

# Urban co-living

An infrastructure that  
supports the 'sharing city'.



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Examiner: Kengo Skorick

Chalmers University of Technology  
Spring 2019



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An infrastructure that supports the  
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Master thesis  
Master of Architecture and Planning  
Beyond Sustainability

Chalmers University of Technology  
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Urban Challenges

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## Student background



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## **Acknowledgments**

I would like to thank my supervisor Joaquim Tarraso and my examiner Kengo Skorrick for their guidance during the semester but also for being supportive and encouraging during the difficult moments. A warm thank also to the Emilio Brandao and Marco Adelfio for offering another enriching perspective and feedback during the semester.

Thank you to the friends from Göteborg for the last 2 years we shared together inside and outside Chalmers. A special and warmer thank to the Greek gang, Efstathia, Marietta and Myrto.

Thanks to George, for always being patient, supportive and encouraging.

And finally to my family, for the unlimited love and faith to every of my decisions.

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## Terminology

### Intensity of movement

It is the parameter that measures how many people are moving in a place and whether they stay there or pass by.

### Official city

Top places to visit in the city of Göteborg, as proposed from the official visitor guide <https://www.goteborg.com/en/10-must-dos-in-gothenburg/>

### Accessibility

The quality of the selected places, of being able to be reached by crossing the edges that are surrounded by.

### Sharing city

The initiatives, pop up from individuals or communities, that are supporting the idea sharing economy as they are mapped from the association Collaborative Economy Gothenburg and the City of Gothenburg Consumer and Citizen Service Administration. <http://smartakartan.se/karta/>

### Edge

The outside limit of the selected sites. As an edge, both built environment (buildings) or paths (tram lines, highway etc), could be considered.

### Instagram city

Most popular places on Instagram in the city of Göteborg, as proposed from the official visitor guide <https://www.goteborg.com/en/10-instagram-places-in-gothenburg/>

### Points of interest

A particular space that hosts a distinct activity.

### Scale of publicness

The scale of publicness is the outcome of a comparison process among different criteria in specific locations. The scale of publicness has 4 grades, public, private, common 1 and common 2. The grades are representing a personal understanding of each location. The grade understood as an opportunity rather than a restriction.

### Temporal citizens

The group includes people who have lack of networking in the area where they currently live. Therefore they are not properly established. Newly arrived refugees, longer period tourists, international students, seasonal workers, commuters are some examples of people that are included in this category.



# ***CHAPTER 1***

# ***INTRODUCTION***

Abstract  
Aims and objectives  
Relevance  
Methodology  
Background  
Discourse  
Delimitations

## Abstract

The starting point of the following thesis were the unpleasant results that short term accommodation, usually targeting tourists, occurs in local societies and the urban environments. The initial idea was the sharing of spaces and experiences between hosts and guests, referring to the basis of sharing economy. However, that turned into a capitalistic way of earning extra money. Therefore, many tenants are forced to move out as the short term contracts are more profitable compared to long term contracts. "Airbnb" and "Home away" are the most famous representative platforms of this phenomenon. The concern becomes more relevant and topical if we take into consideration the forces of the existing housing crisis in many cities around the world. A housing crisis that has multiple results, unpleasant and insecure feelings among the people, obstruction of integration of different groups of citizens that probably leads to isolation.

This master thesis also questions how cities could address the need for densification, both spatially and also in terms of activities. How could different kind of activities and groups of people overlapped, blurred and co-exist at the city center?

This master thesis goes back to the initial idea of short term uses and sharing spaces. It investigates and illustrates which are the different levels of sharing, what type of activities could be included, how many people are needed, what "temporary" means and how the above could be expressed spatially. The project is based at a central location at Göteborg and the design is a temporary housing typology. Temporal citizens are the target group of the proposal. In this group, newly arrived refugees, international students, and tourists are included. The location, the program, and the target group are a vehicle for the exploration of the idea in the Swedish context. They would differ if placed in another context as the need will be different. The implementation of the idea remains the same.

The final outcome of the thesis is an infrastructure. The people can build their own spaces which serves their own needs. There are specific typologies, guidelines, and advice which help the building process. The proposal focuses more on how the spaces in between the units function, rather than the units themselves.

### Keywords

Infrastructure Temporary Density Sharing

## Aims and objectives

### Research question

How could a temporal architectural and urban design address the problem of densification and social segregation?

### Complementary questions

What is the meaning of sharing in an urban and architectural scale?

How can temporal structures and activities support blur the physical limits of the city and also the intangible "limits" between social groups?

How can the design be adaptable in order to serve needs of different groups and programs?

### Aim

The overall aim of the thesis is the design of an infrastructure. That infrastructure would host many types of activities depending on the needs of the context. Therefore it will be adaptable to different demands. The activities however are temporary. This system can be implemented anywhere needed with same changes. It could host

tourists during a summer in an island at south, support a carnival parade with food kiosks in Rio, transform to a Christmas market in Stockholm or support refugees that are seeking for shelters during their route around different countries. And even hosting food tracks, flea market and temporary housing at the same time and place.

It is a project of coexistence of different activities and people during time.

## Relevance

### Society



The thesis subject is related with the society as it tries to facilitate human and social needs that constantly change under the same structure. It's inspiration point was the touristic short term housing and its effect in the society. The topic expands further than the starting point by questioning how a temporal and adaptable structure could densify city centers, integrate target groups and activate urban spaces.

### Sustainability



The thesis has as a starting point the sharing economy. Sharing economy is related to the core of sustainability from environmental, economical and social perspective. The thesis, refers to a new way of living adapted to the contemporary sustainable challenges.

### Architecture



The subject lays between architecture and urban scale. The starting point is from the urban environment but in the end the scope is architectural as the final result is a framework and guidelines that create space.

