

# Mikkeli. Eco-Base







# 01. DESIGN CONCEPT

## \_THE ANALYSIS

### GEOGRAPHICAL ANALYSIS OF MIKKELI

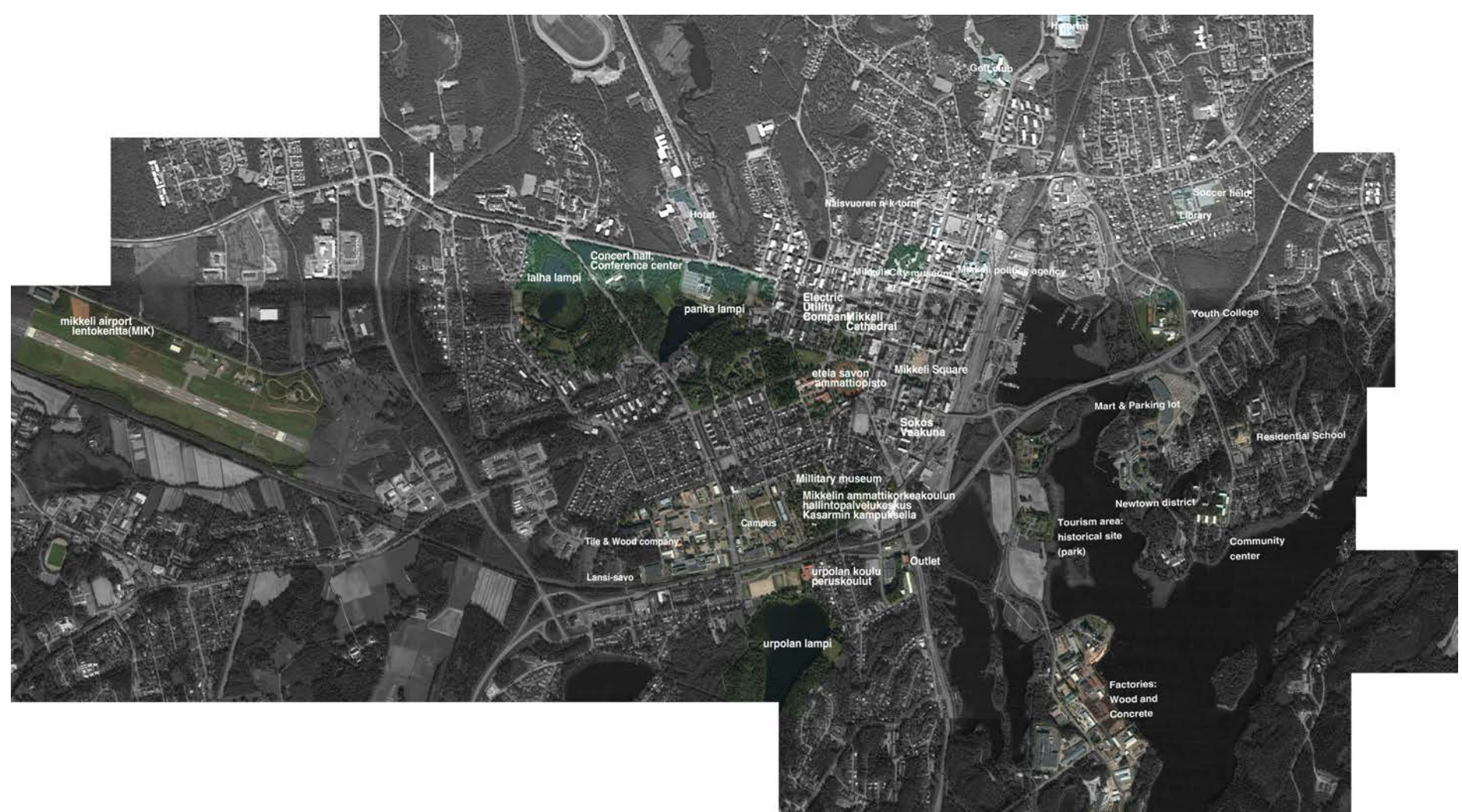
Since the extreme climate in winter days and geographical advantages from the Baltic Sea, major cities have been developed alongside the southern part of Suomi. Main transportation roads also stretch out from the south to the North areas.

Furthermore, when considering the natural conditions of the cities of Mikkeli, it is recognizable that most of the main cities are situated along the lake side. Mikkeli is also located next to the lake Saima and has been influenced by the lake throughout the history; probably trade through the water transportation.

In this sense, Mikkeli is situated in the mid-southern area of Suomi, and has the potential of becoming a gateway to the Northern cities due to its advantage of the transportation network.

### MAPPING OF MIKKELI

This map shows the current status of the central area of Mikkeli. Current facilities or places that have the potential of maximizing its utility when the new science centre and harbour district is developed are marked in colour.



## PAST HARBOUR CITY

Mikkeli used to be a water oriented city. The city had expanded by trade through Lake Satamalahti and later through the rail system. Therefore, the urban structure has been formed relating to the connection between the main land and the lake, forming axes and linear streets.

