# Why not Strangers?

## SPACES OF INTERRUPTED URBAN CIRCULATIONS AND NARRATIVES

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*2020 SPRING MASTER THESIS*

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*Urban Challenges Direction*
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/Why not strangers?


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Yan Zhang, 2020 Spring

## About the author

**Basic Information**

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## Abstract

As inherently social animals, human are made happier and healthier when connected to others (Stark, 2016). We are used to be connected tightly with our acquaintances, but usually ignore that, strangers, as a product of urbanization, is also an important component of our social relationship in modern society. What we can see today is that so many people are afraid of or don't bother to have interactions with strangers. People waiting at the bus stations stare at their mobile phone screens without even making eye contact with each other. Two persons meeting on the same sidewalk don't smile to each other. Even people who live in the same neighbourhood avoid having any interaction when they see each other in the garden. People are so used to stay in their own "safety bubble" and be self-isolated.

This thesis aims to enhance the experience of urban life within the context of public spaces, by exploring and promoting the interactions between strangers with the respect of social distance in modern society. For most people living in cities, they have their expected daily narratives. Public spaces for them have become more and more like a space where they will only pass by while commuting between home and office and urban life is missing. According to Goffman(1956) and his dramaturgical theory, people usually have different performances in front of different groups of acquaintances, while interactions with strangers can be a relaxed and unexpected experience in your daily life. In this thesis, how people behave and interact in public spaces will be discussed. After some research about sociology, psychology and human behavior, several relevant agents and design elements will be selected as focus of the design. Prototypes will be built as proposed physical environment and discussion about colour, materiality, and program will come after that.

The result will be a sequence of public spaces where some architectural elements will be designed as interruptions or attractions. People can feel easy to have some unexpected interactions with strangers and thus, feel better connected to others.

Keywords : interactions of the unacquainted, urban life, public spaces, elemental architecture

# Content

# Chapter 1

## Introduction

# 1.1 Purpose and Background

Humans are inherently social animals, who are made happier and healthier when connected to others (Stark, 2016). In history, humans were used to be connected tightly with their acquaintances, families, friends, colleagues, etc. We spent our everyday with this small circle of people and relied wholly on the relationship with them or from them. However, the modern society changes this situation completely. While the new technology and interventions brought a lot of convenience to us, it drove people far away from each other to some extent. With fast transport and convenient online chatting, you don't have to stay close to your acquaintances anymore. We were exposed to strangers more and more. We built big cities and began to have urban life. Urban life has experienced prosperity. We still cannot forget the bustling bazaars and baths of the eighteenth century, and how rich and natural the interactions between people were back to that time.

However, when it came to the end of the end of the nineteenth century, because of the development of technology and urban sprawl, the western society has experienced the transformation to the society of strangers. Ever since then, reliance on the relationship between localization and personalization has gradually been replaced by self-disciplined ethics and contractual spirit. Strangers promoted extra-local trade, provided objective assessments of the societies they passed or moved into, and facilitated the formation of more abstract social relationships (Vernon, 2014). To some extent It marked the progress of the society, but it also presaged the decline of urban life. Relationship between strangers, as a product of urbanization, should have synchronous development with the city. But that is the opposite of what we can see today. What we can see is that people waiting at the bus platform stare at their mobile phone screens without even making eye contact with each other. People sitting in the urban plaza are in groups of several with their friends, but different groups sit far away from each other. Even people who live in the same community avoid having any interaction when they see each other in the garden. People are so used to stay in their own "safety bubble" and be self-isolated. As a human in modern society, stranger is an important component of social relationship for everyone of us. It is a pity that we are afraid of or don't bother to have interactions with strangers nowadays. The situation will differ with cultures, traditions or personalities. But according to lots of scientific research and social studies, having simple interactions with strangers are so good for most people, like making people feel better connected and less lonely, interrupting the expected narratives of daily life, shifting perspective, etc (Stark, 2016).

So how was urban life gradually faded away in our lives? How did the connections between people and strangers become weak? As new technologies continue to attract us, modern design of urban spaces also had a force to push people further and further. The loss of human scales leads to improperly-scaled spaces; urban sprawl, unplanned development and construction have led to redundant spaces in-between buildings; lack of comprehensive consideration of factors such as materials, environment, and landscape has also led to some non-attractive public spaces. All these have, to a certain extent, shaped the social personality of our modern people to isolate ourselves against strangers. It cut off the simplest and natural way for us to seek support from the whole society. I hope to be able to use spatial design to help changing this phenomenon and promote connections and interactions between strangers. But it is also important to point out that I am not encouraging as much interactions between strangers as possible. On the contrary, I hope these interactions will happen without disturbing the reasonable social distance between strangers.



*Cities are machines for interaction among strangers. ... Strangers and cities are inherently intertwined.*

*---- Kio Stark*

Resource: https://www.mustardseed.cn/TravelBlogs/261

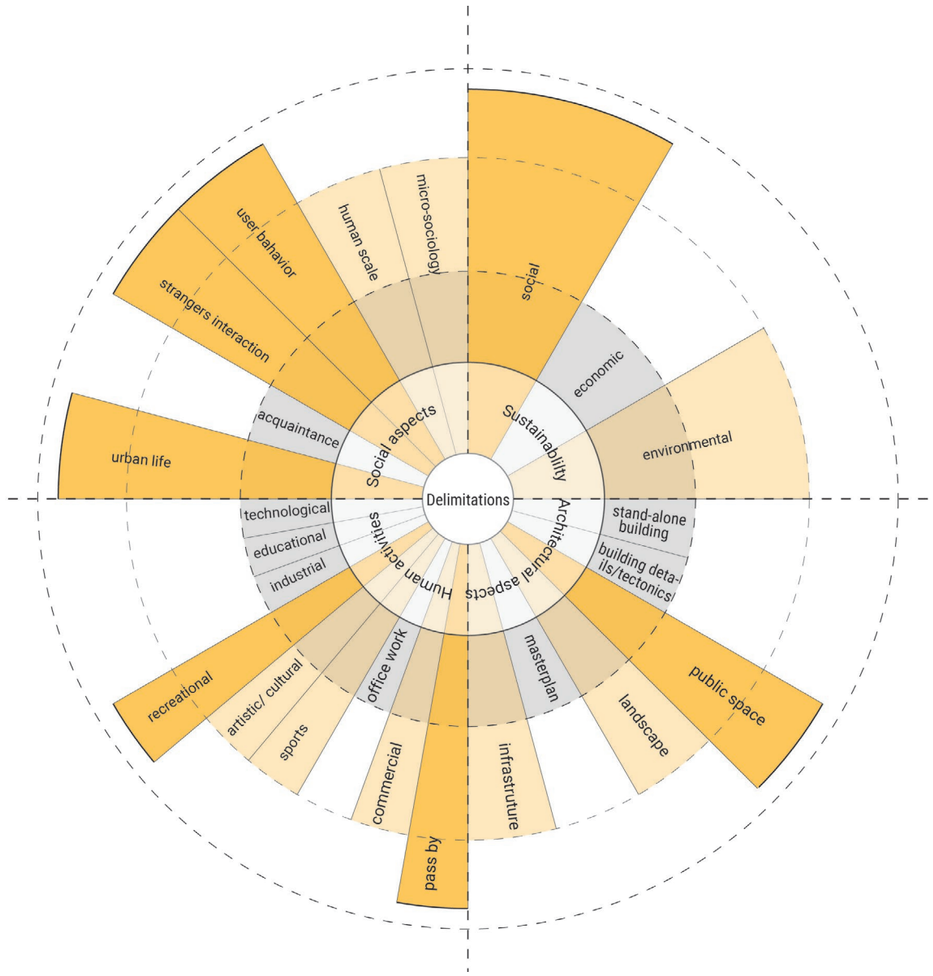

Resource: https://piebbs.pconline.com.cn/topic_12487791-41595.html

## 1.2 Thesis question:

How can the design of public urban space promote the interactions among strangers with respect to social distance, by interrupting expected narratives in daily life?



## 1.3 Delimitation diagram




This thesis is an exploration of a new possibility to achieve social inclusion and social sustainability. The focus of this thesis is the interaction among the unacquainted and the activation of urban life in the context of urban public spaces. The research will start from micro-sociology, environmental psychology and human behaviour at public space. In a word, it will focus on the users' perspective and human scale will be taken care of.

The thesis is about public spaces and sequences but not a detailed design of a stand-alone building or a masterplan. Apart from the people stay at the spaces, passers-by is also an important group of people that I will focus my research on.

## 1.4 Manifesto

# MANIFESTO

### Better Connection

I believe healthy cities are the ones that can provide vibrate **urban life** to everyone who lives in there. All the residents can be connected as a whole, and each person can feel, can reach out and rely on everyone else easily. People should feel welcomed in public spaces, where they can see and feel easy to talk to different people, where they can enjoy the urban life.

Yet the urban spaces where you can enjoy this kind of urban life are quite limited. Part of the reason can be the lack of welcoming public spaces and the unbalanced **social relationship** of people. Humans are inherently social animals. That is why good social relationships with others are quite crucial for ones' happiness and well-being. However, for most societies nowadays, among all the social relationships one has, the relationship with strangers is the one that is most commonly ignored by us but becoming more and more important. It seems like we are always trying to avoid interactions with people, conversations, smiles, even eye contacts. We are so self-isolated, more than we need to keep the appropriate social distance. But according to lots of scientific research and social studies, having simple **interactions** with strangers are so good for us, like making people feel better connected and less lonely, **interrupting the expected narratives of daily life**, shifting perspective, etc. Then, if we want to feel some connection to the world or have a small casual talk with someone else, why not choosing strangers?

And the design of public spaces should have some intention of encouraging the stranger interaction within social distance and provide a stage for the unexpected connections. There is always this image in my mind that people can all feel welcomed to enjoy a rich urban life. The urban space is like a large living room for everyone. People feel easy to smile or initiate a small talk to each other. I believe we will be better connected then.

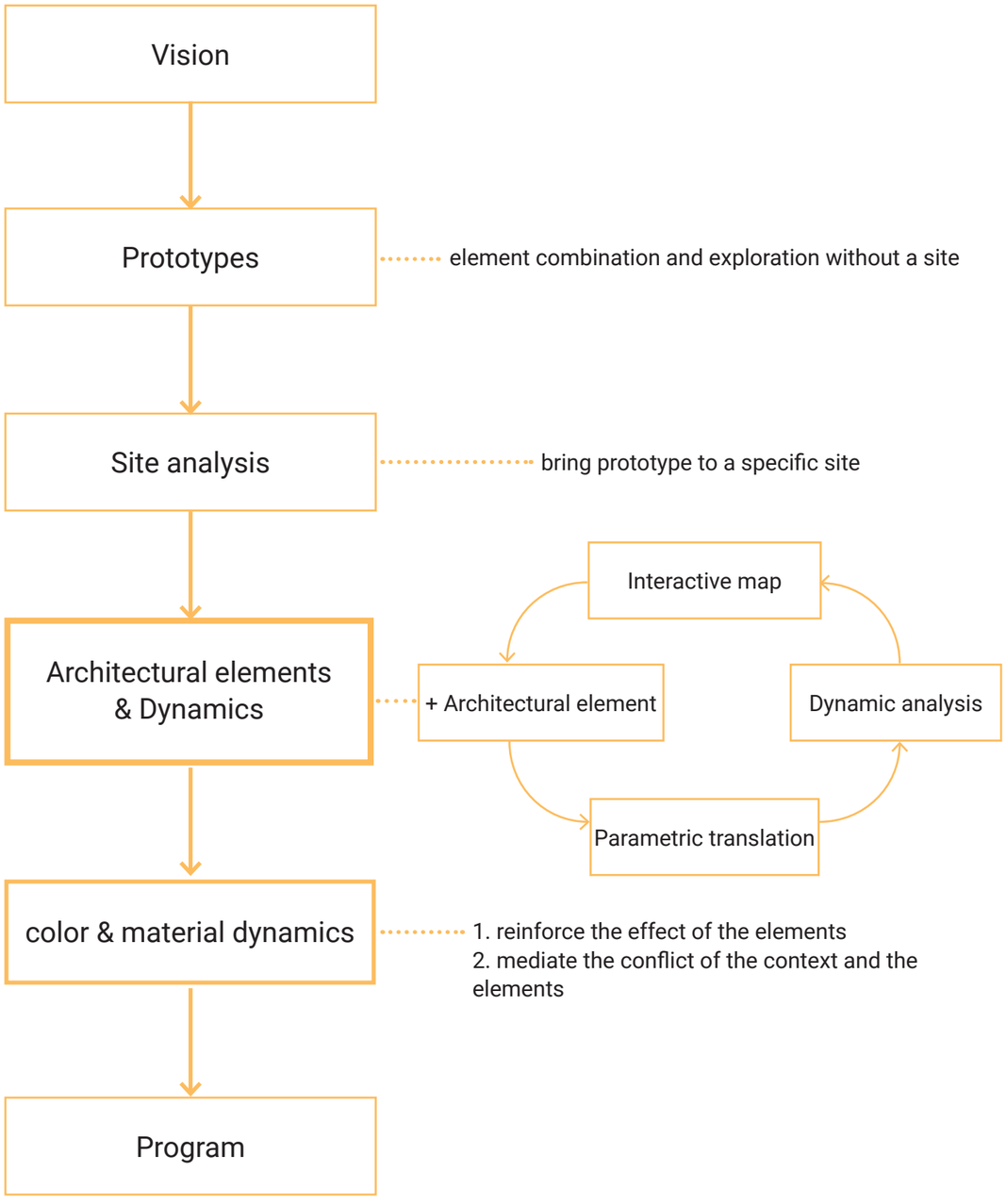
### Integrating Blue and Green Elements

Nature is an attractive element for public spaces. I believe the connection to the green and blue elements can give people better mood and encourage interactions. That's why the exposure to the sun and the connection to the water will be taken into consideration. Blue biophilic design can be an interesting way of design.

### Users' Experience and Perspective

I believe the good design is the one that can be easily understood by users, and takes users' experience into the first priority of design. How strangers "read" each other, how they initiate or avoid interactions and how they interact will be discussed. From users' point of view, I hope I can create a space which is both welcoming and attractive.

## 1.5 Methodology




* Glossary:
**Architectural Element**-Component of architecture, impactful things that a designer can control
**Parameter**-Variables of the element. to control or adjust the consequences of intervention



# Chapter 2

Design Elements and Prototypical research

# 2.1 Theory of Strangers interaction

Human Behaviour

1. Different interaction types & requirements

## Strangers Interactions

| *eye contact smile* | *share space* | *functional conversation* | *spontaneous conversation* | *activity* |
|---|---|---|---|---|
| mutual visibility (at a certain range of distance) | stay at the same area | will happen anyway | encounter | encounter events |
| no talk | no talk | | talk | talk+ other activity |

* mutually open

* Strangers only interact when they sense the mutual openness in between each other.
--- Goffman, E. (2007). The presentation of self in everyday life. [S.l.]: Academic Internet Publishers Incorporated.

Unlike the interactions between acquaintances, strangers' interactions usually happen spontaneously and in low level and the interaction types are limited. The interactions of the unacquainted can be divided into these categories, as shown in the above diagram. The first two types of interactions are conducted through eye and facial expression or body language. Conversation is not necessary for them. When it comes to conversations between strangers, I divided them into two categories according to their different purpose. Functional conversation, like asking for direction or seeking for other help, will happen anyway. In this case, it is not part of the discussion for this thesis work. And the highest-level interaction between strangers is participating in some events or activities, like outdoor exercises or street performances, etc. This kind of interaction has a requirement for the space and event.



2. Reasons for interacting with strangers

*"Unacquainted persons require a* **reason** *to enter into a face engagement, a* **willingness** *to open themselves up."* *-- Erving Goffman*

**"mutual openness"**

[ Goffman, E., 2014. Behavior In Public Places. 1st ed. [Place of publication not identified]: Free Press.]

*personal defensible space*

**interactive radius**

( property of place, environmental psychology,
how open people are willing to be at a specific context )

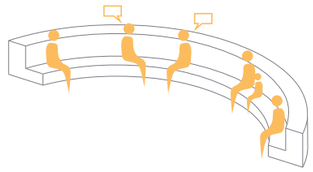
## Meeting space

place property

[ Goffman, E., 2014. Behavior In Public Places. 1st ed. [Place of publication not identified]: Free Press.]

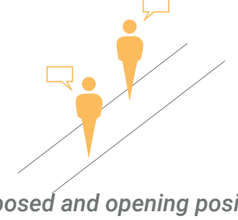
*Active node- space for event*

* open spaces:



*Static node- space to stay*

* When people stay too close to each other, it will be strange to not say something.



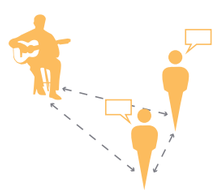
*In exposed and opening position*

eg. passing a narrow road

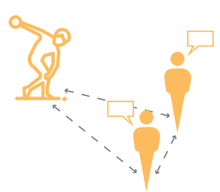
## Triangulation

external stimulus

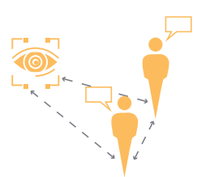
[ Whyte, W. H. (2018). The social life of small urban spaces. New York: Project for Public Spaces.]



