THANK YOU

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SMART NET

urban public space design to enhance the city interaction and develop a sustainable living environment

Landscape Graduation Studio: Flowscapes
First Mentor: Nico Tillie
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ACKNOWLEDGMENT

This report is the result of my master graduation project in TUD.

Here, I want to thank my mentors Nico Tillie and Maurice Harteveld for the support they gave me. Thanks to Nico for his patience to me. As my first mentor, he helped a lot during my research and design process. Thanks to Maurice for sharing his insight in urban design. He helped me a lot for my logical thinking as well as creativity thinking. My sincere gratitude to Steffen for his instruction on theories and critical thinking. I would like to thank my dear classmates for their help and company during past 2 years. Thanks to my friend Xinnan Liu and Yao He who always help me a lot in my study and daily life and share happiness and sadness.
I would like to thank my parents for their understanding and supporting.

Finally, I want to thank myself for the smart choice of TUD.

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Delft

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PERFACE

Perface|

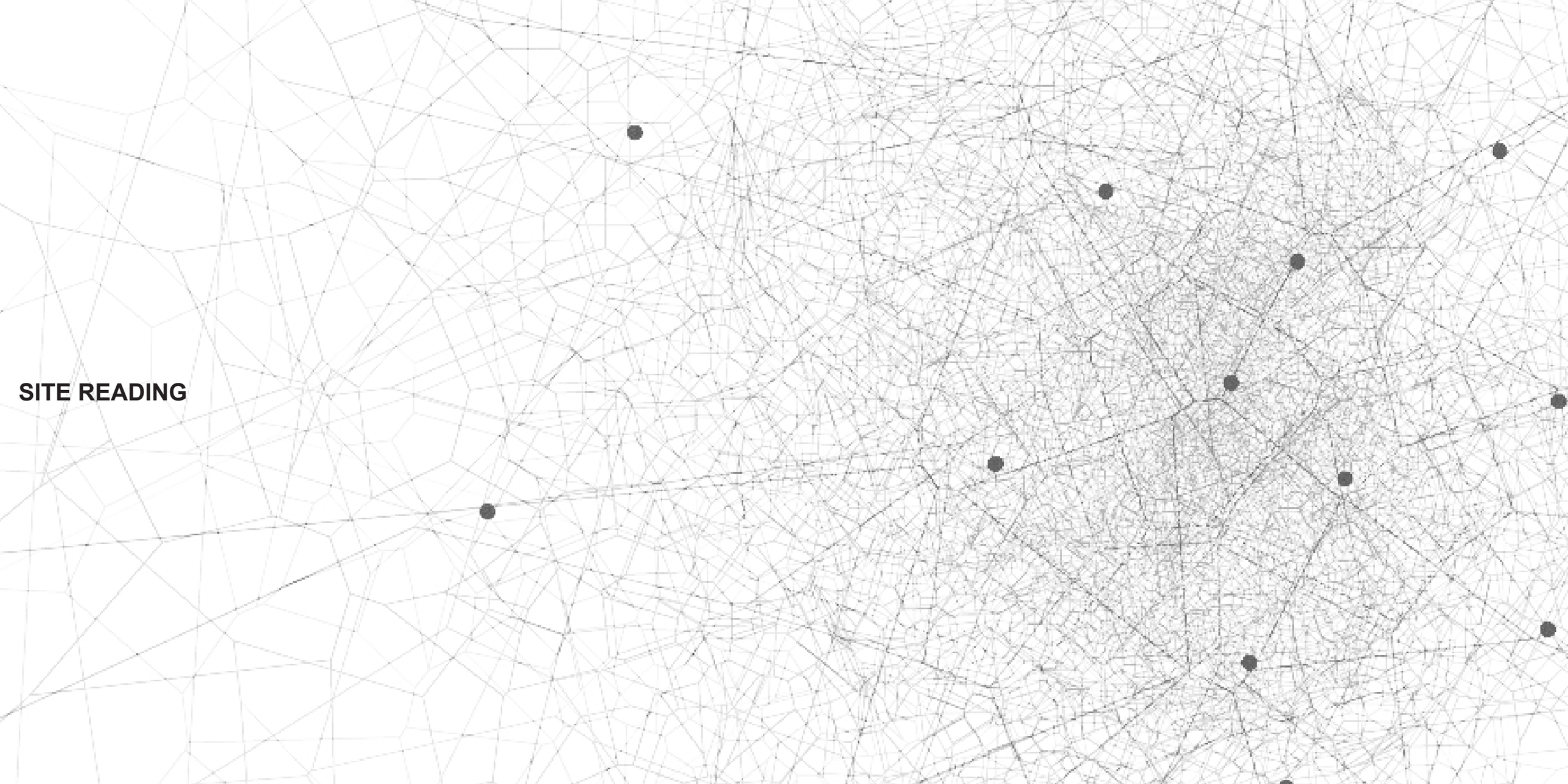
fascination of landscape architeture

One of the basic question facing our society today is that a large number of cities have entered an era of transition. The urban renewal adjust scotial networks to adapt to the requirement of higher quality of urban social life. However, it is better to achieve urban renewal with lower disturbance. Under this circumstance, landscape architecture is playing an esstial role.

From my perspective, Landscape has two things. Firstly, it brings nature to human beings. Secondly, on the basis of it, humans can practice or try to practice their dreams of the world. Use the power of landscape to influence urban organization, function and development and get the balance of urban itself.

This master graduation project takes Petrzalka, which is the new city part of Bratislava and has a pressing need to urban renewal. My goal of gradiation project is to use landscape as infrastructure of urban public space to enhance the interaction of Petrzalka by transform the site from mono-function dormitory area to a vital part of Bratislava and creat high-quality living environment .

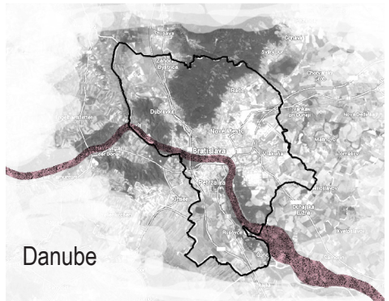
SITE READING

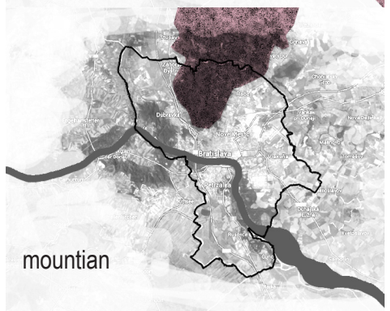


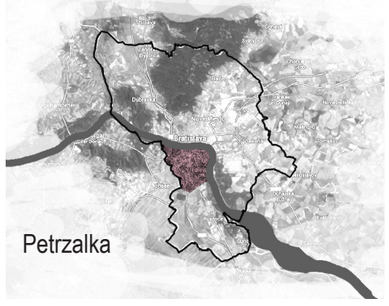
Site Reading | scanning bratislava

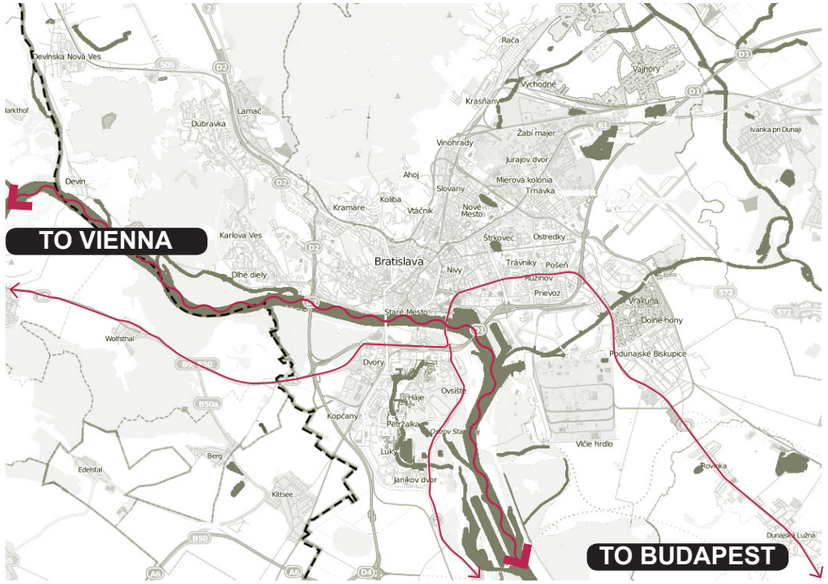
location

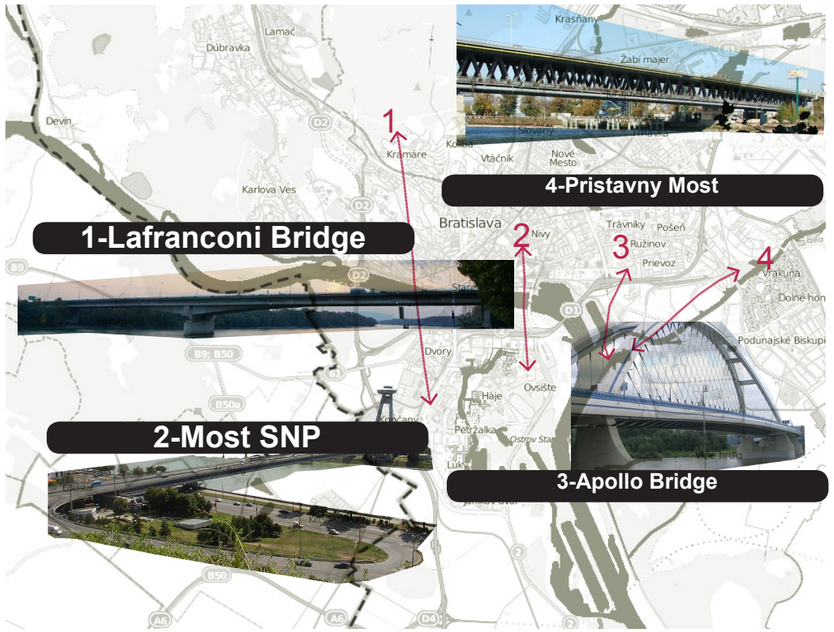
Bratislava is the capital of Slovakia and, with a population of about 500,000, the country's largest city. Its population is about 411,228 (2011), elevation is about 134 m and area is 367.6 km2. The river Danube cross through this city and divide it into 2 parts. The north part is its old town and with current years' development, the city is growing towards south and east.







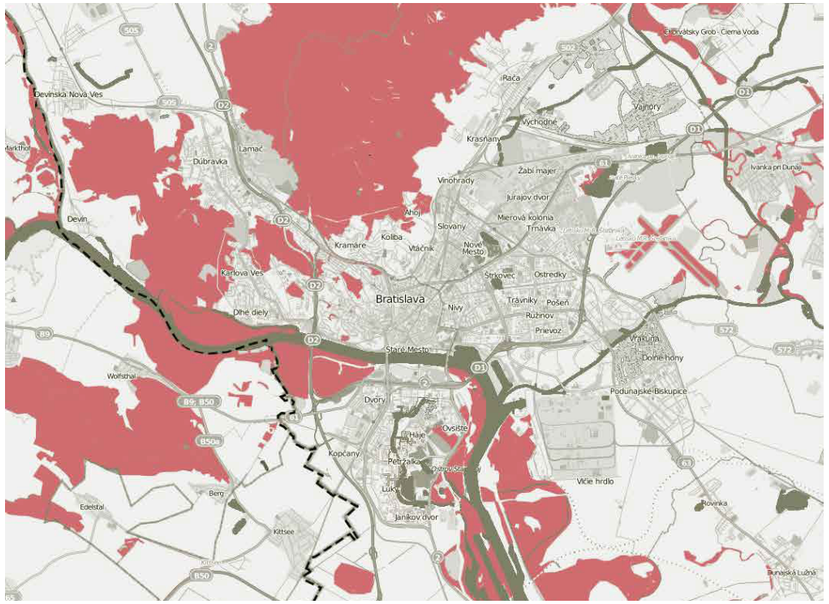


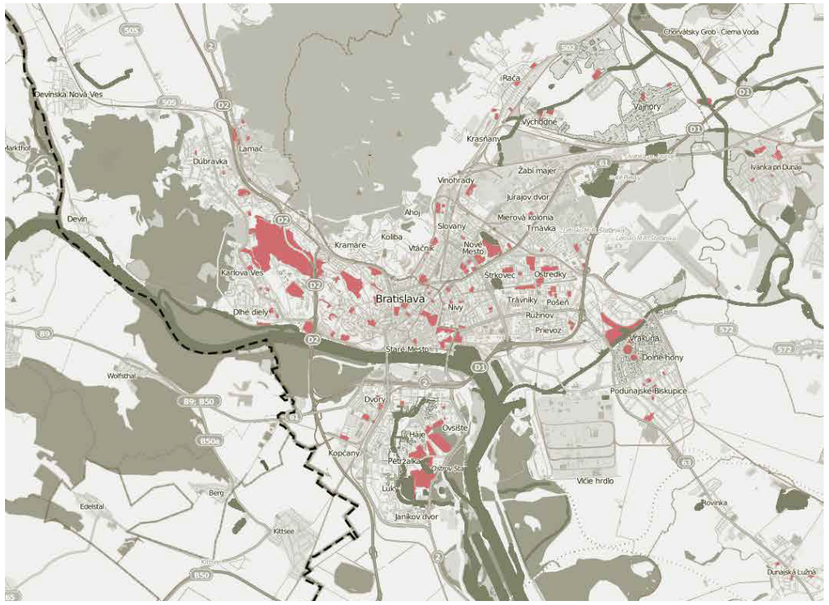


Site Reading | scanning bratislava

traffic system

To whole city, it has convient transport system. People can take train, bus or boat to Vienna or Budapest. Inside city, 4 bridges link 2 parts.



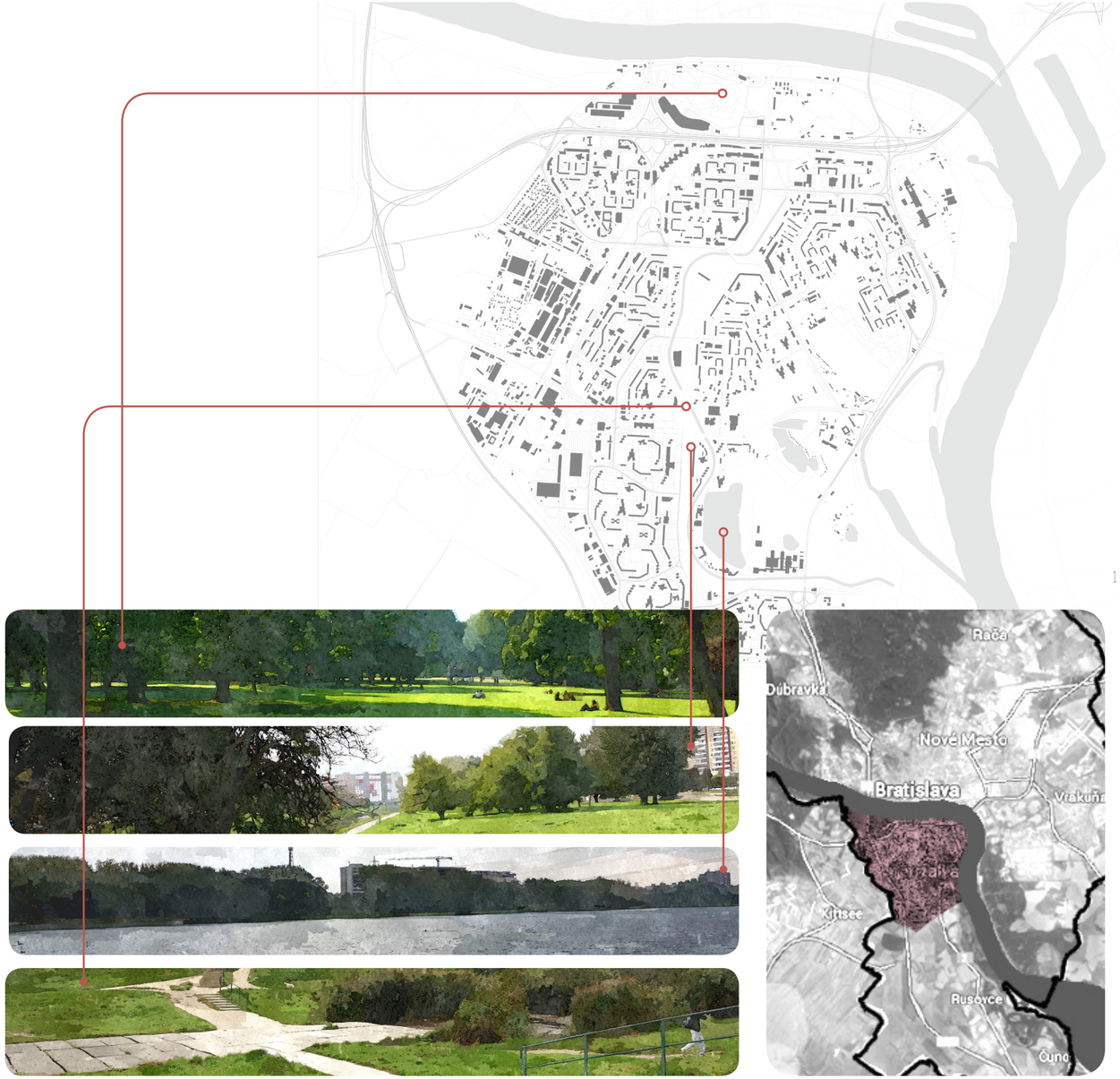


Site Reading | scanning bratislava

green space

The green space of Bratislava is mostly at the rural area of city, following river Danube. Some of them were used to be flooding area. Even though Bratislava has solved the flooding problem, these area still in good enviornmental condition due to rich groundwater. However, the green space inside Bratislava is quiet small an fragmentized. But in general, the north part is better to south part.

Zoom in the south part, Petrzalka, it is the new city of Bratislava according to its official urban planning. The green space here is lack of professional design and management and, currently, it looks boring and untidy. Hence, I choose here as my project site where I want to use the magic of landscape architecture to promote urban renewal.



Site Reading | new city Petrzalka

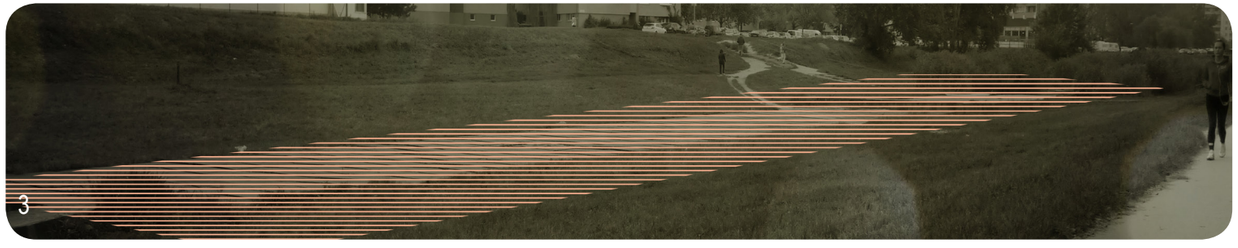
problem statement

Zoom in Petrazalka, it concludes that there are 3 kinds of problems: poor quality of public space, poor infrastructure system and limited space.
For the first problem, picture 1 can be example. With only one public park along the bank of River Danube, the rest green public space of Petržalka simply consists of empty grassland and a few trees which looks empty and untidy.
The second problem is about infrastructure. It is showed in picture 2, 3 and 4. In pic2, cycling, walking, jogging and other activities share the same thiny path without any other infrastructure. In pic3, the platform without any facilities makes the space useless. In pic4, Fragmentized and limited cycle network brings inconvenience to bicycle riders, and hence increase the difficulty to promote cycle as a public transport.
When it come to the third problem, as a new city area of Bratislava, Petržalka is blocked by country boundary lines of Austria, Slovakia and the River Danube. The urban area of Petržalka is fixed and limited. The current urban land use structure cannot meet the future development.it is not only existing in Petrzalka, but also Bratislava.
Landscape should be taken as infrastructure to take on more tasks in one limeted space. Currently, it canbe concluded that the rough landscape makes poor green space experience and brings disordered infrastructure system, and finally lead a limeted space feel even smaller.