## Methodology

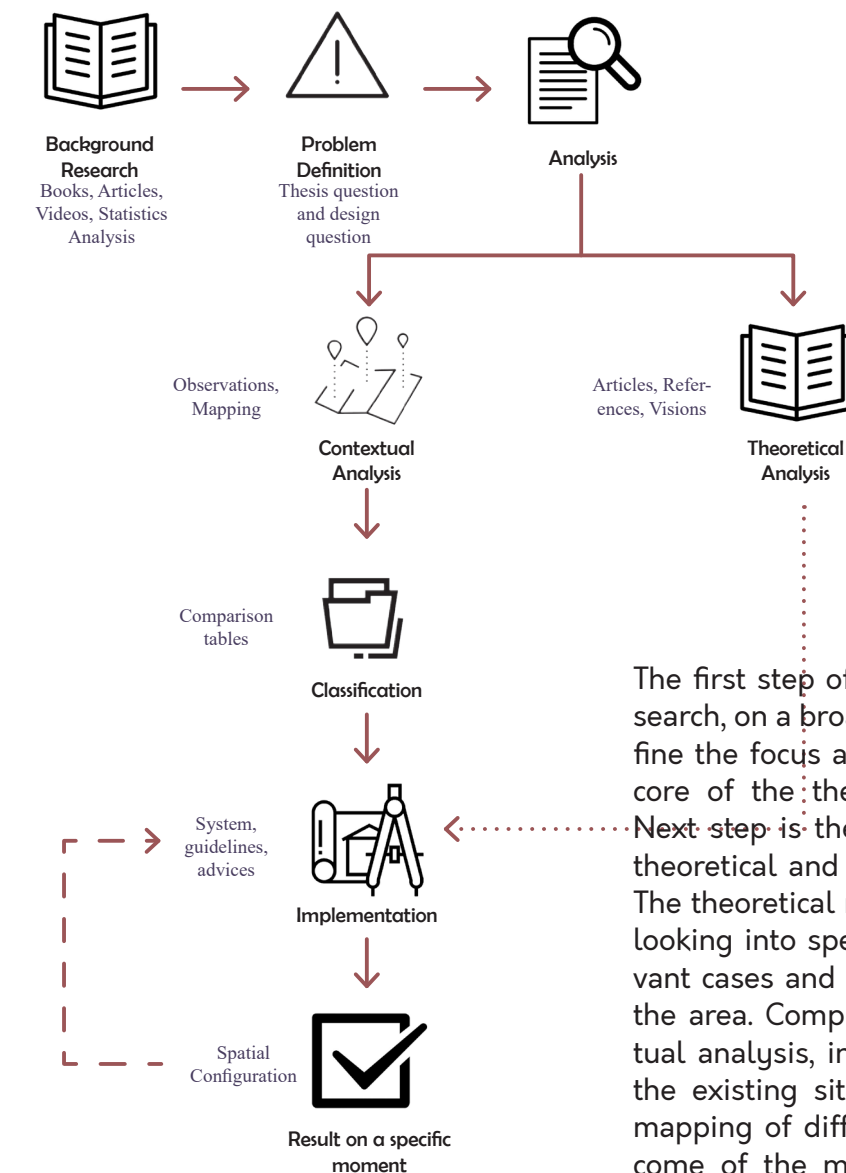


Diagram of methodology

The first step of the process is the research, on a broad level, in order to define the focus area and synthesize the core of the thesis research question. Next step is the analysis both from a theoretical and contextual perspective. The theoretical research at this point is looking into specific information, relevant cases and vision for the future of the area. Complementary, the contextual analysis, includes observations of the existing situation of the site and mapping of different factors. The outcome of the mapping is the classification. The classification is a personal understanding of the spaces and introduces the understanding of publicness and sharing. Therefore it is a step that connects research and design. The theoretical analysis can contribute in the evolution of the design by giving inspiration. Finally the result, is a set of guidelines that give people the power to create the space they need. There is no final design. The configuration can change every moment and the following designs are just possibilities.

## Background

The background and the starting point of the thesis lays among 3 subjects, sharing economy, experience of travel and planning and travel. The next pages explain this first inspiration and starting point of the thesis by pointing out the personal interpretation and interest in those subjects.

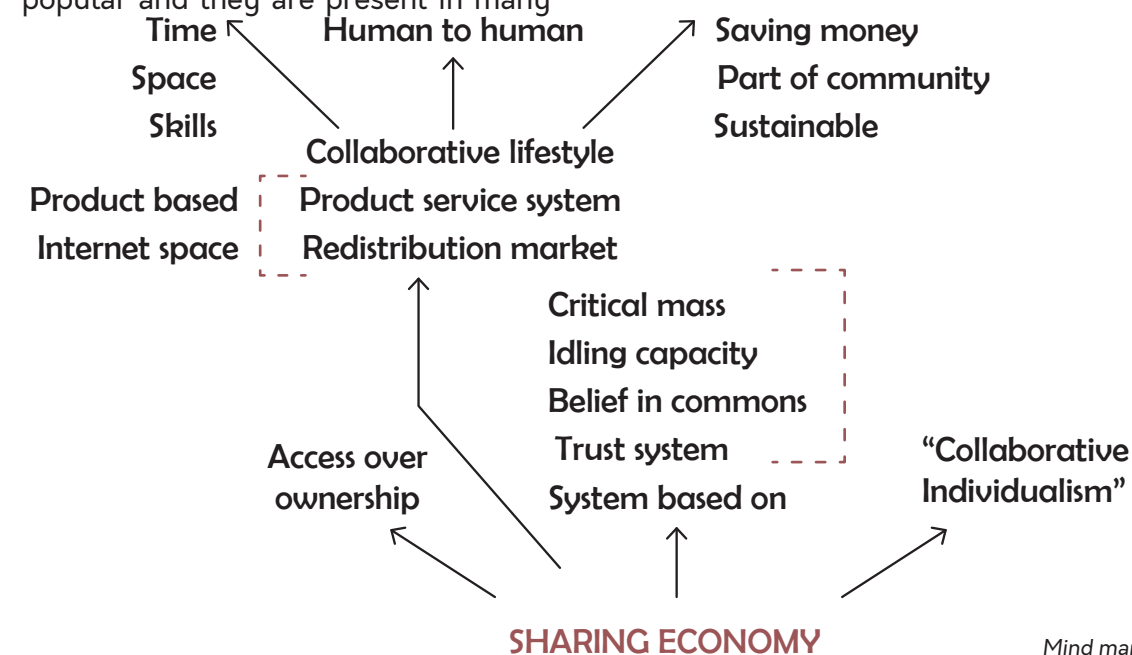
### Sharing economy

Sharing economy: an economic system that is based on people sharing possessions and services, either for free or for payment, usually using the Internet to organize this

Sharing economy. (2019). In *Cambridge Advanced Learner's Dictionary & Thesaurus*. Retrieved from <https://dictionary.cambridge.org/dictionary/english/sharing-economy>

Rachel Botsman and Roo Rogers analyze further the topic in their book *WHAT'S MINE IS YOURS*. According to the author, the systems of sharing economy are mainly based on 4 significant characteristics. Those are the critical mass, the idling capacity, the belief in commons and trust system. In this economy more important is the access to a product or service rather than the ownership of it. Collaborative consumptions systems are more and more popular and they are present in many

fields of everyday life, as co-housing, co-working, swapping of clothes and toys or even sharing different modes of transportation. Through those examples three categories can be identified, Collaborative lifestyle, Product service system and Redistribution market. The last two are product and Internet based. However, the collaborative lifestyle, refers to a system where human to human interaction and be a part of a community are crucial. In this type of system, people can share not only products but also time, space and skills. Popular examples of this category in a great scale are the Couchsurfing and the Airbnb accommodation. (What's mine is yours, 2010). Collaborative lifestyle, human to human interaction and sharing of time, space and skills are important keywords from this chapter for the evolution of the thesis.

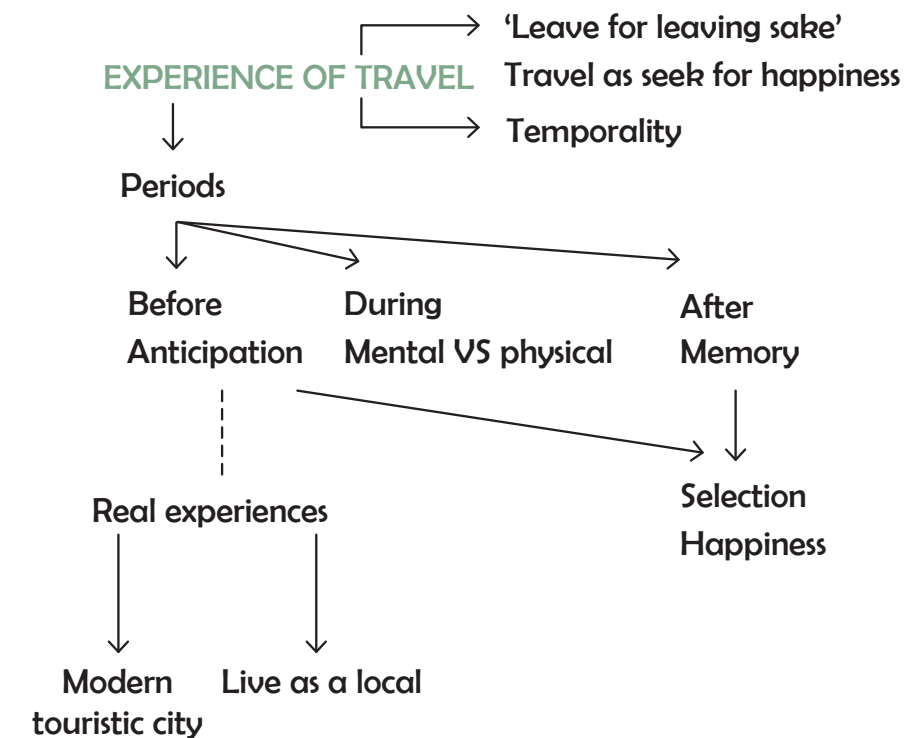


Mind map 1

### Experience of travel

The second pillar is the experience that travelers have before, during and after their trip. The related literature is the book, *The art of travel*, by Allain de Botton. The book discusses the mental and physical experience a possible trip creates. His main point is that travel is a way to search for happiness. The destination doesn't matter in the end as sometimes we 'leave for leaving

sake'. Another interesting point is how he divides the trip into three parts, the anticipation, the actual trip and the memory of it. All of them are equal important. Finally significant point is the underestimation of situations and times we have (waiting times) and the connection with the experience we get in a modern touristic city nowadays. (The art of travel, 2003).