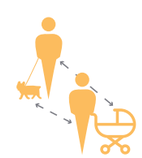
*street art*



*physical object*



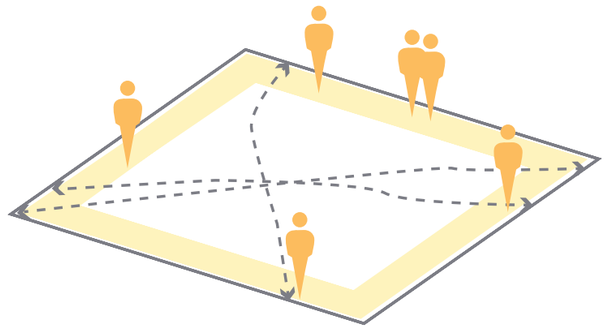
*sighting*



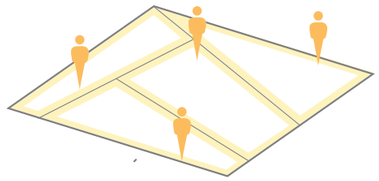
*people with kids/ pets*

# 2.2 Theory of Urban Space

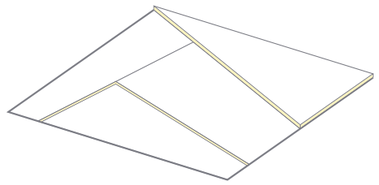
Environmental Psychology



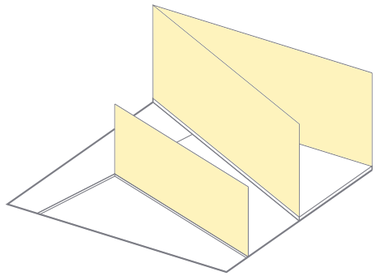
*Edge - sensory boundary*



*Zone*



*Better defined area: + height*



*Better defined area: + enclosure*

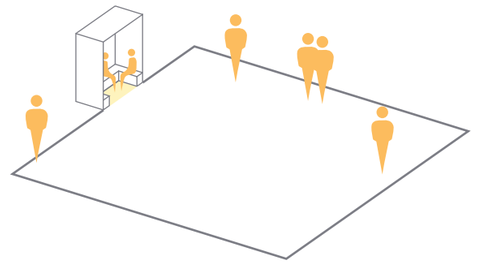
## Where people stay?

### well-defined VS ambiguity

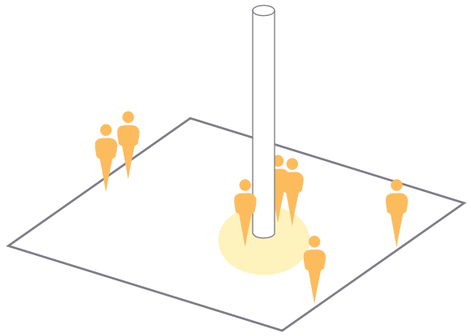
According to William H. Whyte(2018), people have a preference of well-defined space, and if on an empty space without definition, people will stay and walk on the edge. Height difference and adding walls will increase the level of regional division and enclosure.

Also, people are drawn to objects and sittable spaces.

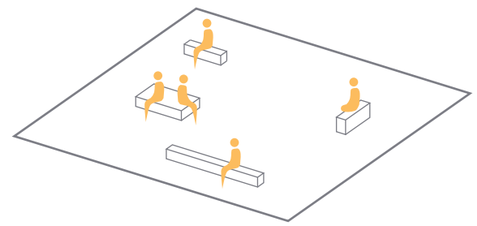




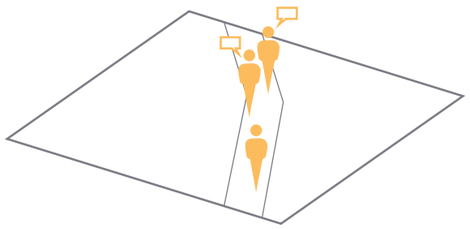
*Niche*



*Object*

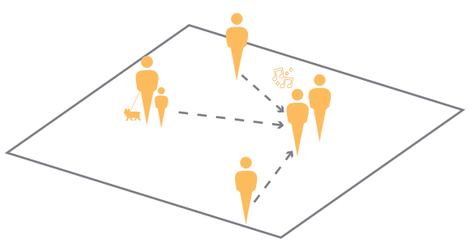


*Sittable Space*



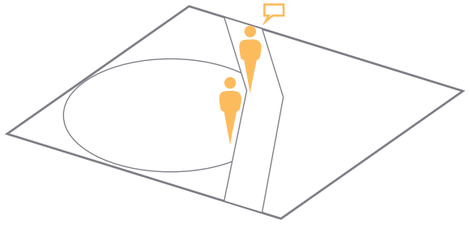
*100% location*

Interactions, like conversation, usually happen in the middle of main stream.



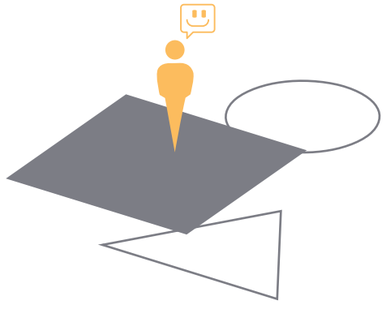
*Self-congestion*

People are curious about other people and will go to there most people go.



*Junction of traffic line and open area*

Spontaneous interaction usually happen at the junction of traffic line and an open area. People don't like to stay far away their original movement.



*Environmental uncertainty*

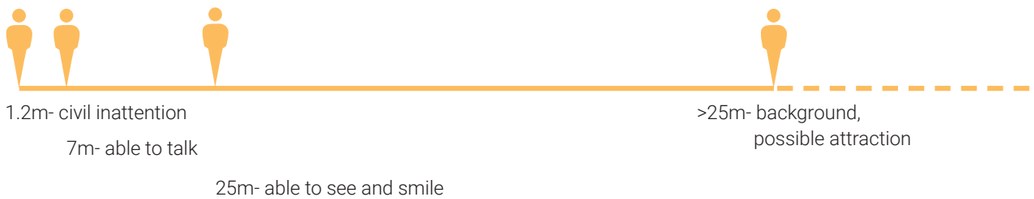
Environmental uncertainty will raise peoples' arousal level, which will give people better performance in activities, including interaction with people.

## Where social interactions happen?

[ Whyte, W. H. (2018). The social life of small urban spaces. New York: Project for Public Spaces.]



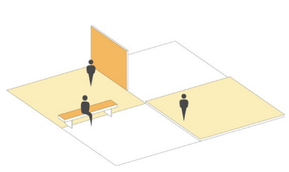
## Human scale



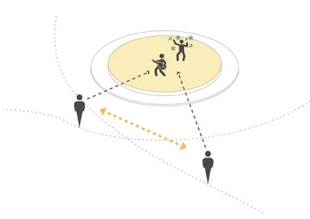

According to Jan Gehl(2010), people can recognize the silhouette of an object or movement at a distance about 100 meters and we can recognize the person and read the body language at a distance between 50 to 70 meters. At a distance of 22-25 meters, we can read the facial expressions and have simple information exchange, but we cannot have any real conversation or use the full sensory until the distance reduces below 7 meters.

But when the distance between two strangers is too short, the two of them will look away to avoid embarrassment. This phenomenon was called civil inattention by Erving Goffman.

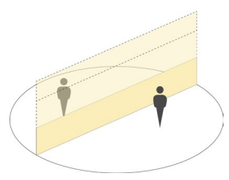
## Conclusions



Well-defined space & Edge zone



External stimuli



Human scale & psychological feeling

There are multiple factors that can affect the willingness of interacting with strangers, for instance, peoples' different cultural background and personalities. In this thesis, I will only focus on the spatial reasons and try to create this kind of space where people can feel easier to interact with strangers.

These conclusions can be drawn from all the previous theories:

1. Well-defined space can attract more people. And if this is a space for social meeting or events is happening on site, it will be even more popular.

2. Edge zone can be created to guide peoples' movement or afford a space to stay. A niche by the edge can increase the chances of people's stay.(Mattsson, 2019)

3. Introducing or designing some external stimuli can promote strangers interaction. The stimuli can be some events, some objects, like statue, fountain, or good view of these objects and events.

4. Human scale should be taken care of. Space designed in uncomfortable scale can be a negative effect for strangers interaction.

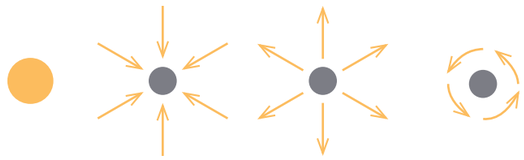
# 2.3 Architectural elements

## Architecture and dynamics

[ Ullmann, F., 2011. *Basics*. 3rd ed. Vienna: SpringerWienNewYork.]

### point-element

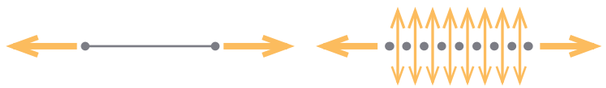
- directionless
- timeless
- marks a position in space
- static, centered and centralizing
- stillness



examples of point element

### linear element

- strongly directional
- the course of time
- separates the spatial continuum
- dynamic, directional, and directing
- movement and tension



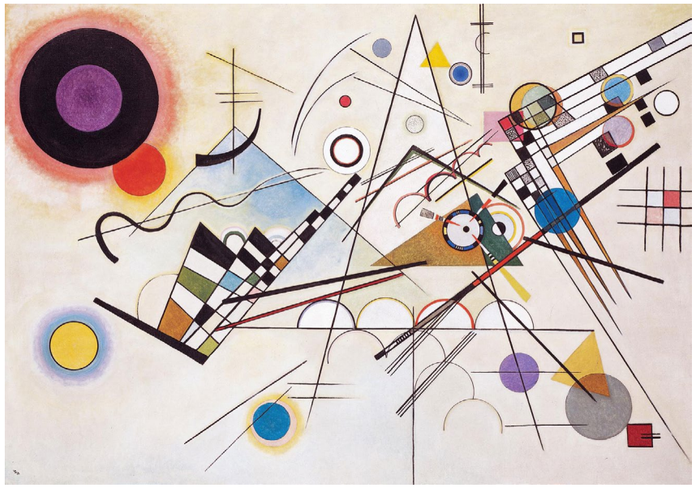
examples of linear element

### planar element

- two dimensional
- fundamental for all events and activities
- expansion, extension, and relaxation
- filling, spreading or outlining

example of planar element





*Composition VIII, 1923, Wassily Kandinsky*

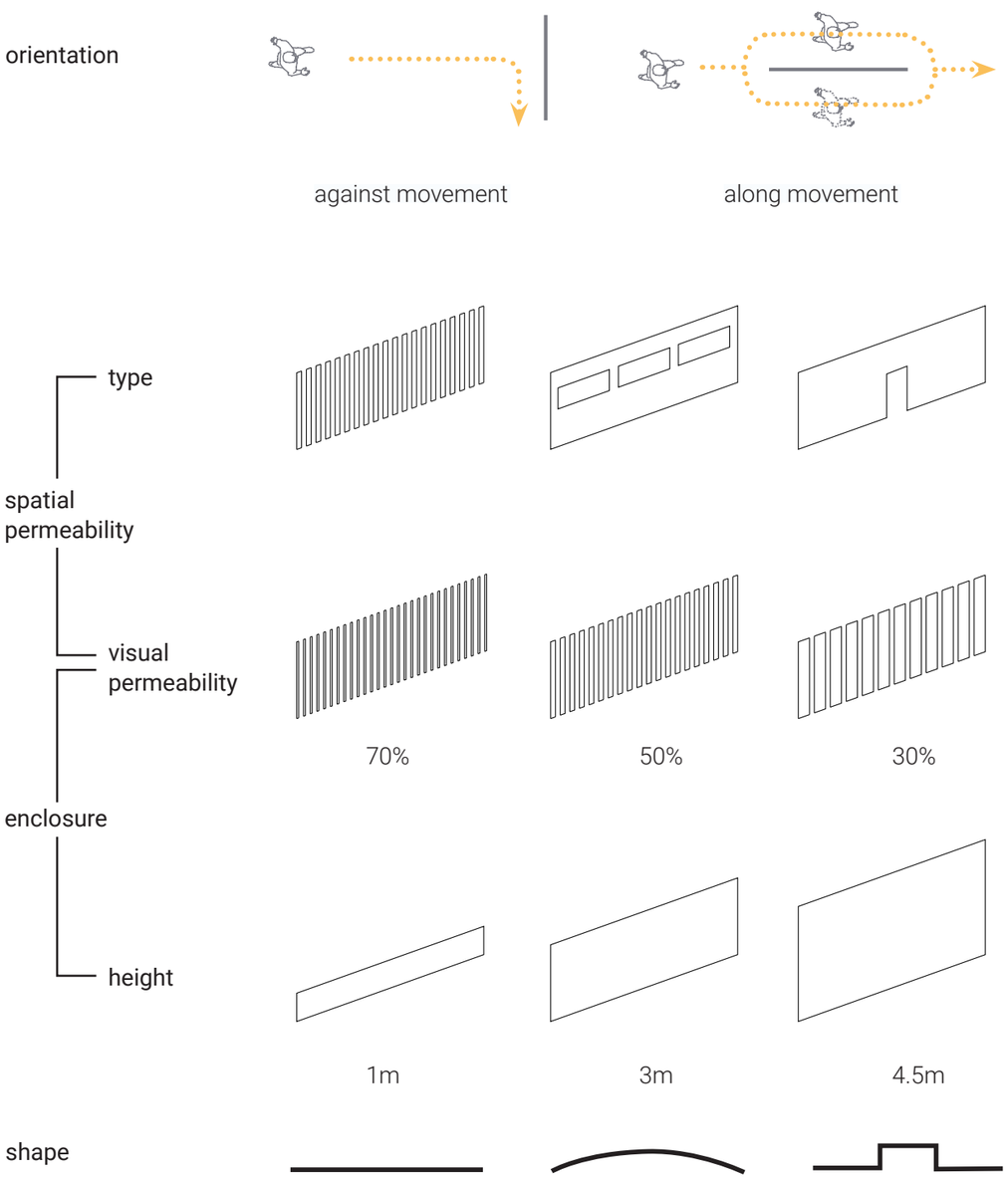
*Band, 2006, Richard Serra*

*Characters in yellow, 1937, Paul Klee*

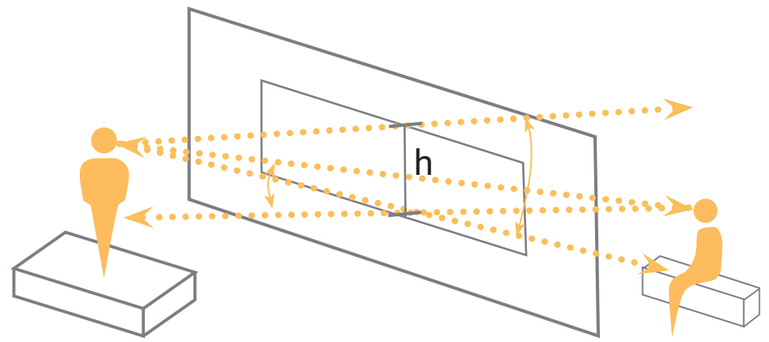
In these artworks, we can read the dynamics in between the simple elements and how this tension affect the space both two- and three-dimensionally. The color of the elements also plays an important role at some part to reinforce the tension.

# 2.4 Design elements and parameters

## 1. Vertical surface - linear element




Translation rules:




visual connection ⟶ window size

As a linear element, vertical surface is strongly directional. The function of this element is guiding pedestrian movements or temporarily separating a mainstream into two movements. The relevant parameters that I will focus in my design are listed out on the left.

The first parameter is orientation of the surfaces. For those surfaces that function as interruptions, they block the movements, give people a sign to shift the moving direction, and in this way, lead people to discover some spaces that beyond their expected narratives. And for those surfaces that goes along the movements, they separate the spatial continuum to avoid civil inattention. But through the opening on the surfaces, the tension in between two spaces can be implied, and people will be more aware of each other. The distance between two strangers is actually pulled closer.

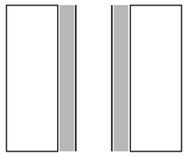
And the following parameters defined different levels of spatial permeability, both visual and locomotive, and different levels of enclosure. High surface with the least visual permeability has the highest enclosure.

At last, the shape of vertical surfaces defines the strength of movement guidance. Short and straight have the strongest tension to guide the movement. People will stay along it only when it has a niche provided. A curved surface is more attractive and people will walk along it slowly or stay at the inner side of the arc for a period of time.

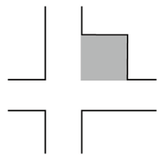
Above is the translation rule for the window size. It should enable the visual connections along the main direction. The translations of the enclosure and visual and locomotive permeability base more on the context. They will then be explained at the design chapter.