1

4

2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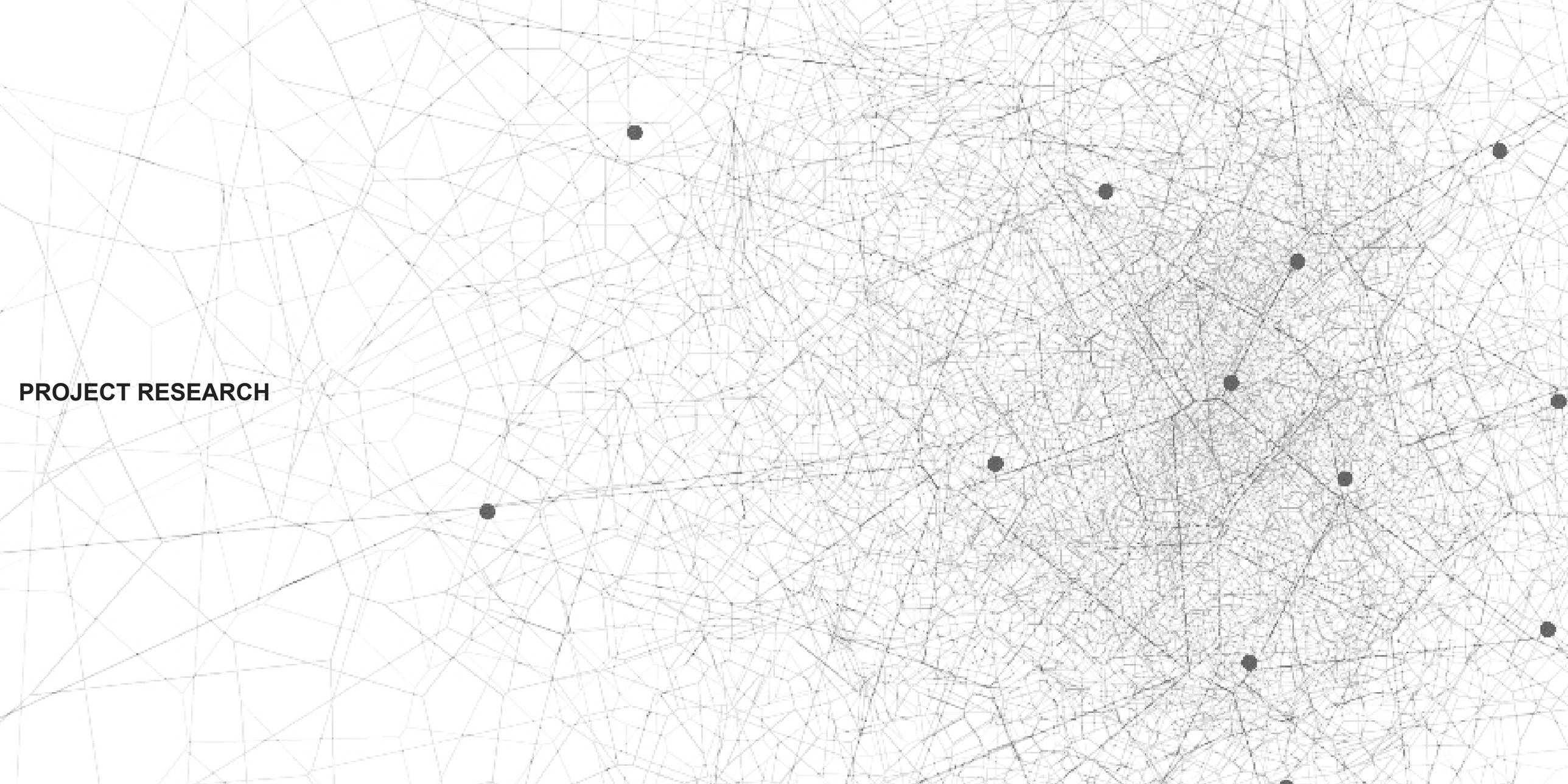
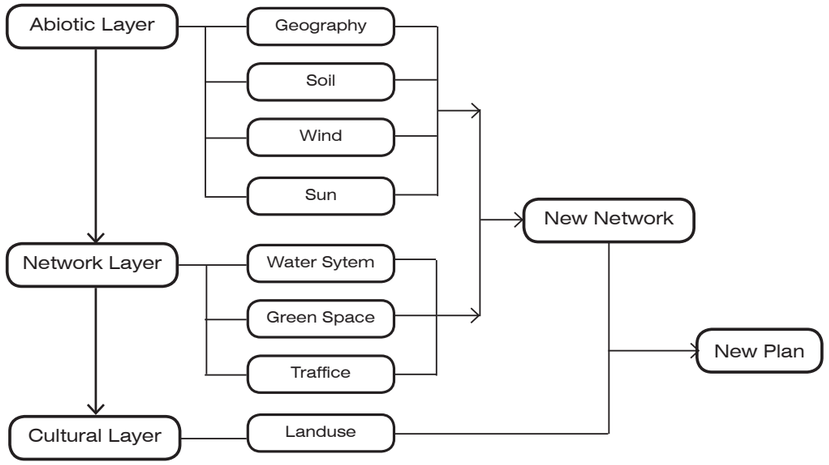
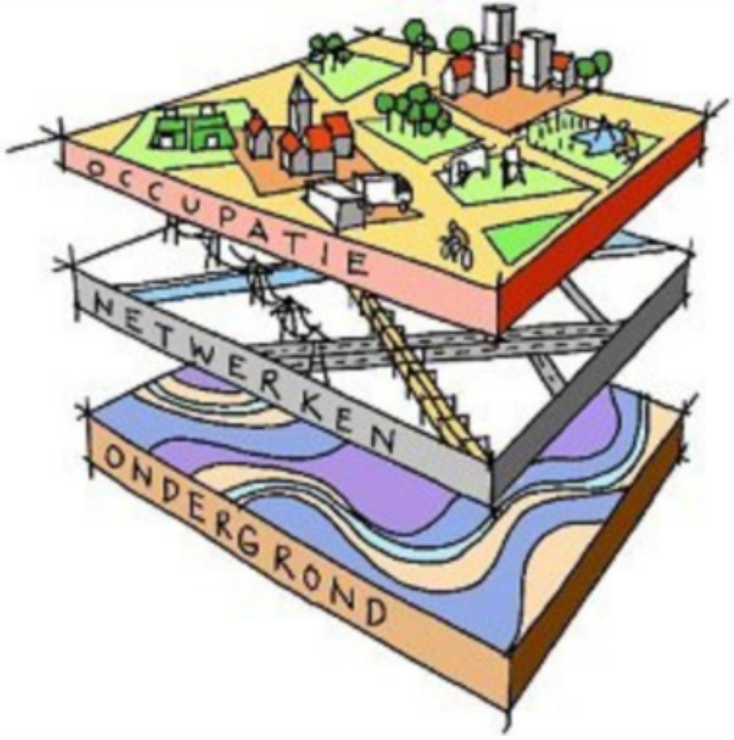
PROJECT RESEARCH







Project Research | layer approach

methodolgy application

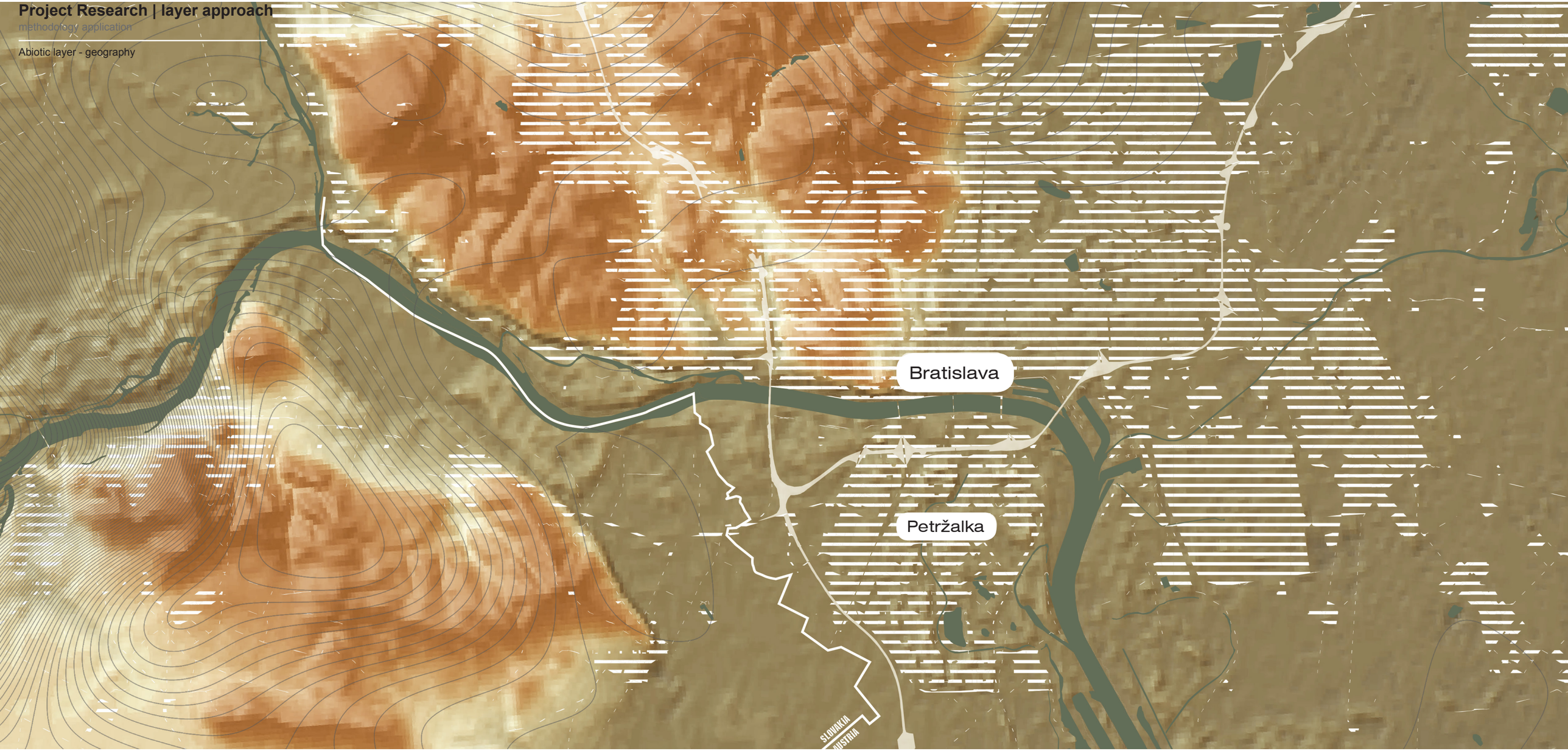
Layer approach will be used throughout the whole planning process. The basic problem of Petržalka is disordered infrastructure network, to solve it, new layer approach will be used to analysis the current context and help to develop organize the network and fine situation for further function.

Layer Approach can date back to the Overlay Maps by Ian McHarg who promoted landscape as the instrument of environmentalism and helped shape national policy on the environment(Spirn, 2000).
As the classical layer approach, the Overlay Maps can be regarded as an analytical tool. In the book of Design with Nature, McHarg explained this sustainability approach theory, which also can be called as Layer Cake Mode, tried to define the problems of modern development and present a methodology or process prescribing compatible solutions(Schnadelbach, 2001). Though some landscape architects argued that too much insights of science, In McHarg's practice, Classic Layer Approach helped to understand how a place came to be, identify problems and opportunities and quiet revealed important but unaware issue.
In the Netherlands, the ideas of McHarg are of great influence not least though the persona of one of his students, Meto Vroom, a Professor of Landscape Architecture since 1966(Roncken, 2003). The rather complex layer cake of 3 + 8 + 17 successive layers in the time of McHarg are adopted at Wageningen for Landscape Architectural education into a comparably simple textbook version of 'triplex-model'(Kerkstra, 1976). Landscape, regarded as a system which is formed with complex entities, is divided into three layers: abiotic layer, biotic layer and anthropogenic layer. There exists a kind of dependence among three layer though they are not quite clearly hierarchy systems.
The pre-supposition of the classical mode is that there is this dependency of human patterns on biotic and through those on abiotic patterns. When this dependence is lost the model no longer functions as a tool for analysis. However, with modernization, development of artificial fertilizer and the change from rural to industrial and to service economy, there was a loss of soil-dependency.
Nowadays, networks of infrastructure start organizing the landscape when soil dependency is no longer structuring and explaining landscape. Development of the internal combustion engine and the consequential ease of transport in an economic system have (over) emphasized the importance of situation over that of site.
From 1998 onwards, the layers model and the resulting layers approach became an important subject in an already vivid discussion about the regional level in planning, about the balance between local and national responsibility for spatial planning, and about the importance of water-related and infrastructure problems in spatial planning(Schaicka and Klaasena, 2011). Dirk Sijmons, one of the founding fathers of Dutch layers approach, used "layers model" instead of the "layer approach" and stated it as 'a strategic proposal to organize a multitude of spatial tasks and projects'(Sijmons, 2002). When the layer approach became interpreted in practice, it turned into different ways. Teunissen stated 5 points for its further development in 2002 (TEUNISSEN, 2002). In the Fifth Meorandum, Zonneveld gived explanation for the rift between the layers approach analytical framework and the content of spatial policies(Schaicka and Klaasena, 2011). Hans van der Cammen and Len de Klerk reconstructed the rise of layers approach and regarded it as a spatial framework of water management, increased mobility and new concept of urbanization and 'natural' landscape(Van Der Cammen and De Klerk, 2003). Vonk Noordegraaf focused her analysis of layer approach on the version as it was developed in RPD(2011) and concluded that the layer approach was 'not of value' to create a spatial plan(Schaicka and Klaasena, 2011). Werksma, Dauvellier, Maring and Puylacrt had a more positive attitude towards the layer approach that it offered possibilities for interdisciplinary and intersectional planning process(Schaicka and Klaasena, 2011).
After the transition, criticism focused on the assumptions regarding the level of dynamics. New layer approach can be used as a tool for understanding modern landscape. Regarded as complex entitites, landscape is divided into new three layers: abiotic layer, network layer and cultural layer. These layers depend on each other though there is no absolute hierarchy as well.
Abiotic layer continues to play a role as the large systems, consisting of bedrock, soil, rivers and streams, climate. They are mostly beyond our control and act as long time frames. Network layer refers to large expensive and immobile man-made systems, such as infrastructure, economy and services. Cultural layer refers to the patterns of human settlement and activities depending on trade, cycles of development and recessions and depression.
Applying layer approach in the project, it plays two roles as analysis tool and design tool.The classical layer approach is a good analytical tool for understanding vernacular landscapes. From the perspective of hydrology, the river Danube brings advantage and obstacle to Bratislava. It makes Bratislava itself. The new layer approach, a tool for understanding man designed landscapes. From this field, we can read how and why people develop the city into current image. Based on it, new layer approach not only bring question to landscape also the answer to which kind of landscape people really need and expect.
Generally speaking, the analysis process of layer approach (understanding landscapes) helps us avoid mistakes and realize the existing reason of landscape. Through that, we can find the right location and shape of landscape. The use of layer approaches offers site-based and situation-based in designs by responding to particularities and developing these particularities.
With layer approach, it is easy to frame problems. However, since the differences in the hierarchical prioritization of planning tasks, variations are constituted by the practical adoption of the approach and bring confusion about appropriate levels of scale for the successive layers. Applying the layer approach, it is challengeable but also profitable to organize a dynamic city system. The basic layer of Petržalka as soil, vegetation and other abiotic layers should not be only regarded as basement also can be seen as a kind of potential.
Another problem is extending a rational analysis result into aesthetic detail design. When used as a kind of judgment tool, layer approach will be much helpful to point out the unreasonable points and future possibilities in both of temporal scale and spatial scale. McHarg was widely recognized a successful ecological planner, but, as at Woodlands, he had been unable to expand his practice from the domain of planning into that of design(Spirn, 2000). Similarly, both classical and new layer approach are lack of link to the basic landscape experience of site. They run as a quiet scientific and rational process. They operate within a rational scientific paradigm and can stifle designers' imagination. During the design of Petržalka, the beauty of urban public space and people's requirement are both should be considered.
The basic problem of Petržalka is disordered infrastructure network, to solve it, layer approach will be used to analysis the current context and help to develop and organize the network and find solution for further function. Layer approach will be used throughout the whole planning process in this project, consisting of 3 layers, abiotic layer, network layer and cultural layer.
In the realm of abiotic layer, I want to find the potential for its current abiotic resources. Listing the current abiotic resource in Bratislava area and mapping the location of them. Diagrams are used to explain how they work by now and the possibility when it comes to abstract realm. Compared the reality and imagination, I can get the potential of abiotic resource.
Secondly, in the realm of network layer, my purpose is to develop a new efficient network in Petržalka. Hence, I need to map the current network of traffic, green space, water system and economy flow. To each of them, it is required to check the continuity and, if existing discontinuity, point out the breaking points. The location of breaking points present inefficient spot in one network and further study and design are required here. Moreover, these networks are going to be overlapped in order to find out the segistration points, which present a variation used space and mean efficient. In the further work, these efficient spots should be kept and play significant role in future network system. In addition, considering of the expansion of future requirement, it is also important to leave enough developing space to these spots.
Combined the abiotic layer and network layer, it is possible to find out some solution for breaking points that link one system on the base of 'nature energy'. For instance, if I want to connect breaking canals, it will be more helpful to dig the new part along the valley lines which can be mapped corroding to geography.
Third, when it comes to the realm of cultural layer, my research question is how to design public spaces to fulfill people's demands on social activities based on efficient network structure. Therefore, the first step is to map the function of Petržalka's current urban public space. Combined the function mapping with former network layer study, the type and location of new function can be pointed out to meet the requirement of new efficient network. Under the circumstance, new social activities can be introduced to these public urban space. In order to realize these assigned function, the abiotic layer should be considered in certain space. For instance, if a new children's playground will be introduce in one neighborhood, it will be better with comfortable and safe condition. If that place has quiet much direct sunshine, shadow from trees should be designed and view corridor also need to be left for parents who live at nearby building can notice what is happening.

Project Research | layer approach

methodology application

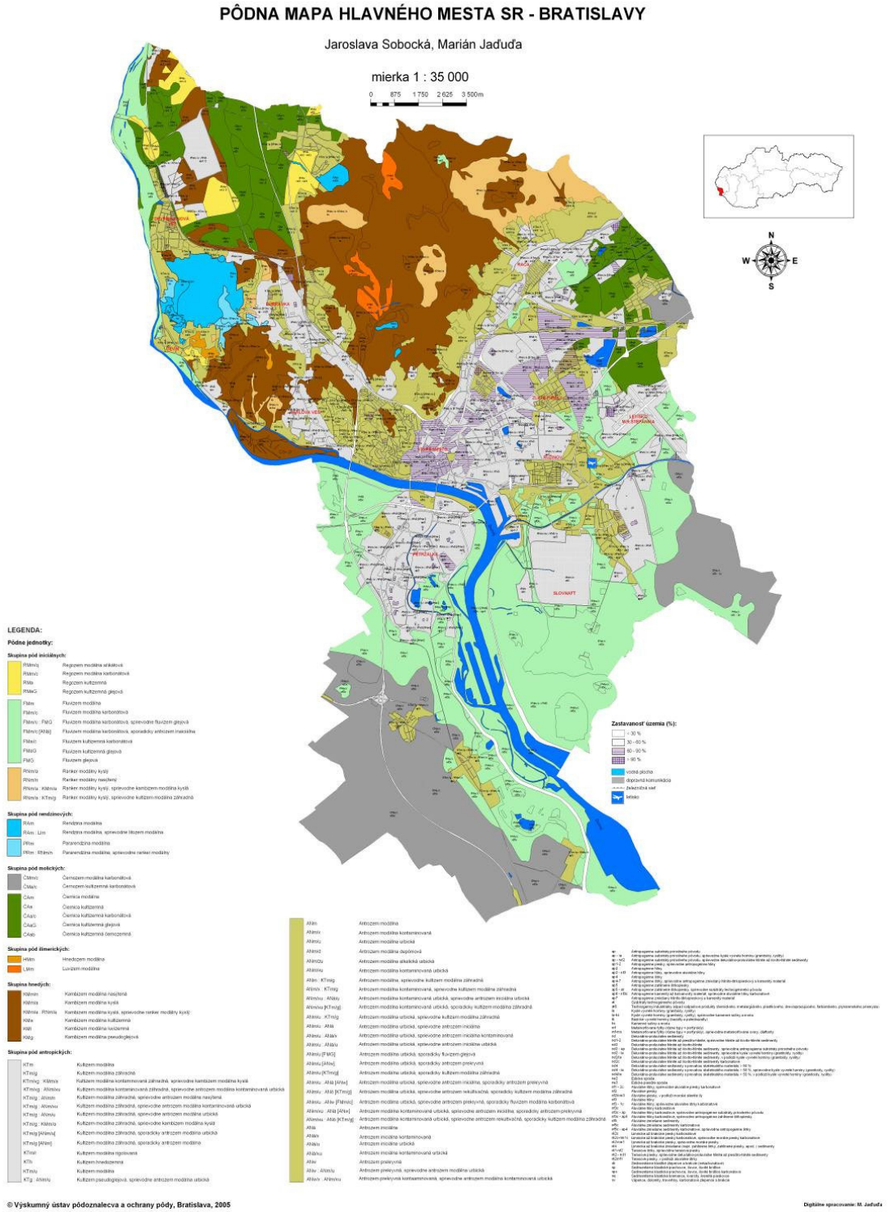
Abiotic layer - geography

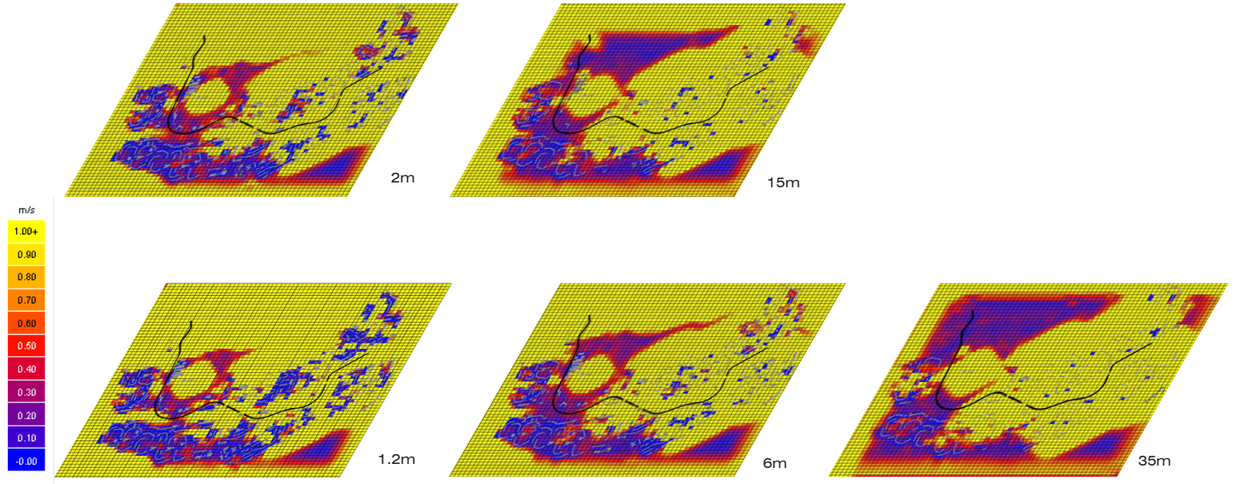


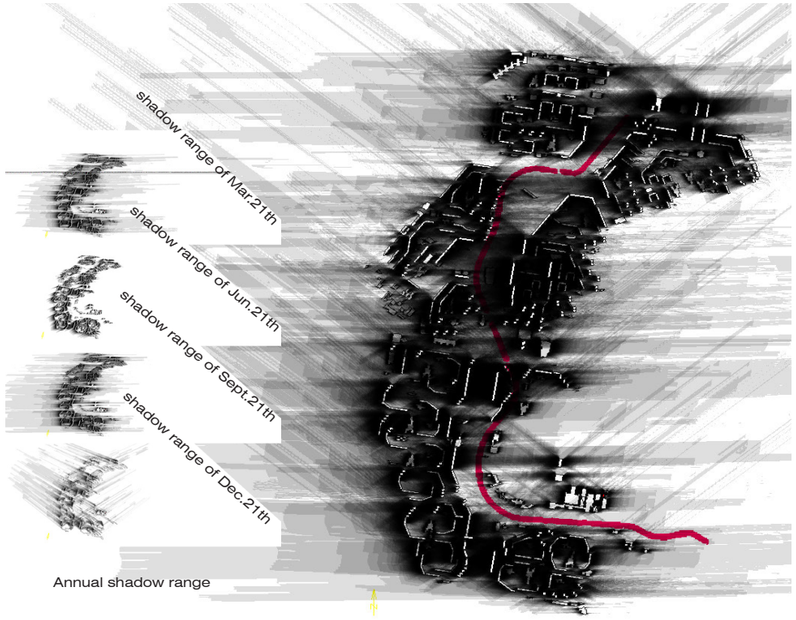
Project Research | layer approach

methodology application

Abiotic layer - soil







Project Research | layer approach

methodology application

Abiotic layer - wind

Considering of different influence by varity height, I pick 5 levels to get an overal wind mapping. They are 1.2m (children's height), 2m (adult's height), 6m (shops' height), 15m (general residential buildings' height), and 35m (the avarage height of toppest buildings). From the map, it can be found that high residence building make partly heavy wind.