Mind map 2

## Discourse

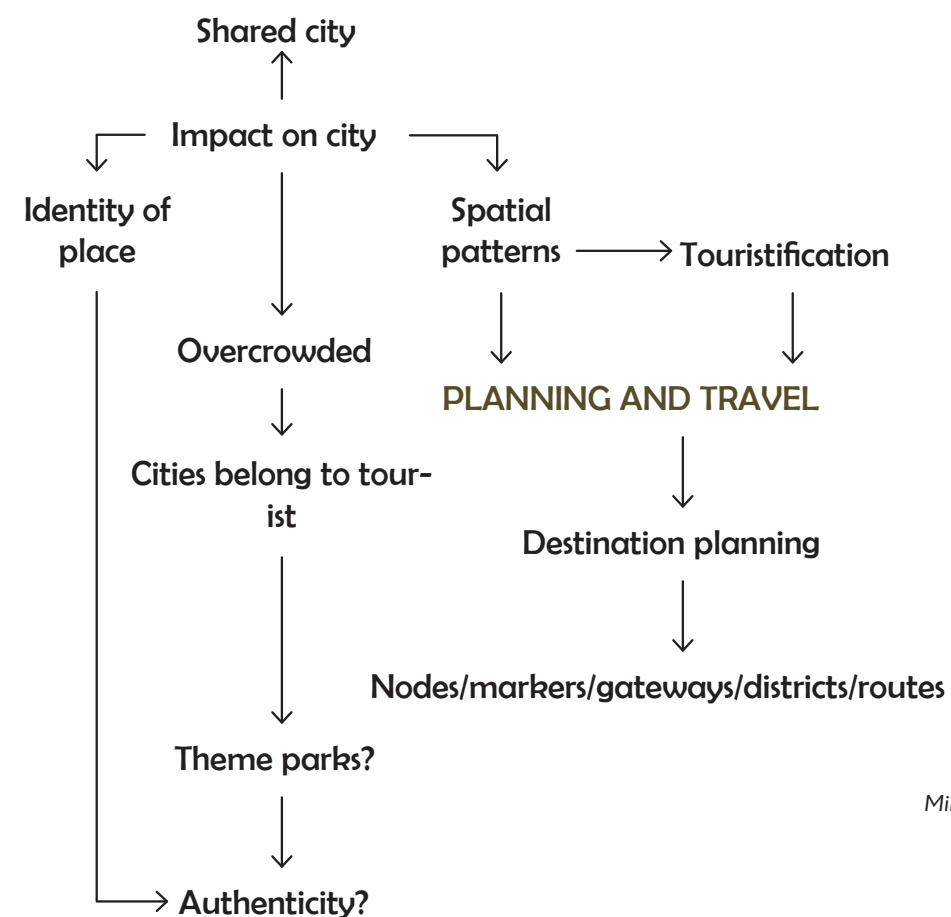
### Planning and travel

The third inspiring topic for the thesis is regarding the planning of the destination and the modern touristic city. Destination place planning and design, written by Diane Dredge, and Consuming Culture: Tourism and Architecture, written by Rogers Williams were the main literature studies around the topic. The first one is pointing out the core design elements that could make the planning of a destination functional and attractive. The main 5 elements are nodes, markers, gateways, districts and routes. (Destination place planning and design, 1999).

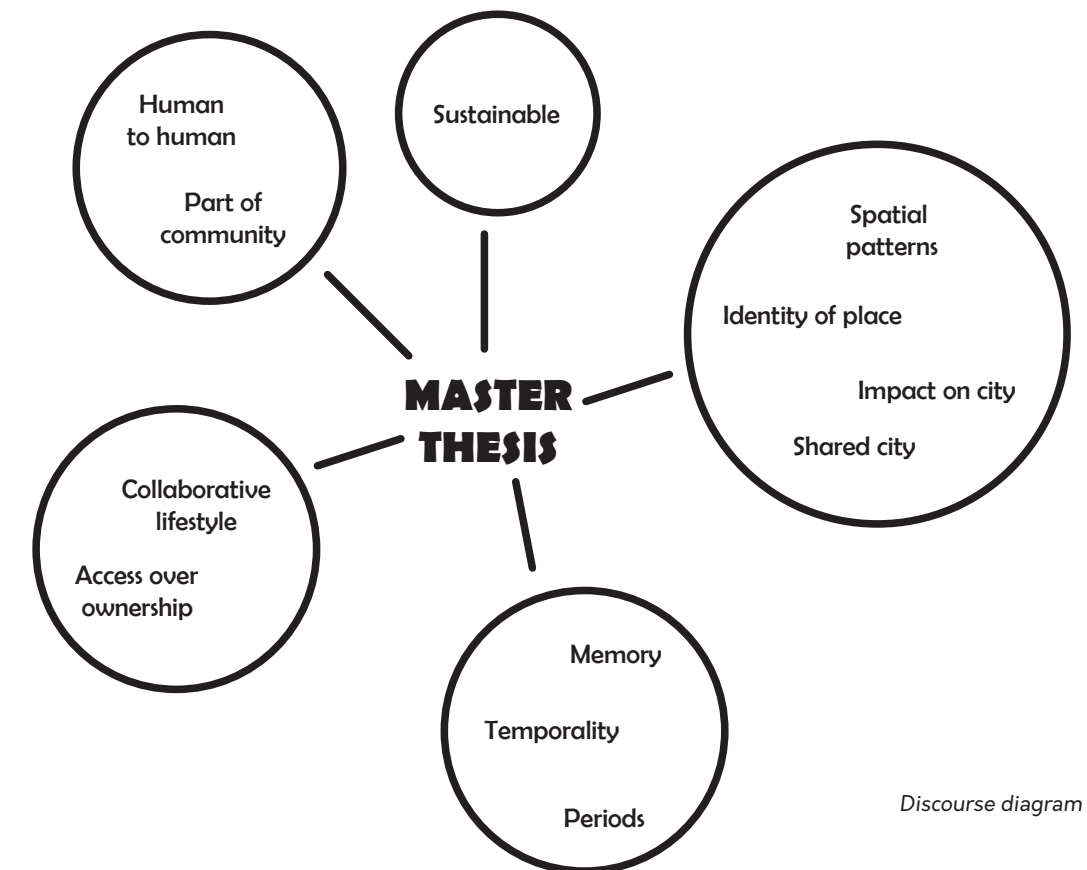
At the same time, the second article discusses about identity and authenticity of the destination and how the Internet and social media affect that. It questions how authentic and unique accommodation offer the different hotels and resorts around the world and how different is finally travel physically or through scrolling on social media. By taking into consideration that accommodation spaces are the first and perhaps the most intense images of the new city that the visitors have the questions are very relevant. It also questions whether there exists any authenticity in touristic cities or is everything a replica in order to feel right. (Consuming Culture: Tourism and Architecture, 2016).