## 2. Node - planar element

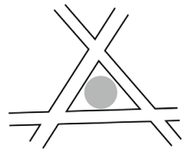
location



beside flow

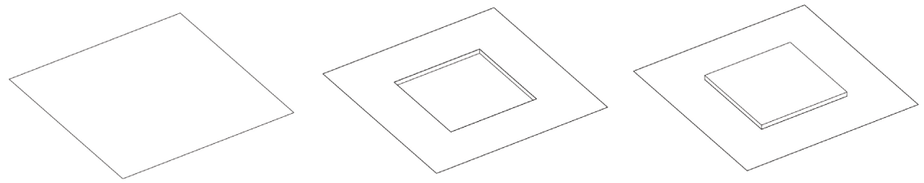


junction of several flows

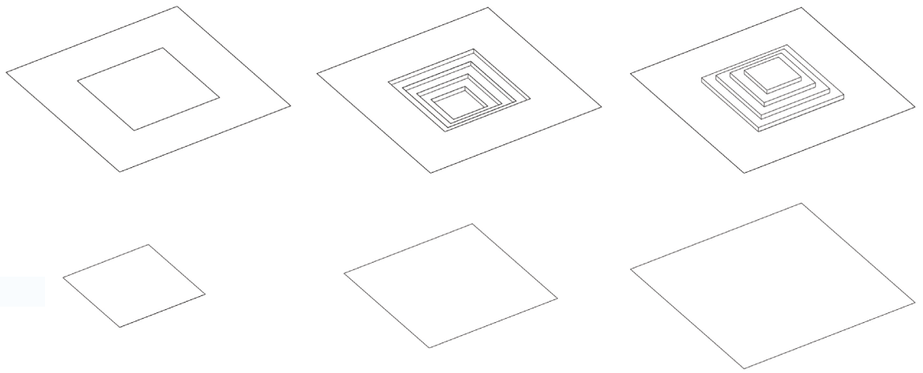


no flow area

height



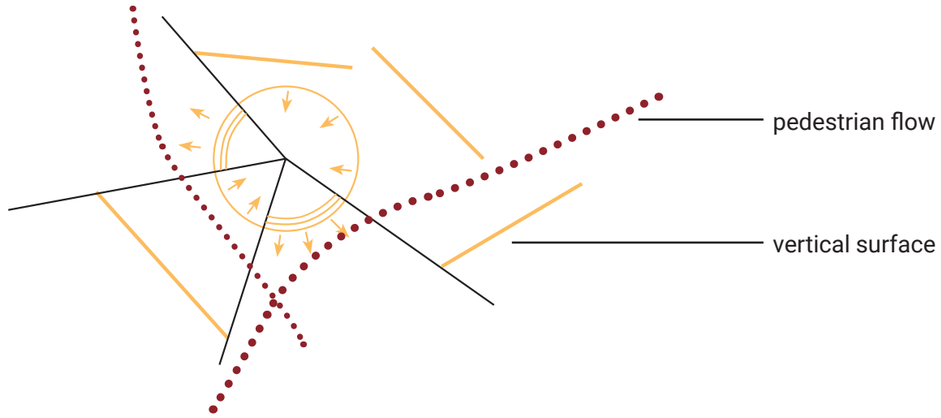
size



small middle large



Translation rules:



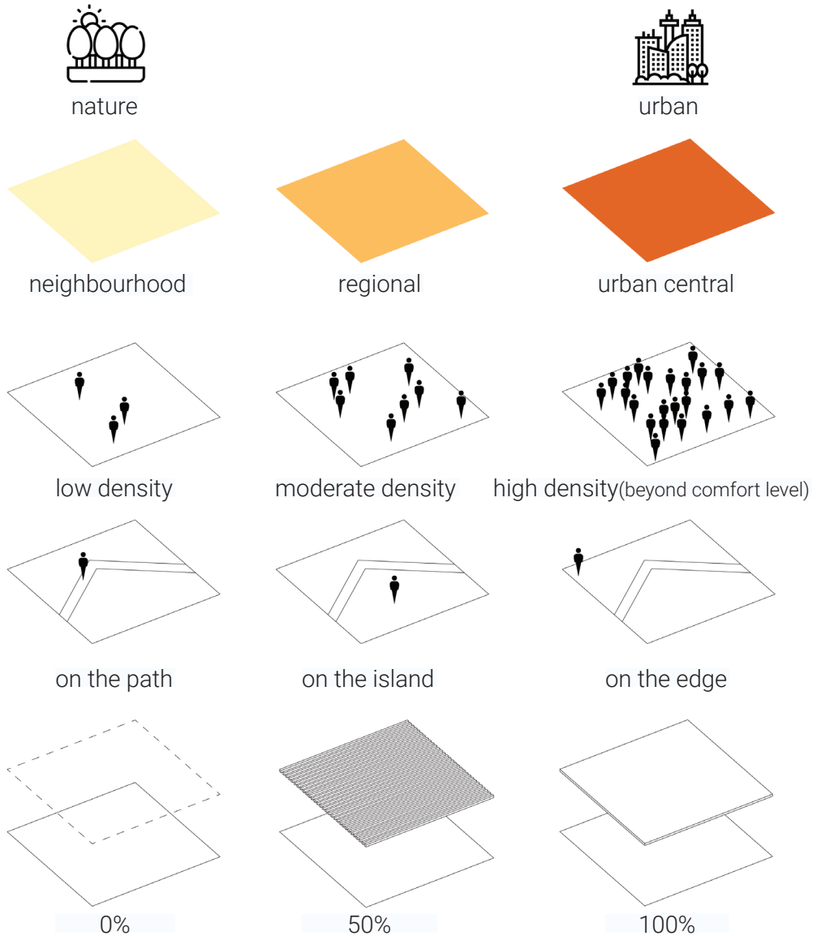

Node is a planar element that can accommodate events and activities.

The location of the nodes determines the possible functions they could have. Active nodes should be at the junction point of several flows or at adjacent to attract more people, while static nodes should stay at a distance from the mainstream.

The nodes are separated from other area, and if it is elevated above the ground, this spatial separation will be strengthened. And if it is sunken below the ground, the area will also has an enclosure. Steps, as a connection between different height levels, provide an edge zone for people to stay. That is why I use the amount of pedestrian flow to define the amount of steps. More people passing by, more edge zones should be provided to accommodate these potential stay and interactions.

Inside each node, mainly active nodes, the introverted parts and extroverted parts are defined by the sight accessibility. Where the sight is blocked by vertical surfaces, it is defined as introverted space. Other part will be extroverted and steps will be located at these edges.

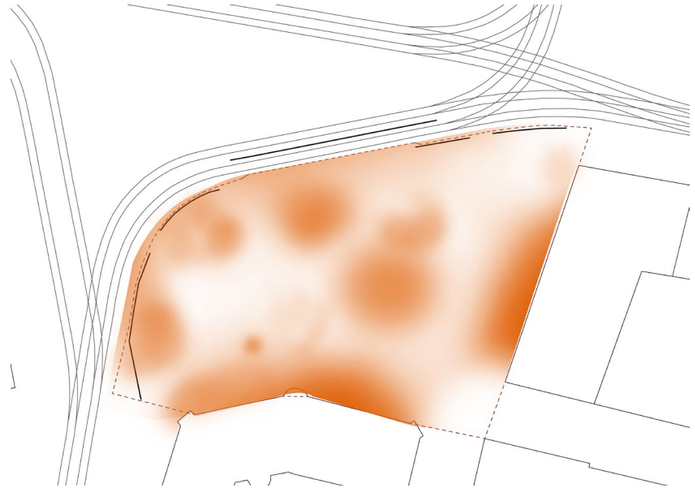
## 3. Interactive radius- property of place




Different from the previous elements, this element is used to depict how willing people are at a spot to open themselves toward others. It is a psychological reaction to the property of a space. This is a value that can be affected by so many factors and thus, different from one spot to another. I only listed out the parameters that are relevant to me research. For example, human density will affected how people feel. When the density is beyond the comfort level, people will feel stressful and tend to close themselves down to protect; but when the density is too low and people stay far away each other, people still cannot feel the reason to open themselves up. The light condition will influence people's feeling. And a place that can protect people from bad weather will have a positive effect on people's psychological feeling.

This element will only be used as an evaluation after each of my design steps.

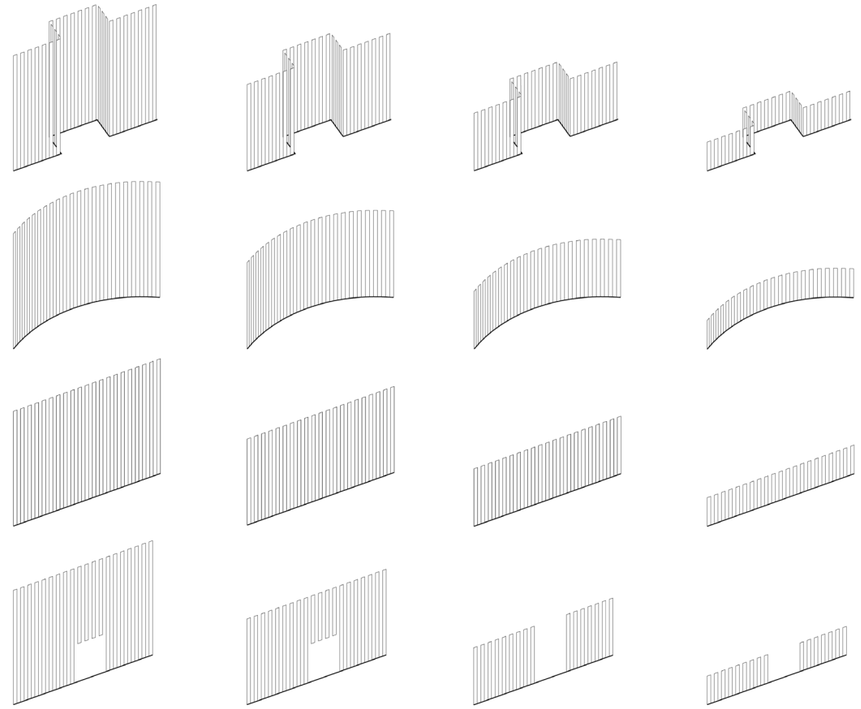




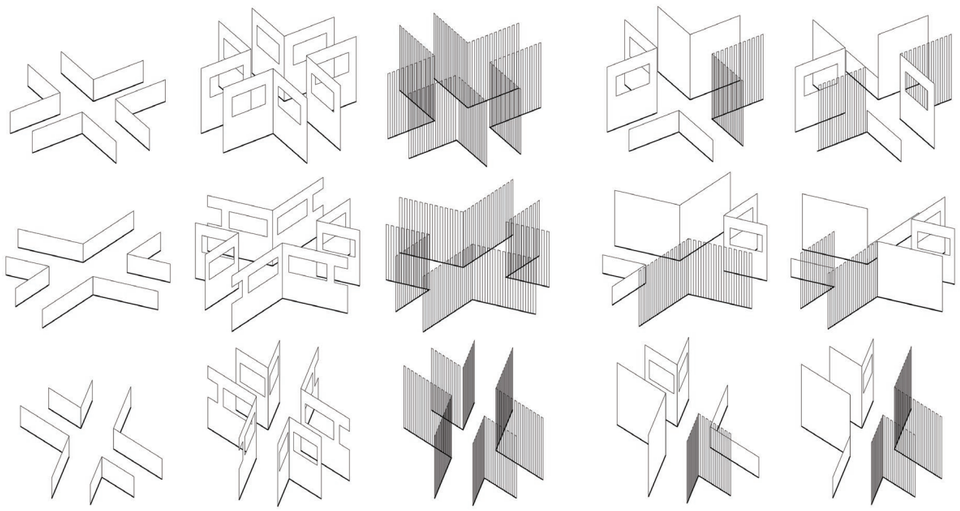
*Interactive map will be used as evaluation after each step.*

## 4. Combinations of elements

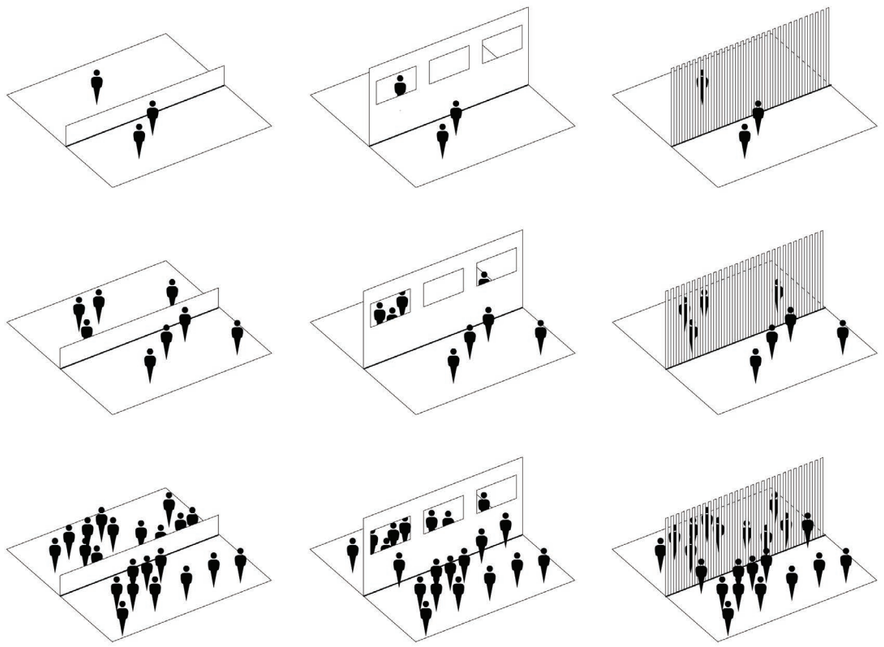
After making the decision about design elements and parameters, I then made different combinations of elements or parameters. The purpose of this step is to maximize the possibilities of this elemental intervention before bring it into a specific context, and also have a look at how the design result will probably like.



*Vertical surface- height X shape X type*



*Multiple vertical surface- type*



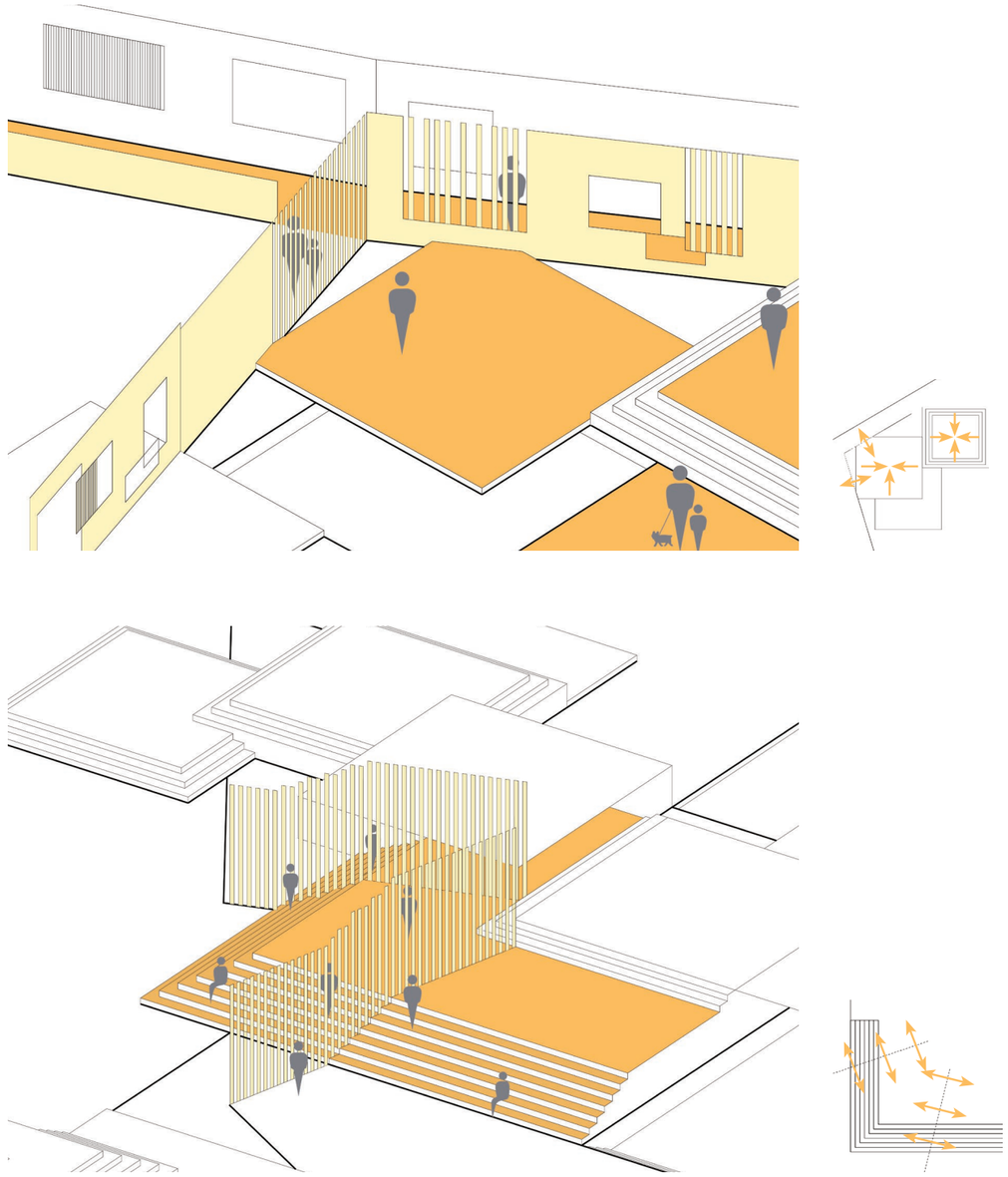
*Interactive radius-density X Vertical surface- type*

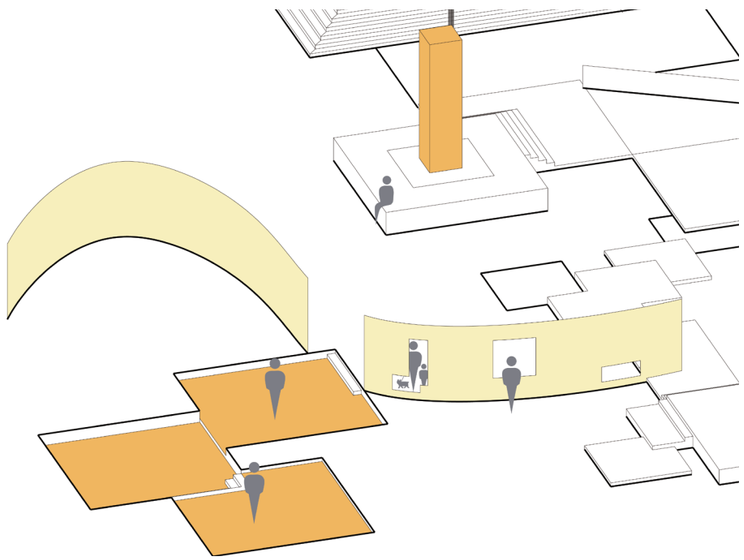


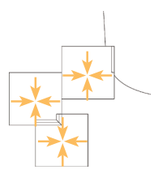
# 2.5 Prototypical research

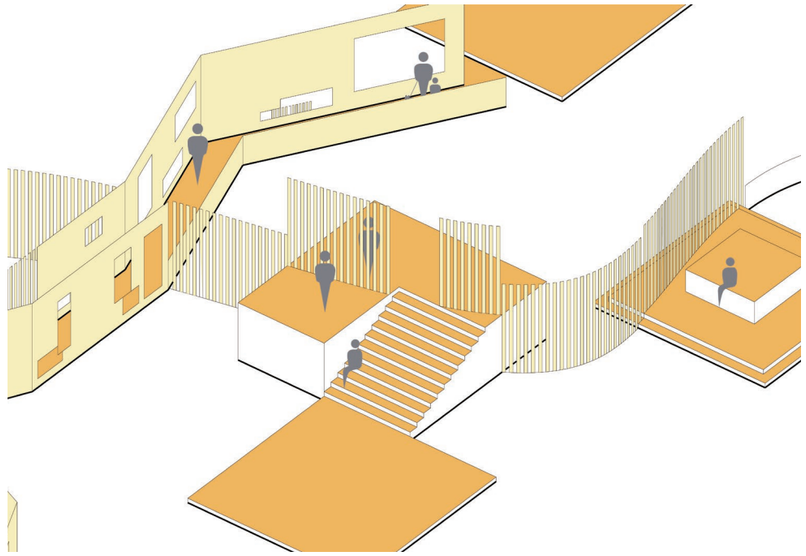
## Prototype without context

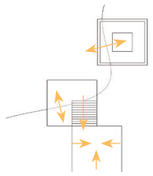
A prototype is built by combining all the elements randomly on an empty canvas. This step is a development and enrichment of last step's combinations. Without the restriction and pre-definition of the context, the dynamics of elements and the tensions in between them can be more clearly felt.











