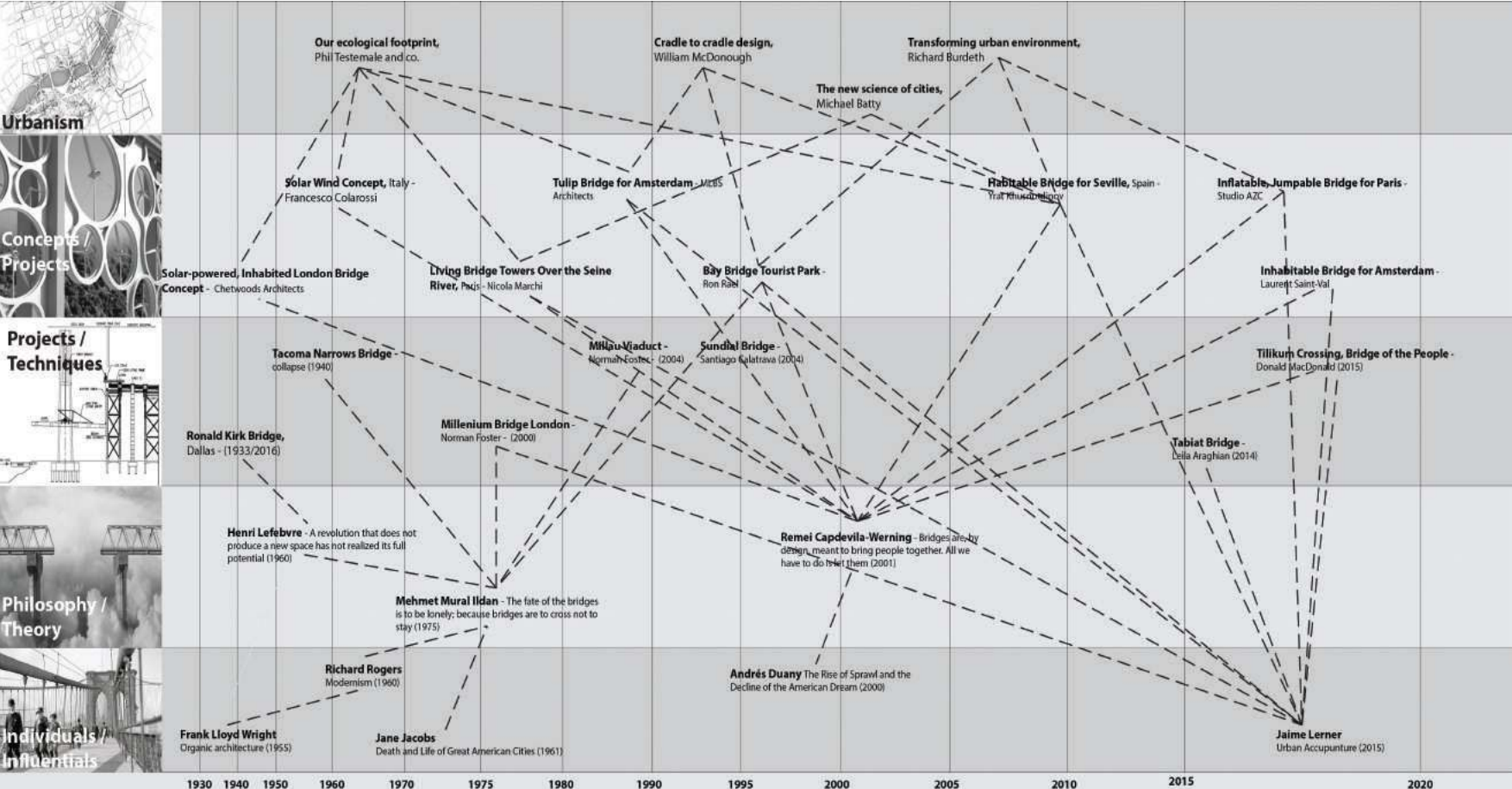
The Krämerbrücke, Erfurt 1472



South Reserve Bridge 2011



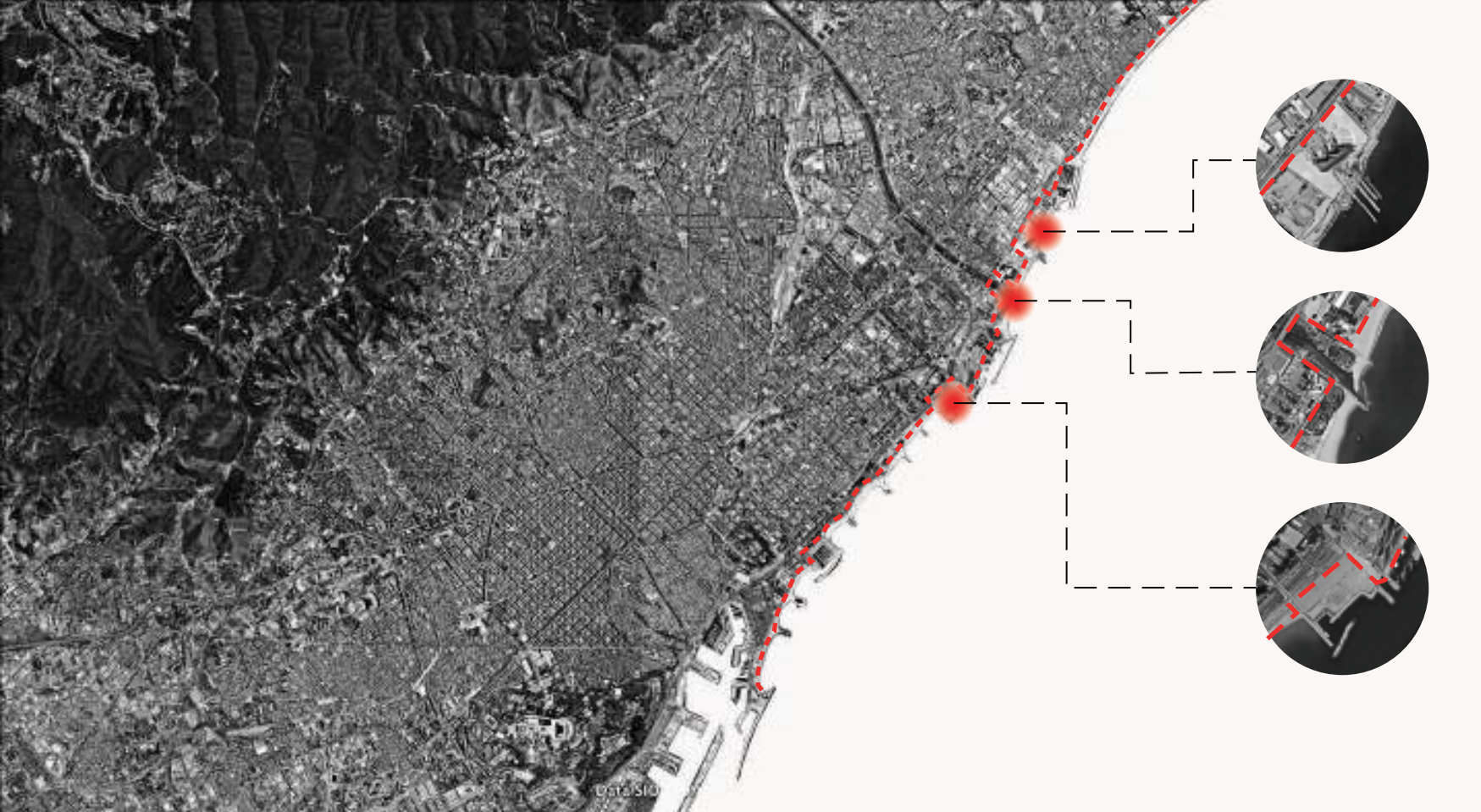
Smith Creek Bridge 2008



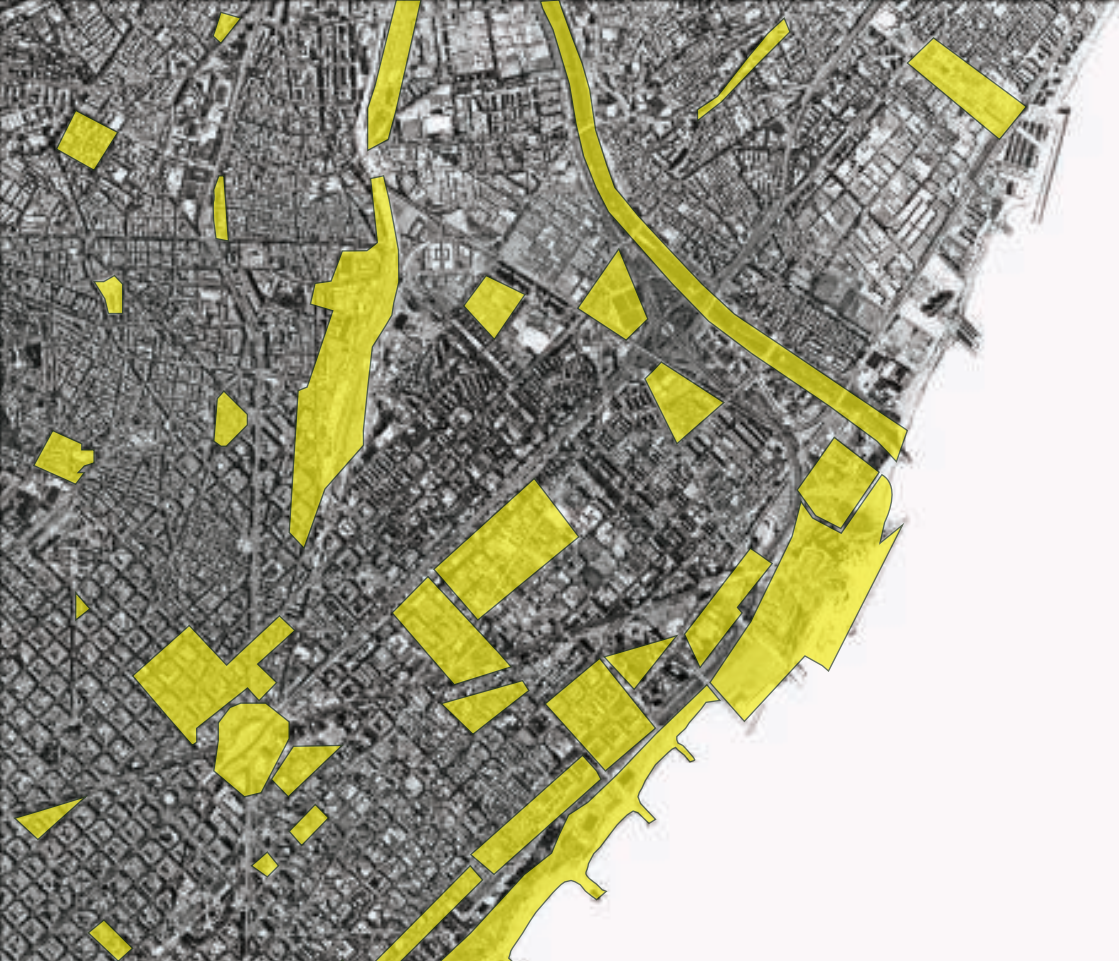
Contemporary bridge structures,

The diagram shows the relevance between the factors, that have influenced the contemporary bridge structures. The outcome, which results is up-to-date bridge structures, not only for new designs, but also retrofitting existing bridges, turning them into programmatic spaces and dedicating them to the public and not the cars anymore.