## What will be the FUTURE?

A vacant space, namely “Old harbour” is now an anonymous space that remains reminiscent. However Mikkeli is ready for an action for the Satamalahti water-front area, which will provide a vibrant future for the citizens and the city itself.

## \_THE AGENDA

### From the Harbour district : Starting point

By imposing these actions of the Satamalahti water-front developments, the harbour district will influence the entire city.

### GREEN + WATER

Since Mikkeli has historical and valuable nature assets: Lake Satamalahti & the forest, the mingling of these elements along the edge of the lake (harbour district) will maximize the potentials of each others aspects.

### INNER-CIRCULAR SYSTEM

The planning site is designed to have 5 initiative eco-sectors which are mainly composed of “Parks and Water front Squares”. Each eco-sectors will have its unique functions and characteristics. Green and Water will be linked together by a continuous sequence of pedestrian roads and visual connections, and finally function as a harmonized Inner-circular System.

### VIEW CORRIDOR + FLUIDIC RHYTHM

To overcome the fact that here has been a obstacles(or gap) between the city and the harbour district such as the rail way and other physical distractions, providing an urban contextual connection and opening the visual corridor could be one possible solution to overcome the severance.

Moreover, to enhance the rhythmical sequence for the foot-travelers and cyclers, a waving shaped facade design along the cost has been inspired by the lake’s fluidic water front.

These agendas will be achieved through the organic design of the newly implanted physical harbor environment which also refers to the current urban context, along with the squares and parks that are based on the nature assets of the site. The plan will set a distinct image from the past industrial water front and become an Eco Base for the sustainable growth of Mikkeli throughout the future.

## 02. INTRODUCING THE SUB AREAS

### 1. Science center : Fun and activity

This district's open space can hold diverse functions. The theme of open space would be 'Fun and activity' since each structure has a specified function. For example Science center 1 is mainly for research and museum, exhibitions for adolescents while Science center 2 will be used as a convention center, concert hall, exhibitions for children. Built next to Science center 2 is a Culture center, for commercial, theater, gallery and library. Next to Culture center is a commercial building mainly consisted of a Hotel and Sports center.

The skyline can be seen in the overall sectional view of the district, where the main two landmarks of Mikkeli (Cathedral Mikkeli and Tower) are clearly revealed and not interrupted by the newly planned district.

### 2. Ecology park : Observation and calmness

To protect migratory birds from the noisiness and artificial light during night times, the first action made is to distinguish the domain of nature, park and man-made facilities. Multi-layered alternation helps both human and birds to live together in one district. The park's main function is migratory bird observation which will become a relatively calm and quiet area. The warehouse will be renovated into a migratory museum combined with restaurants, souvenir shops and service facilities.

### 3. Residential & Business district: Artificial topography

This district is a joint area where urban and nature elements meet. Therefore setting a neutralization point between the existing urban area and nature protected area can become essential to naturally blend both significant aspects. Since central Mikkeli lacks of dynamic geographic turbulence or vertical topological conditions(mountains and hills), we imposed an artificial 'hill' to the district. This can provide dynamic landscape conditions.

Moreover, a 'boat: park-and-ride' and a bridge actively provides a stronger context between water and land. The sloped roof will be used for ecological functions such as a roof garden or solar panels, making this district into an energy efficient area.

### 4. Residential area: View balcony and sloped roof

In this area, green will flow out to the lake and lake will flow in to the ground. This will maximize the experience of nature. There is a view balcony at the roof top of the buildings which is opened to the lake. Sloped roofs and view balconies are designed for efficient lightening and ventilation. It is consist of green gardens and solar panels. Since these structures are mainly a Passive Housing, alternative energy will be the main resource of energy.