# Chapter 3

## Design Proposal

# 3.1 Context

## 1. Introduction

After getting the reflection and inspiration from the prototype, it is a good time now to also integrate the information of a specific context. Since I am working with strangers interactions, the site choice is super crucial for my research. I found Järntorget area is an extremely interesting site to test my interventions. It is a heavy traffic node of Gothenburg and, therefore, an important transit point in millions of people's daily narratives. In this area, people are exposed to a lot of strangers. But you cannot see many interactions happen among them. Usually they are not even aware of the presence of each other. That becomes a great opportunity and challenge of my research.

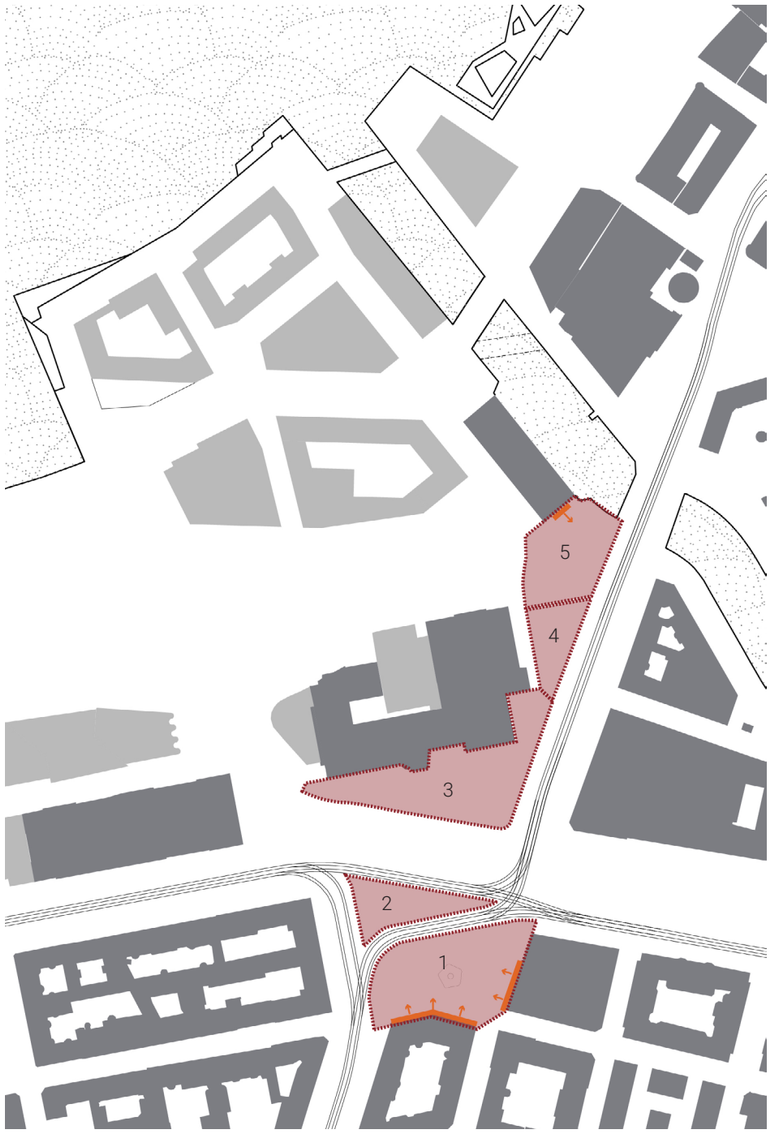



*Current pedestrian flow*
*- represented from GPS map*

*Pedestrian flow*
*- according to the new plan*

The site also has an extra quality that it is only ten minutes' walk from Göta river. From the current pedestrian flow according to real GPS data, we can see a clear path that people usually take the way east to Folkets hus and go all the way north, then turn left at Lagerhuset to the riverside. And the restaurant on the east facade of Lagerhuset stands out as a hot spot on the map. My own observation of this site can be another evidence to support this map. During sunny days, the riverside is quite popular for people to have a walk, and large proportion of people will walk from or to Järntorget.

Right now the municipality have made a new detail plan for this area and had a lot of development at the riverfront. And to achieve the vision of the river city plan, the new detail plan of this area shows this intention to strengthen this north-south path and want to lead people from Linnegatan and Järntorget to the riverside. That will bring more people and more quality to the site and the new context can be more interesting to work with.




*Boundary of site*

In this thesis, I will only work with this segment of this Järntorget-riverside path. It will consists of these different areas with different problems and different qualities as well.



# 2. Site analysis


5



3


2


1


*Environmental stress & bonus factors*

Environmental stress, like pollution, traffic, noise, can be a negative factor to people's interaction willingness. And on the other hand, environmental bonus can increase the willingness. Therefore, an important site analysis is to identify the environmental stress factors and bonus factors of each specific site.

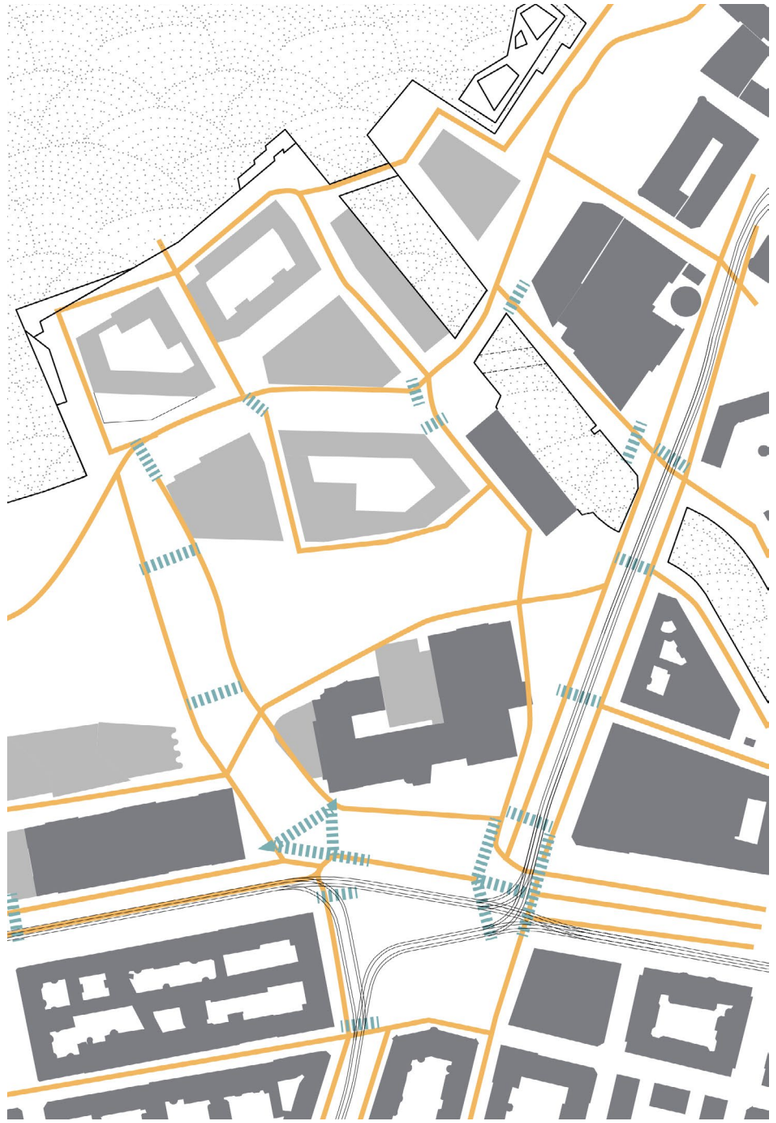
After several walks at the site during different weather and times in the day, the problems of different sites are identified from my own observation and feeling. As a heavy traffic node, three tram tracks divided the Järntorget area into three station areas, and . The site is busy with public transports and fast vehicles all day long. Therefore, traffic noise is the main cause of environmental stress  for site 1,2 and 3. And different forms and colours of the surrounding facade make people feel overwhelming and in this case, it becomes another environmental stress factor of site 1 & 3. But the external tables of the restaurants and the existing fountain can be the bonus factors. Site 4 and 5 are super empty, but it have the view of the river as a bonus factor.

Thus, different strategies are adopted to different sites.



# 3.2 Mapping

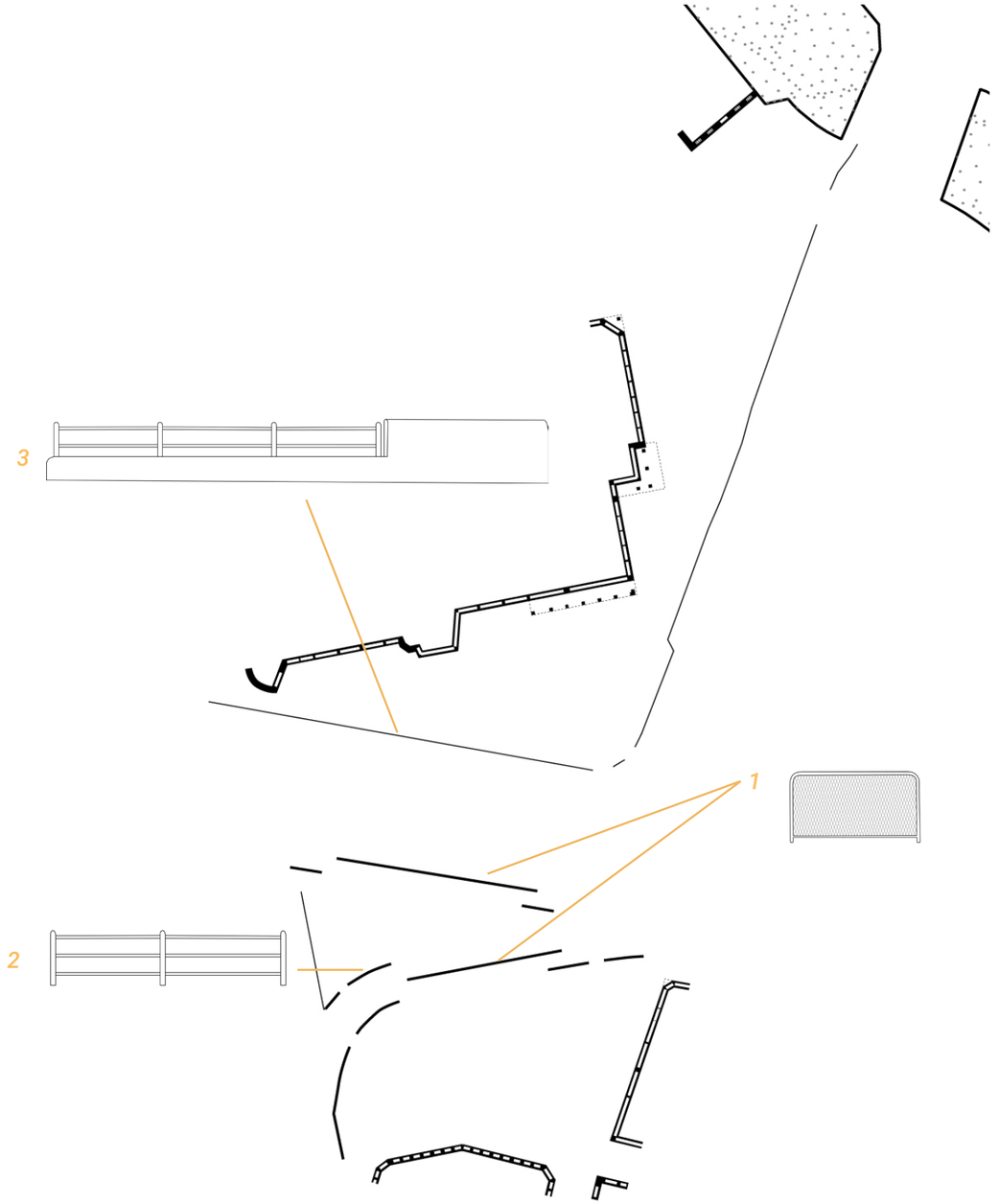
## 1. Pedestrian flow



*New plan of pedestrian walk*

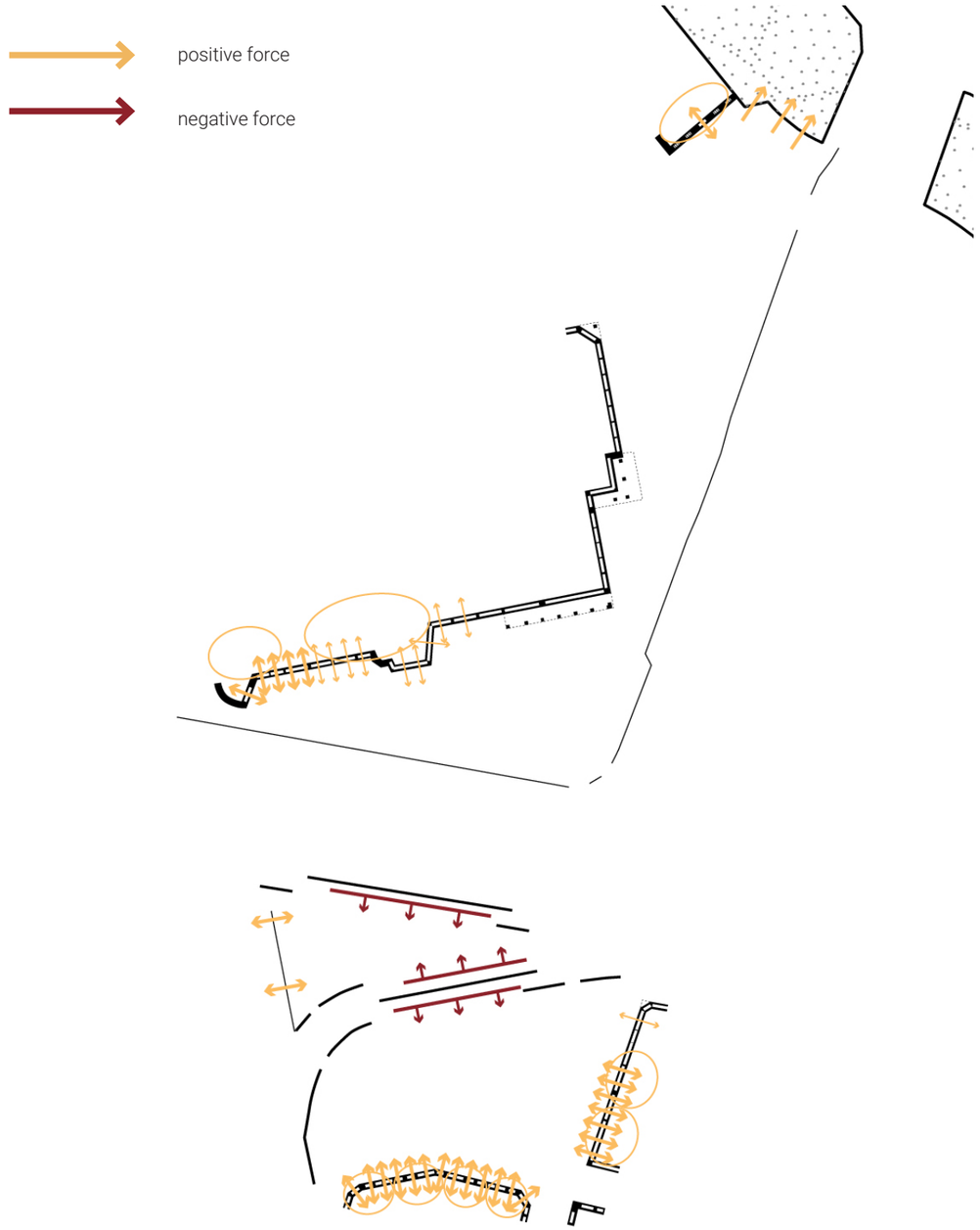
I mapped out the pedestrian walk of the new detailed plan of this area. The crossings are very important since they decide the starting points and ending points of pedestrians' movements inside each area.

# 2. Existing elements




The existing vertical surfaces are mapped out as the initial state of the site. These vertical surfaces can be the surrounding building facades, rows of columns and different kinds of fences.



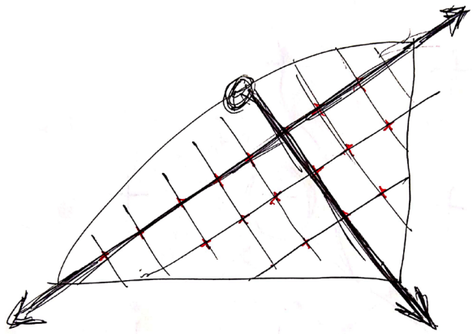



*Boundary condition*

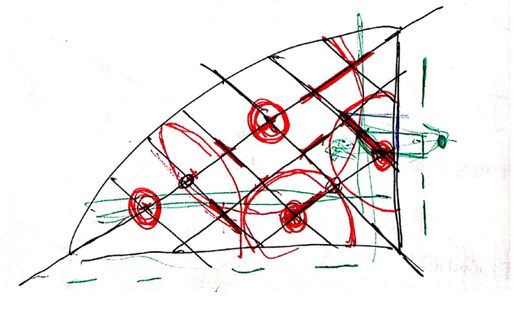
These existing elements have already had some tensions on the site. These tensions are not only for space, but also for people's feeling. For example, the transparent facade of the restaurants can have an attractive force for people passing by; on the other hand, the crowd from the tram station can have a negative effect and make people less willing to open themselves towards strangers.