03. Defining the site



Disconnectivity points along the coastline, north of Barcelona



Large cale interventions in Barcelona, Badalona, Sant Adria De Besos in the passed decade



Existing parks



Existing rec. spaces



Potential public spaces

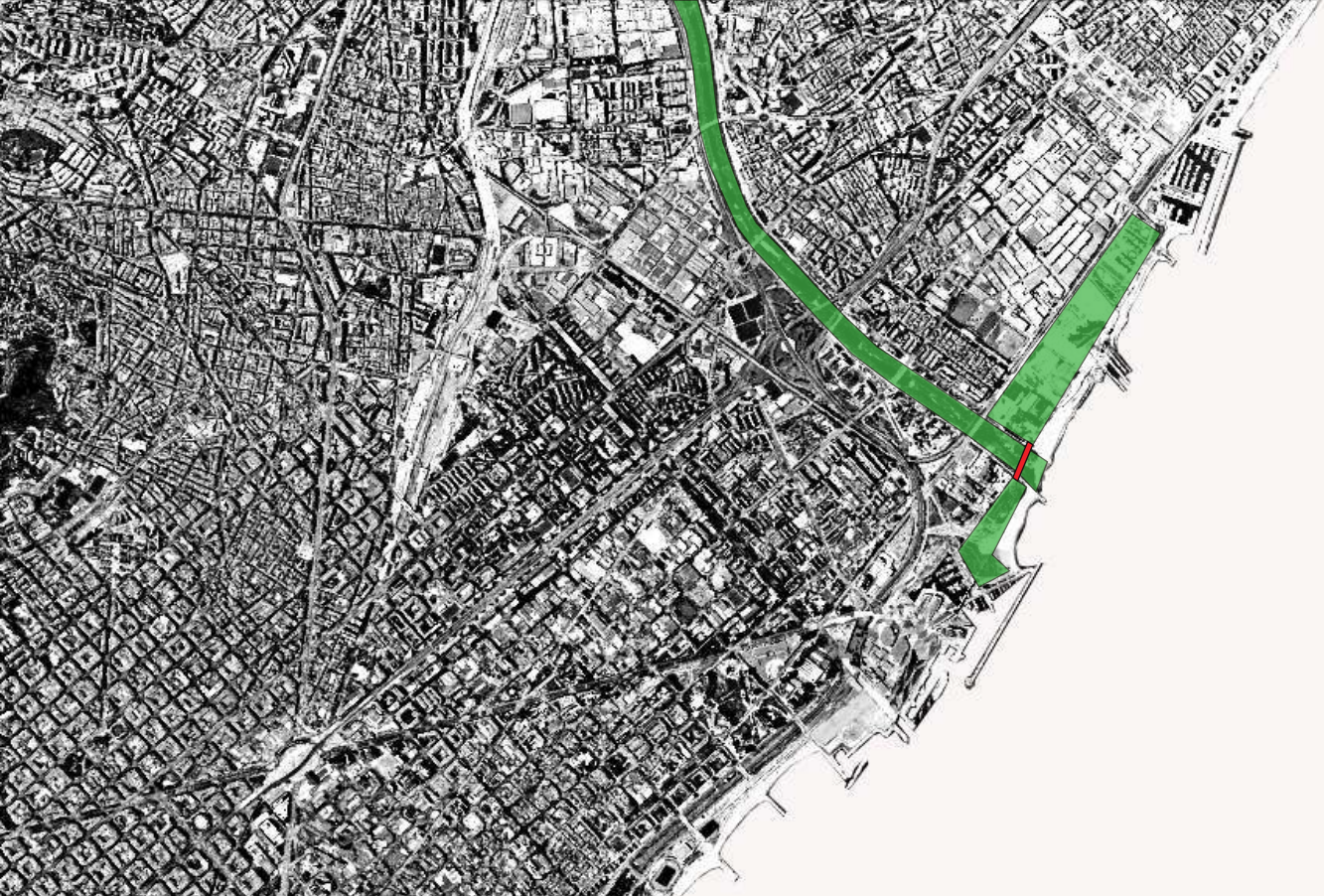


Coastline disconnectivity





Green map, Barcelona, Sant Adria de Besos, Badalona



Proposal of connecting three parks - Park del Besos, Park Forum, Factory park

Instead of having three individual and separated parks, we have the possibility to combine both the existing parks and the new public spaces on the bridge into a series of connected, vibrant urban spaces like beads on a string.



Therithorial distribution of Barcelona in 2017



2030

CITY

**SEMI -
PERIPHERY**

PERIPHERY

OUTSCIRTS

BARCELONA

Therithorial distribution of Barcelona in 2030



2050

CITY

**SEMI -
PERIPHERY**

PERIPHERY

BARCELONA

Therithorial distribution of Barcelona in 2050

2100

BARCELONA CITY

Barcelona city in 2100

The outfall of river besos, is located in former industrial zone north of Barcelona, during the last decade the area has developed into a modern city neighborhood including a marina and beach adjesent to the outfall of