### Conclusion

As analyzed previously, the project is inspired by three topics. The next diagram concludes which meanings, deriving from the background, are relevant and important. Since the idea is tested in Göteborg some meanings are not directly related and reflected on the Swedish context. In this case the "experience of travel" is better understood as "experience of the city" and the "planning and travel" as the "spatial configurations of a sharing city". However the point of departure was the tourism and the short term accommodation.

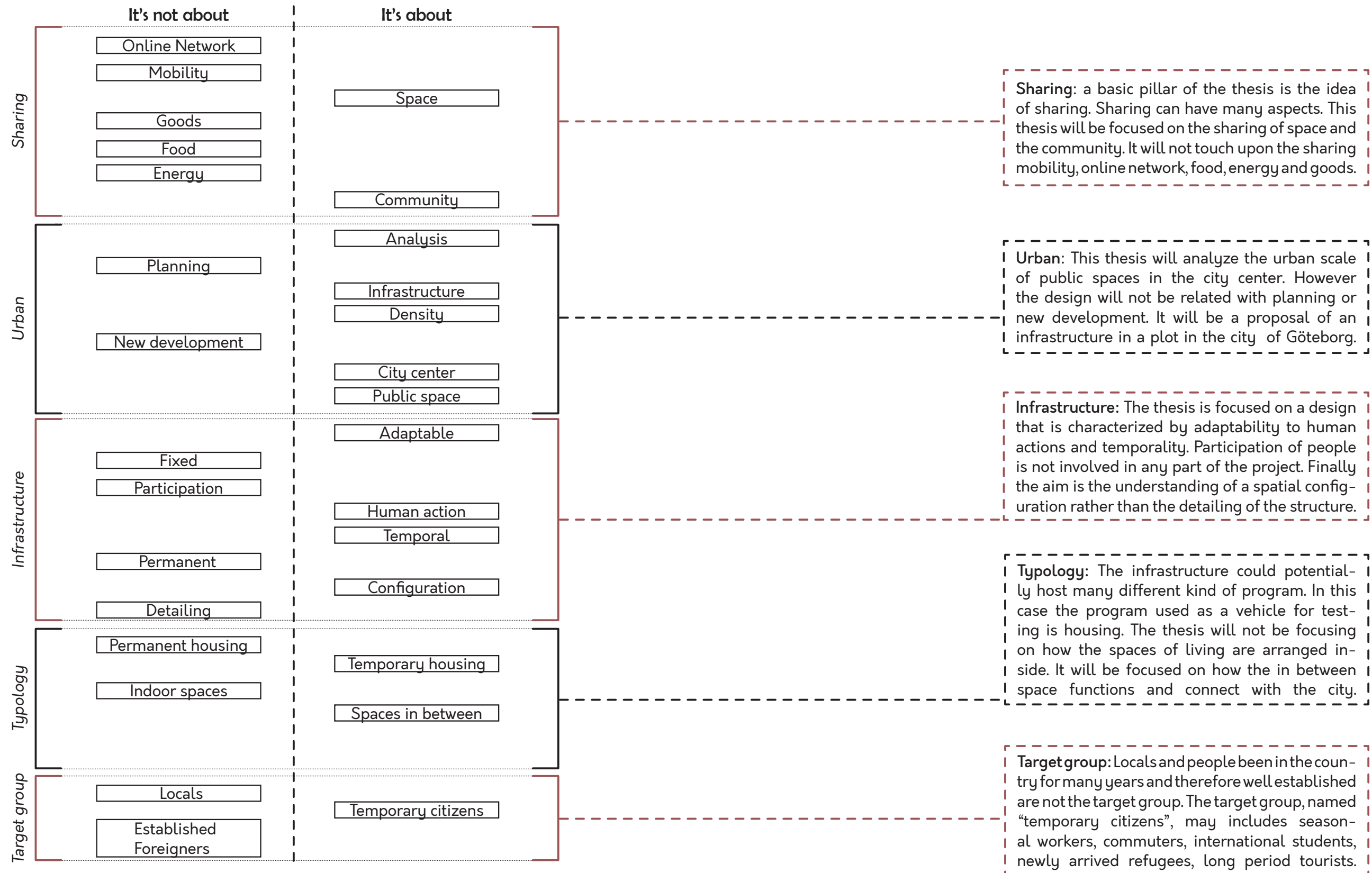


Mind map 3



Discourse diagram

## Delimitations



# *CHAPTER 2*

# *RESEARCH*

The research of this thesis is focused on a better understanding of different aspects of sharing economy, the relation of it with the Swedish context and the exploration of basic design concepts for the project.

The first part of the research is focusing on the expression of sharing economy in the housing field. It explores which was the initial idea and how this was transformed into its current situation in several places. Next step is the understanding of the selected case study, Göteborg. How the Swedish reality is reflected through the prism of sharing and temporal? The last part of the chapter refers to the main concepts of the projects as a result from the research.

Sharing economy

Sharing economy and short  
term accommodation  
Case of Göteborg

Concepts

Shared spaces  
Dynamic Change  
Identity

Conclusions



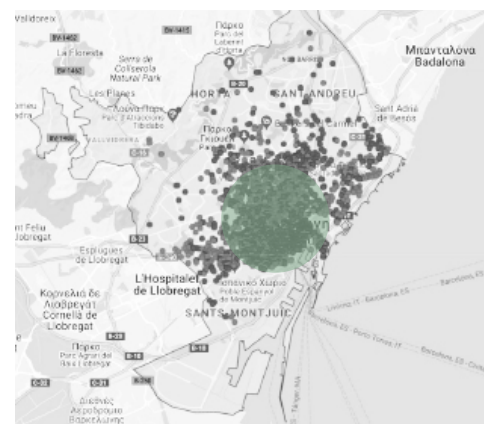
## Sharing economy

### Sharing economy and short term accommodation

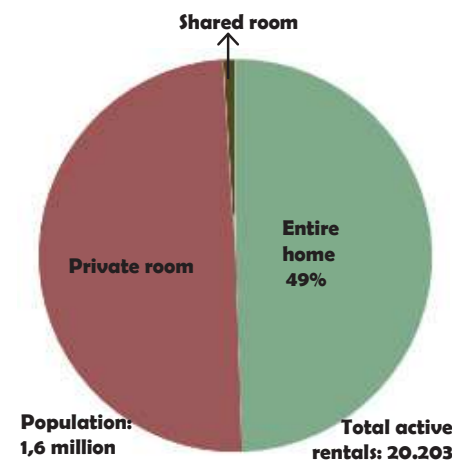
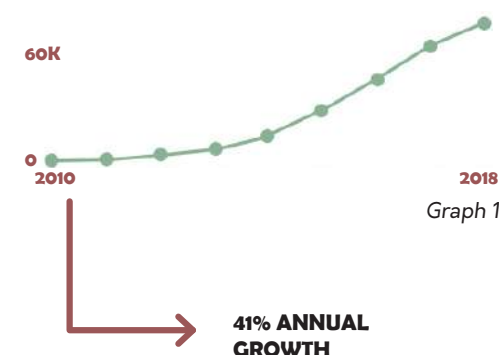
Sharing initiatives pop up in cities and concern different scales and activities. In the field of accommodations, popular are the short term rentals of rooms and apartments. The basic idea was that hosts and guests are sharing the space of living for a short period of time. This agreement was supposed to be beneficial for both sides as the hosts could earn some extra money by renting an empty room and guest would get to know better their destination place and live “in the shoes” of a local. Moreover, it could support social interaction between them. However the expansion and the scale up of this idea, occurred many problems in the cities, the people and the economy. Lately, many governments are trying to come up with solutions in many levels.