# 03. SITE DETAILS

## \_FIGURES

### Total Area

Total amount of building rights: 368,750m<sup>2</sup>

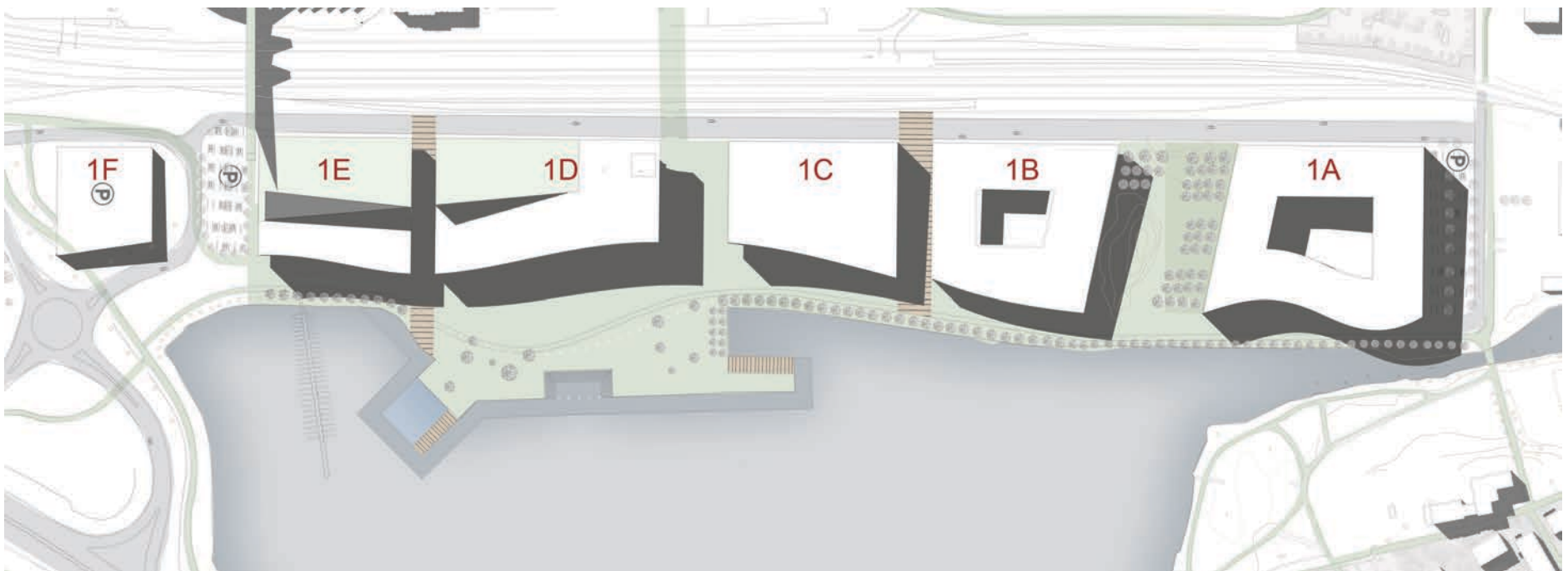
Public Parking: 699 cars

Green Areas and parks: 47,390m<sup>2</sup>

Area density: 31.43%

Block density

Area1: 31.43% Area 2: 13.19% Area 3: 40.73% Area 4:41.7% Area 5: 25.02%



### Sub-area 1

Total amount of building rights: 193,000m<sup>2</sup>

Public Parking: 426 cars

Green Areas and parks: 6,900m<sup>2</sup>

Area density: 31.43%

Block density

A: 53.36% B: 70.27% C: 60.82% D:51.69% E:51.69%

### Details

1A. Residential, 35,000m<sup>2</sup>, 5 floors, 412 cars

1B. Cultural, 32,000m<sup>2</sup>, 5 floors, 376 cars

1C. Conventional, 32,000m<sup>2</sup>, 7 floors, 376 cars

1D. Science center, 38,000m<sup>2</sup>, 9 floors, 447 cars

1E. Science center, 48,000m<sup>2</sup>, 12 floors, 565 cars

1F. Parking tower, 8,000m<sup>2</sup>, 3 floors, 285 cars





## Sub-area 2

Total amount of building right: 30,850m<sup>2</sup>

Public Parking: 273 cars

Green Areas and parks: 16,100m<sup>2</sup>

Area density: 13.19%

Block density

A: 21.36% B: 9.37% C: 22.55%

### Details

2A. Business, 17,250m<sup>2</sup>, 6 floors, 103 cars

2B. Service Construction, 13,600m<sup>2</sup>, 4 floors, 60 cars



## Sub-area 3

Total amount of building rights: 77,300m<sup>2</sup>

Public Parking: N/A

Green Areas and parks: 5,800m<sup>2</sup>

Area density: 40.73%

Block density: 40.73%

### Details

3A. Residential, 11,400m<sup>2</sup>, 6 floors, 134 cars