Abiotic layer - sun

To caculate the shadow range of a whole year, I use 4 extreme dates (the Spring Equinox, the Summer Solstice, the Autumnal Equinox and the Wintrt Solstice) as basic elements. By overlapping the shadow range of those 4 days, I get the mapping of annual shadow range. With the sun mapping, I can get the best sunshine spot or best shelter spot, which is an essential basic condition for making routes and planning landuse.

Jaroslava, *Specifics of urban soils (Technosols) survey and mapping*

Network layer - water system

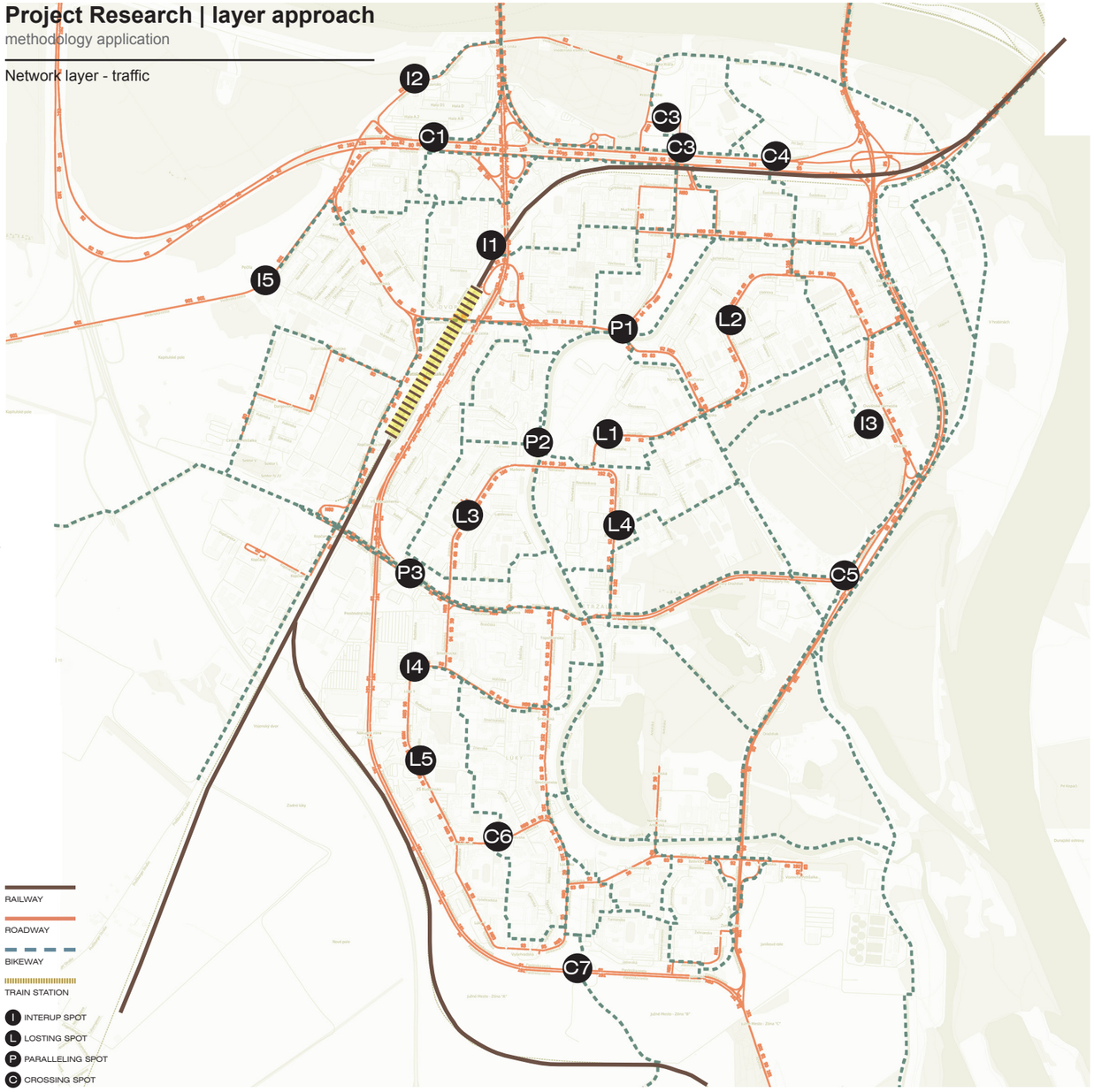
Project Research | layer approach
methodology application

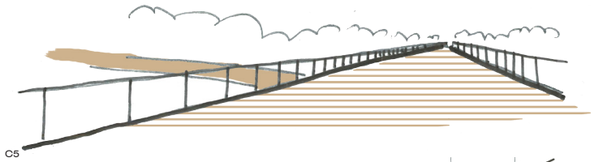
Network layer - water system

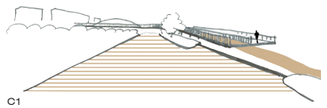
Project Research | layer approach

methodology application

Network layer - traffic




C5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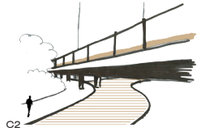
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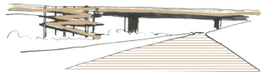
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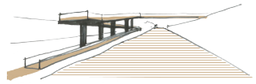
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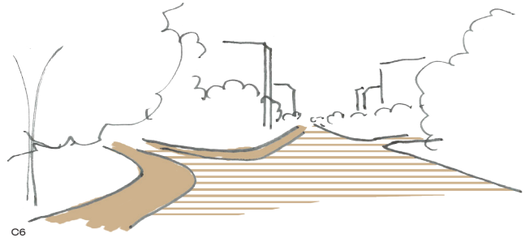
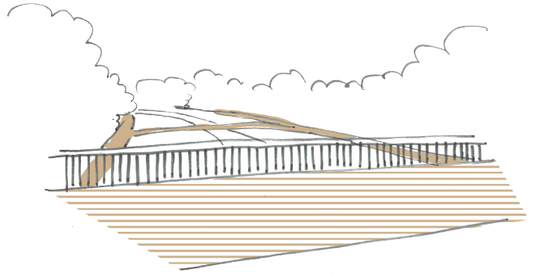
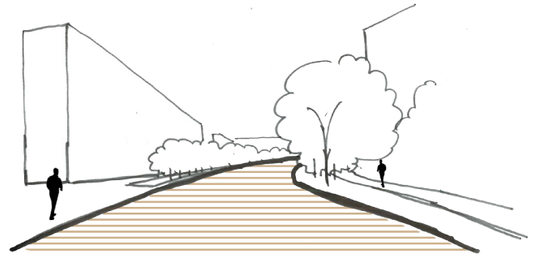
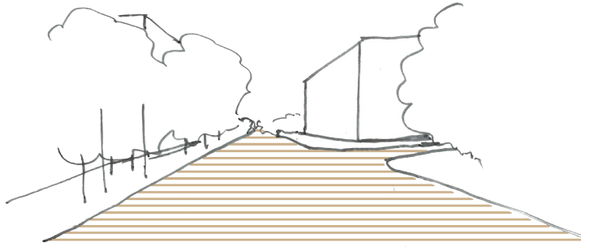
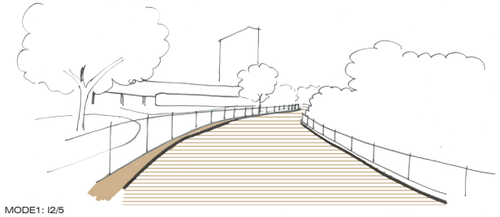

C6

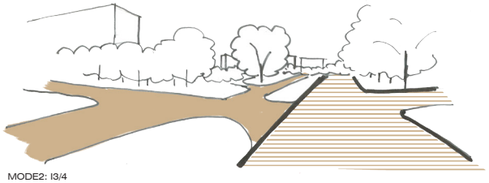

MODE1: P1/2

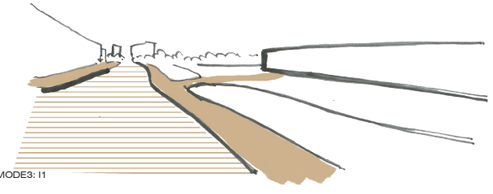
MODE2: P3


MODE1: L1/2/3


MODE2: L4/5


MODE1: I2/5

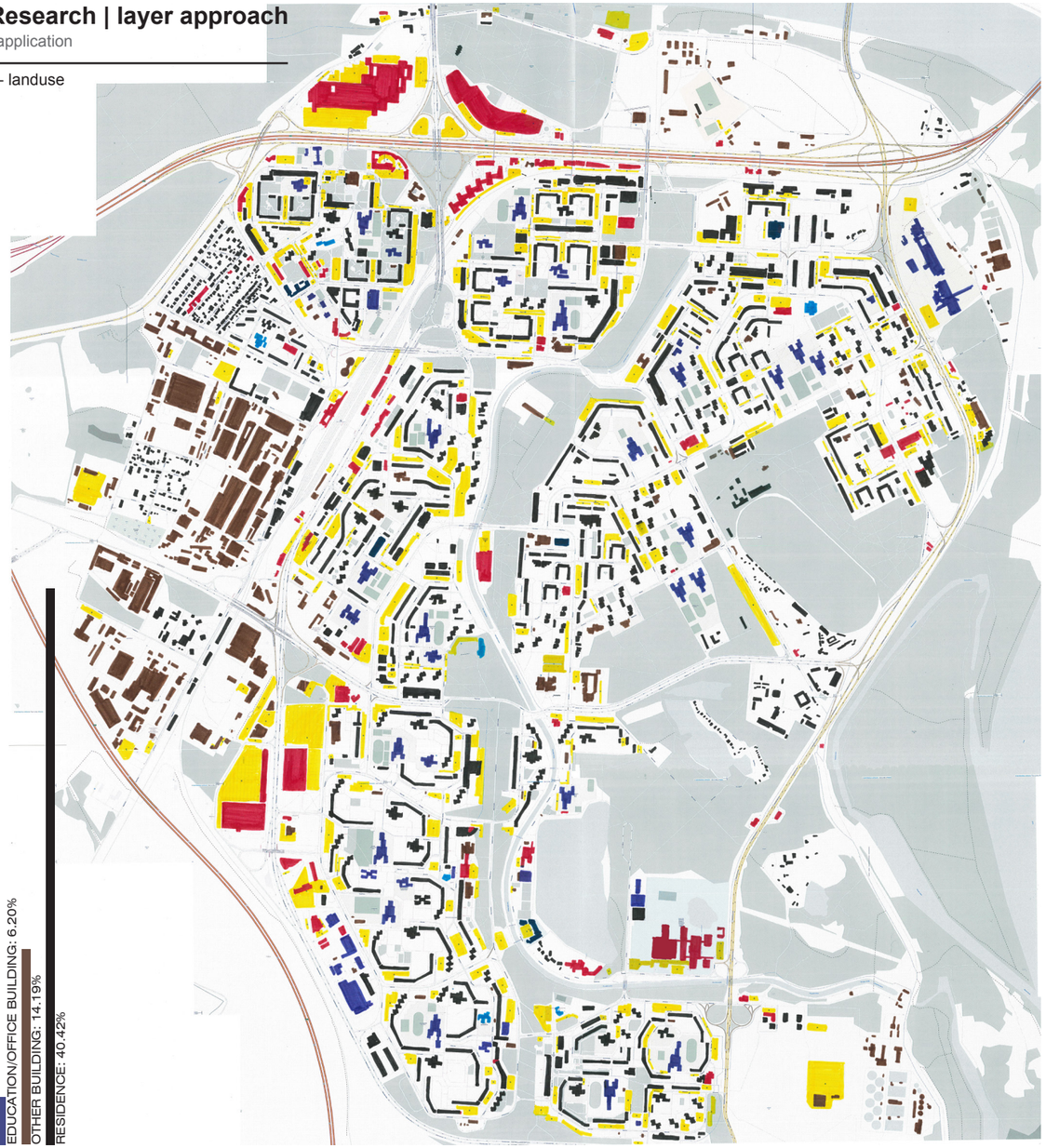

MODE2: I3/4


MODE3: I1

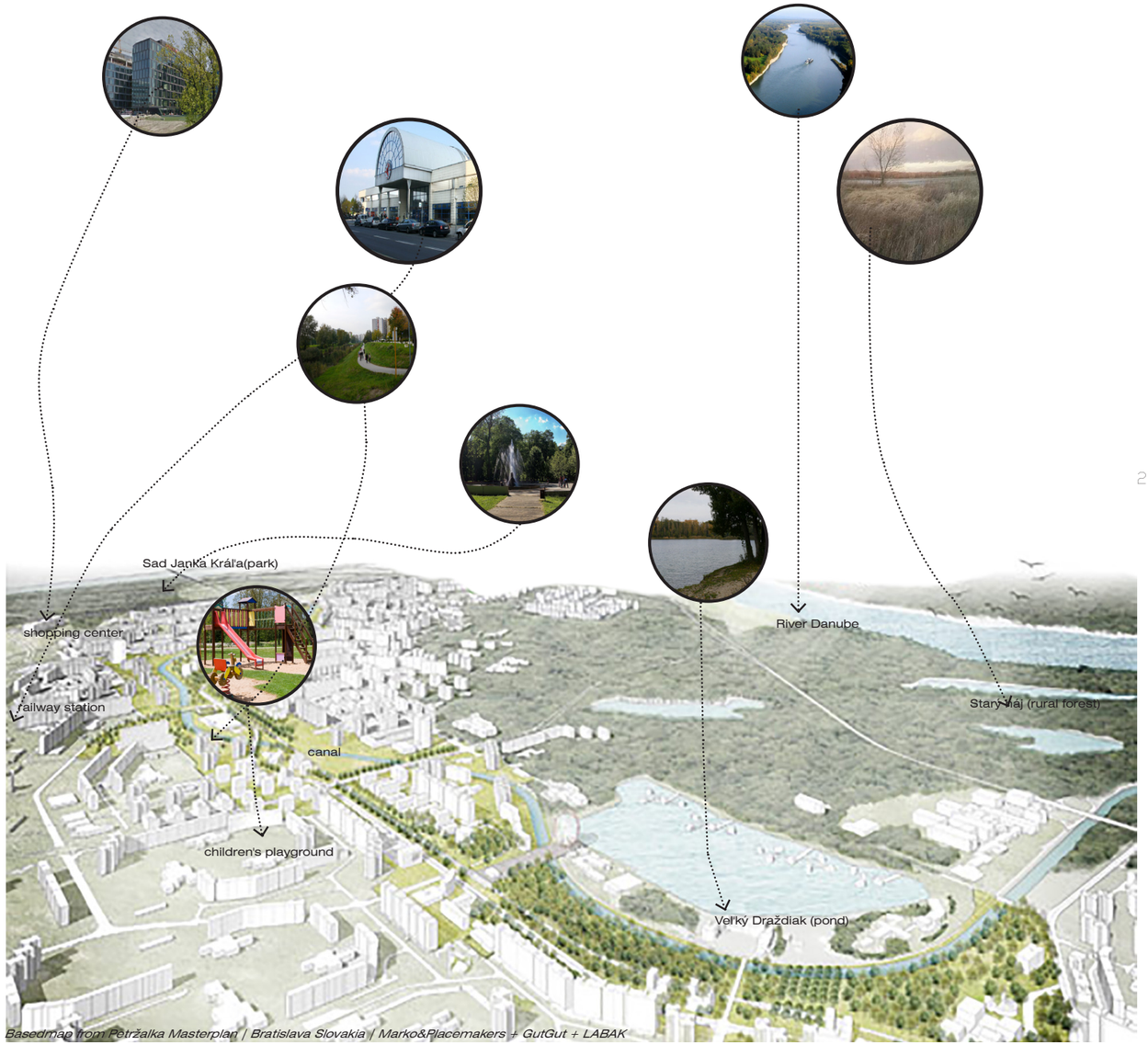
Project Research | layer approach

methodology application

Cultural layer - landuse



What makes a place great?

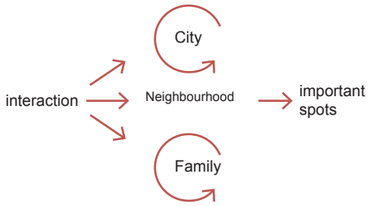


Basedmap from Petržalka Masterplan | Bratislava Slovakia | Marko&Placemakers + GutGut + LABAK

Project Research| PPS

methodology application

Project for Public Spaces (PPS) is the central hub of the global Placemaking movement, connecting people to ideas, expertise, and partners who share a passion for creating vital places. To make a place great, I find the standard from PPS: sociability, uses & activities, access & linkages, and comfort & image. Put the four aspects togther, Ethan Kent once said that cities failed and succeed at the scale of human interaction.
To the word of interaction, I deem it can be insight from 3 levels.
First, the city level. It means a good function cycle in the city iteself. Second, the neighbourhood level, it is open and convient to get the important spots in city. Third, the family level. It means that parents anf children enjoy a good relationship and they can have fun together.