The following research has focused on the general picture of some of the cities in Europe. Not all the cities are in an “emergency situation”. However, as the some of the problems are already known, it is possible to act now and be prepared for the future. The following information are retrieved from the site [www.airdna.co](http://www.airdna.co). The data analyzed, concern rates related short term accommodation based on Airbnb and Homeaway. A map is giving the main concentration of the active rentals, a pie the percentages of the types of accommodation (shared room, private room and entire home) and the graph the rental growth during the last years and the current percentage of annual growth. The purpose is to understand the current situation before select the city of intervention.

### Barcelona



Map 1



Statistics 1

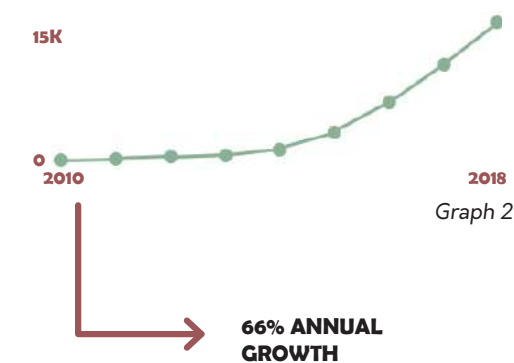
Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>

## Sharing economy and short term accommodation

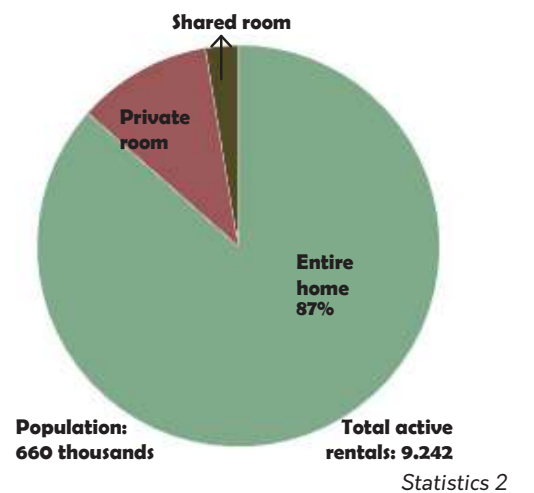
### Athens



Map 2



Graph 2



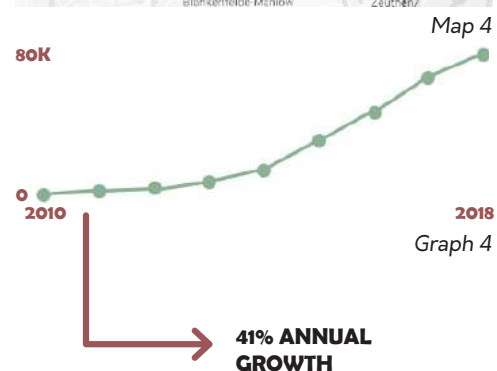
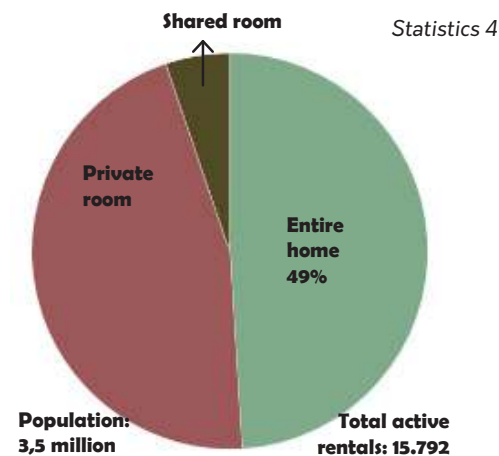
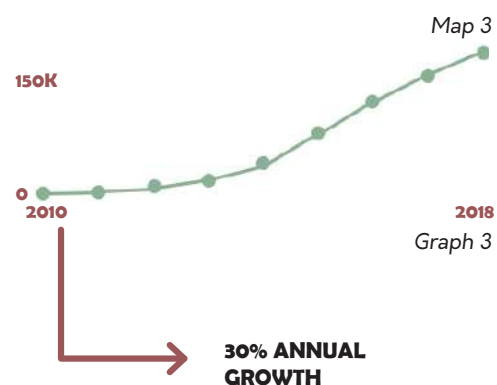
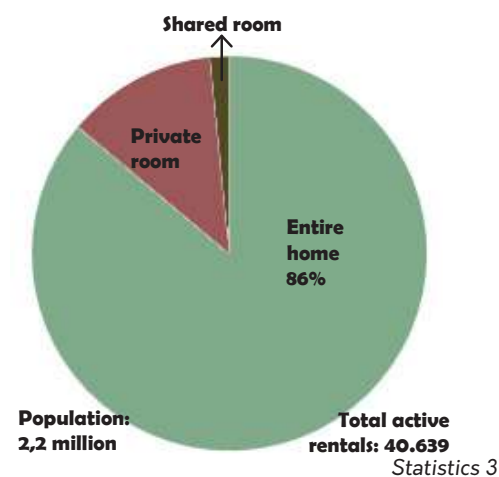
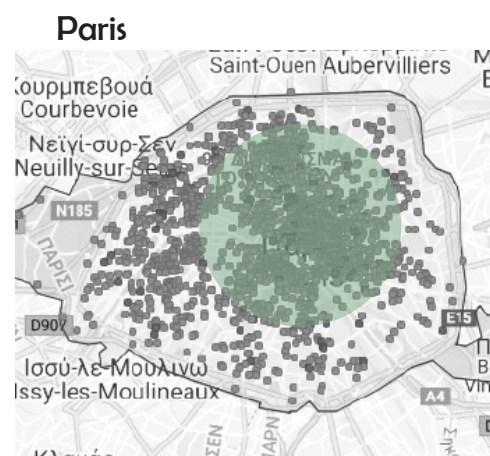
Statistics 2

As the problem was firstly detected in the capital cities of the south Europe, Barcelona and Athens, were selected to analyzed further. In this analysis it is important the type of accommodation, the population number in comparison with the total active rentals number and the percentage of growth as it predicts the possible future. In case of Barcelona the interesting fact is that the living is ‘more’ shared as expected. Almost half of

the hosts are renting a private rooms or shared room than the entire apartment. That increases the possibilities to meet other people during the staying and actual share the house. In case of Athens the percentage of entire home rented is around 87% which is the highest score compared with the rest selected cities. In this city the short term rental are approached less as a sharing living way and more as a profitable business.