3B. Business, 10,000m<sup>2</sup>, 5 floors, 118 cars

3C. Residential, 12,900m<sup>2</sup>, 7 floors, 152 cars

3D. Residential, 28,000m<sup>2</sup>, 11 floors, 329 cars

3E. Business, 12,700m<sup>2</sup>, 5 floors, 149 cars



## Sub-area 4

Total amount of building rights: 57,600m<sup>2</sup>

Public Parking: N/A

Green Areas and parks: 8,550m<sup>2</sup>

Area density: 41.7%

Block density

A: 47.56% B: 43.84% C: 50.84%

### Details

4A-1. 5,000m<sup>2</sup>, 7 floors, 59 cars

4A-2. 4,500m<sup>2</sup>, 5 floors, 53 cars

4A-3. 3,500m<sup>2</sup>, 5 floors, 41 cars

4B-1. 11,500m<sup>2</sup>, 7 floors, 135 cars

4B-2. 9,300m<sup>2</sup>, 6 floors, 109 cars

4C-1. 10,300m<sup>2</sup>, 6 floors, 121 cars

4C-2. 13,500m<sup>2</sup>, 5 floors, 159 cars

## Sub-area 5 (additional competition area)

Total amount of building rights: 10,000m<sup>2</sup>

Public Parking: N/A

Green Areas and parks: 10,040m<sup>2</sup>

Area density: 25.02%

Block density

A: 40.69%

### Details

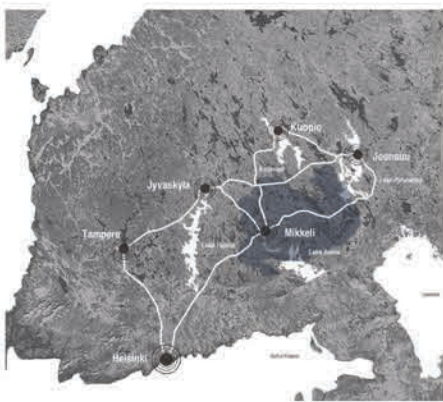
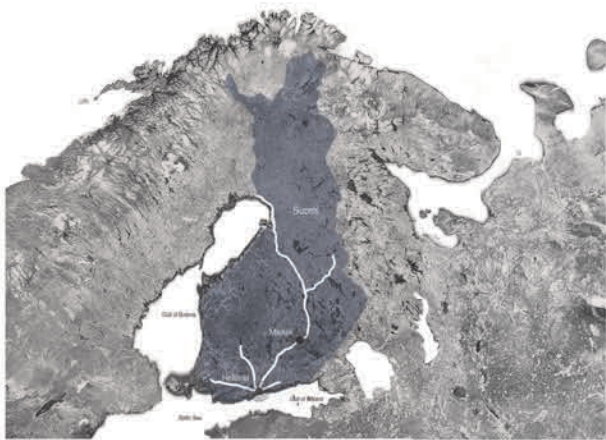
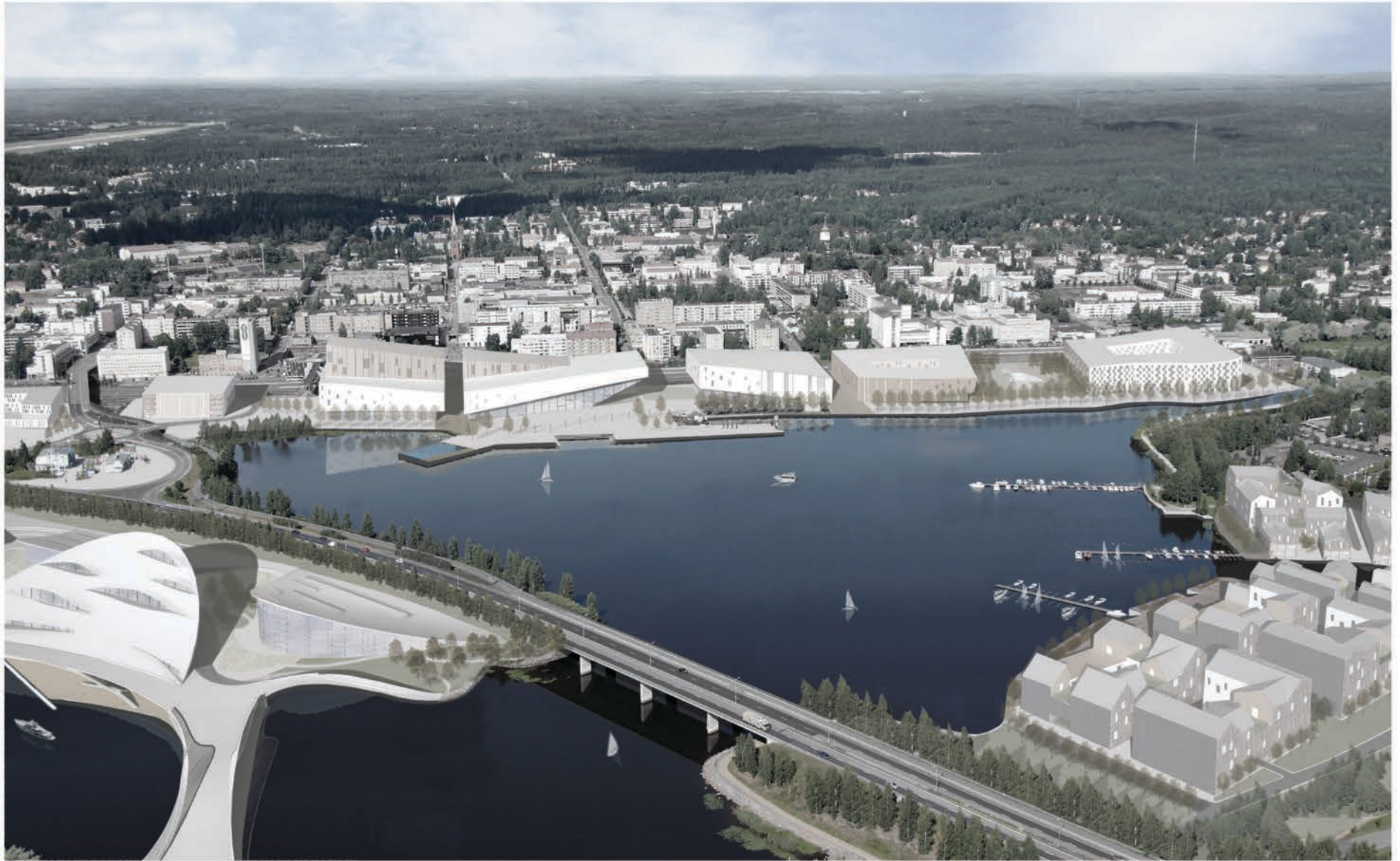
5A-1. 4,000m<sup>2</sup>, 6 floors, 49 cars

5A-2. 3,400m<sup>2</sup>, 5 floors, 40 cars

5A-3. 2,600m<sup>2</sup>, 4 floors, 31 cars



# Mikkeli. Eco-Base



## GEOGRAPHICAL ANALYSIS OF MIKKELI

Since the extreme climate in winter days and geographical advantages from the Sea Baltic, major cities been developed alongside the southern part of Suomi. Main roads are also stretched from the south to the North direction.