# 3.3 Physical elements generation

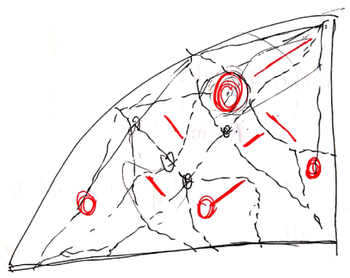
## Step 1: Layout of nodes and vertical surfaces



1) Grid



2) first generation of nodes and v-surfaces



3) flow simulation on site

static nodes at meeting points

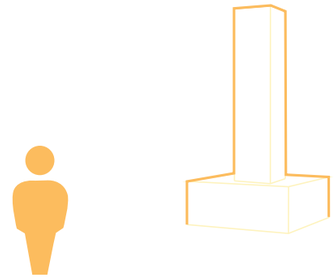
The generation of the elements follows several steps. The first step is to determine the layout of nodes and vertical surfaces.

In this step, I will first map out the main directions of pedestrian movements. The junction points of these movements will become the locations of the active nodes, which accommodate multi activities. These directions will then be used as axes to divide the site with a certain grid size. The vertical surfaces will be added to interrupt the movements or separate them. This step will be run in three scales. And after the results of the three scales be combined together, a simulation will be run in grasshopper to get the pedestrian flow which will avoid the new obstacles I added. Then the static nodes, which are places for people to stay, will be added at the junctions of these flows as the last step.



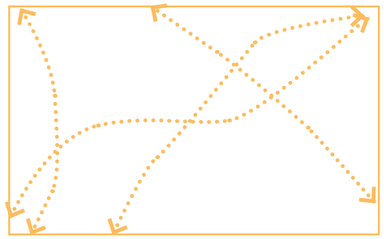
Three scales:

Urban scale- 100m-50m grid



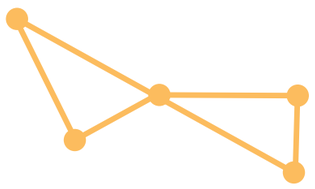
recognize the silhouette of the object; navigate oneself

Site scale- 50m-25m grid



move around inside a defined area

Node scale- 25m-12m grid



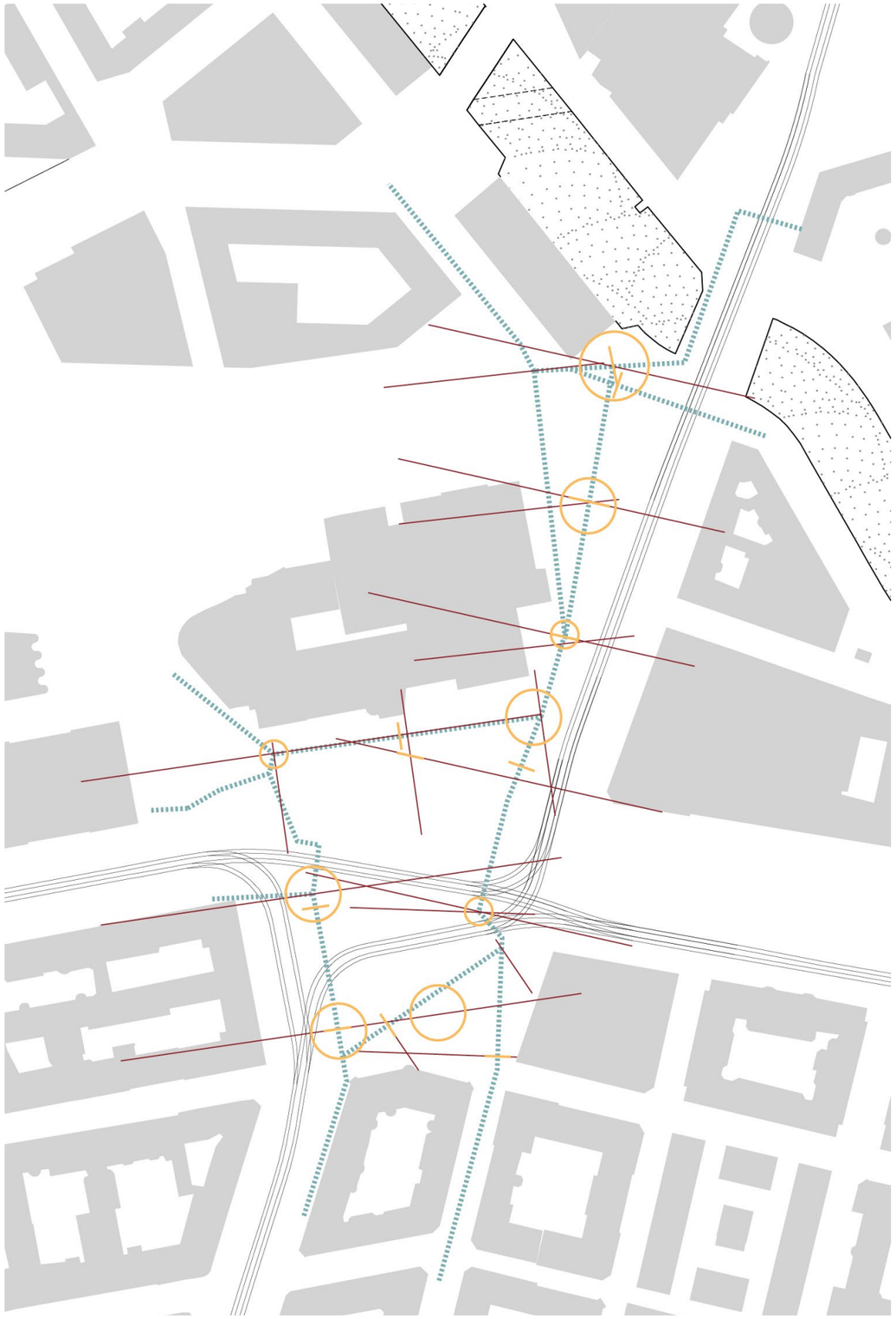
connection with adjacent nodes

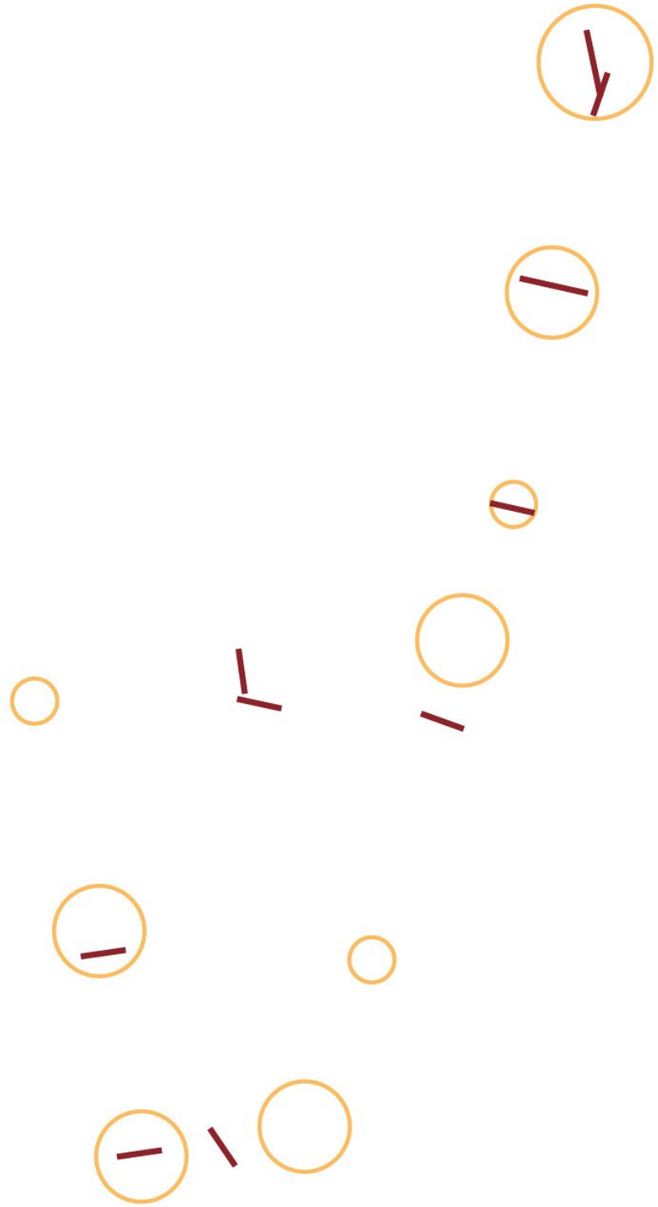
This step will be conducted in three scales, which have different focuses.

The first scale is urban scale. The focus of this scale is to help people navigating themselves around the site. At a distance about 100 meters, people can recognize the silhouette of objects or movements(Gehl, 2010). In this case, the grid size of this scale, which is for locating the interruptive vertical surfaces, is 50 meters.

Site scale is the second scale, of which the focus is the pedestrian movements inside each site. People can recognize the body language at a distance around 50 meters (Gehl, 2010). Thus, a gridsize of 25 meters is set for this scale's intervention.

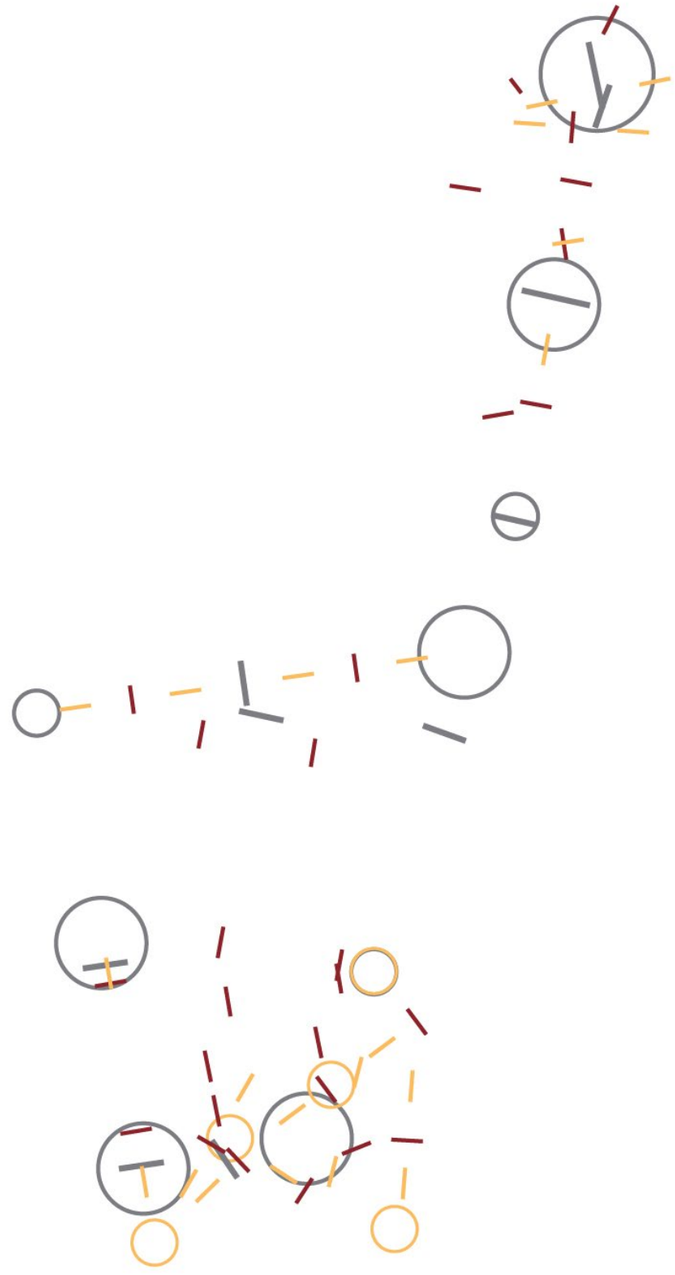
The last scale is node scale. In this scale I will focus on the connection of different nodes. If the node have good connection with adjacent nodes, there will be an interchange of people that stay at different nodes. People will then stay for a longer time at the public spaces and the activities of the adjacent nodes can also be an external stimuli for people's interaction willingness. 12 meters is the grid size for this scale since we can read people's facial expressions at a distance about 25 meters (Gehl, 2010).





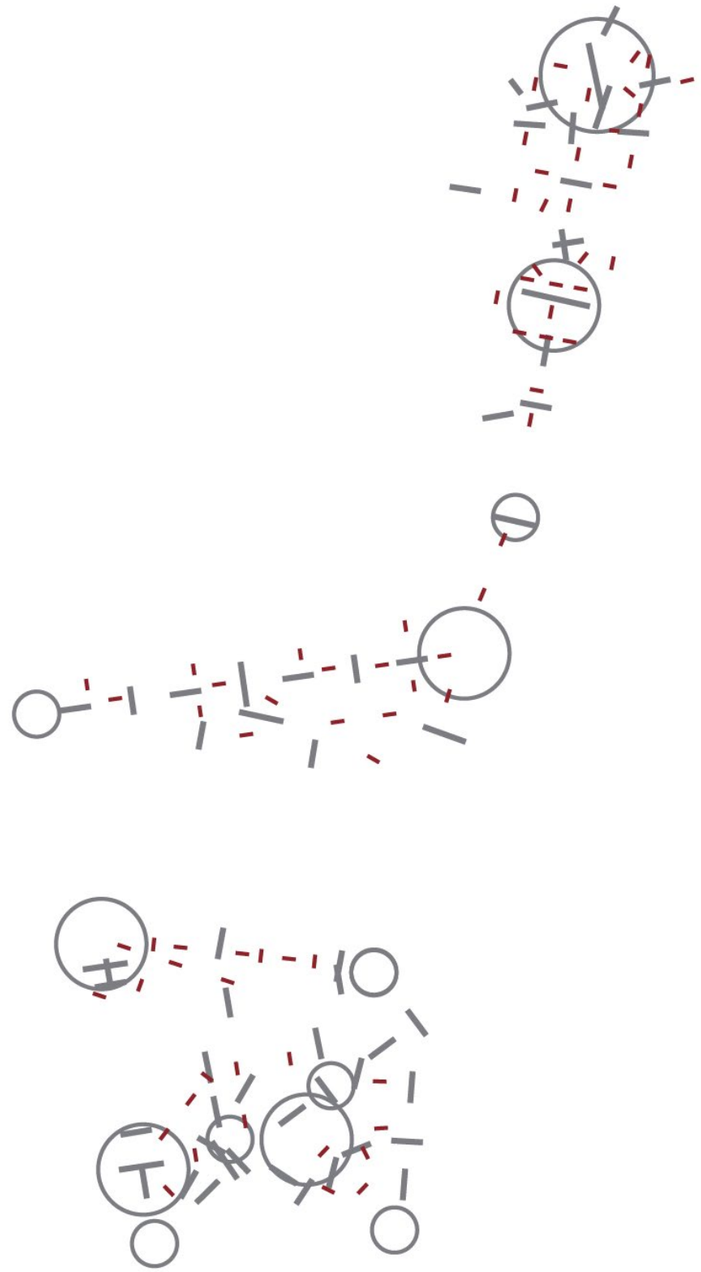
Step1-1: Urban scale

In this scale, the focus is to have several active nodes at the intersection points of urban flow, which means long distance movement that has a certain purpose. These nodes function as the navigation points for people to move around the site. Several vertical surfaces to interrupt these direct movement will be added as the first generation.



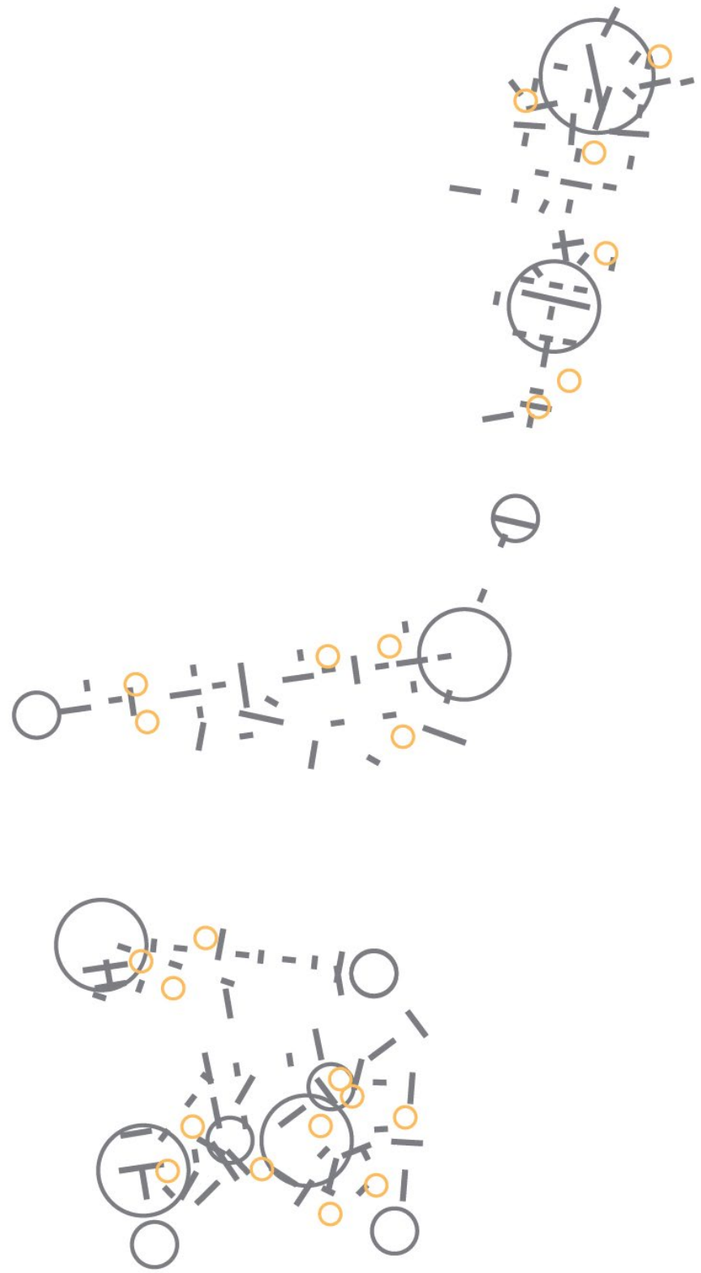
Step1-2: Site scale

In this scale, I zoom in a little bit into each single site. How people move inside each site will be the focus for this step. Active nodes will be located at intersection points of main directions of movements. Two different types of vertical surfaces will be added. They will function as interruption and separation respectively.



Step1-3: Node scale

The focus of this scale will be the connection of different nodes. The third generation of vertical surfaces will be added as separation of movements. By connecting these nodes, we actually connect the people stay at those nodes and their activities.