river besos. Located between the desolate Fecsa's Thermolectric plant and the energy from waste plant of Sant Adrià de Besòs, it acts as a natural barrier of the flow along the coast line. Looking into options, that ensures passing the obsticle of the river, but also embed in a way, that influences the environment in a positive manner.

Barcelona is expanding towards Badalona and Sant Adrea de Besos. The only possible direction it can go. The beach arund the old Thermo-electric plant will become of significance similar to the one of Barceloneta. Due to this future expansion, the outfall of river Besos will become a center point of the city and therefore it need to act like a new centrality, new attraction point, new hub for the devoleped city. During the passed decade, Barcelona had a lot of large scale public interventions, but all of them were done up to the border of the city with the Besos river. Adding the new territory to the city will reqire more interventions to places that were neglected so far.

04. Site presentation



Site area

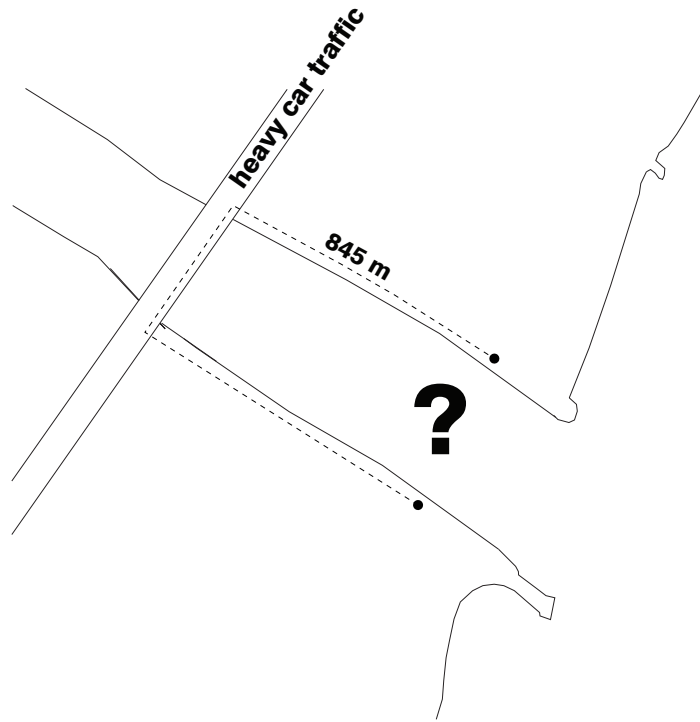
The project creates a new bicycle and pedestrian connection across the river Besos between Barcelona and Sant Adria de Besos