Furthermore, when considering the adjacent cities of Mikkeli, it is recognizable that most of the main cities are situated along the lake side. Mikkeli is also located next to the lake Saima and been influenced by the lake, probably trade through the water transportation.

In this sense, Mikkeli is situated in the mid-southern part of Suomi, and has a potential of becoming a gateway to the Northern cities due to its strength of well networked transportation.



## MAPPING OF MIKKELI



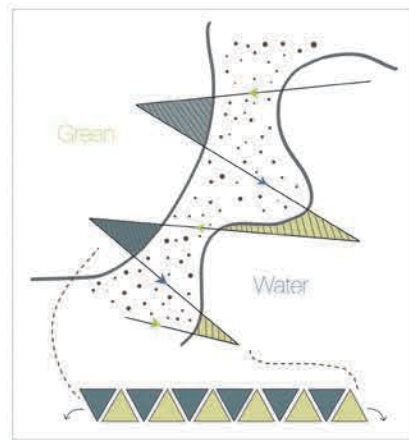
**Old part of Mikkeli**  
 Naasuvuon naakotorni  
 Mikkeli Cathedral  
 Harbour  
**Past Harbour City**  
 Mikkeli used to be a water oriented city. The city could expand by trade through lake Saima and later adjacent rail system. Therefore, urban structure has been formed orienting strong axis from the continent to the lake.



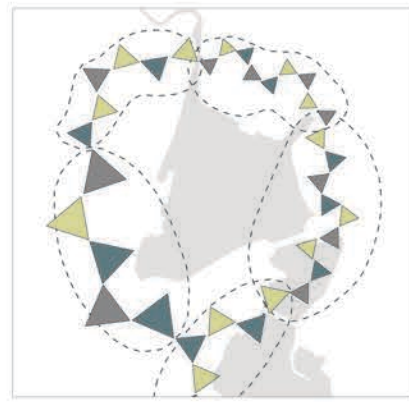
**What will be the FUTURE?**  
 A vacant space, namely "Old harbour" it now has no name but remains reminiscence. Now Mikkeli is about to do an action in Saimaahai water-front area.



**3 ACTIONS : Injection**  
 There is 3 basic strategies : Infill the district with **Scientific, Festival, Ecological** functions.  
 To do so, we suggest to maximize Mikkeli's potential by connecting water and green elements.



**GREEN + WATER**  
 Since Mikkeli has a historical and valuable nature assets like Saimaahai forest, mingling those points at the edge of lake (harbour district) will maximize its potential.



**INNER-CIRCULAR SYSTEM**  
 Those Green and Water will be linked together by continuous sequence of pedestrian and visual connection and finally function as a one inner-circular system.



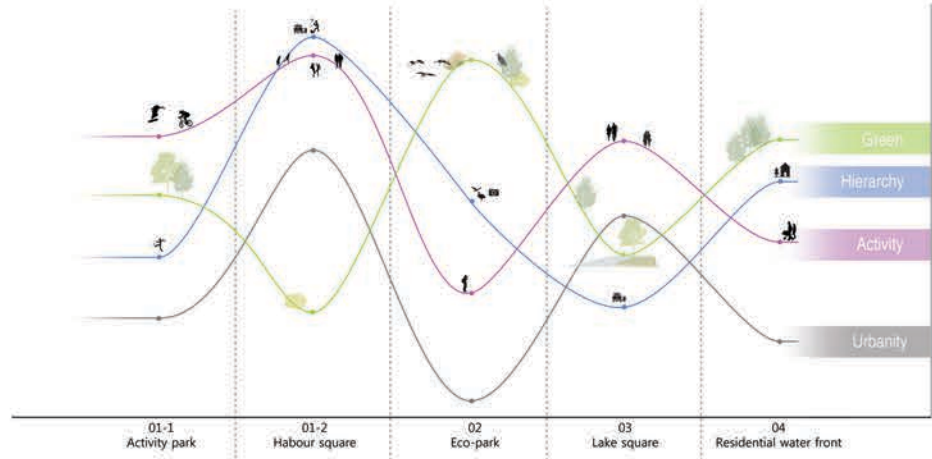
**VIEW CORRIDOR + FLUIDIC RHYTHM**  
 To overcome the fact that there has been a disconnection (or gap) between the city and the harbour district by the rail way and other physical difficulties, providing an urban contextual connection and opening the visual corridor could be one possible solution.  
 Moreover, to enhance the rhythmical sequence of pedestrian walking and cycling experience, a waving shape inspired by the lake Saimaahai's fluidic form is applied to the facade design.