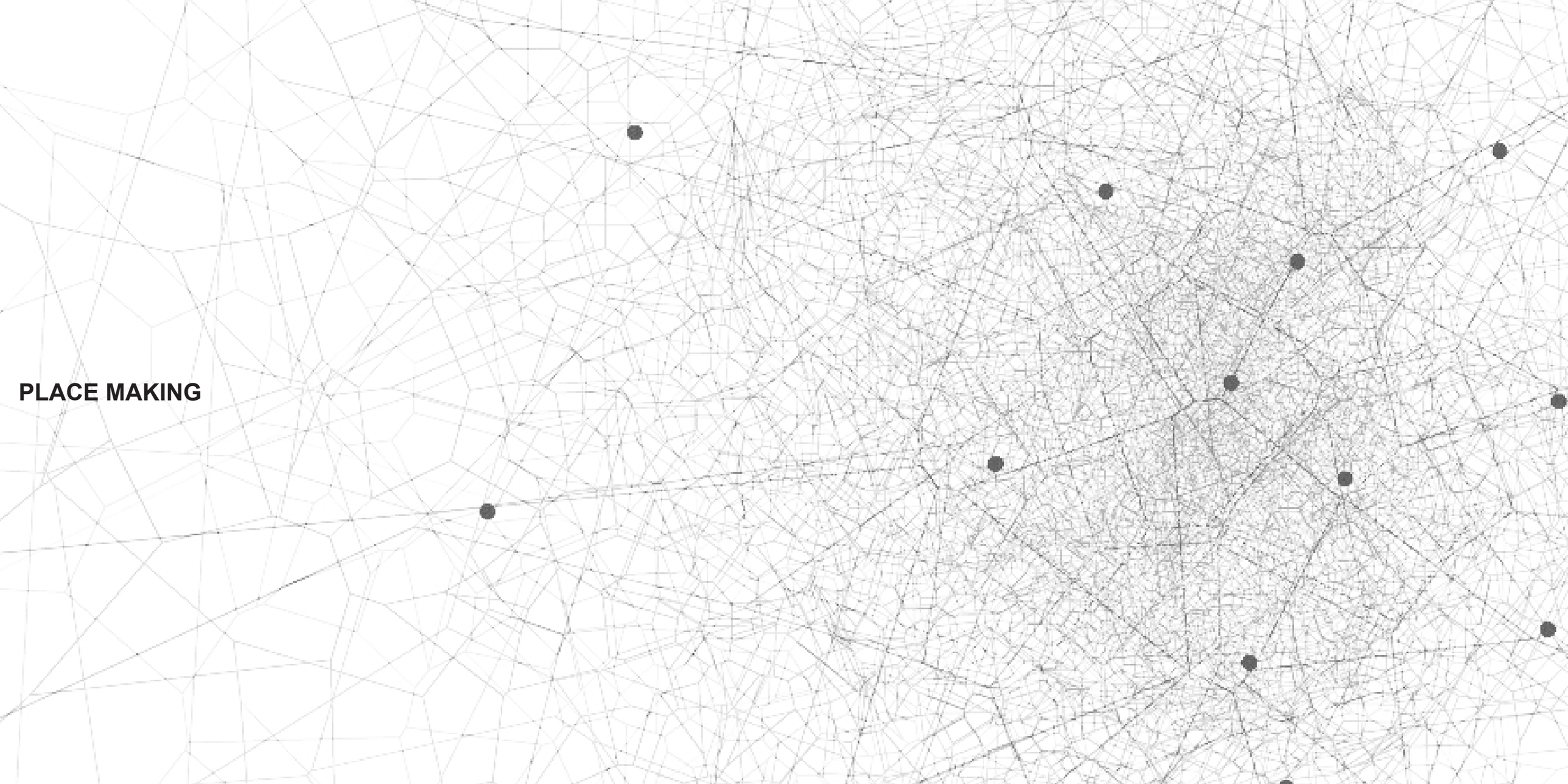


Left: Children enjoying the water sculpture fountain.

Right: The ice skating rink is a huge draw for Discovery Green, attracting nearly 80,000 users a year.

Left: Rockefeller center management corporation and exxon corporation

Right: The Heart of Davie Village Plaza: Colorfully Connecting People and Place

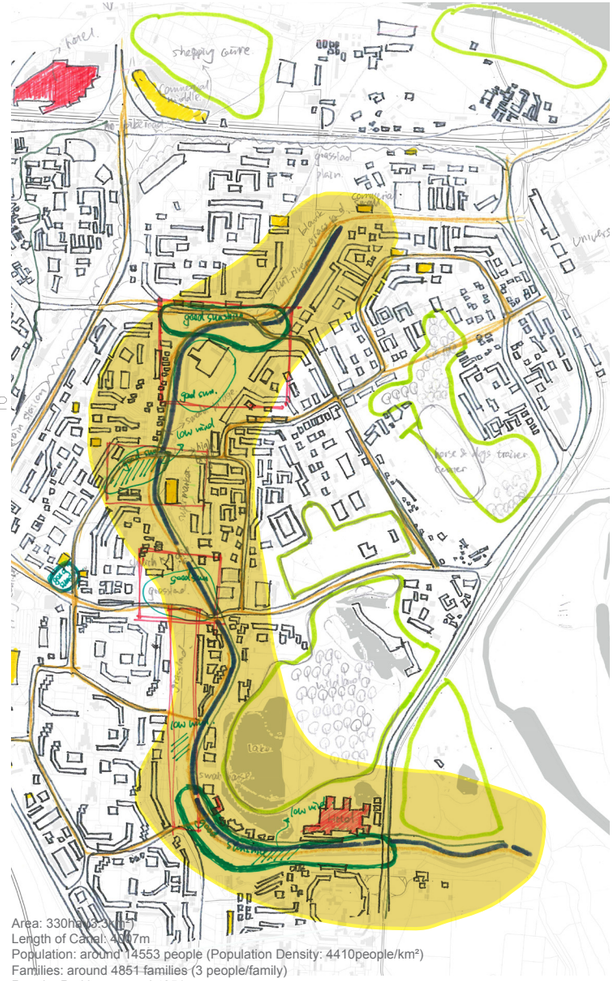

PLACE MAKING

Place Making | strategy

design site

To enhance human interaction in Petrzalka, best to start from the centre. Canal area is chosen as design site.

Spatially, and has potential to be real city centre in the future.


shopping centre
hotel
grassland
plain
commercial
industry
cemetery
Petržalka
Bratislava
Slovakia
Austria
Hungary
Czech Republic
Danube
Danube River
Small Danube
Old Danube
Old Danube River
Small Danube River
Danube Canal
Danube Canal Park
Danube Canal Park Area
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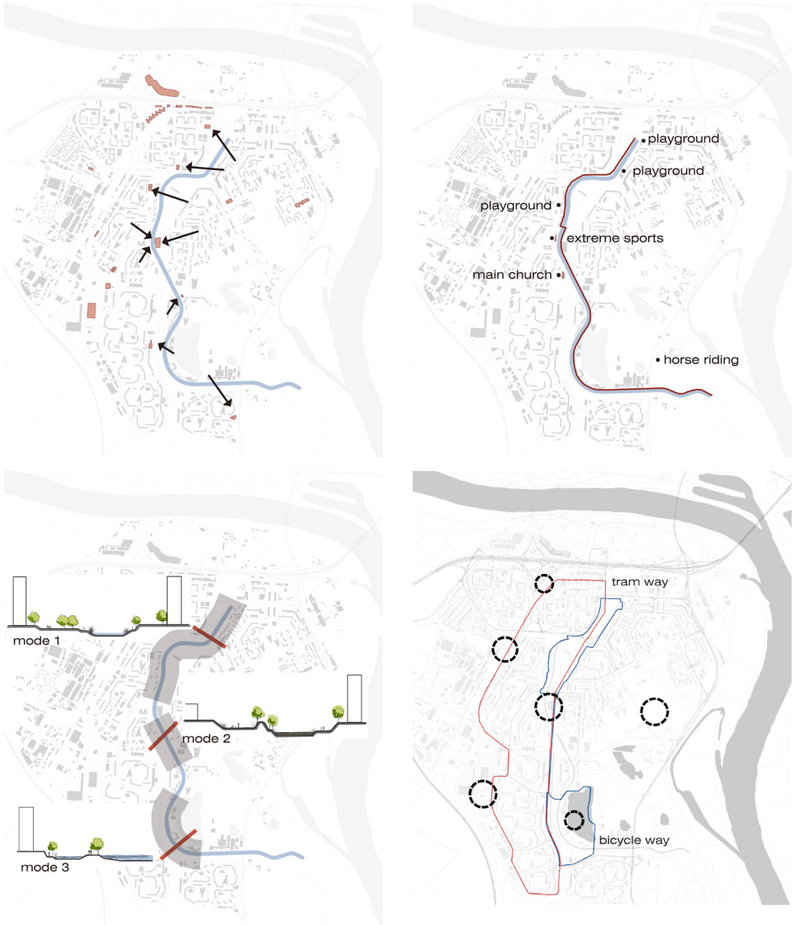
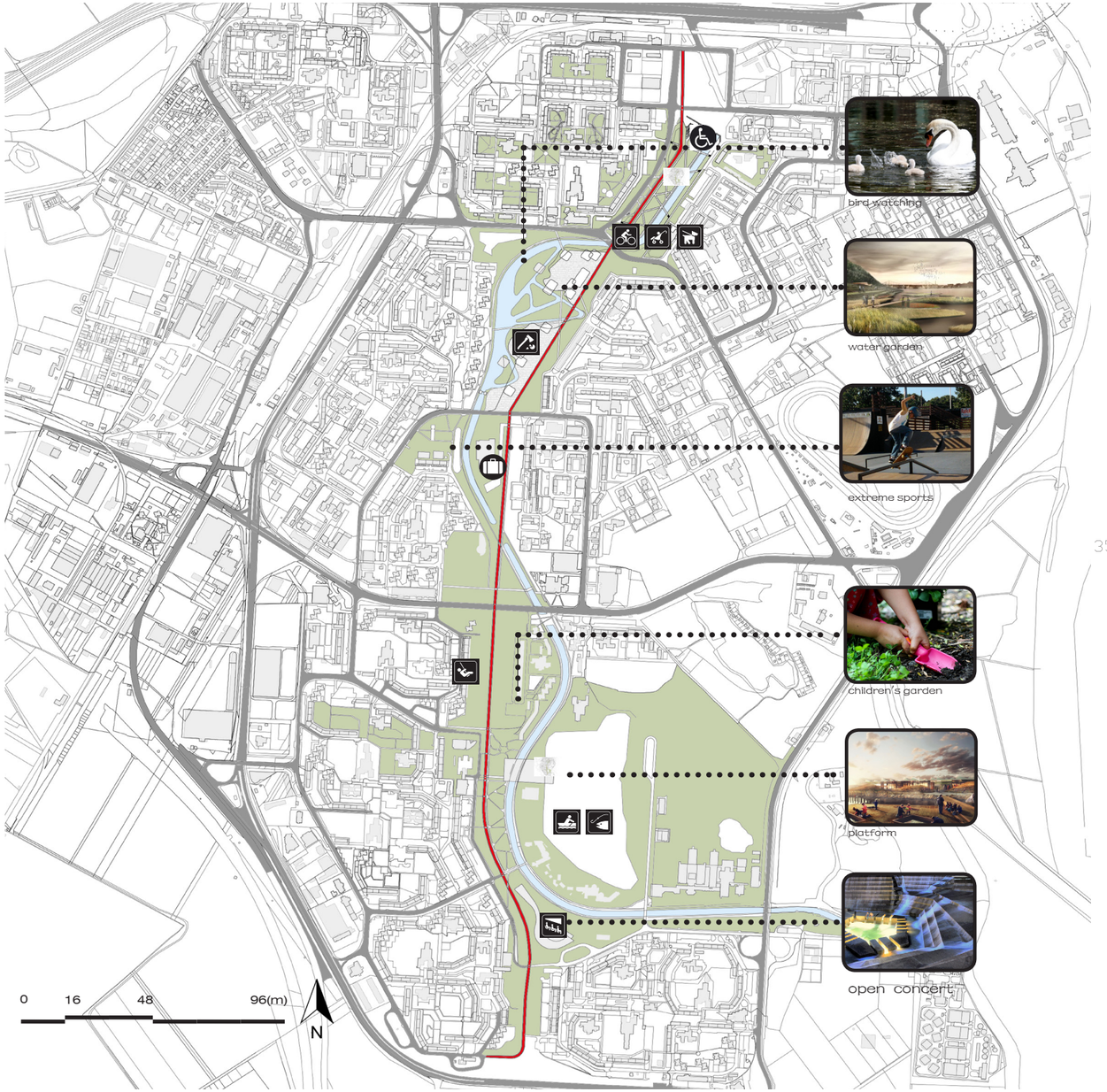
Danube Canal Park Area Boundary Line

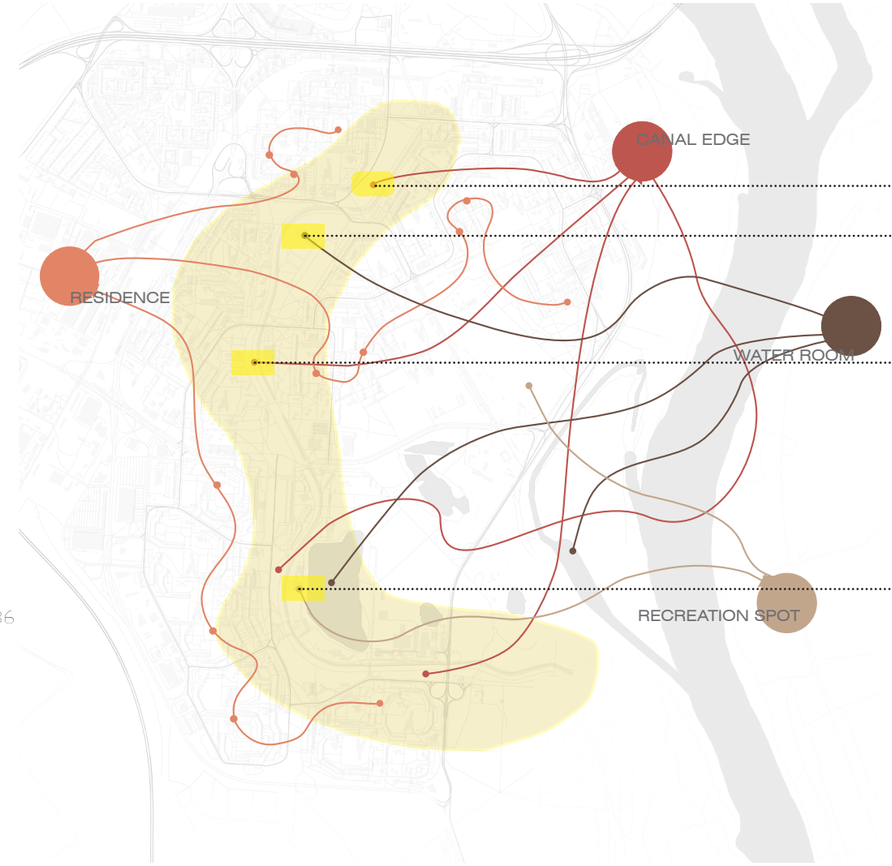


Place Making | strategy

strategy mapping

According to site analysis and survey, I plan more convient for people get stores and introduce more types of recreation for people with landscape architecture. Take advantage of current spacial mode and a new tram line to link current people flow. Moreover, a new tram line is introduced to link main city spots.





PLACE ONE

the beginning of canal

PLACE TWO

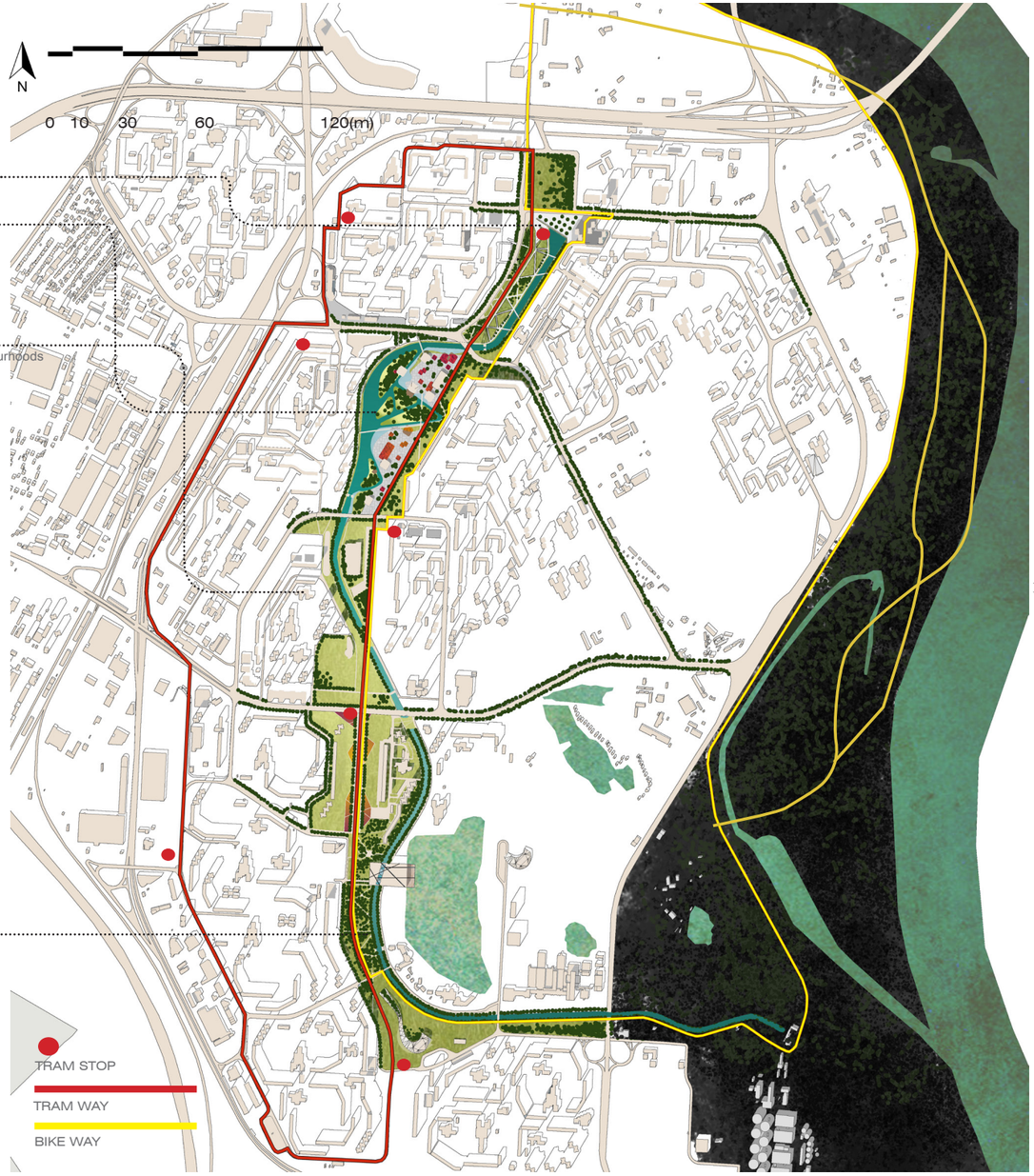
a turn of river leaves water room and closing to train station makes it a new meeting spot

PLACE FOUR

green space in neighbourhoods

PLACE THREE

beside pond and with good sunshine condition; lacking recreation spots around; the end of canal making a new focus

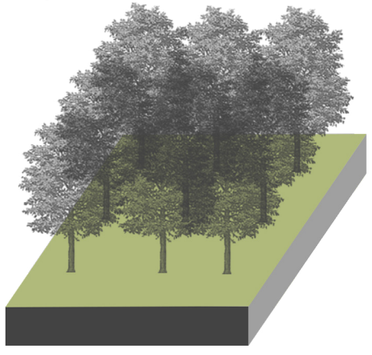


Place Making | master plan

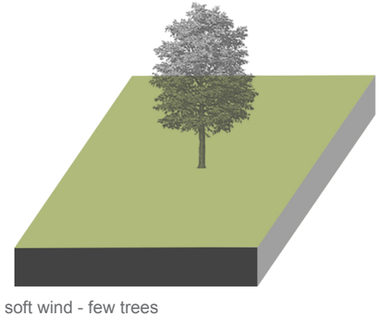
design sites

Whole future design sites can be divided into 4 types: residence; canal edge; water room; recreation spot. I pick 4 pivotal places from each type. The design principle can be followed in every type.
A new tram line and a new bikeway link esstial spots.