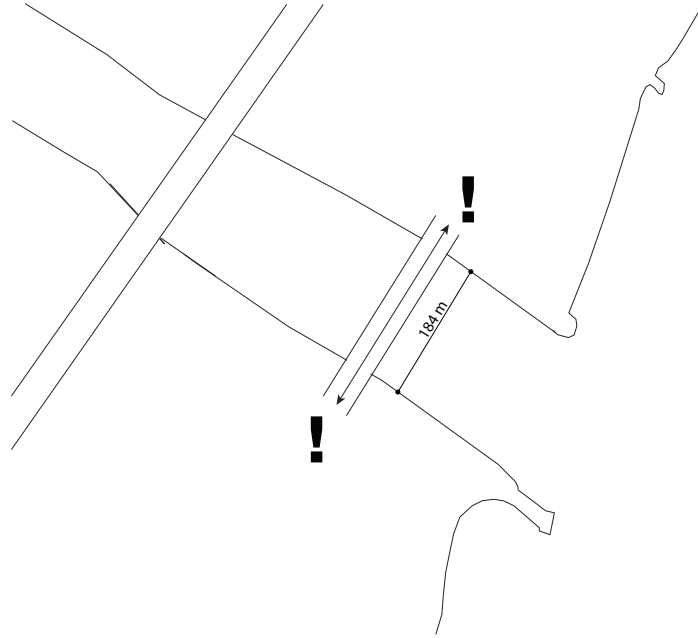


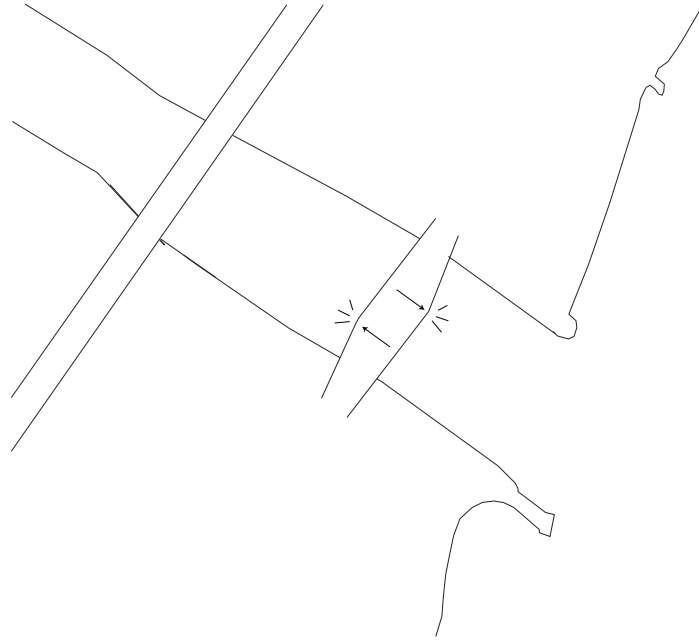
A disconnection point along the coastline, should be fixed

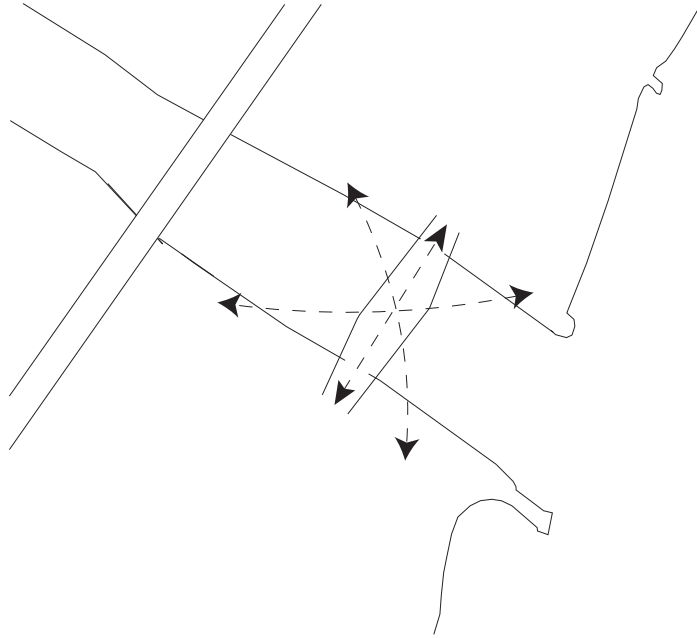


The bridge connects the two sides at the outfall of river Besos between Barcelona and Sant Adria de Besos