# 5 Vital eco-sectors.

There are five main eco-sectors that have unique characteristics. Through each of the place, one can observe different scenery to the lake exploring rhythmical skylines of various areas. Since each eco-sector has different use and functions, visitors to the harbor district are capable of enjoying diverse programs and events during a walk along the inner-circular path.

This graph illustrates the hierarchy of the 5 eco-sectors by several standards. 'Green' means the amount of landscape and intimacy to nature. 'Urbanity' implies the opposite meaning of 'green' category. If the eco-sector is used for urban activities (e.g. festival or exhibition) then urbanity marks relatively high. 'Activity' indicates the density of activities in an area which may also relate to the crowdedness.



**01-1. ACTIVITY PARK**  
The Activity Park functions as a buffer zone and as an 'energy park'. In this park, sustainable energy can be collected by street furniture and installations. In occasions it can be used as a study program for children providing an actual place for science experiments along with the science center.



**01-2. HARBOR PLAZA**  
The Harbor Plaza serves many activities related to the science center, concert hall, commercial museum..... We suggest building a bridge that directly connects the town area to the harbor plaza to provide accessibility for more people. Along the shore line, there is a swimming pool and stairs to the water. This plaza has the most wide opened view to the lake and gives actual experience of the harbor.



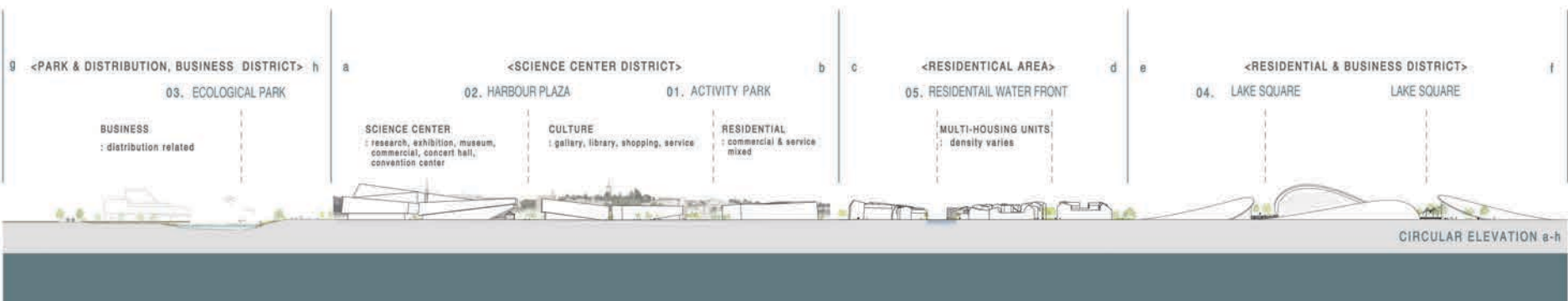
**02. ECOLOGY PARK**  
The Ecology Park protects migratory birds from loud noise and man-made environment. This area will be changed into an ecological park for wild bird observation. The distribution center and warehouse will be renovated along with the construction of a crossing gate for pedestrians to access this area by over-crossing the railway.



**03. LAKE SQUARE**  
The Lake Square located in the middle of District 3. Considering the current pond, the square has been planned to be a 'sunken space', and due to the corresponding design to the pond, it will be named as the "Lake Square". The square will be consisted of commercial, office and residential programs.



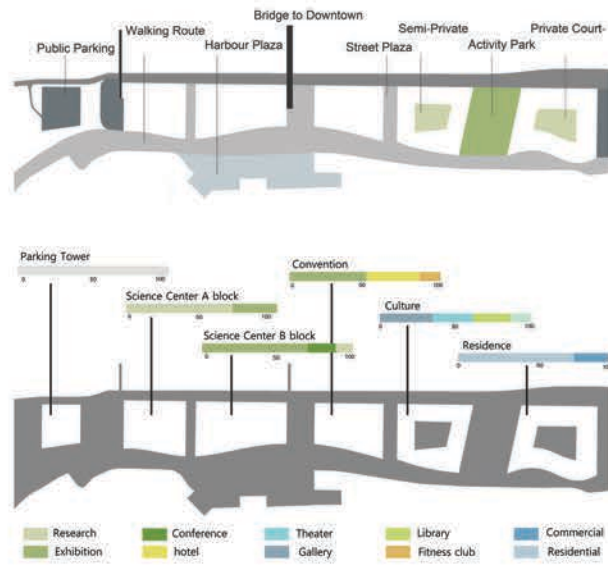
**04. WATER FRONT RESIDENTIAL**  
Since the residents in the district are close encountered to the water front, privacy is a great issue and will be protected by visual blocks. Landscape or higher level courtyard will help block visual invasion from path walkers.