Wind

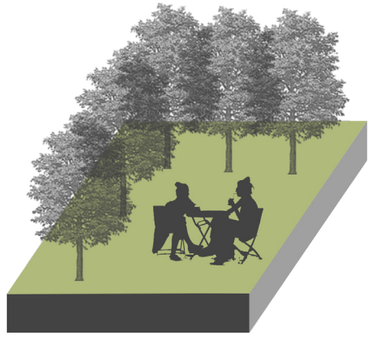


heavy wind - plenty of trees



soft wind - few trees

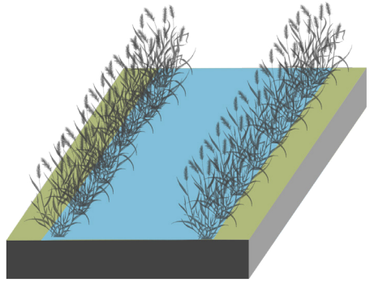
Sun



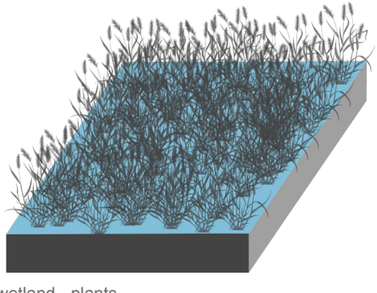
shadow - rest

brightness - activities

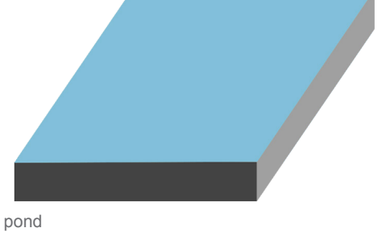
Water System



canal - plants canalside

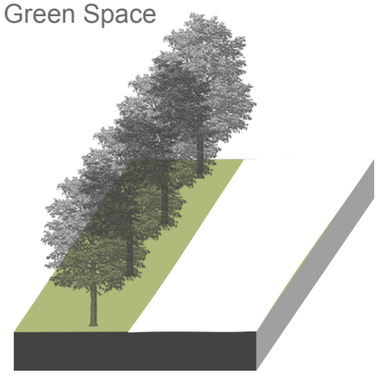


wetland - plants

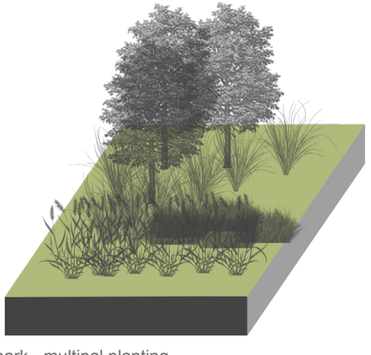


pond

Green Space

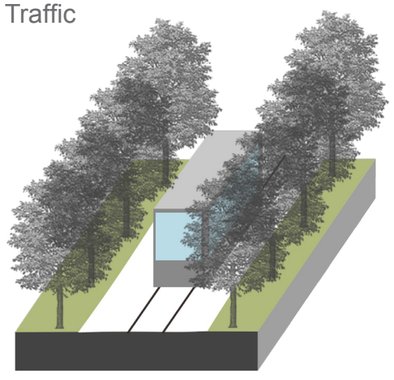


roadside - trees



park - multipal planting

Traffic

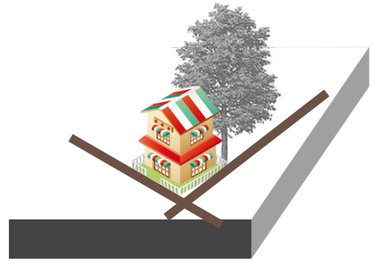


tramway - both sides trees

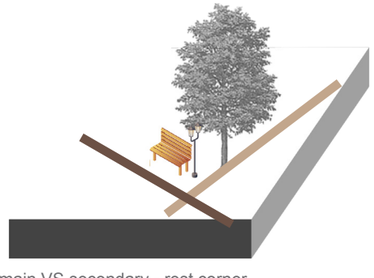
bikeway - at least one side trees

footway - free

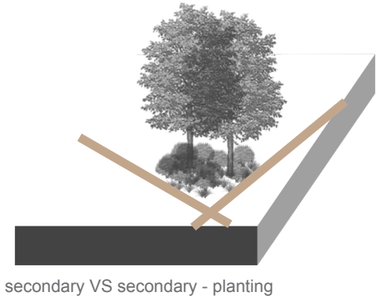
Landuse



main VS main - recreation spot



main VS secondary - rest corner

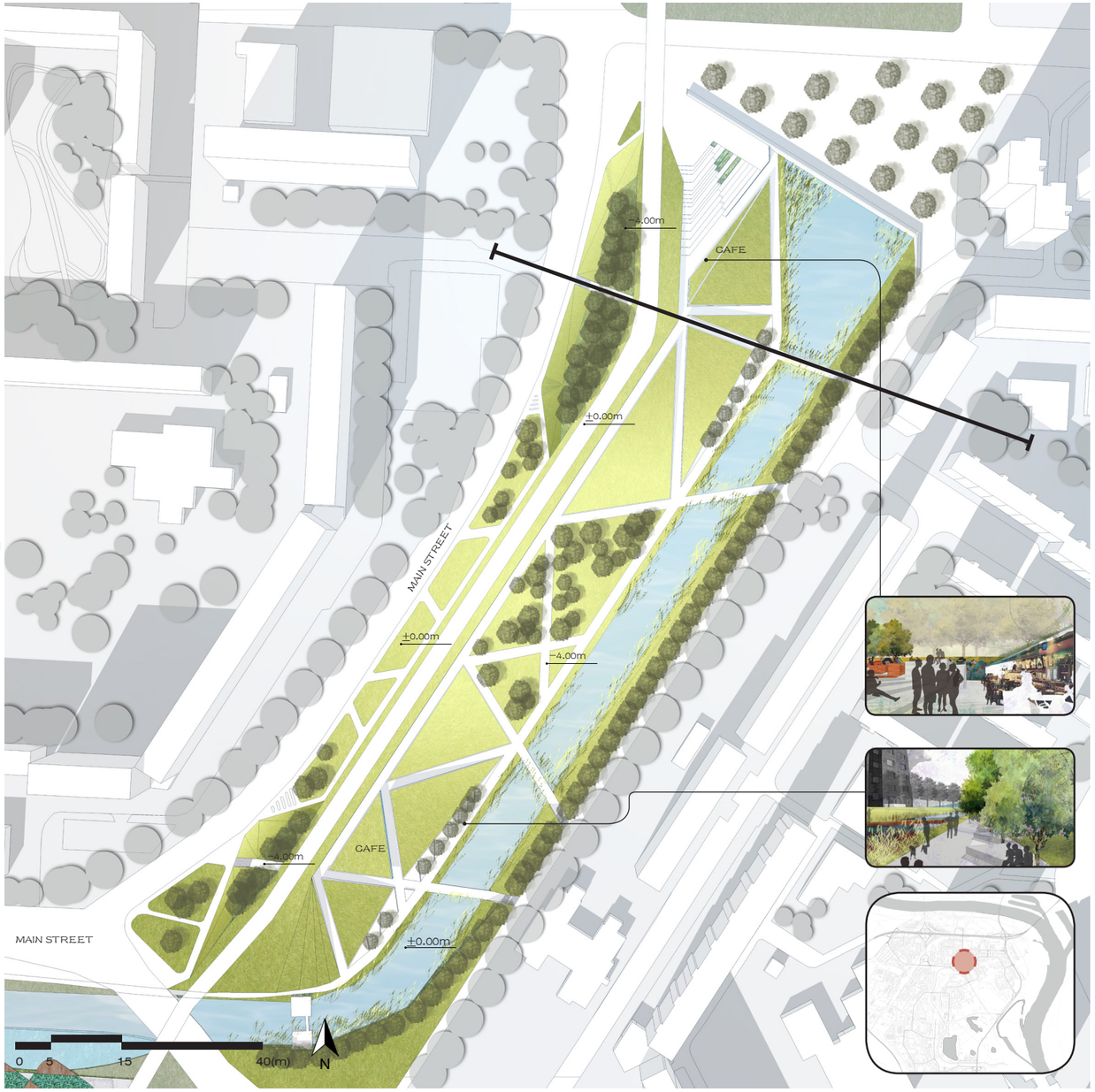


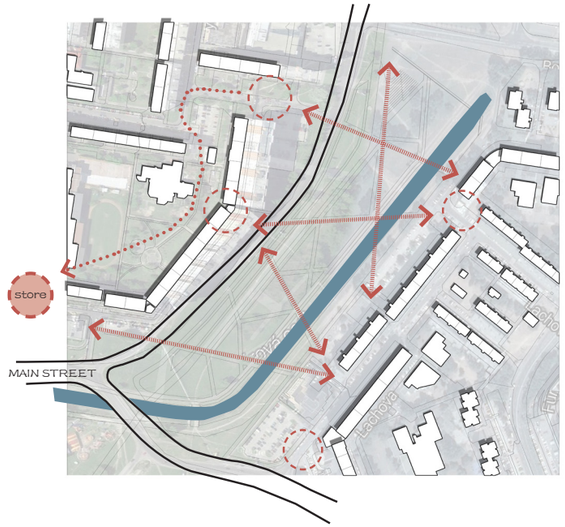
secondary VS secondary - planting

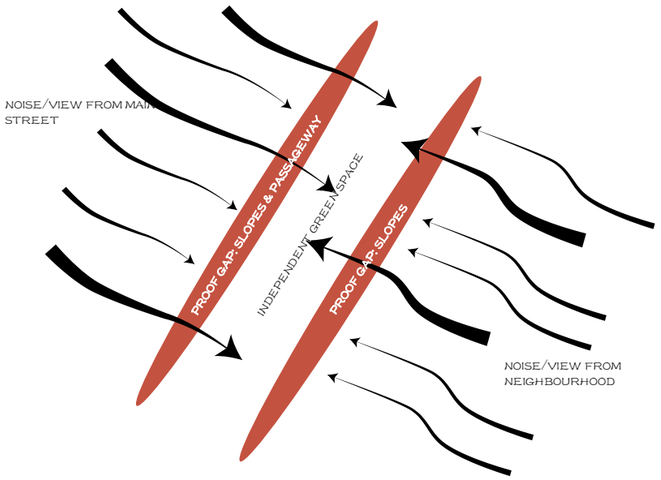
Place Making | site design

toolbox from layer approach

According to former layer analysis, I have got basic information of site. This toolbox is developed under different situation and make a common design principle.







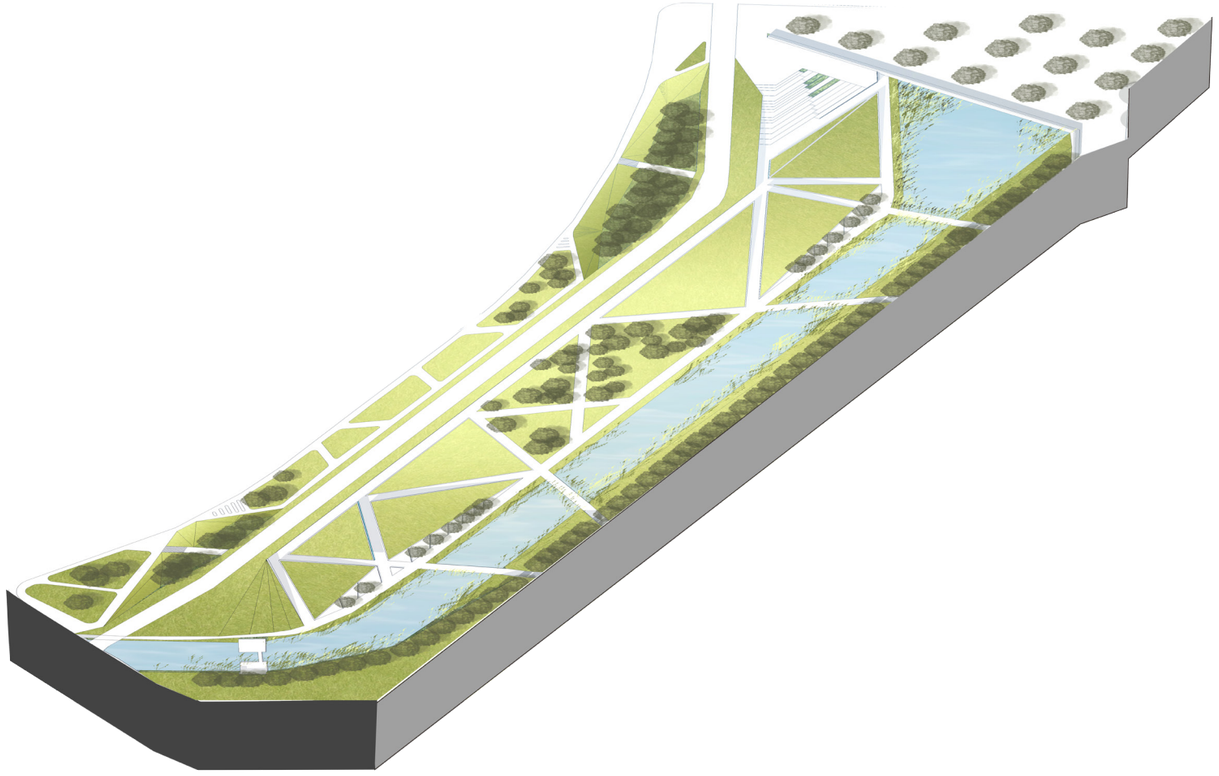
Place Making | site design

place design

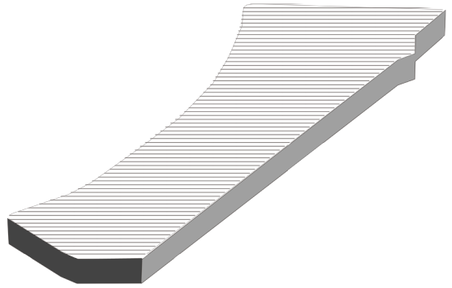
Place one: canal edge design

Zoom in place i, it is the beginning of whole story. People who come from old town pass through bridges and arrive at this area. A plaza is a good welcome to them. The neighbourhood along here is unblacnce for stores. One side residence have to cross cannal. I list all possible flow spots (store, entrance, parking zone) and design a denser walking net. The canal area as urban green space, it is better to be less distutbed by view an nose from main street and creat an independent core zone. To closer to waterscape, the core zone is 4 meters lower than ground level. Slopes and under passageway are introduced to slove the problem of height dispersion.

60(m)
30
10
0
±0.00m
green
drive way
grass slop
trees
green
tram way
passageway
green
footway
grass slop
rest zone
footway
green
canal
−4.00m
grass slop
stairs

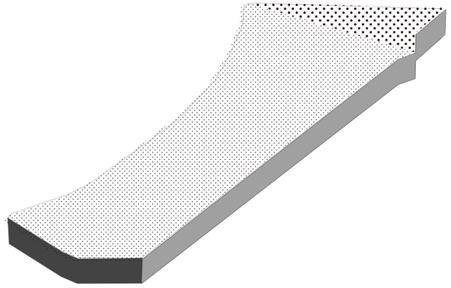


Wind



heavy

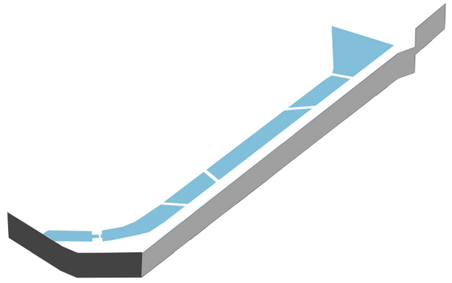
Sun



brightness

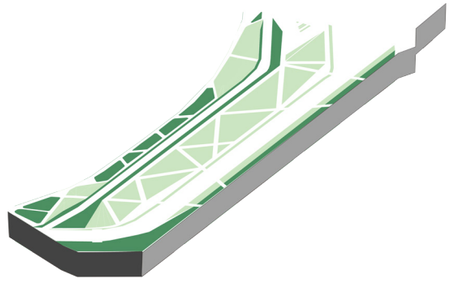
darkness

Water system



canal

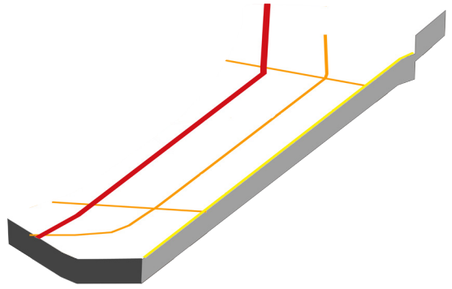
Green space



roadside green space

park green space

Traffic

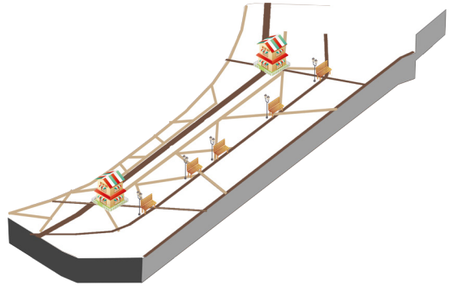


tramway

bikeway

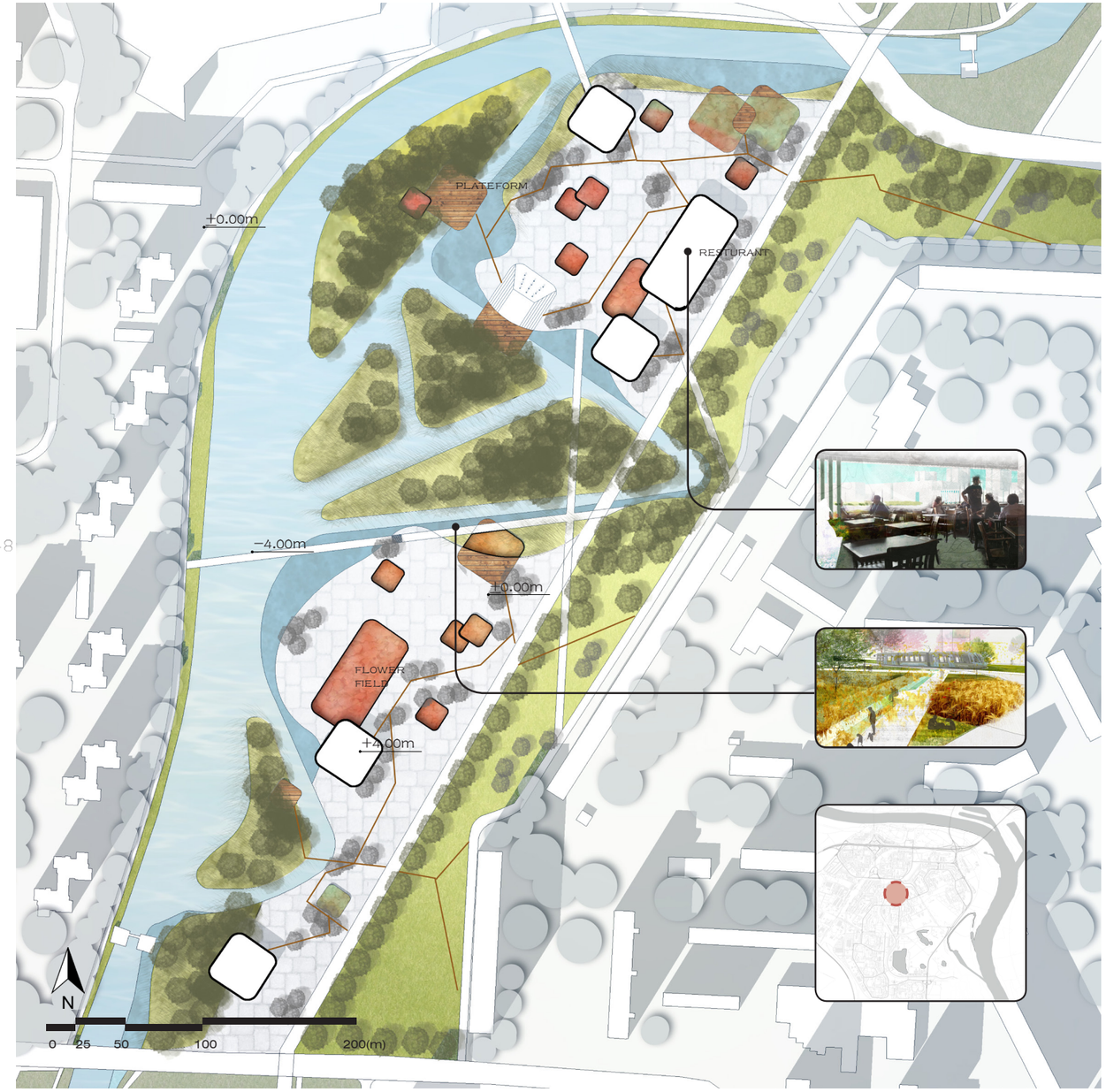
footway(main)