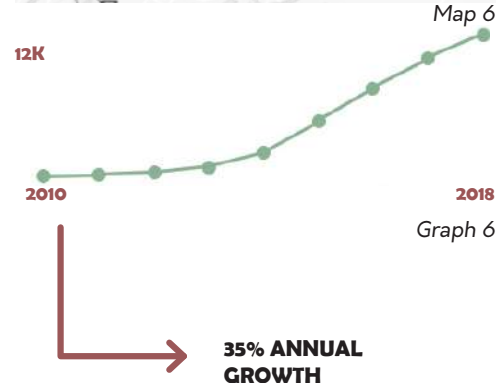
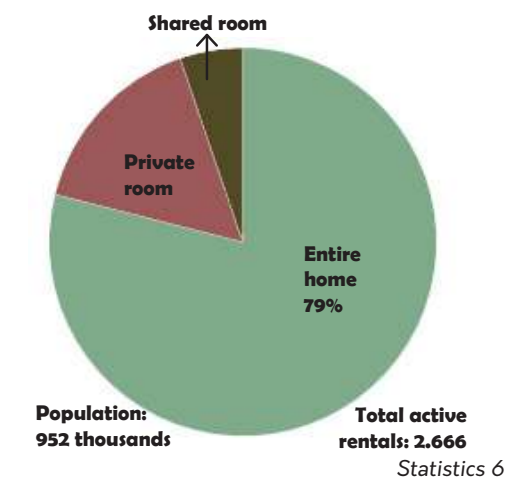
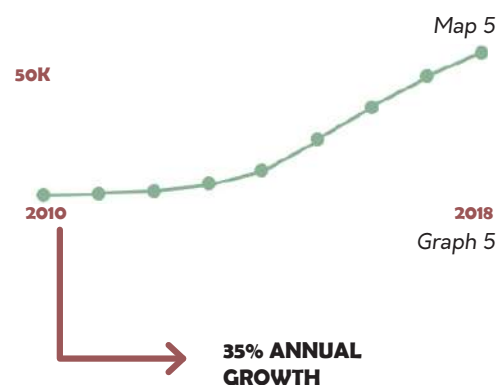
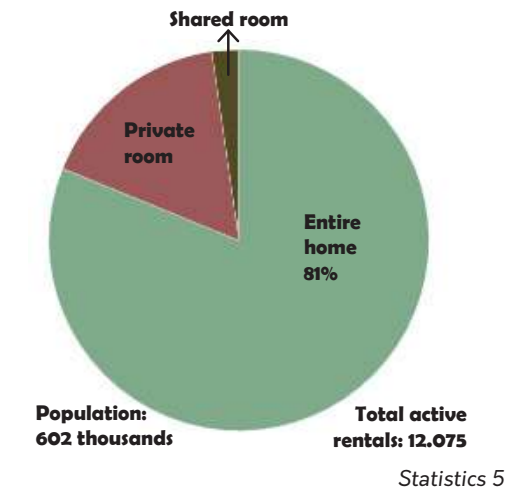
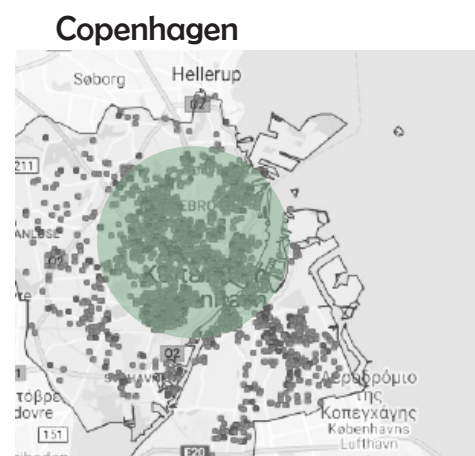
Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>





Research

Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>



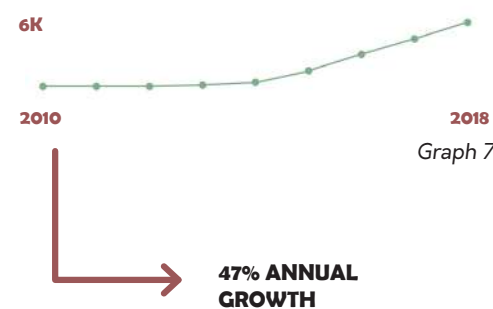
Research

Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>

## Göteborg



Map 7



Graph 7

The last selected cities are located in Scandinavia. Copenhagen and Stockholm were selected because they give a representative image as capital cities in the north. Göteborg is selected as the city of intervention and case study of the topic. Göteborg has around 1,000 active rentals and the population comes up to 567 thousands. Most of the hosts are renting their entire apartment. The interesting fact about Göteborg is the growth, which is 47% and is increasing since 2014. In 2013 the rentals were 163 and in the next 5 years they multiplied by 40% and increased to 6,700 until 2018. Therefore the case of Göteborg is selected as the case study, as the proposal can refer to the moment right before the big problems begin.

Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>

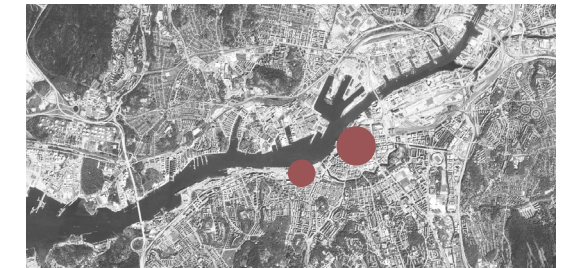
## Case of Göteborg

### Statistics in Göteborg

The next step of the research is to understand the case of Göteborg related with the short term accommodation.

#### 1. Which area is more popular for searching accommodation?

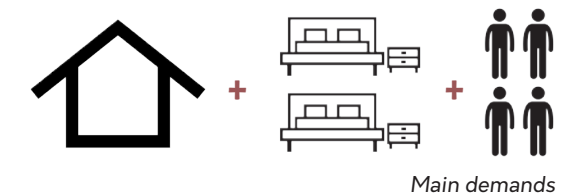
A survey was focused on the density of the available listings in each district of Göteborg. As expected, the area of Majorna and Centrum are having most of the apartments.



Popular areas

#### 2. What is the average rental size and how many people can it host?

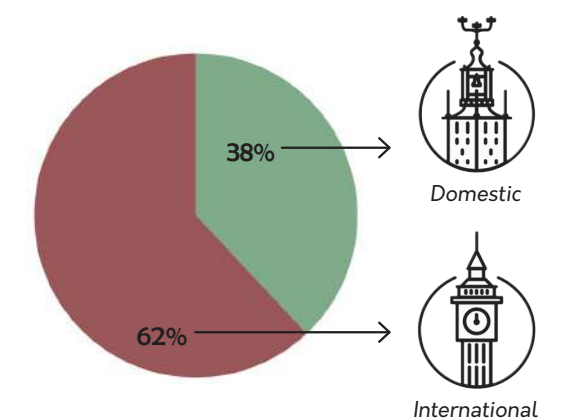
The most common rental size of apartment it contains 2 bedrooms (1.7) and hosts 4 people (4.3). That info gives an insight of the program description of the proposal.



Main demands

#### 3. From where do the visitors come from?

The 62% of the visitors are international and come from London while the rest 38% are domestic and come from Stockholm. Interesting is the fact that the second highest percentage of domestic visitors comes from Göteborg itself. This percentage, in comparison with the shortage of housing in the region of Göteborg, could be concluded that short term accommodation is urgent need not only for tourists, but also employees, immigrants, students.

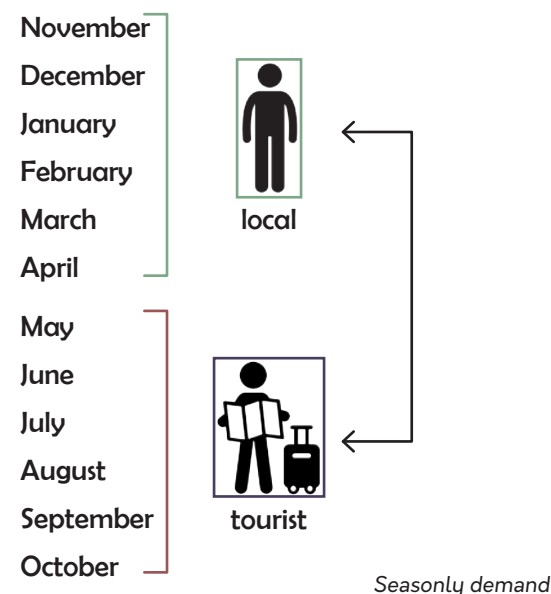


Where people coming from

Information retrieved from:  
<https://www.airdna.co/vacation-rental-data>

#### 4. Which are the months of peak and low season?

The city of Göteborg doesn't appear to have intense seasonality. The lack of housing is partially responsible for that fact. However June, July, August, September and October are having bigger travel demands than the rest of the year. That could make possible the sharing of space among different people through time.