Step1-4: Static nodes

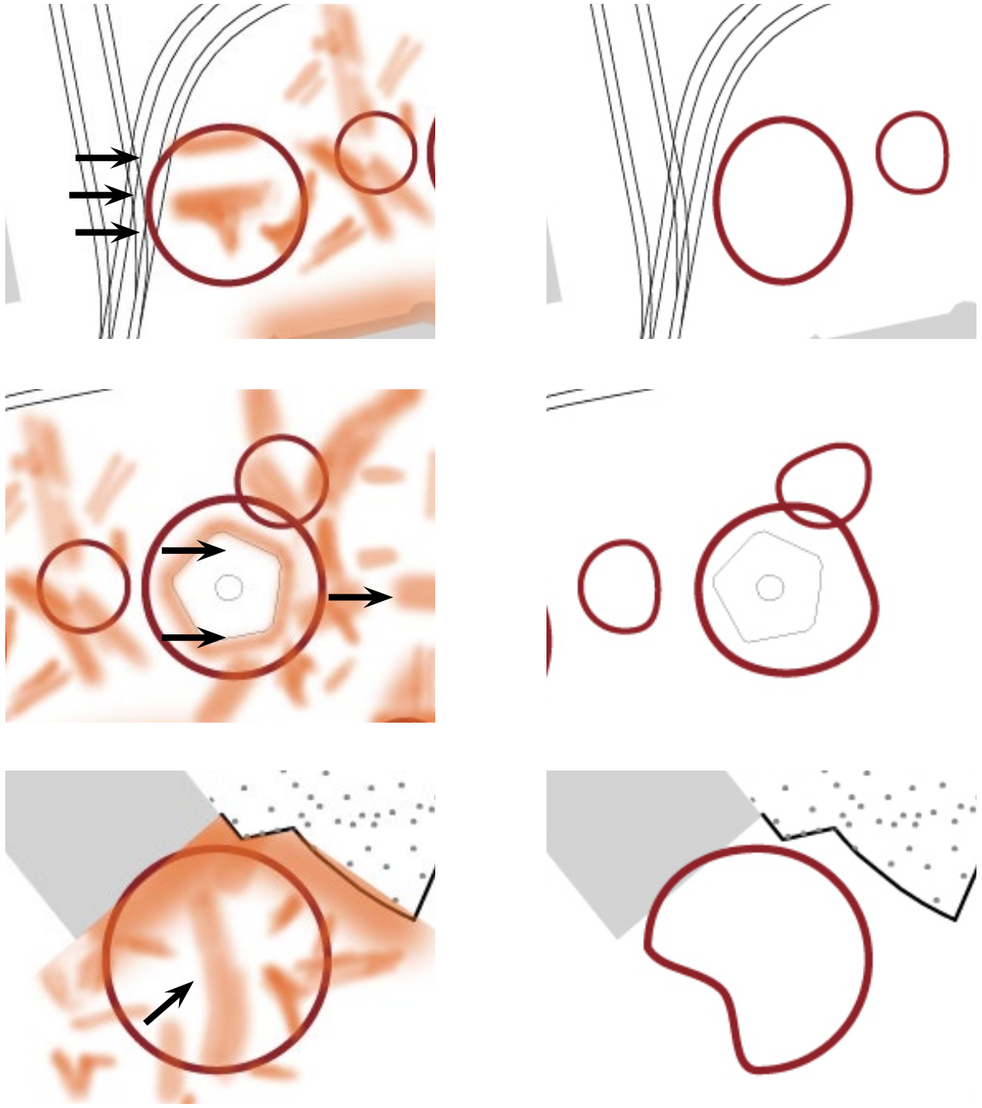
After the generating of vertical surfaces, I used grasshopper to simulate pedestrian flow on site that avoid those newly-added obstacles. And at the junction points of those flows, the last generation of nodes, static nodes, which can be statue, or just some sitting spaces, can be located.

*Vertical surfaces & nodes*



Step 2: Nodes

*Interactive map after step1*

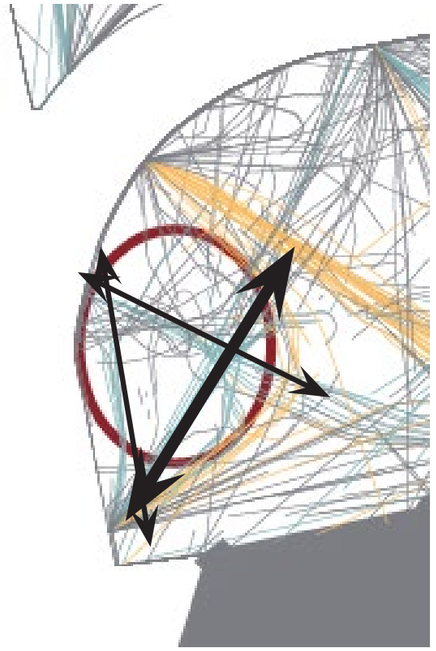


*Reshaping the nodes- Pressure & Counter pressure*

The second step of elements generation is to define the three dimensionality of nodes.

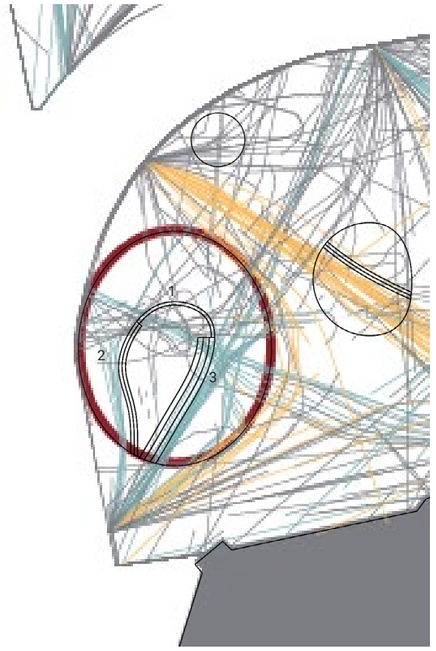
First of all, the interactive map after the first step's intervention is used to reshape the boundary of the active nodes. The point of doing this step is to include more psychologically pleasant area into active nodes. The interactive map represents the pressure outside the boundary and also the counter pressure inside the boundary. The darker the colour is in the map, the stronger the force will be. The result of this step will be like shown in the right images above.





*zoning inside active nodes*

Then the zoning of each active node will be determined by the movements through the node. Active nodes are actually multifunctional spaces, including spaces for movement, spaces for staying, spaces for events, etc. Since the spontaneous interactions usually happen at the junction of traffic lines with an open area, the edge zones will be located along the main movements.




*amount of steps*

The relative amount of the movements will then be used to determine the amount of steps.

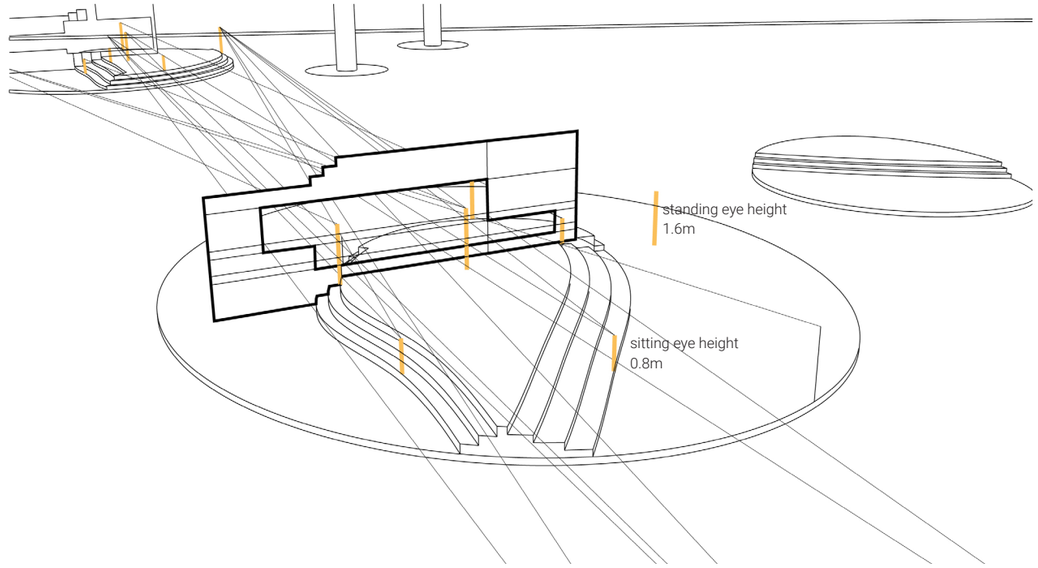
Steps as the connection of two spaces, is actually an edge zone. The steps in public spaces can provide space to sit. The more flows pass by, the more sittable edge zones should be provided to make people stay, and then the more steps should be located.

*Three generations of nodes on site and pedestrian movements from node to node*

## Step 3: Vertical surfaces

window size for interruptive surfaces

*visual connections in plan*



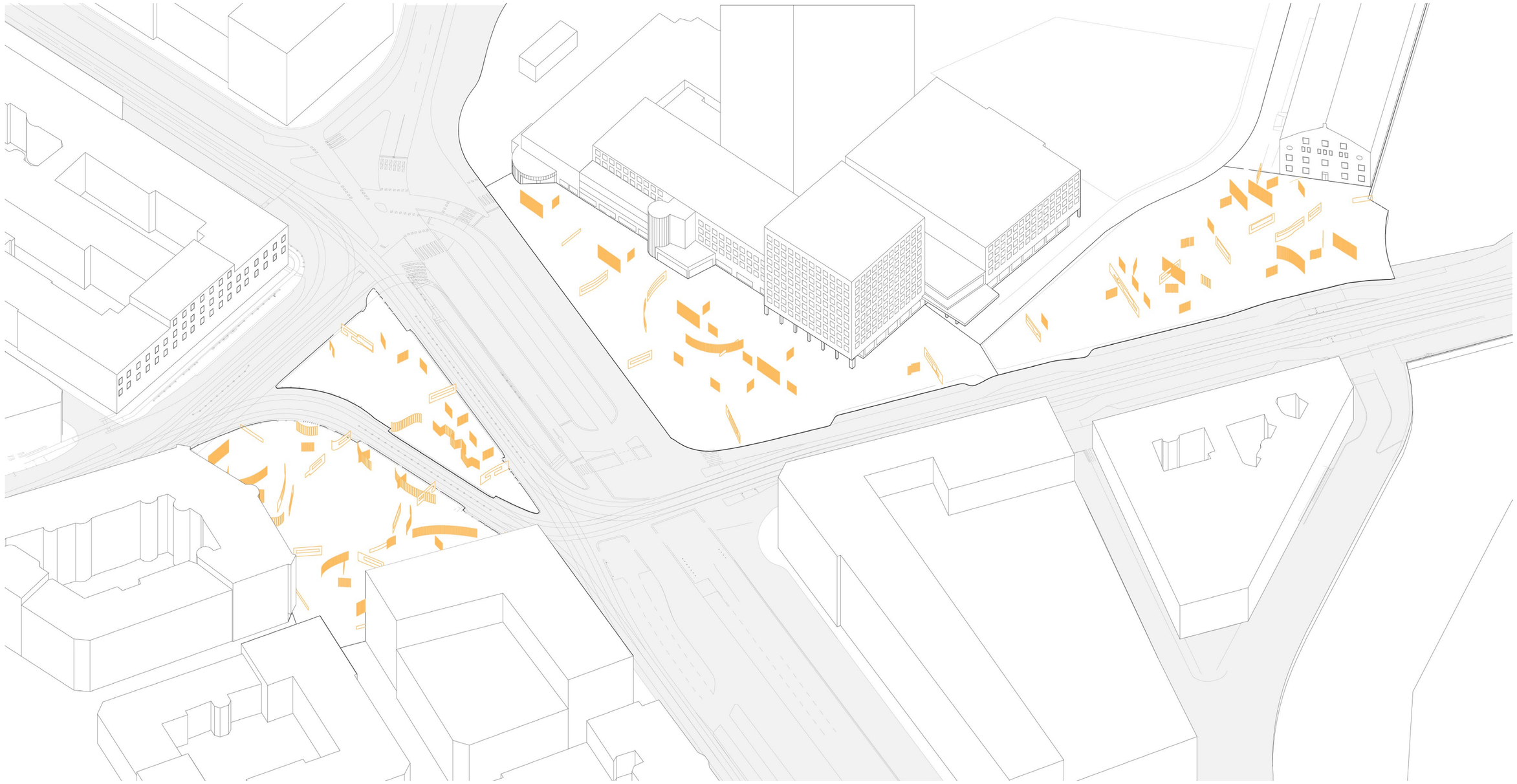

*enable visual connections in corresponding scale*

The third step is the definition of three dimensionality of vertical surfaces.

According to the layout generation, the surfaces that are added as interruptions will be translated as solid lines, while the surfaces function as separations will be translated as dotted lines.

For interruptive surfaces, windows should be open to enable the visual connections in corresponding scale. For example,  the surface shown in the above image is generated in urban scale. The movement it interrupting is the urban flow from street corner to the next interruptive surface at the adjacent node. I use two different height to represent people staying in different status. These visual connections then frame out the window size on this surface.

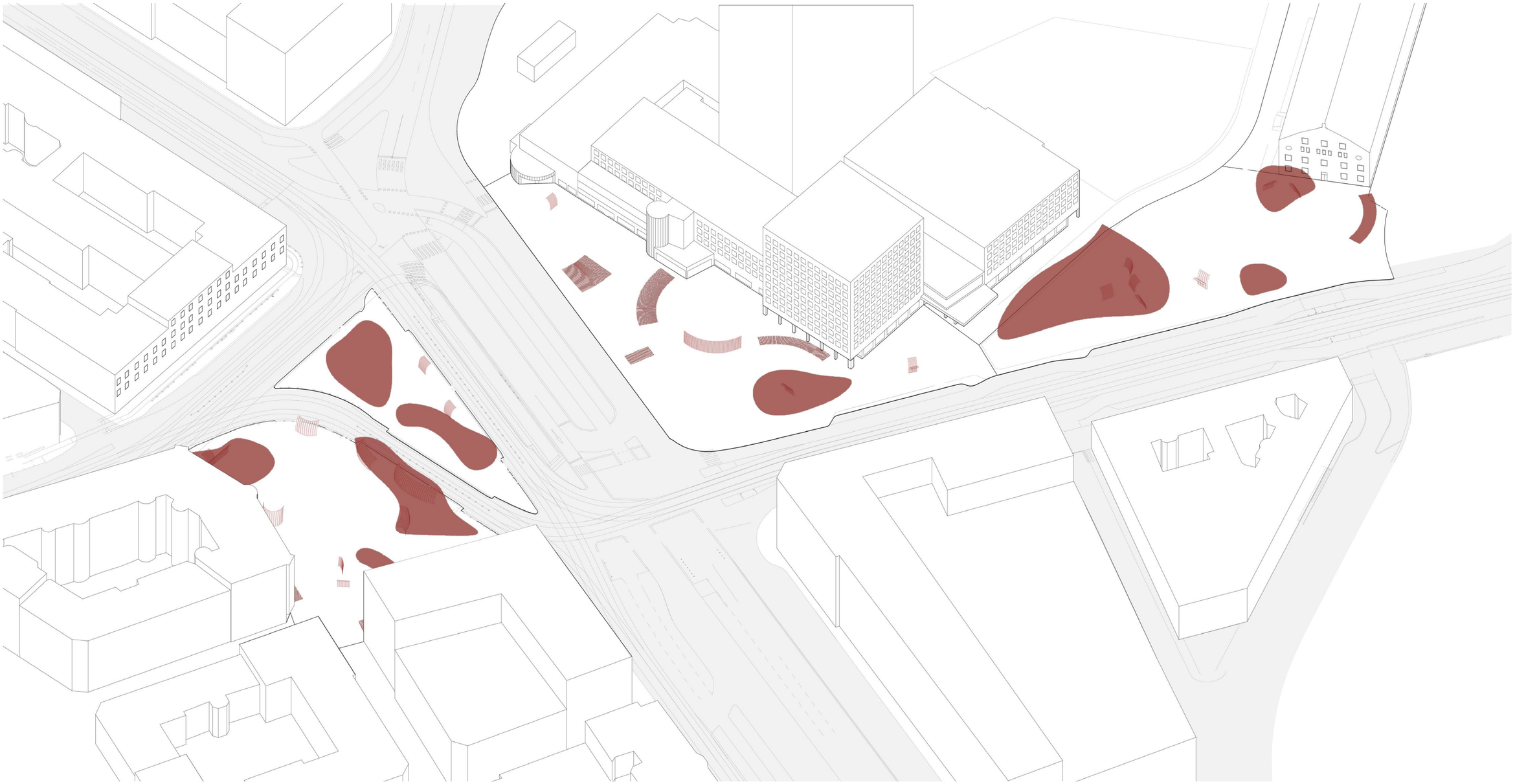
The enclosure of separative surfaces is decided by the locations. If it is located on the space for movement, it will have high percentage of visual permeability to provide more spatial filtration. But if it is located on the space for staying, like static nodes or elevated part of active nodes, it should have less visual permeability to provide more protection for the people stay there.