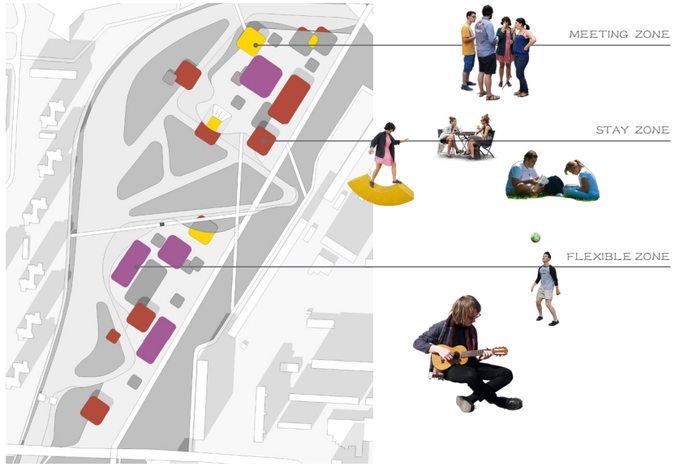
Landuse



mian route

secondary route



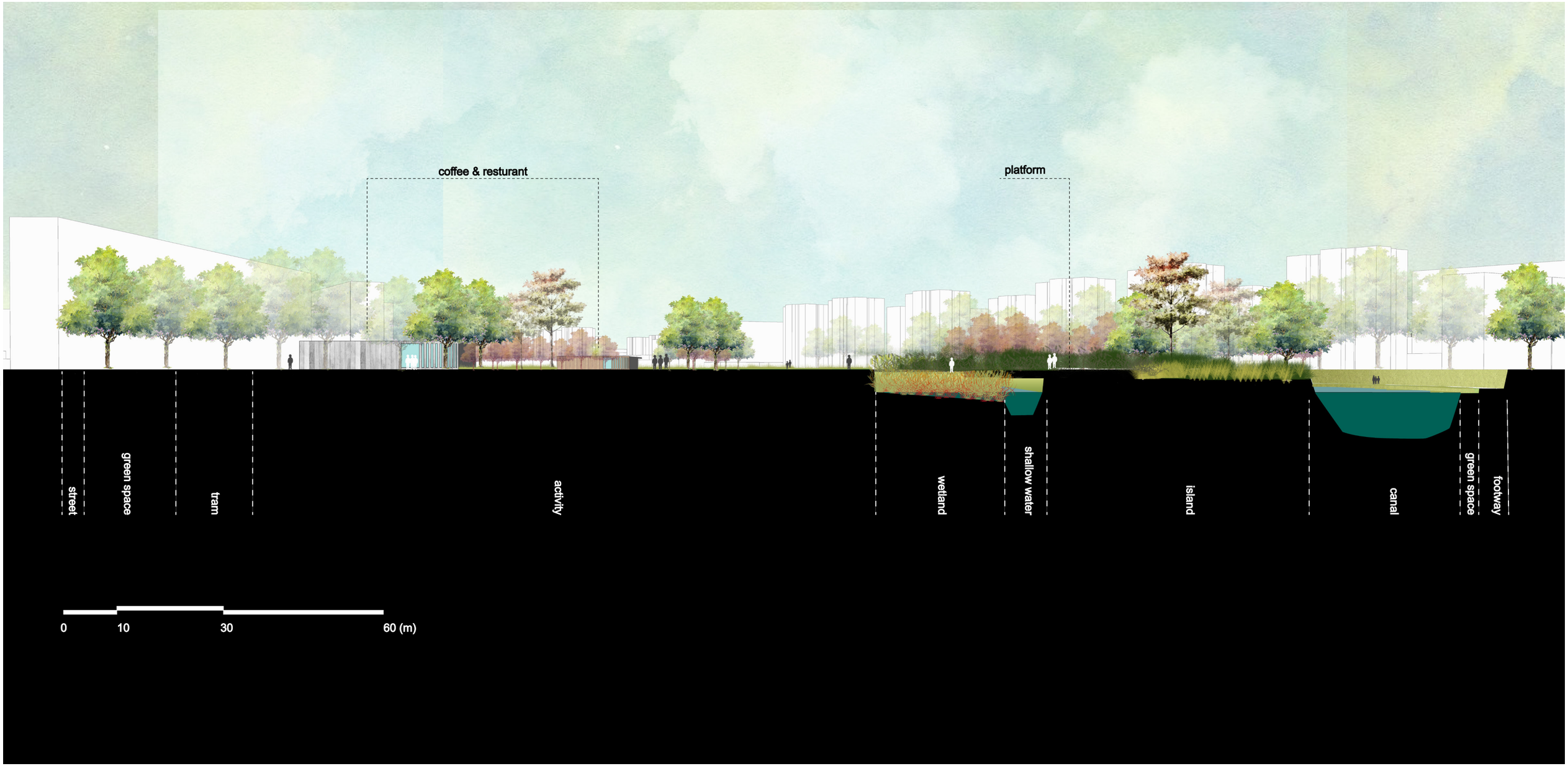


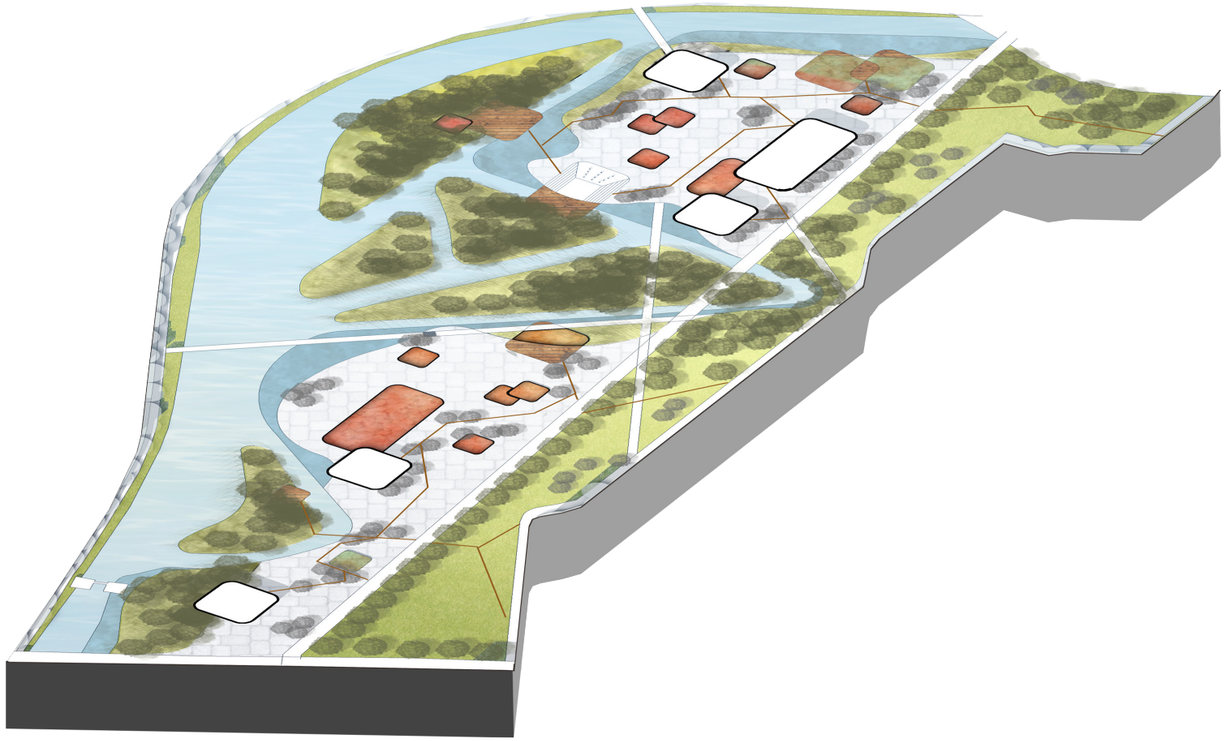
Place Making | site design

place design

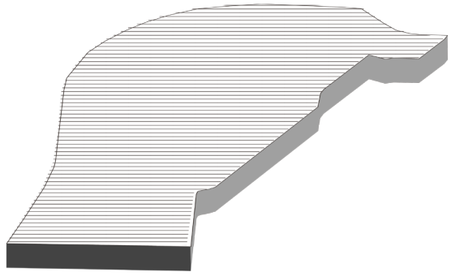
Place two: water garden design

Zoom in place 2, it is the nearest part to train station, which means existing great potential market for people flow. This place also is the greated turn of canal, then also there is potential space for water room to control canal's water level.
I widen the canal and leave some islands to create wetland condition, which brings a kind of totally new landscape type to Petrazaka and benefits biodiversity. Profitting from its location, this place has huge people flow potential and could become a new meeting spot of Petrazaka. Hence, a more vivid atomosphere is required to make it highlight, not only attractable but also stayable. Landscape resturant is introduced to here as a main function. I design pieces flower fields for child to watch and practice. Plateforms are designed to be an indepent space for meeting or just enjoying themselves.
Routing systerm is followed the princple used in place 1. I first list all the possibilities of people flow, which space is divided based on. Then, plan is developed by considering view corridors and routings towards outside.


coffee & resturant
platform
street
green space
tram
activity
wetland
shallow water
island
canal
green space
footway
0
10
30
60 (m)

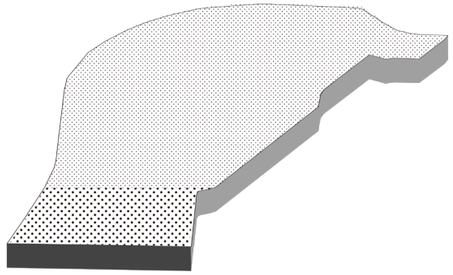


Wind



heavy

Sun



brightness

darkness

Water system

canal

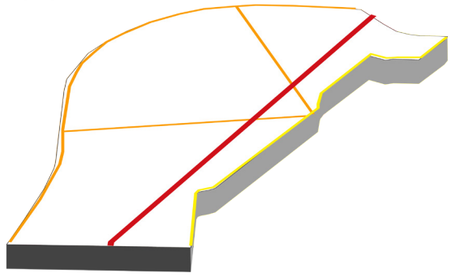
wetland

Green space

roadside green space

park green space

Traffic

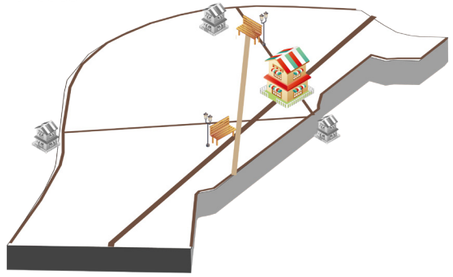


tramway

bikeway

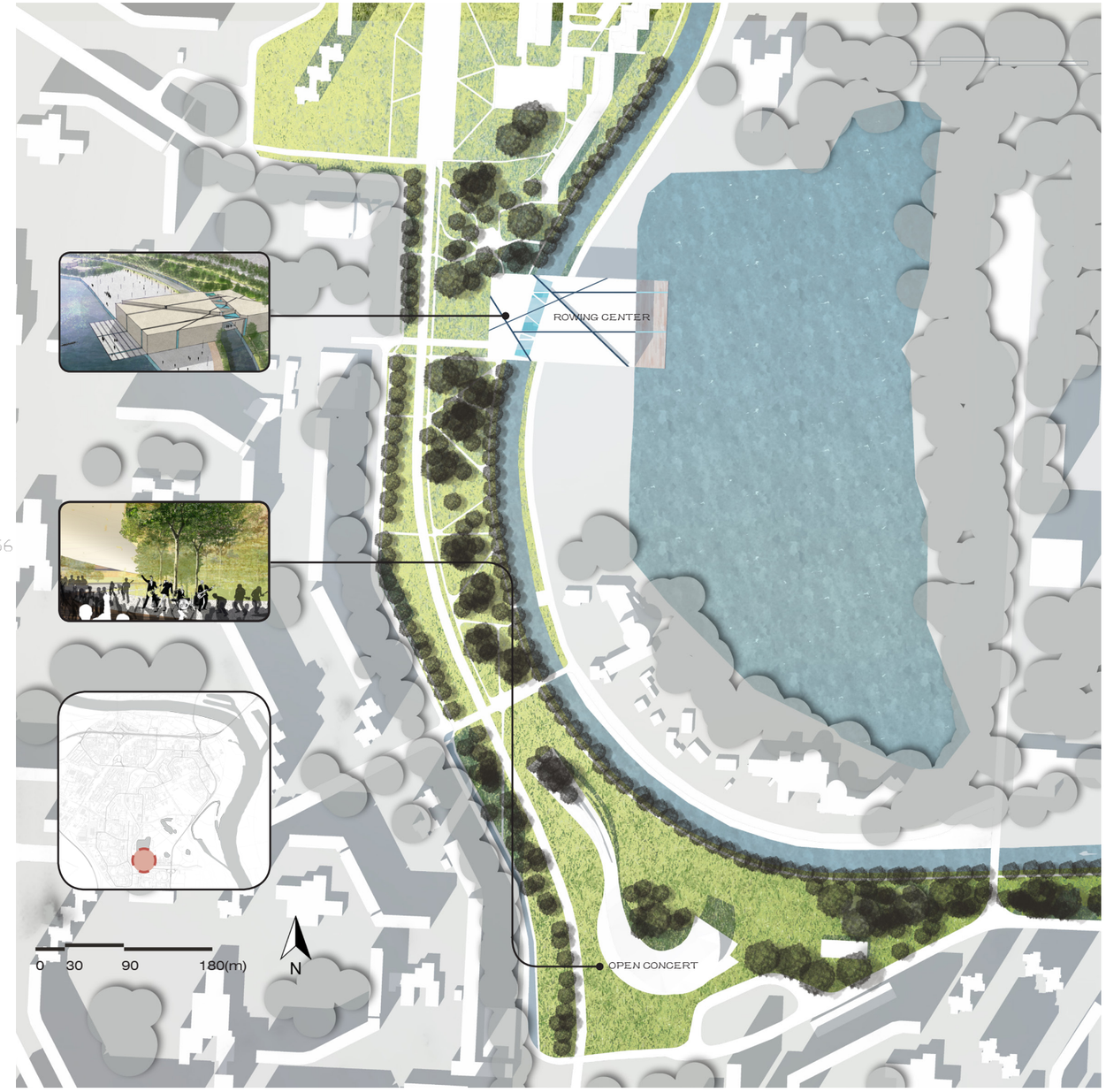
footway(main)

Landuse



mian route

secondary route

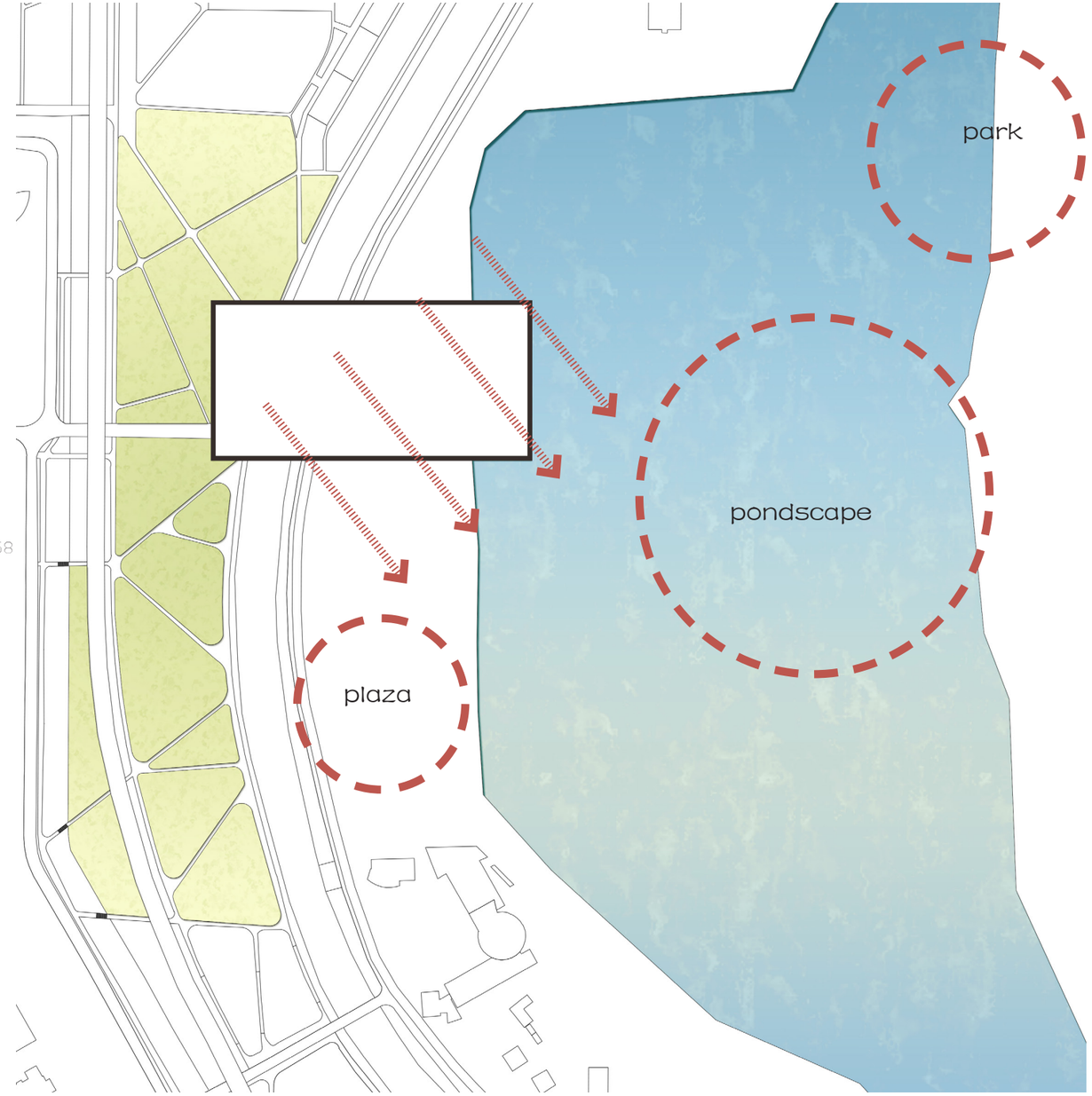


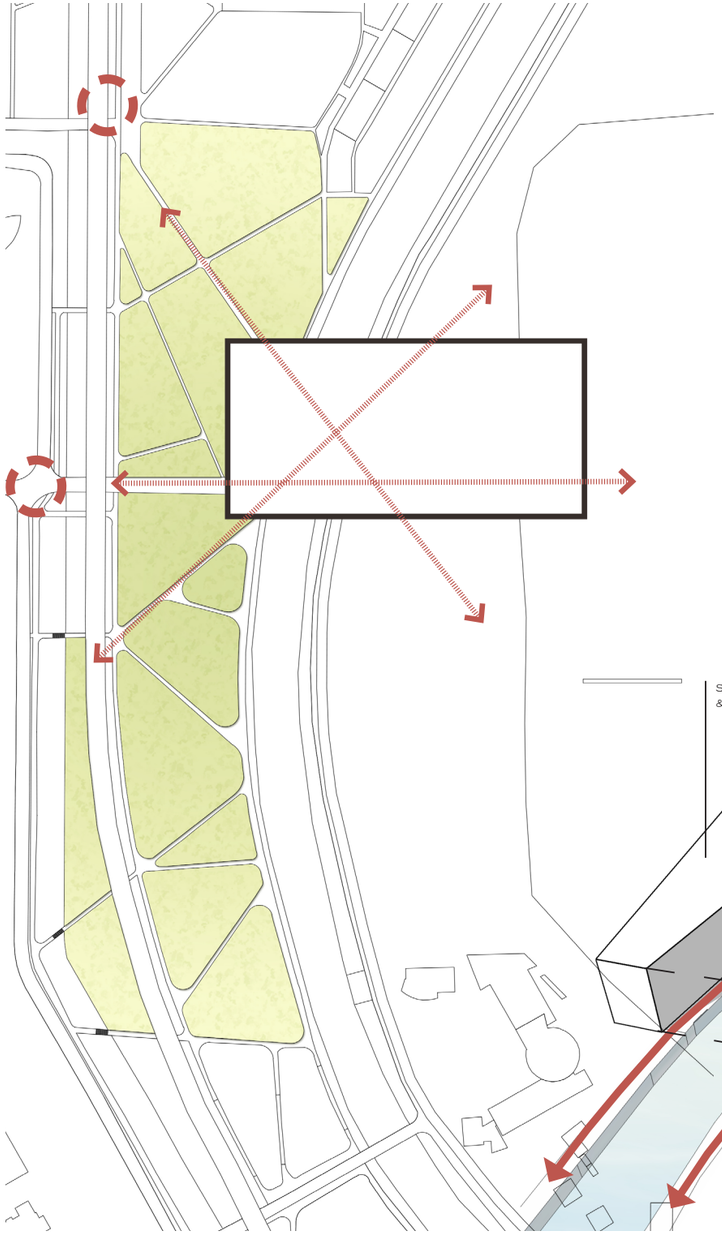
Place Making | site design

place design

Place three: recreation center design

Zoom in place 3, it is designed as a new recreation center with a rowing center and an open concert.
The new rowing center is a new landmark at the end of canal zone. It is a multifuntional building and canal runs passing through. It is combined by two blocks and small bridges link two sides.The open concert is at the best sunshine location with a large lawn as background.
Routing systerm between rowing center and open concert is followed the princple used in place 1. I first list all the possibilities of people flow, which space is divided based on. Then, plan is developed by considering view corridors and routings towards outside.