#### Conclusions

The case of Göteborg is interesting and different from big capitals in Europe. The city is not consider a typical touristic destination in Scandinavia, especially comparing with Copenhagen. However there is high annual growth of demand of accommodation the last years. Considering the demographic characteristics of people visiting, we can conclude that the statistics and the situation reflect another major

problem of the city and, the country in general. Due to lack of housing, many people searching a space at this market. Another fact related with short term and contemporary way of living, is the high mobility modern life appears to characterized by. More and more people are in need of constant changes and therefore getting detached from ownership of houses. This needs and demands will this project deal with.

## Key Concepts

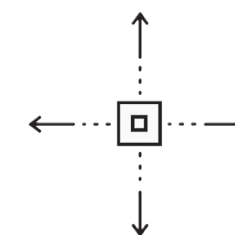
#### Shared spaces

That concept of shared spaces will investigate how different spaces can co-exist together. How can a private space as a bedroom designed close to a meeting outdoor space with public activities. How could the different flows of people in the urban space don't disturb the short term living? What types of spaces activities can be shared among different groups and activities.



#### Dynamic change

The needs and people visiting and using the proposal will differ from time to time. The infrastructure should be able to host different needs and adapt every time. The amount of people is an important parameter as they could affect the changes. They could decide the space they need and move objects/parts of the proposal. However it is also important to design some fixed and stable spaces.



#### Identity

Internet and social media were one of the most important tools for sharing economy to be developed at a greater scale. The visual world is different from the reality. Some hidden spaces in the real world are getting more and more popular in the visual. However this is a dynamic and constantly changing condition. That affects the perception and image of a city each moment. How this double reality can become a tool of analysis of the city from different perspectives?





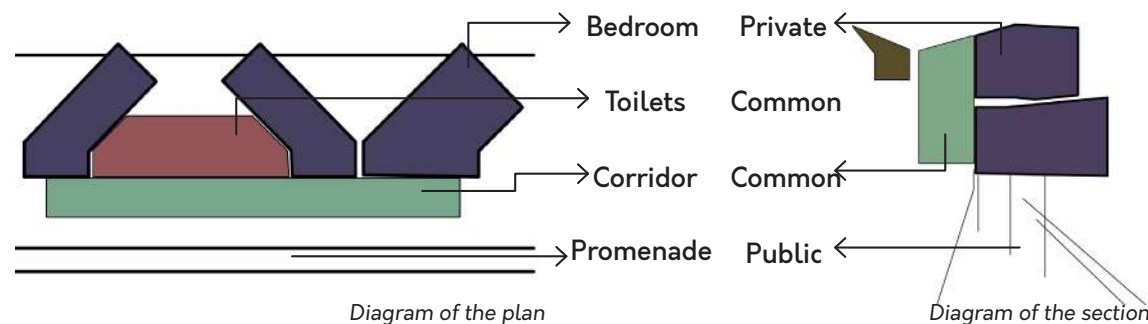
## Shared spaces

### Capsule Hotel

Menomenopiou, Paris



Figure 1: MenoMenoPiu Short term housing in Paris  
(Adapted by MenoMenoPiu Architects, 2014)



#### Description

The architects addressed the problem of decentralization of the citizens from Paris due to short term accommodation of tourists. Therefore they proposed a system located in the riverbank that can host small capsules of bedrooms and toilets. The idea is interesting as they placed such a private use in a traditionally public part of the city. The elevation of the capsule from the ground is a way to secure the privacy.

#### Personal thoughts

How the most private spaces of living could be placed and be functional in the middle of public?

What type of design or program could “protect” them and create a buffer zone between them?

Could that buffer act as an important use for the city as well?

## Dynamic change

### Art form made of glass

Bhimanshu Pandel

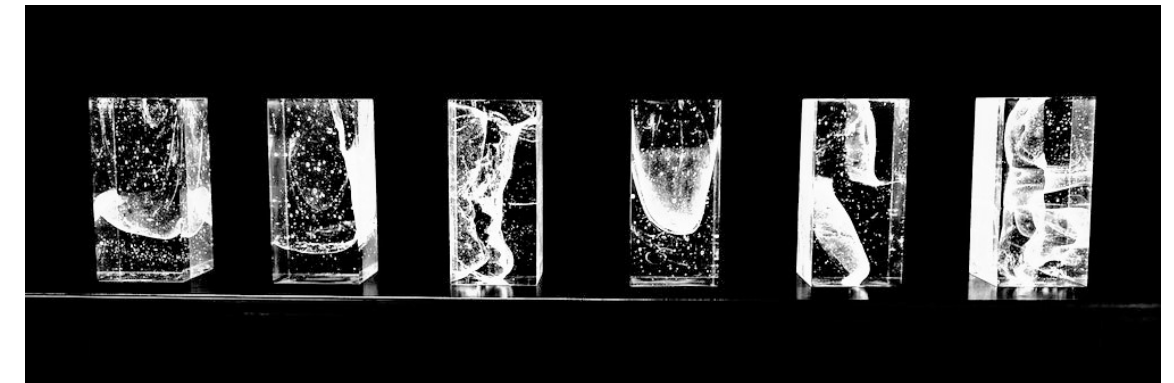


Figure 2: Temporality (Adapted by Bhimanshu Pandel, 2018)

#### Description

The reference is an art project made of glass. It is interesting as it can be conceived as different moments in which one the object has different form.

#### Personal thoughts

How could the proposal change its form as the users and needs change at specific time periods?

How can the changes be visible and tangible in the proposal?

Images retrieved from:  
<https://www.archdaily.com/577304/menomenopiou-proposes-capsule-hotel-for-short-term-housing-in-paris>

Image retrieved from:  
<http://www.artprize.org/68703>

## Dynamic change

### Aqua Airground

Jeffrey Shaw



Figure 3: Aqua Airground  
(Adapted by Jeffrey Shaw, 1972)

#### Description

The reference is about an interactive installation project of 1970s in Amsterdam. It was a large cushion filled with air and water. When people passed through it the cushion reacts and adapts to the forces and change its shape.

#### Personal thoughts

How could the proposal change dynamically by visitors actions?

How can the human forces be visible and tangible?

Could this infrastructure become a platform of social interaction?

Images retrieved from:  
<https://www.jeffreyshawcompendium.com/portfolio/aqua-airground/>