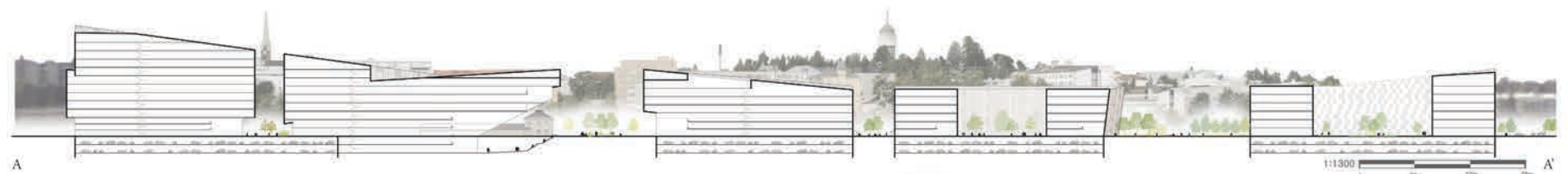


## 01. Science Center district

'Fun and activity' is the key of this area since each structure has a unique function. For example Science center 1 is mainly for research and museum, exhibitions for adolescents while Science center 2 will be used as a convention center, concert hall, exhibitions for children. Built next to Science center 2 is a Culture center, for commercial, theater, gallery and library. Next to Culture center is a commercial building mainly consisted of a Hotel and Sports center.

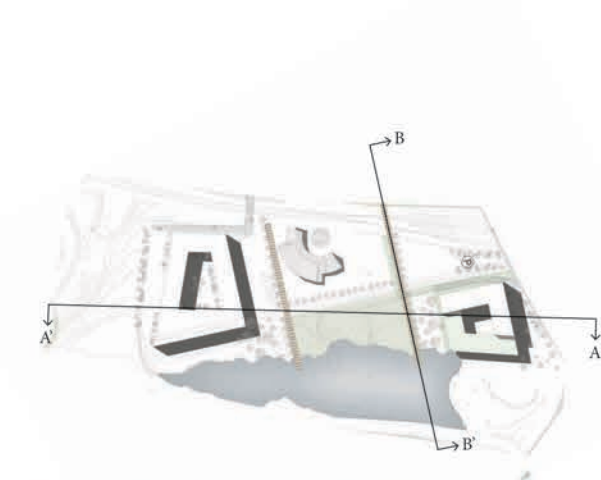
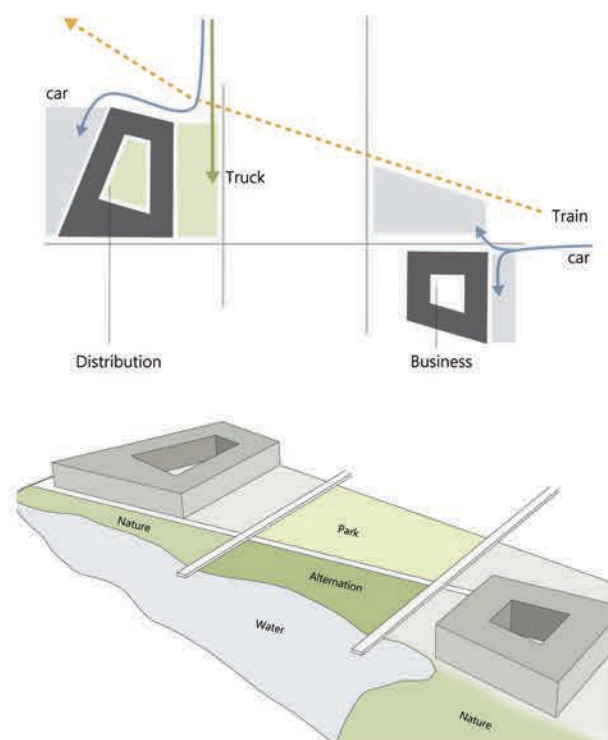


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## 02 Park & Distribution, Building District