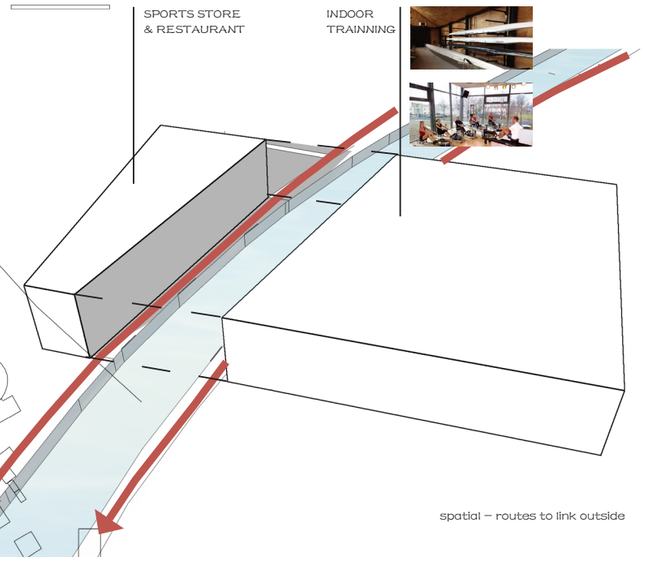




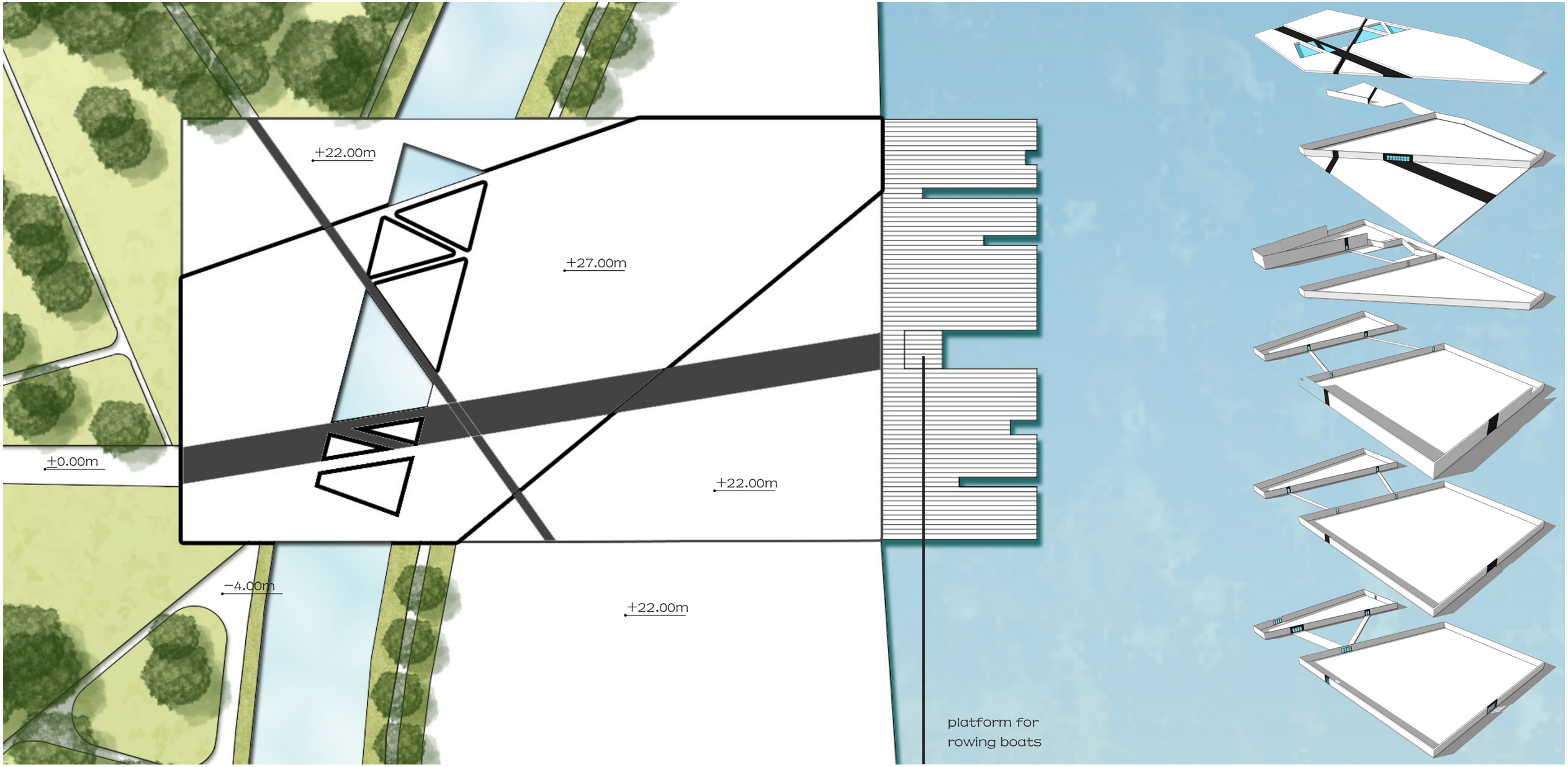
Place Making | site design

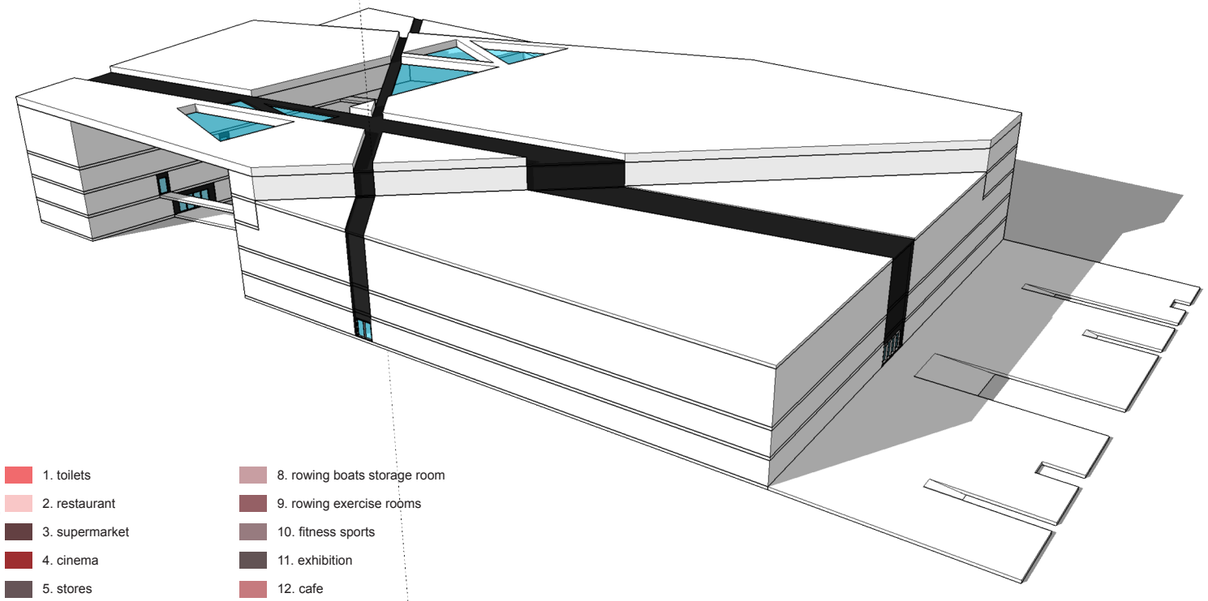
rowing center design

There are 2 restricted condition need to be taken into account for rowing center.
First, located by pond and have a panorama of pond, it is better to make it possible for people still can enjoy the pondscape from inside of building. Hence, some indoor space can be rotated to directly face to the pond. On the other hand, in order to have a more simple and convient connection, several outdoor routes can be extended into inside.

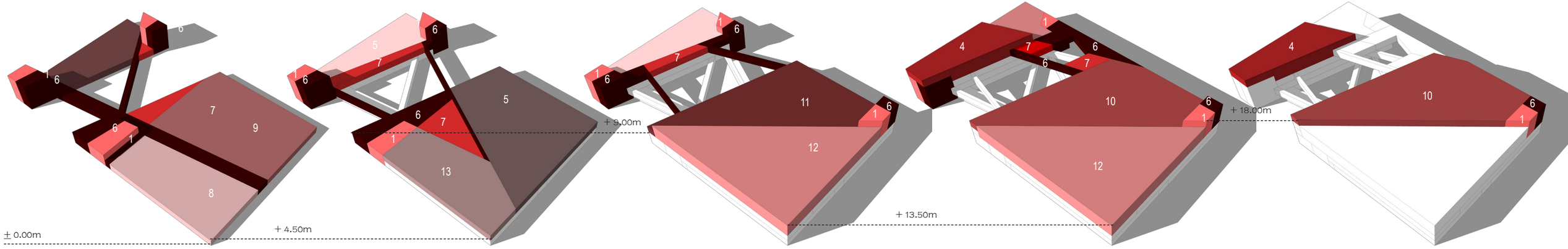


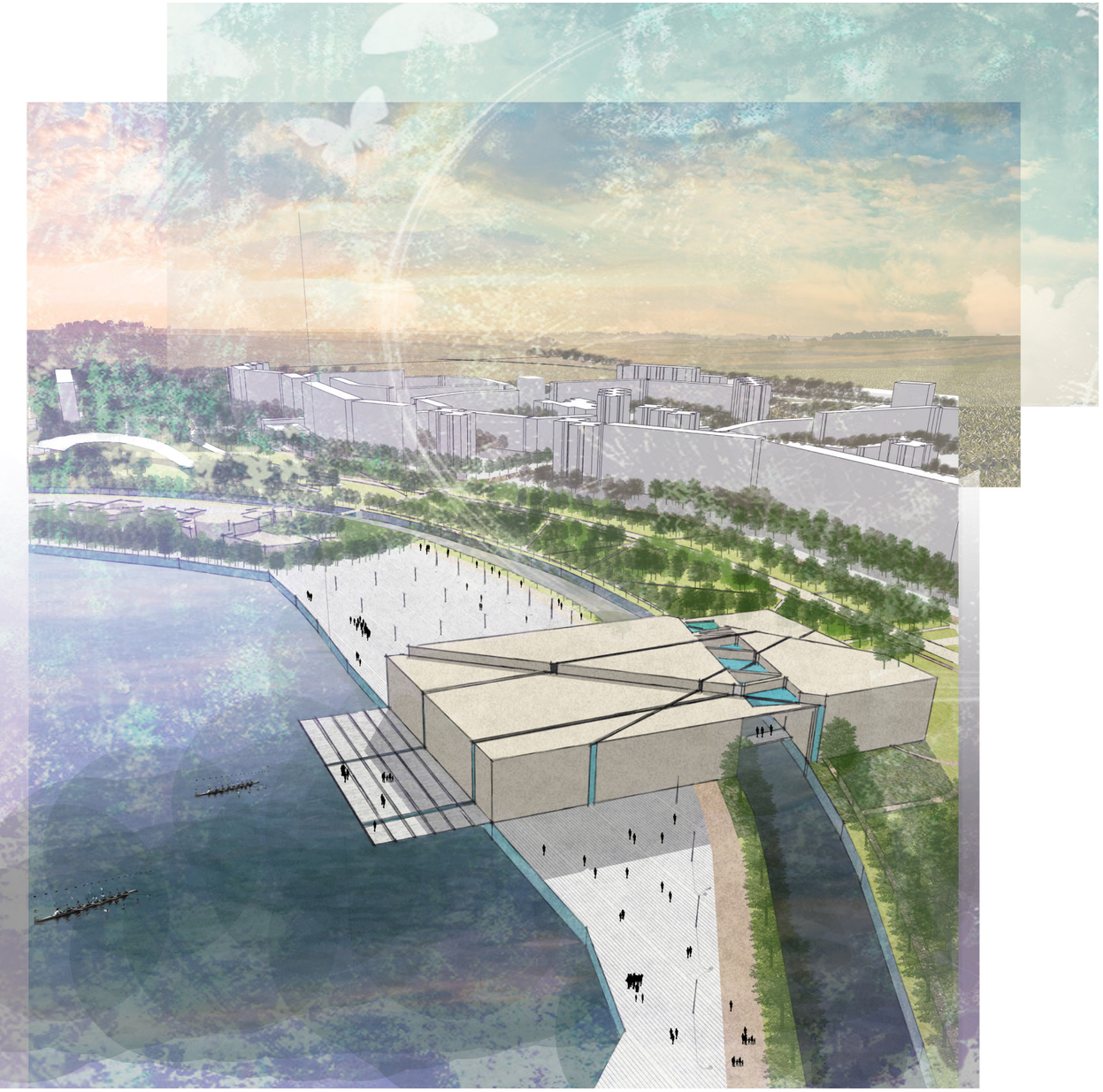
spatial – routes to link outside

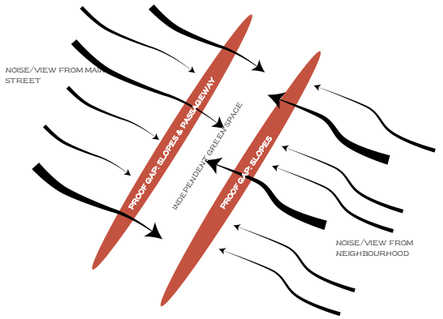

+22.00m
+27.00m
±0.00m
+22.00m
−4.00m
+22.00m
platform for
rowing boats



1. toilets
2. restaurant
3. supermarket
4. cinema
5. stores
6. corridor
7. free zone
8. rowing boats storage room
9. rowing exercise rooms
10. fitness sports
11. exhibition
12. cafe
13. office







Place Making | site design

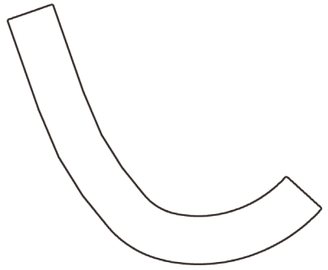
canal edge design

It is followed the design principle used in PLACE ONE, where a gap is used to decrease the disturb from street.

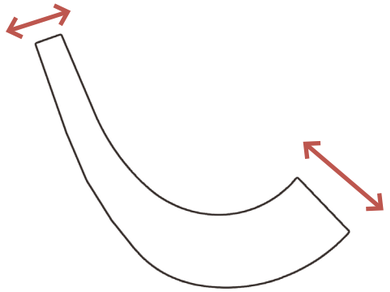
Place Making | site design

open concert

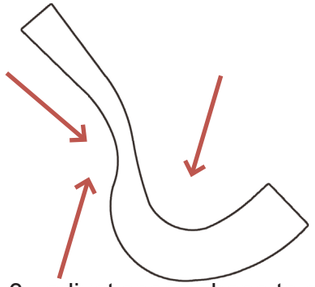
The site selection of open concert is based on the analysis result. It takes almost the best sunshine corner. The shanpe follows site's outline and ie adjusted by people flow. When it comes to the performance stage, I prefer the side of pond, then audiance will back to main street and face to band and nature scenery. Considering of rainy days, I make it as a big slope to release water. Besides, I make a planting bed to take advantage of rainwater.



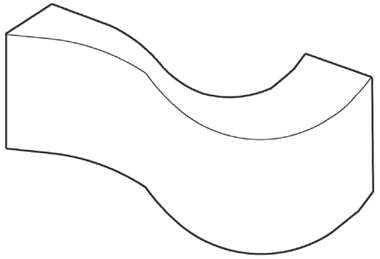
1. shape from surrounding condition



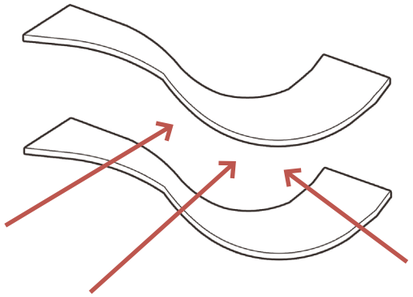
2. change the wideth according to specific size.



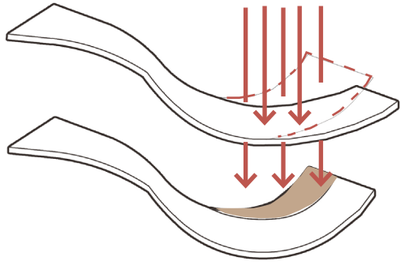
3. adjust space shape to contain more people



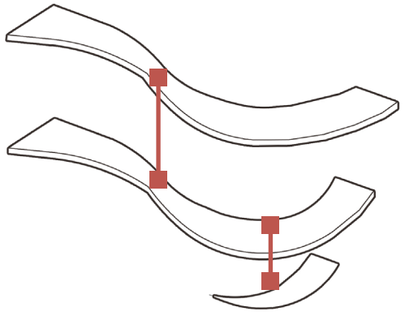
4. sketch model



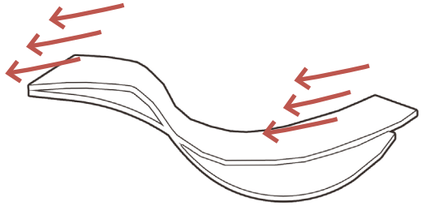
5. empty wall for better view corridor and attract passers' attention



6. rotate roof to expose stage to sunshine and shelter grandstand.

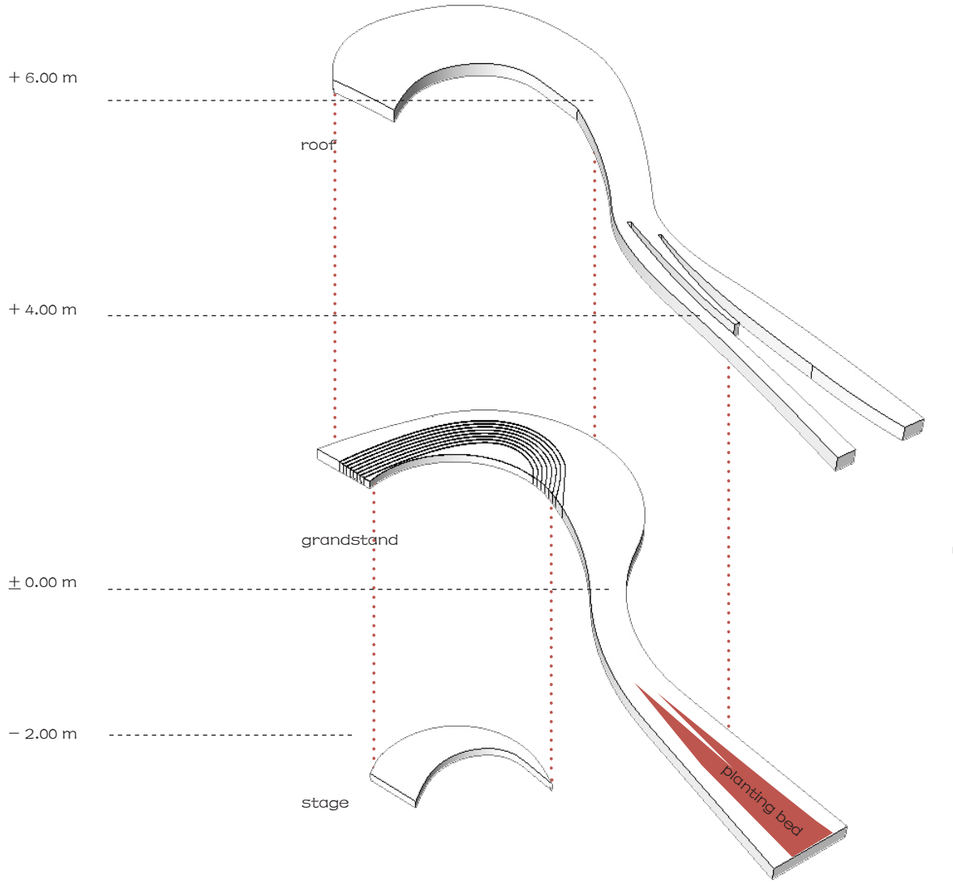


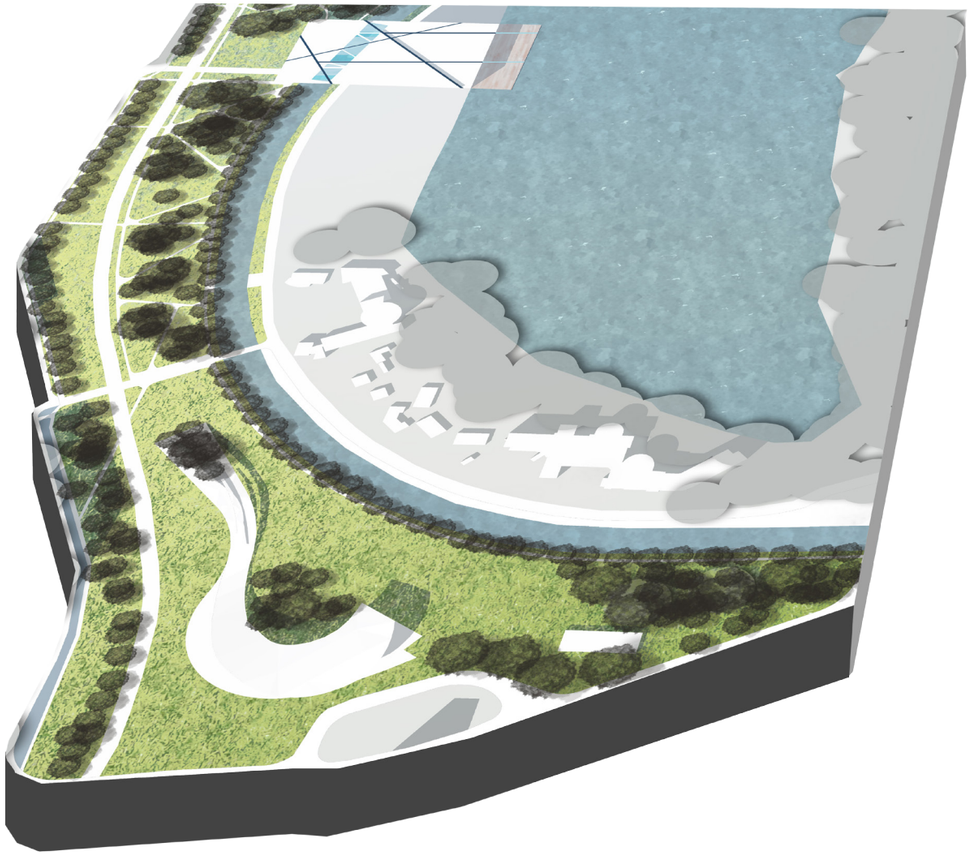
7. support structure



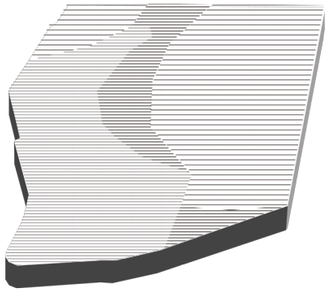
8. curve roof to lead rainwater

9. set planting bed where water gathered


+ 6.00 m
roof
+ 4.00 m
grandstand
± 0.00 m
– 2.00 m
stage
planting bed



Wind

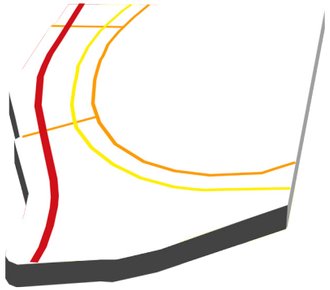


heavy
mild
soft

Water system

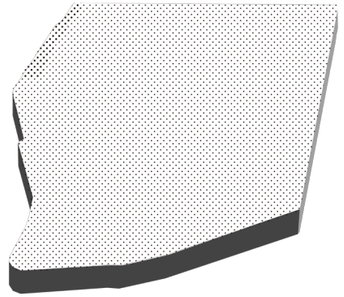
canal
pond

Traffic



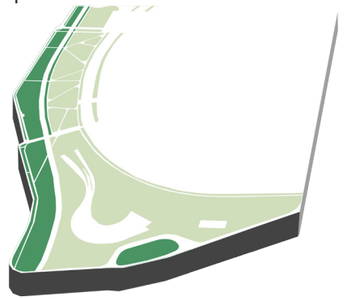
tramway
bikeway
footway(main)