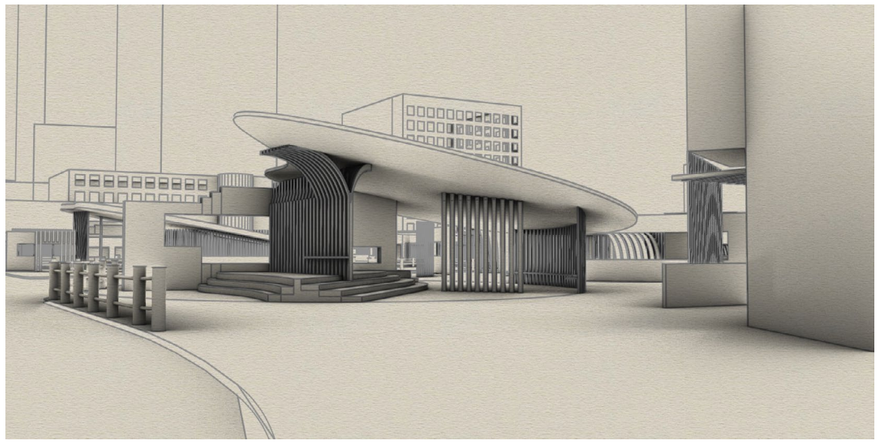
*vertical surfaces on site*

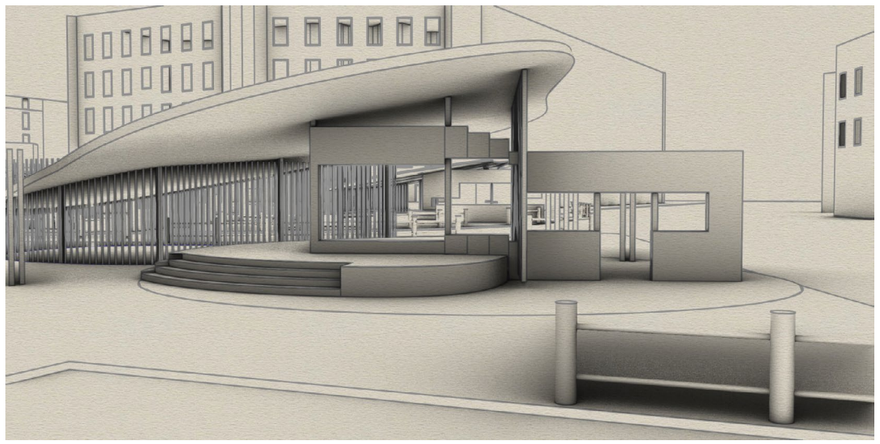
The overhead planes are then added to increase the enclosure and also help organizing the space. Some of them are tilted to create the spatial densification.

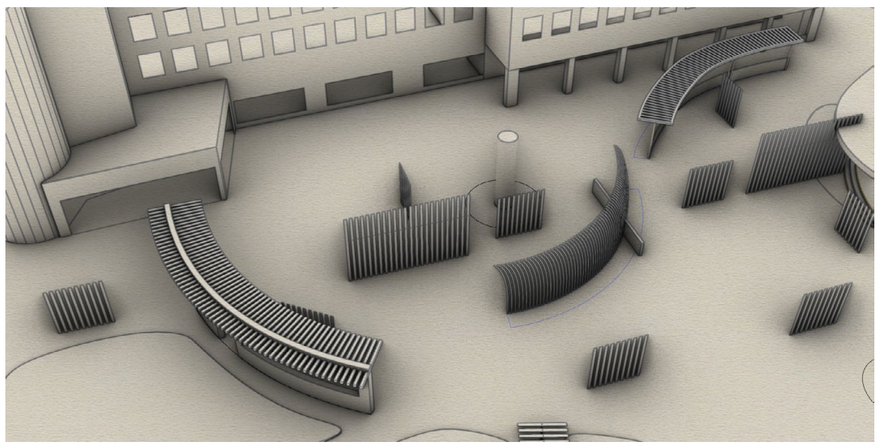
The vertical surfaces that are located at staying zones are bent at the top to increase the enclosure.



***Overhead structure and bent surface***
- for increasing enclosure

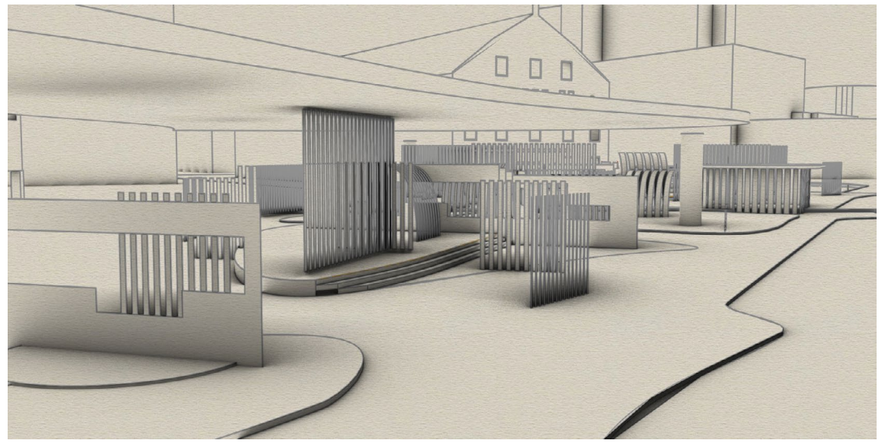


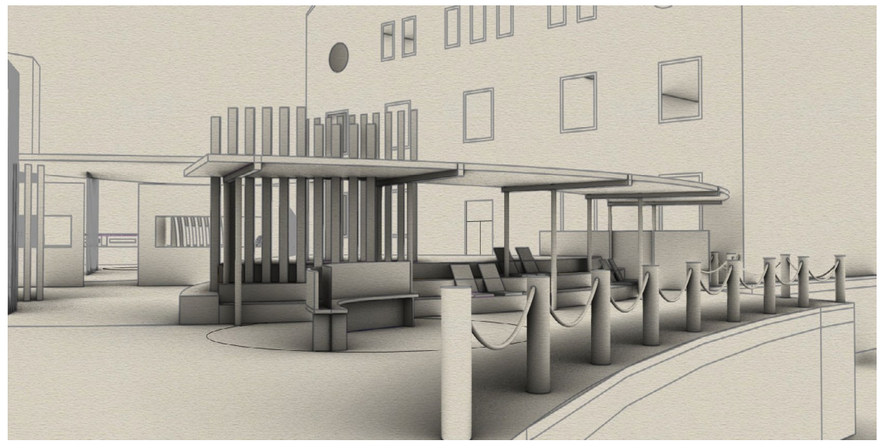


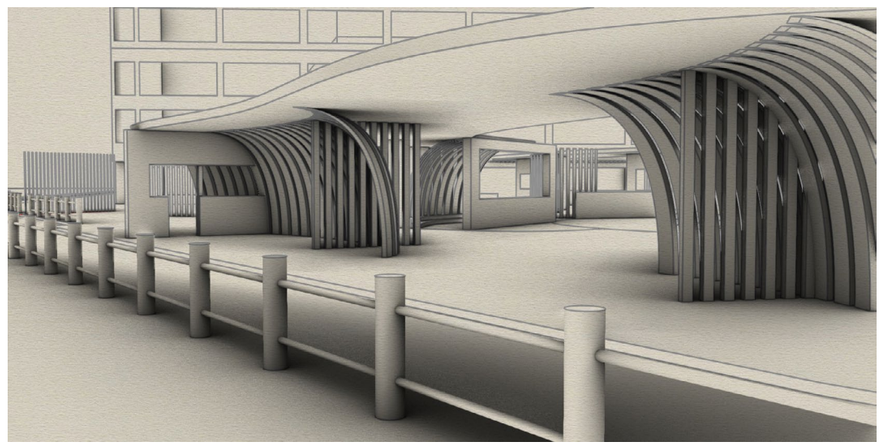


Visualization of the three dimensionality of the elements



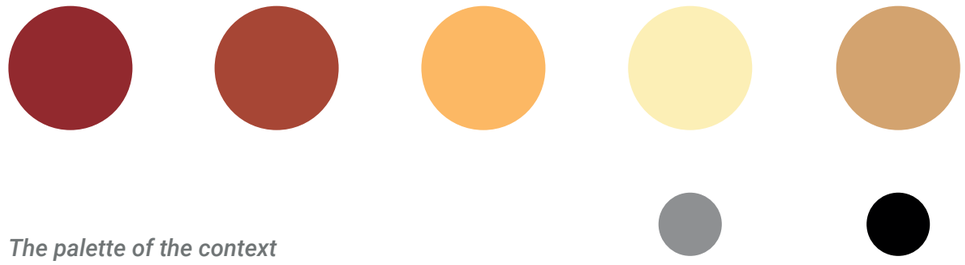






Visualization of the three dimensionality of the elements

# 3.4 Colour and material



*The palette of the context*

By this step, the physical elements have been generated and the tensions in between them have changed the context and how people feel on the site. However, colour is also an important spatial element that will have large impact on people's feeling and perception. I will integrate colour and material into my intervention to **reinforce** the effect of the physical elements. To achieve this goal, the following strategies will be adopted:

**1) A main colour to guide movement**

Right now the site is redefined by different kinds of vertical surfaces. The nodes are functioning as anchor points to help people navigate themselves. To prevent people from feeling lost on the site, I would like to use a main colour along the main direction to reinforce this navigation system. Considering the colour effect on psychology, this main colour should:

a. be a **warm colour**, which can raise people's arousal level and stimulate people's willingness in interactions;

b. **fit the context** and don't fight with the surrounding facade;

And as important spots on the main path, the active nodes should also be highlighted by this main colour.

**2) Site-specific strategy should still be valid in the choice of colours.**

As analysed before, Järntorget area is already overwhelmed with different colours on the facade. Therefore, contrastive colours should be avoided to control the environmental stress.

But for the site at riverside, the background colour is not strong and the site is in a lack of external stimulus. In this case, **contrastive colour** should be added into this site to bring this site back to life.



*main colour- red*

*main colour- yellow*

By importing my model into google earth, I tested the two choices of main colour.

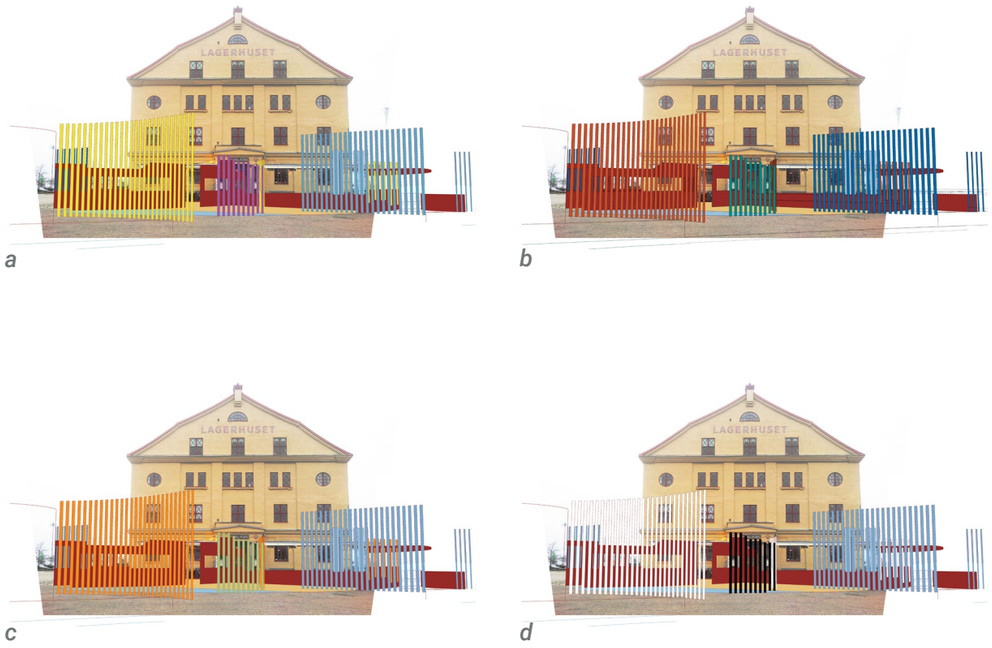
The first is the red colour on the facade of Folkets hus. It is similar to the red brick of the building next to Järntorget and can also be found on the window frames on many buildings at the surrounding.

The second choice is light yellow. It is the colour of Lagerhuset by the river and is similar to the yellow brick of the main building of Folkets hus.

Using Järntorget as an example, we can see the red colour fits the site better. It won't bring so many contrast into Järntorget, but has good contrast effect with the yellow facade on the riverside.

*Main colour to guide movement*

# Discussion of contrastive colour




a b c d

*Colour test on the riverside area*

Different possibilities of contrastive colours are tested on different sites.

The first test is on the riverside since the existing colour elements of this site is not strong, which gives the most freedom of colour choices.

Comparing the four images above, I think the dark colours(image b) and neutral colours (image d), like black and white, should be avoided. These colours didn't give a positive energy to the site and they actually drag people's arousal level down rather than increase it.

The colour choices of image a and image c are ok for the stimulation on people's arousal level. But the colours in first image are more artistic and mysterious, while the colours in the third image are more close to our daily life and can make people more relaxed. I think the third choice can function the best for promoting willingness in strangers interactions.

But when it comes to Folkets Hus area and Järntorget area, the context becomes more and more complex. Multiple contrastive colours are not suitable for both areas.

.



*Folkets Hus area*

*Järntorget area*

a

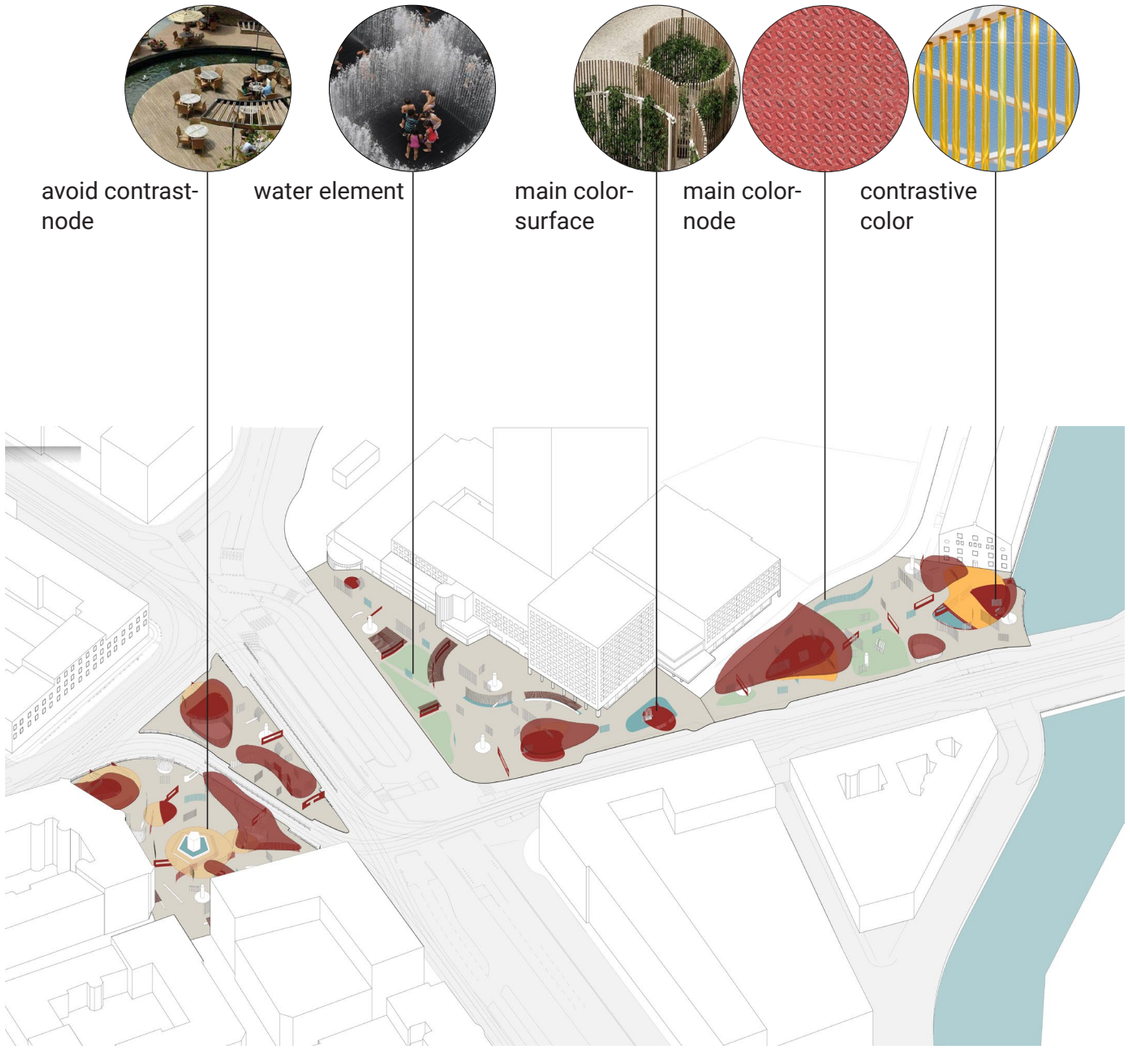
b

For Folkets Hus area, although it has many different colours on the facade, even with a strong red colour, the building forms are consistent. The wood colour matches the colour of the main facade. Either using wood colour as a main colour for the vertical surfaces and have some of them contrast with warm or calm colour, or choosing a calm colour as main colour with several warm contrastive coloured elements, are suitable for this site.

a

b

But for Järntorget area, the building forms and colours on the facade are totally different. To control the environmental stress, the colour choice should be kept simple and calm. Large area of red colour should also be avoided. The wood colour can be used as a substitute.
For other vertical surfaces, the wood colour for contrast can be a good choice. Or we can also choose a calm colour as a contrastive colour.