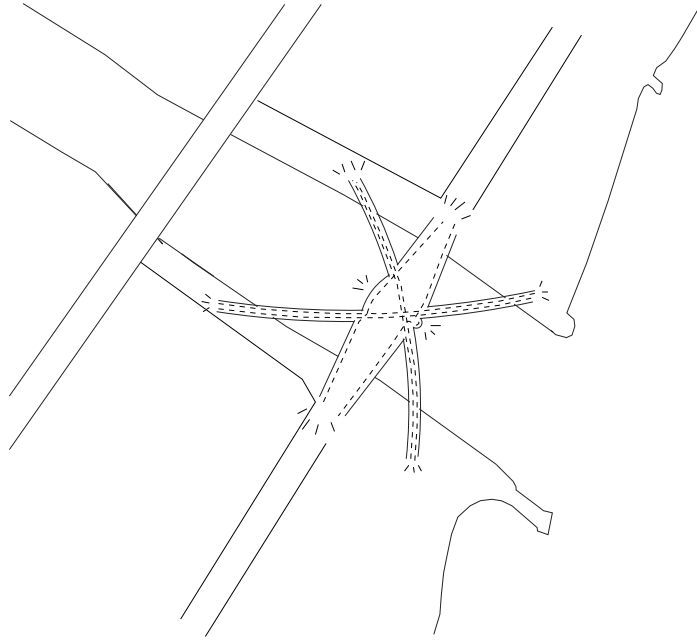




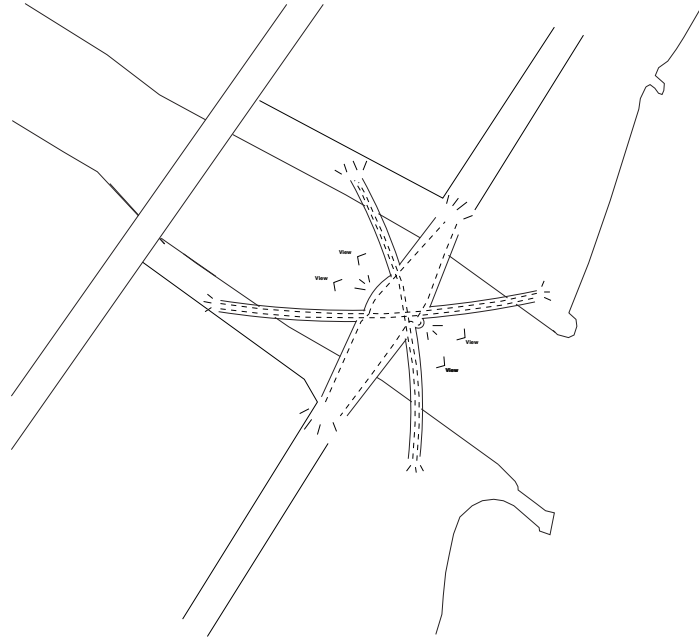




Proposal of connecting three parks - Park del Besos, Park Forum, Factory park
Instead of having three individual and separated parks, we have the possibility to combine both the existing parks and the new public spaces on the bridge into a series of connected, vibrant urban spaces like beads on a string.



Multiple accesing ramps





The bridge connects the two sides at the outfall of river Besos between Barcelona and Sant Adria de Besos

05. Design Framework

- Techniques**
- Function**
- Program**
- Materials**

THANK YOU!