Sun



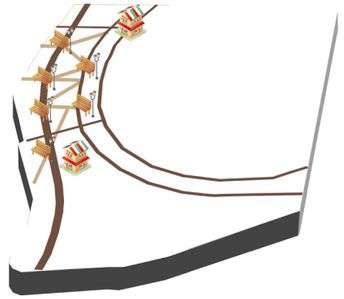
brightness
darkness

Green space

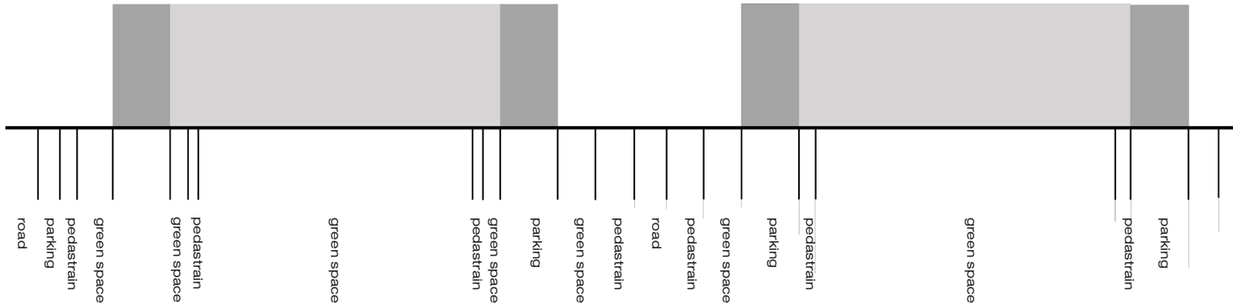


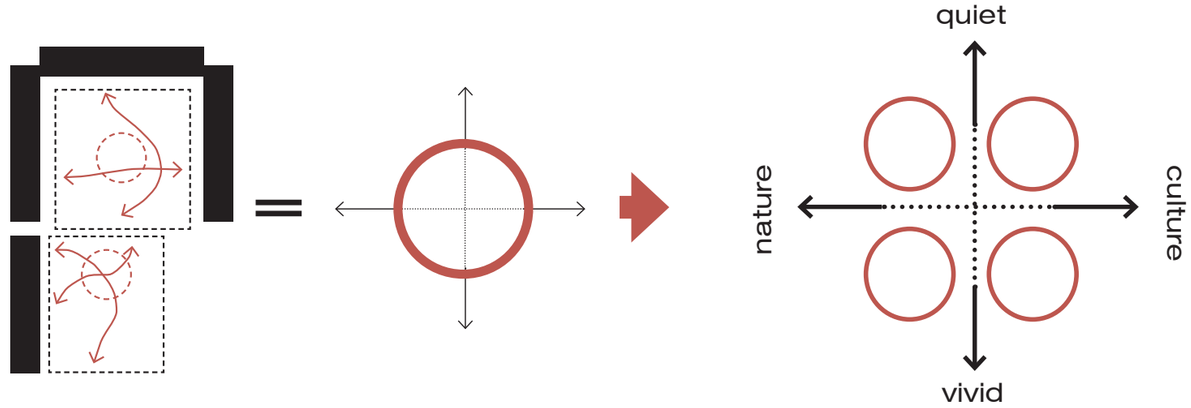
roadside green space
park green space

Landuse



mian route
secondary route





Place Making | site design

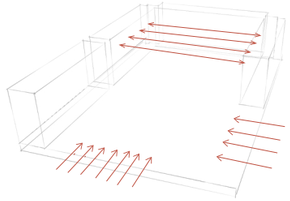
place design

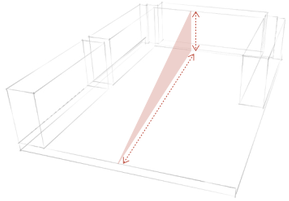
Place four : residential yards design

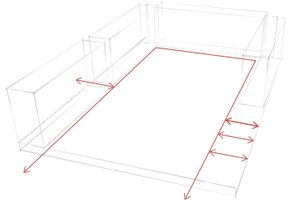
Zoom in place 4, it is one of the typical building type. This L mode building has 3 different appearances. I pick one L as experimental design. Then the design principle can be followed at other L buildings. This method can be repeated at all typical building types.

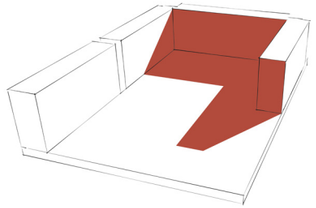
The current green space has one core, but people don't stay in their yards. It looks like a green space surrounding by parking lots. Since everyone has his own requirement to yard, I change one core to 4 cores. The yard is divided into 4 areas, nature-quiet zone, nature-vivid zone, culture-vivid zone and culture-quiet zone. Residents in each building can vote to choose what they need to adjust the percentage of every area.

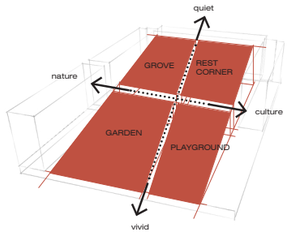
Routing systerm is followed the princple used in place 1. I first list all the possibilities of people flow, which space is divided based on. Then, plan is developed by considering view corridors and routings towards outside.

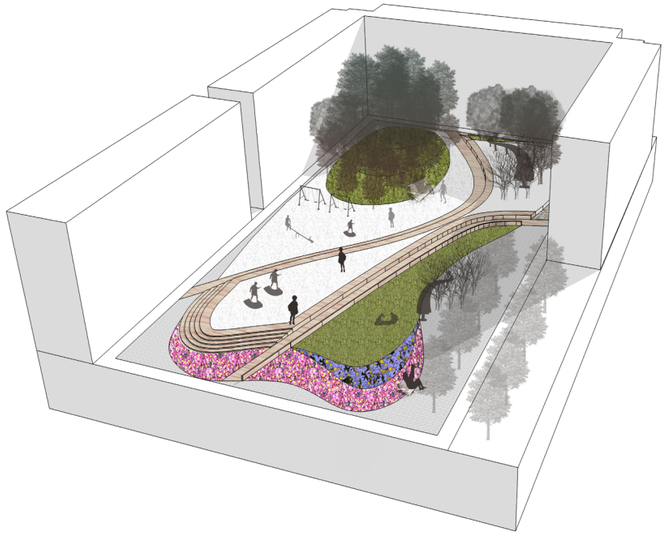


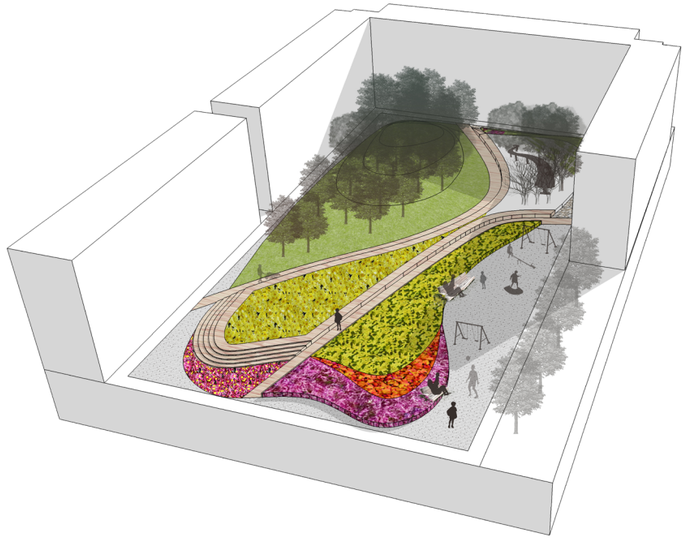


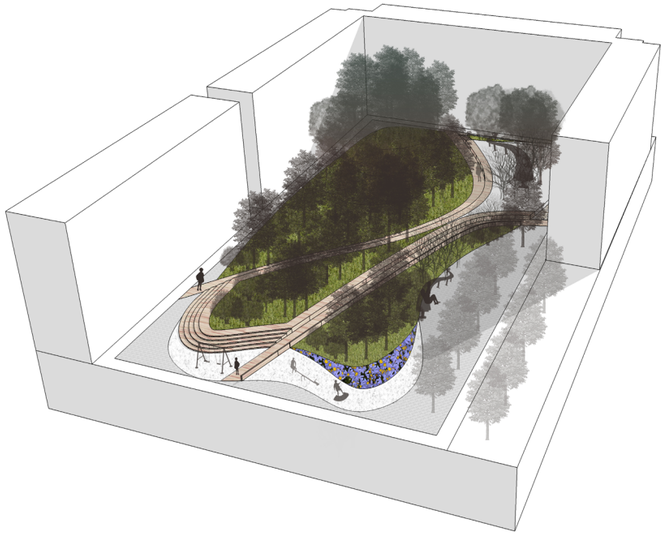












vivid bright
lively
friends games

Place Making | site design

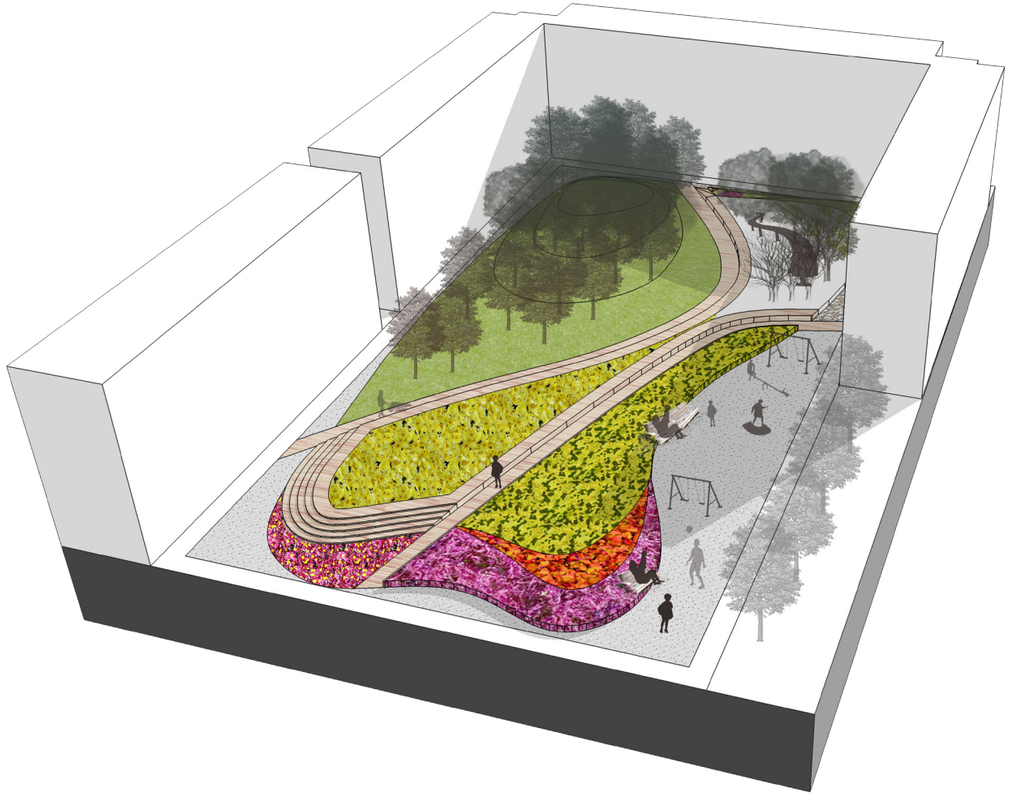
place design

Place four: residential yards design

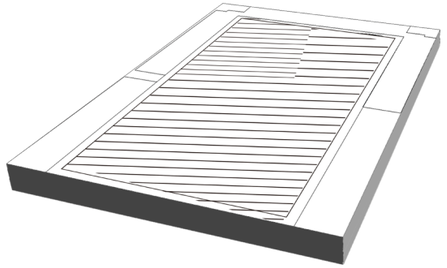
For one yard space, 2 sides are open to outside view. These 2 sides are designed as open entrance to outside. Hence, these 2 sides can be regarded as culture direction. For the view inside building, the distance is not enough for privacy. Grove is used to block disturbance. There exists a big comparison between height and length, therefore, a mound is used to decrease the compariation. When it comes to shadow problem, 2 corners are always in building's shadow. It can be quiet zone for rest or plant trees to keep its charactor. Finally, I get a basic design mode for L building.

I suppose two extreme condition for residents. One is, there are more childern and want to have more activity space, it can be designed as left above. The other, there are more elder people or they want more quiet yard, then it can be designed as right above. The middle one states a balance situation.

breath
trees and shadow
quiet alone
insight oneself



Wind

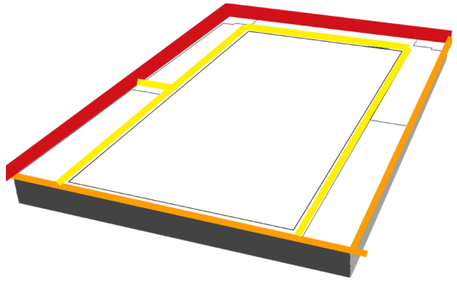


heavy

soft

Water system

Traffic

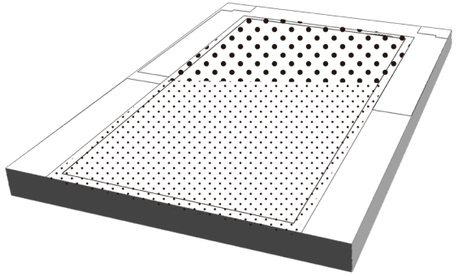


tramway

bikeway

footway(main)

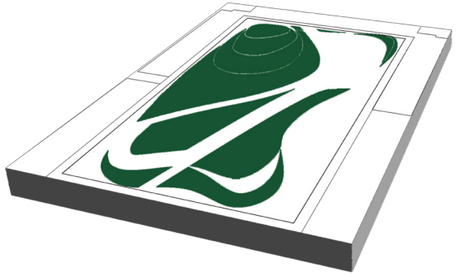
Sun



brightness

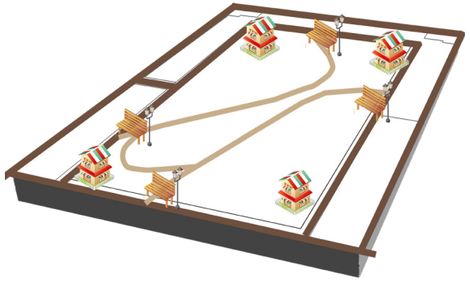
darkness

Green space



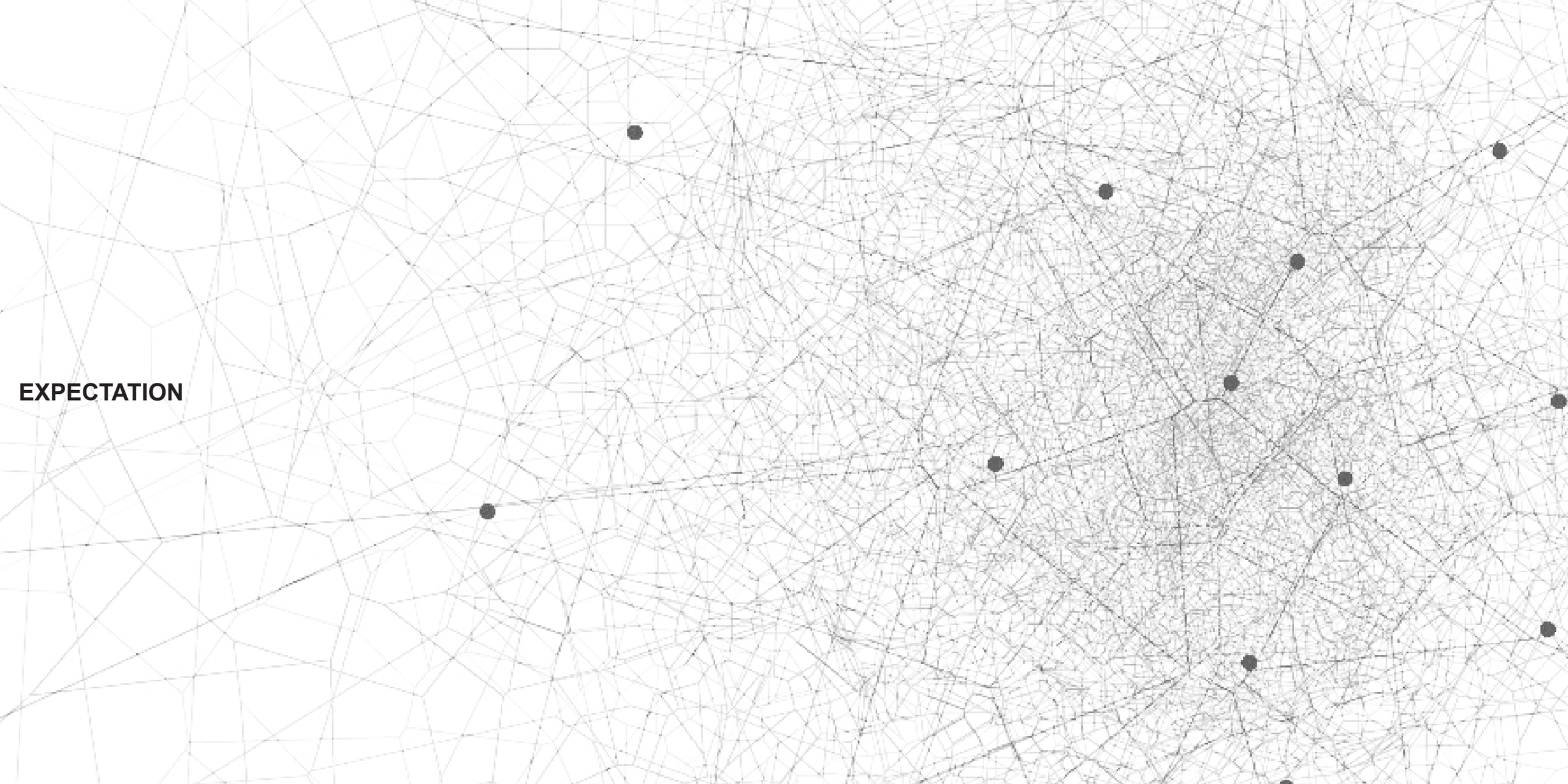
residential green space

Landuse



mian route

secondary route


EXPECTATION

Expectation | towards smart network

An active central bring more possiblity to surrounding areas. More people come to there, and bring more requierments. Their demands prompt update of surrounding area. Then, such process repeat. Urbanism grows after landscape update. Finally, the boundary of urban and rural area will become fuzzy and a balance of urbanism and landscape is born. They work together to bring a suistanable urban image.

REFLECTION

REFLECTION

Track: Landscape Architecture
Graduation Studio: Flowscape

MOTIVATION THROUGH FLOWSCAPE

The graduation studio of flowscape explores infrastructure as a type of landscape and landscape as a type of infrastructure (cf. Strang, 1996).Landscape infrastructure actually integrate “flows” which are nature and human process and movement and “scapes” which are defined and considered as spatial entity. Under this background, I choose the topic of sustainability of living environment which relates to urban public landscape structure and urban growing process. The motivation is to get a kind of landscape network which works well with rapidly developing modern cities.

CASE SELECTION

Majority of modern cities along the world are facing with a same issue of urban regeneration. When the city develops, the scale of city is expanding; the urban function is becoming more complicated, refined and overlapped; Some cites bring more land under cultivation and some develop satellite cites. More or less, they ask more lands and to a certain extent, forcibly occupy the space for nature. Petržalka, the new city part of Bratislava, of which is Slovakia’s capital. Petržalka is blocked by country boundary lines of Austria, Slovakia and the River Danube. The urban area of Petržalka is fixed and limited. Hence, it is not feasible to expand city to meet the requirements with urban development. I choose that special site to look for a landscape solution to upgrade the city environment condition in limited space and bring its current spare area into full play.

NEW APPROACH OF PUBLIC LANDSCAPE SPACE DESIGN IN URBAN CONTEXT

At first, my goal is using the urban public space design to develop a sustainable living environment. I use Layer Approach as methodology to find the problems and shortage of current landscape space, to develop new landscape architecture. After that, linking those new spots and get a new landscape network.
I use Petržalka as an example to test how this method works. Through the recognition of layer analysis and specific problems within it, coming up with my research question: which kind of living environment can be regarded as sustainable?
I do some research and survey and at last adopt the PPS: sociability, uses & activities, access & linkages and comfort & image. Combining the condition of Petržalka, it comes increasing the interaction of Petržalka. Here is my research question: How to use landscape as infrastructure of urban space to enhance the interaction of urban public space and create high-quality living environment?
With the result of Layer Approach analysis, case study and further site reading and analysis, I utilize a new structure built process instead of the former that develop a network through many high potential urban redevelopment. Firstly, based on the potential mapping, I begin with the central part of Petržalka (canal) and divide the spots into different types: canal edges, water room, recreation spot and neighborhood yard. I choose specific point of each type and make the design as a model for other same type points. The urban regeneration will happen in the center and spread to the corner of city with its transport, and finally lead to a free overlapped of nature and urbanism.

WHAT COULD WE LEARN FROM THE APPROACH?

The new approach is not from spots to surfaces as former, it is from surfaces to spots. By this converse, it gives a tonic for the development of whole Petržalka. Landscape architecture become the stump of the tree named Petržalka and gradually growing branches.
In wider context, for instance, when it comes to metropolitan cities, plenty spared green space maybe not exists there. However, we can divide the great city into several smaller zones and point a landscape core of that zone, which helps tidy and refine the specific spirit. From the perspective of large scale, landscape cores mean potential commercial or transport spots of city. With numbers of them, it helps to moderate contemporary urban disease, such as excessive dense area. Moreover, the connection of landscape cores can be developed into new transport lines, making a higher efficient urban infrastructure system.
The new approach provides an integrated design framework of organizing urban public space and also considers the bottom-up initiatives. It provides an overall spatial planning structure and also gives the flexibility to develop and operate.

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