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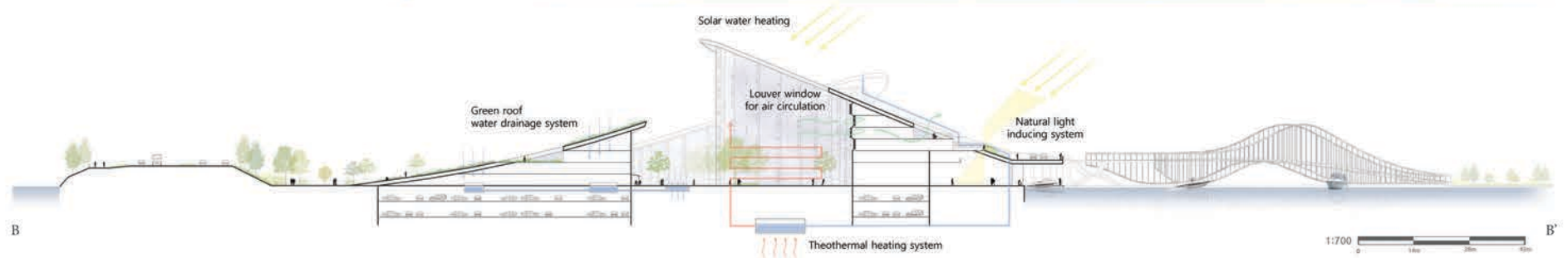
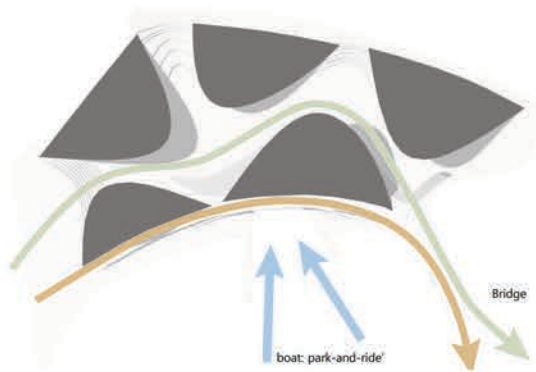
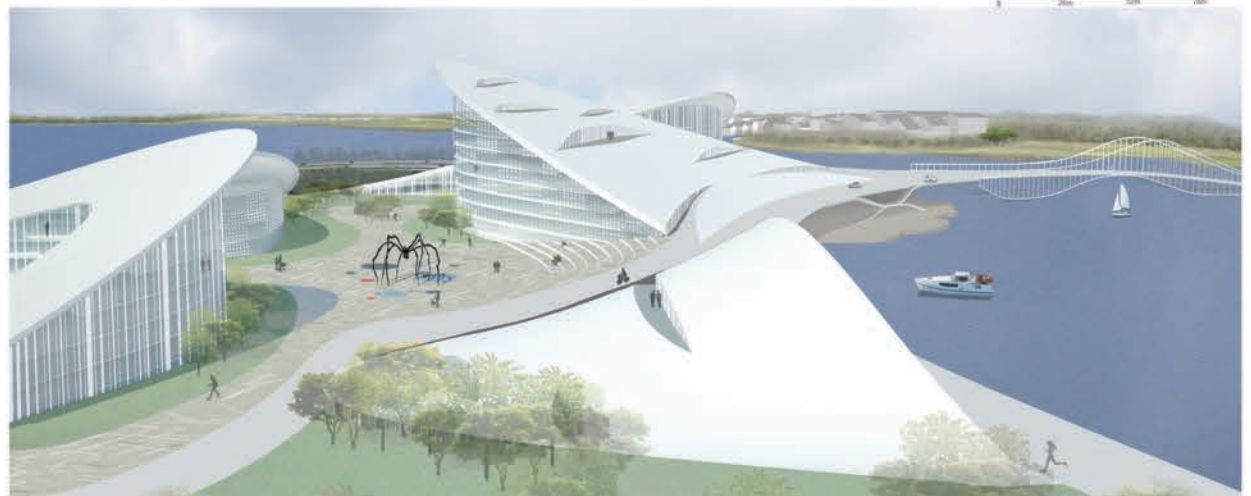
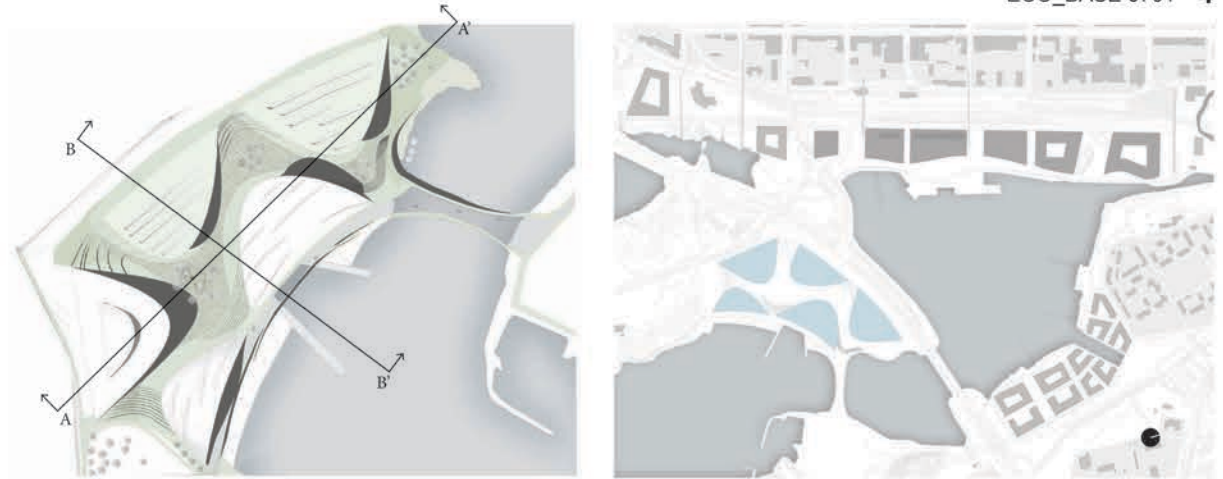




### 03. Residential & Business District

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Moreover, a 'boat: park-and-ride' and a bridge actively provides a stronger context between water and land. The sloped roof will be used for ecological functions such as a roof garden or solar panels, making this district into an energy efficient area.



### 04. Residential Area

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