*material choices*

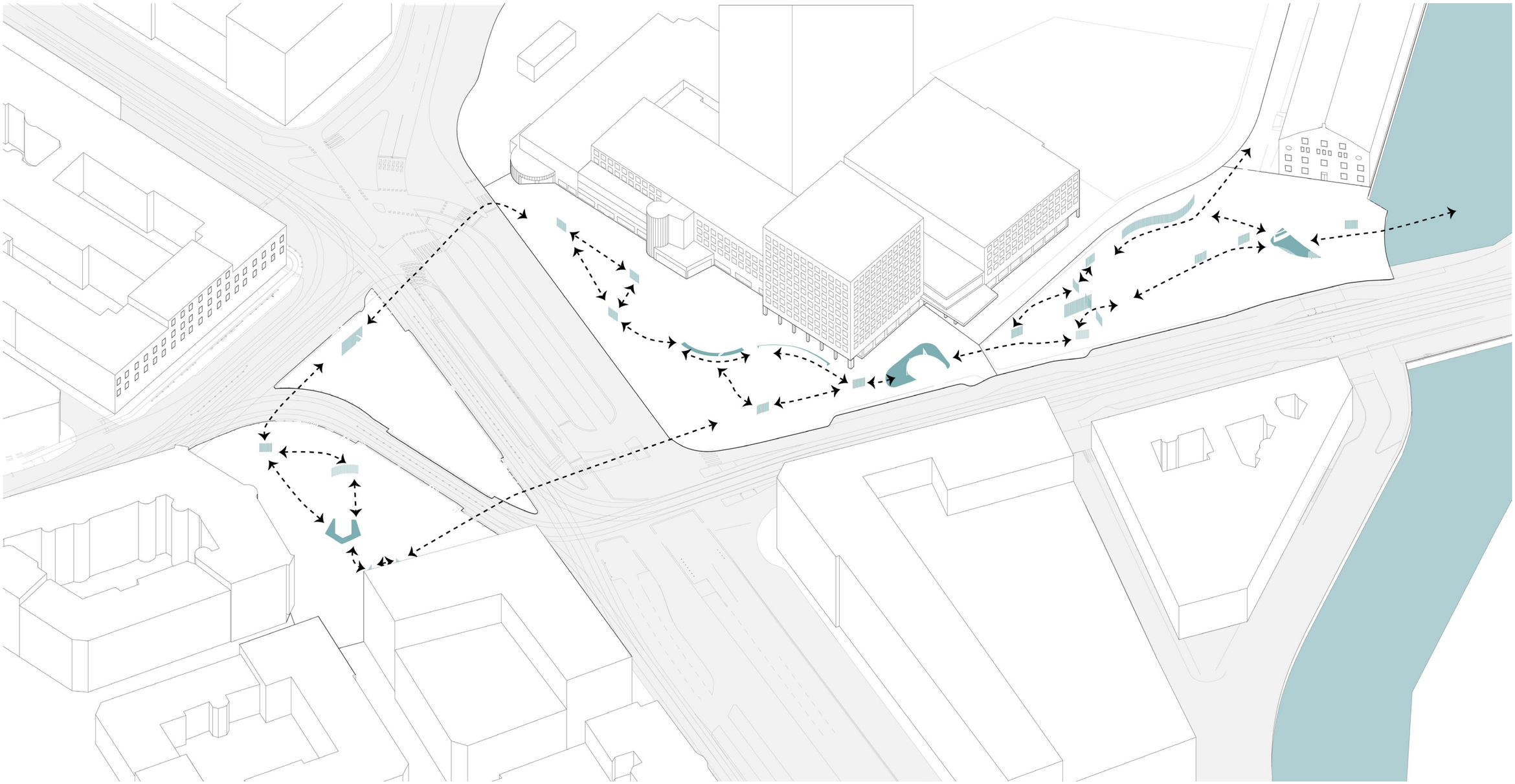
For the choices of material, they are also different according to the difference of elements and specific sites.

I have already mentioned wood in the colour section. Since wood is a material that has some connection with the nature and can make people relaxed, it is a good choice for calm area, like static nodes, or large area of active nodes at Järntorget site.

I avoid to use metal material at any touchable or sittable space, but only use it at the floor area of active nodes and the framework of interruptive surfaces, since it is cold and makes people tend to protect themselves rather than open themselves for interactions.

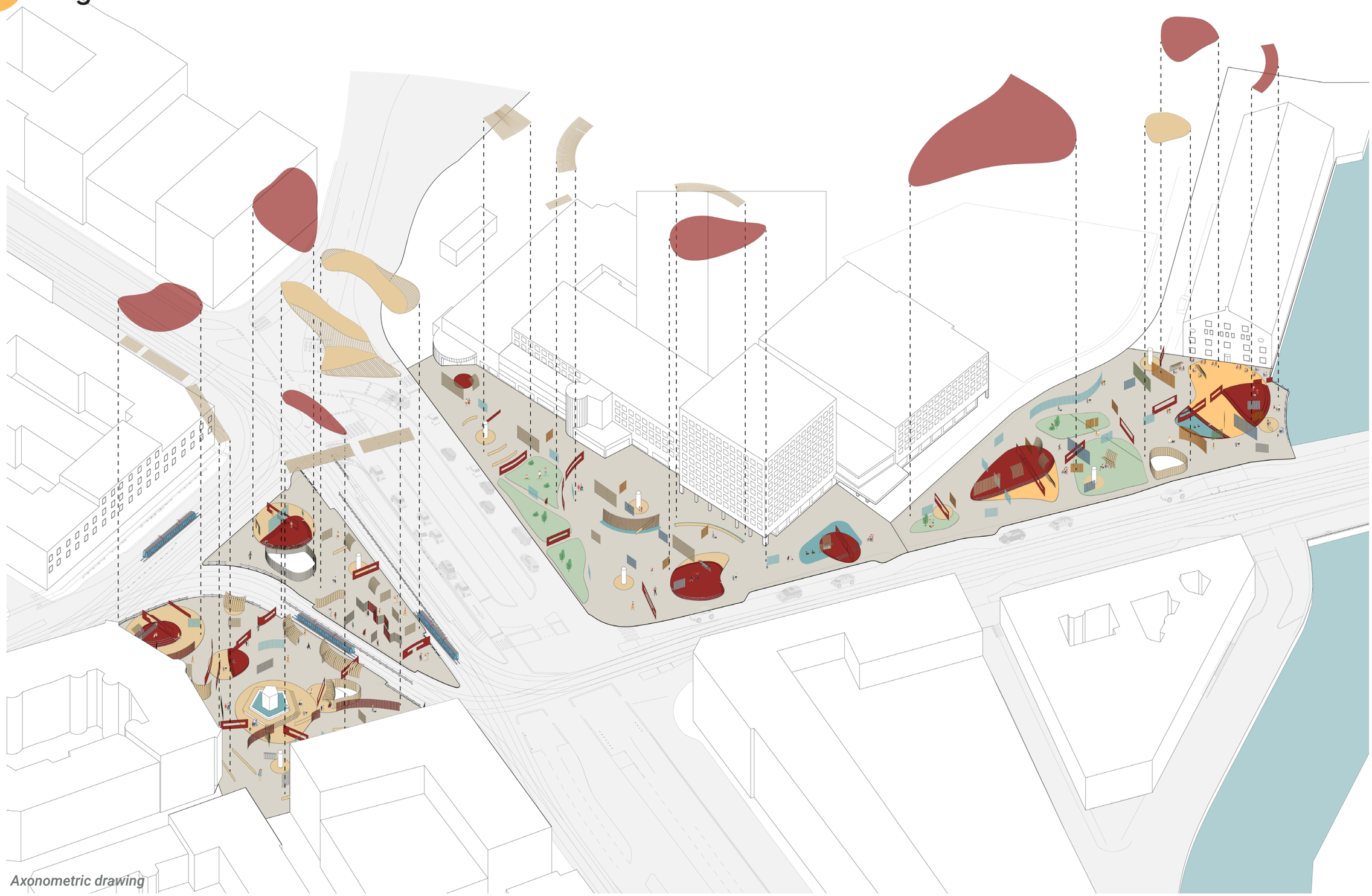
For the interruptive surfaces, hanging plants are added out of the metal structure.

For the separative surfaces, some of them become fountain which is also a translation of dotted-line surfaces. These water elements can then actually lead people all the way to the riverside. And for those surfaces in contrastive colours, they will be plastic tubes, for this material will maximize the contrast and relaxation purpose.

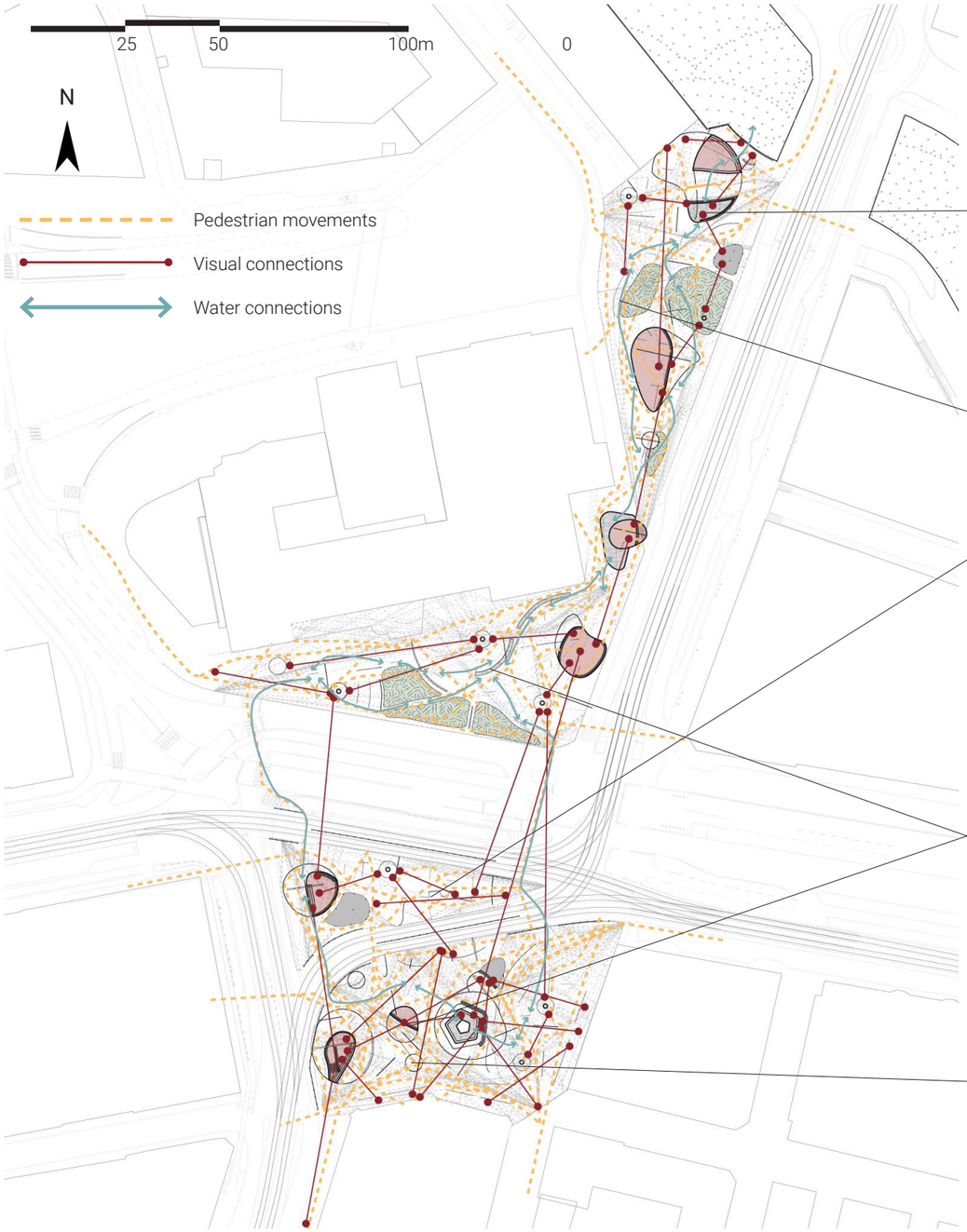


*Water elements and movements*

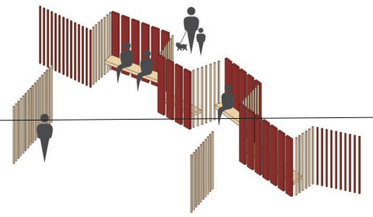
# 3.5 Program and scenarios



*Axonometric drawing*

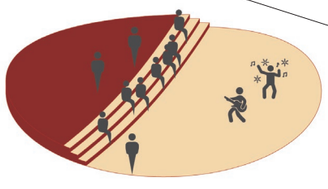



*Plan with activities & movements*



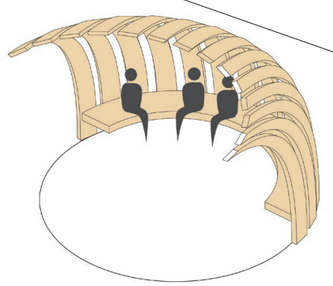
*Resting Area at Station*

*Water element - Pool*

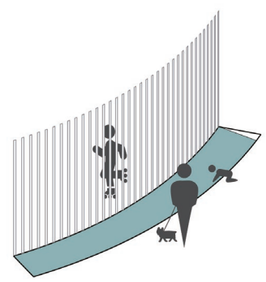


*Active Node*

*Water element - Fountain*



*Static Node*



*Water element*

*Scenario 1- riverside*

This is the active node by the river. Several steps are created towards the beautiful scenery of the river. Multiple contrastive colours are added into this site to stimulate people's performance. A fountain is added at the elevated part of the node to lead the water elements into other sites.



*Scenario 2- Järntorget from Linnegatan*

This is the active node located at the south-western corner of Järntorget. Multiple sittable spaces are created at this node. To avoid more environmental stress on this site, large area is covered with wood, which can offer the relaxed feeling.


*Scenario 3- Järntorget tram station*

This is the tram station at Järntorget. The crowd getting off a tram is a environmental stress factor. To reduce this stress, curved surfaces with low visual permeability are used to block the view of the crowd from the main area of the square. And wooden material and hanging plant are added to help people relax and calm down.



# Chapter 4

## Conclusion

I got my initial interests of this thesis from my own experiences. I have lived in many different countries and areas, like China, Australia, Sweden, and kept feeling and experiencing different cultures, different societies. Among all the differences, I think the way people treat a stranger in a public space is the most interesting. It is different, of course, in Australia and in Sweden, but has something similar. We have different feelings when greeted or ignored by a stranger. Some books about micro sociology helps me understand, beyond all the expected narratives, having some interactions with strangers can be an interruption, where we don't need to have the same performances in front of same groups of people and don't need to care any results. This interruption makes us feeling connected to others and means a lot to us. But when it comes to why people nowadays are afraid of or are not aware of the importance of interacting with strangers, apart from the reasons of cultures and personalities, the modern public spaces should also take some blame. Many public spaces are in a lack of clear definition and organization, which makes them more and more like spaces where people will only pass by while commuting between home and office. The urban life is missing in public spaces.

To find the answer of how the design of public urban space can help promoting the interactions between strangers, I first dived into some literature about environmental psychology and human behaviour and realized the unacquainted need a reason to interact with each other. Public spaces can provide some external stimulus or a space to accommodate the stimulus.

I choose to do the research from an elemental perspective. By using this methodology, I start from the reflection and resolution of single elements and their combinations, and then try to understand the tensions in between them. This helps me feel subtly how the psychological effect of adding an element in a space, and how people can actually feel, even they might not be aware of, the dynamics of these elements.

The site choice is very crucial for my research. At the beginning, the idea is to select an empty area at Lindholmen ferry station. Although a spatial need can be seen clearly there, considering the amount of pedestrian flow, that area is not typical enough for a stranger research. I then chose to work with Järntorget area. As a heavy traffic node, so many people pass through this area. But the site is segmented by tram tracks and vehicle streets into several plots. The complex context makes the research much more interesting.

The complex site also makes the design process complicated. That was why I chose to develop my proposal step by step, from two dimensional to three dimensional, from the generation of physical elements to the integration of colour and materiality. For the program, I leave it to an open discussion, since I hope this thesis research can provide more possibilities. Movements are crucial. But the intervention itself can be the idea of an open space, or can also be the ground floor of some public buildings. The vertical surfaces can be a fountain as I programmed but can also be light pillars that can create another tension during night time.

By adding this intervention on site, I give detailed definition to different areas and re-organized the existing pedestrian flow. The multiple spaces I created provides people the freedom to choose where they want to stay, which will attract more people into public space. Using vertical surfaces, I imply this interruption idea into people's narratives and the intervention will lead them to somewhere else to discover something new. The colour and materiality are used to reinforce the psychological effect of physical elements and will help people feeling easy to open themselves up.

This thesis project answered the question I have had in my mind for a long time and gives me a better understanding of the interactions among strangers. It also gives me the opportunity to reflect on the responsibility of an architect/ urban designer. We should always care about people's feelings and micro-interactions in a space we create, and treat each design element carefully.



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## Images


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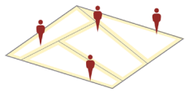
# Appendix

## Theoretical research- where people stay & why people interact with a stranger?

### Where people stay?
environmental psychology

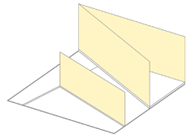
According to William H. Whyte(2018), people have a preference of well-defined space, and if on an empty space without definition, people will stay and walk on the edge. Height difference and adding walls will increase the level of regional division and enclosure.

Also, people are drawn to objects and sittable spaces.



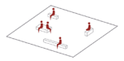
Edge Zone

Better defined area: + height



Better defined area: + enclosure

Object



Sittable Space

Junction of traffic line and open area

### When people interact?
human behaviour

personal defensible space

"Unacquainted persons require a reason to enter into a face engagement, a willingness to open themselves up."
– Erving Goffman

**Meeting space**
place property

active node- space for event
* open spaces

static node- space to stay
* When people stay too close to each other, it will be strange to not say something.

**Triangulation**
external stimulus

environmental uncertainty

street art

physical object

sighting

people with kids/ pets

## Design element & parameters

**Point element**

- directionless
- timeless
- static, centered and centralizing
- stillness



**Linear element**

- strongly directional
- separates the spatial continuum
- dynamic, directional, and directing
- movement and tension

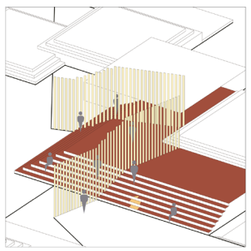


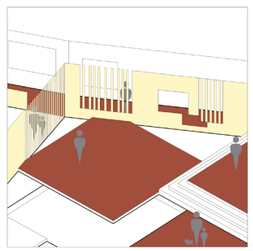
**Planar element**

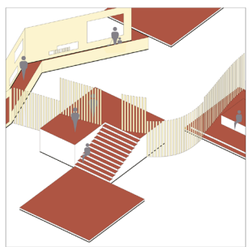
- two dimensional
- fundamental for all events and activities
- expansion, extension, and relaxation
- filling or spreading and outlining



### Prototypical research

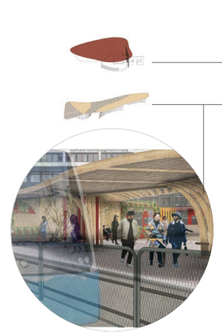






**Why not strangers?** Composition 01- research output





Scenario-tramstation

Overhead structure

Main color

Vertical surfaces

Nodes

Water elements

Scenario-Järntorget

Axonometric

Scenario-riverside

**Why not strangers?** Composition 02- thesis proposal