## Dynamic change

### Apartment

Marek Walczak & Martin Wattenberg & Jonathan Feinberg

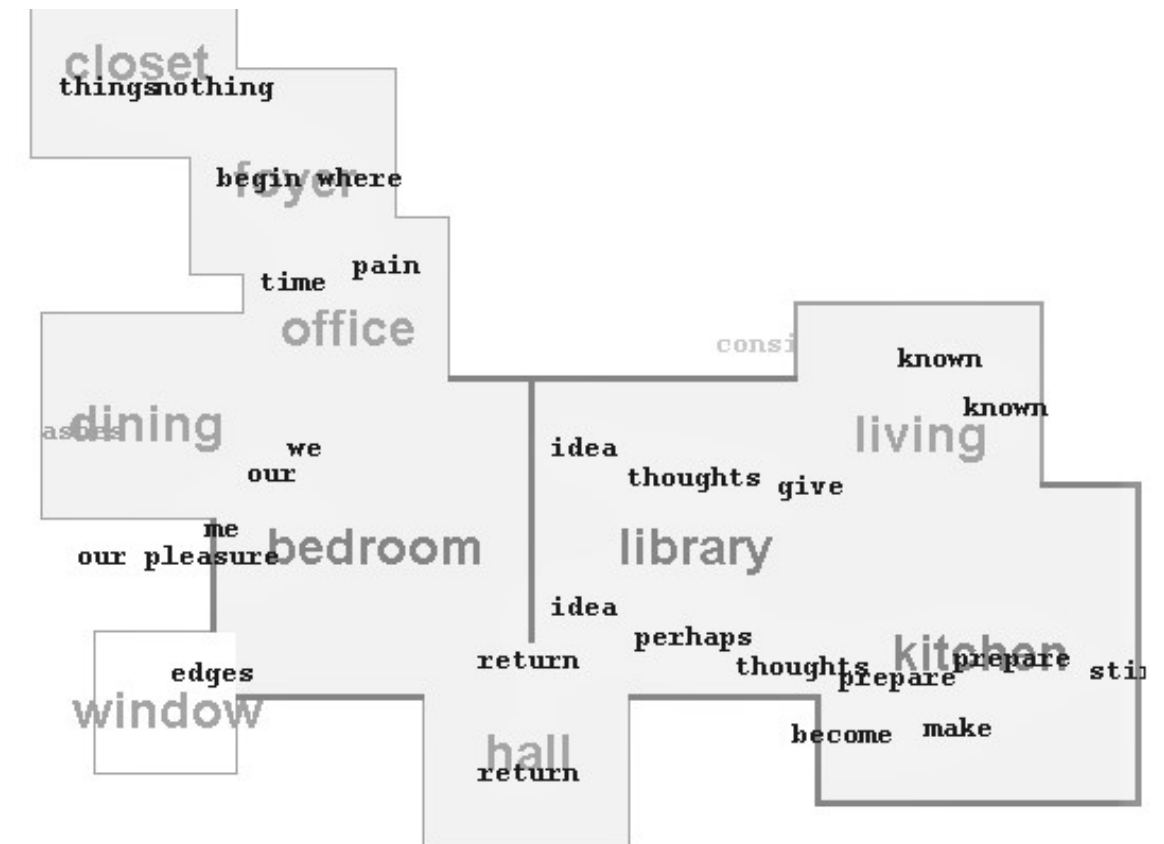


Figure 4: Apartment  
(Adapted by Marek Walczak and Martin Wattenberg, 2004)

#### Description

The 'apartment' was a digital interdisciplinary project. The user could type different words. Each word is linked with a "typical" room of an apartment. For example, by typing the word "return" the online platform linked it with the "hall" and created the space. The size of the space is depended on the number of the related words. At the same time some words are linked with more than a room. In the end, the layout of the apartment is totally customized to the user.

#### Personal thoughts

Customization of the proposal depending on the needs and preferences.

Breakdown of rooms into activities.

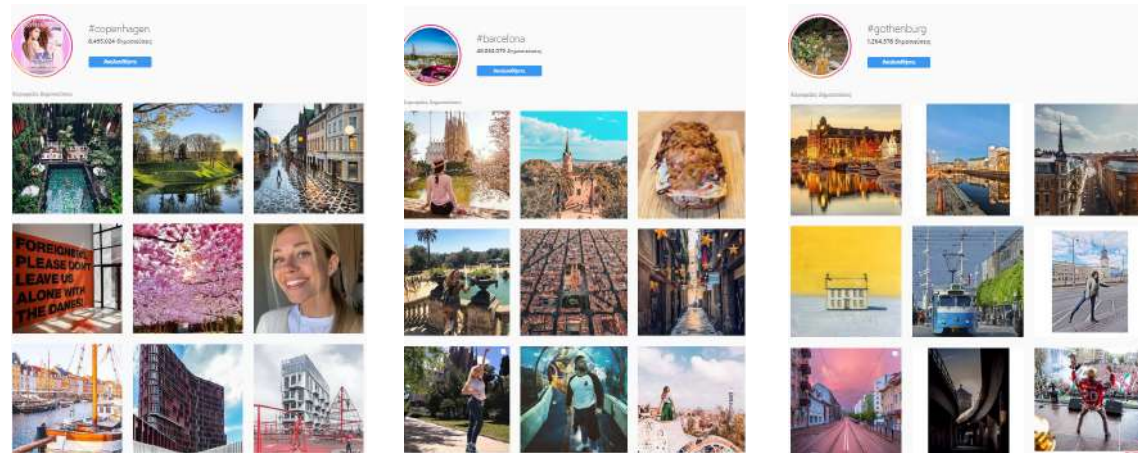
Interconnection between the activities

Images retrieved from:  
<http://turbulence.org/project/apartment/#>



## Identity

### Social media and analysis



Public instagram posts under hastags of cities

### Description

Social media and digital platforms are a important tool for sharing initiatives to grow and function. Moreover, social media tend to create an identity for a place from the posts of different uses. Sometimes this digital identity is different from the physical and probably more spread around the world. A project names "10.000 Moving Cities- Same but Different" is a installation of virtual reality where the person can "walk" around the virtual city where its images are constantly changing depending on the posts published in the selected time.

### Personal thoughts

How can the social media become a tool for analysis of a city?

## Conclusions

### Temporal sharing accommodation

The research based on statistics of short term rentals around Europe indicates the problem that has been occurred. Short term accommodation was scaled up and established in a bigger scale in a way that harms the city and the people with many manners.

The "Airbnb phenomenon" is mostly related with touristic accommodation. However, as proved in case of Göteborg and the swedish context, it can reflect the lack of housing and it can be the last and desperate search for a house. So, what if we rethink the temporality and the sharing

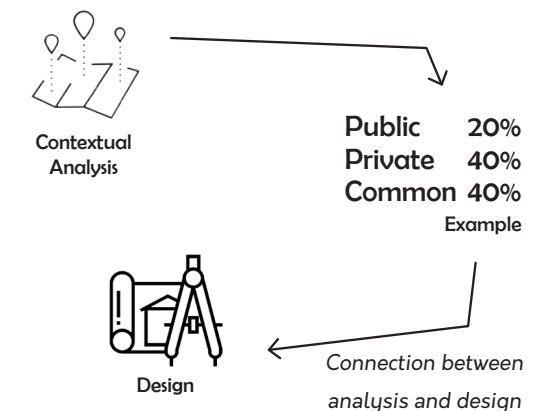
housing? What if this is a key concept to address at multiple contemporary urban problems at once except from lack of housing, as reactivation of urban spaces, densification in city centers and sustainable and contemporary way of living?

People could use a space temporary, express themselves and serves their needs, by respecting and sharing the space and resources with others, without been harmful neither for anybody or the environment. How could this idea been translated spatially?

### Searching for the right spot

In order select the place where the a temporal, sharing infrastructure will be places we need to understand the space and the level of sharing. How can urban space be analyzed and understood through the prism of temporal, sharing and human scale?

The next chapter will bridge the research and the design through a spatial analysis of the urban spaces. It will address which is the level of public and private in relation with the space, the activities and the people.



## *CHAPTER 3*

# *CONTEXTUALIZATION*

The chapter of contextualization is focusing on the understanding of the city of Göteborg, under the prism of sharing and temporality. The first parts is a brief overview of the current projects in the area. Then the understanding of the context starts with mapping. A process of classification which leads to the creation of a catalogue introduces the idea of sharing into the context and the future design. Finally a part of experimentation introduces the idea of a system which is related with the proposal.

Existing projects  
Understanding of the context  
Classification  
Catalogue  
Experimentation  
Conclusions

## Existing projects

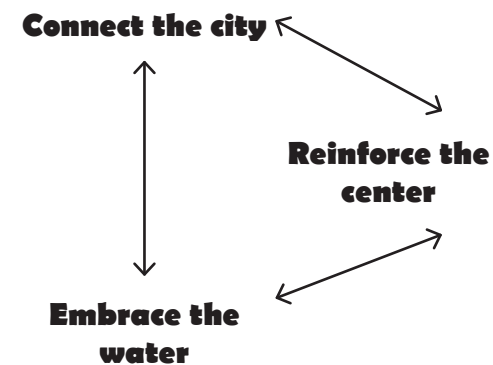
### Selected city

The selected city for further exploration is Göteborg. Therefore the next pages

are dedicated to explain the vision and the future projects in the city.

### Älvstaden

The RiverCity Göteborg is an urban development project of densification focused on the center and the surrounding areas around the water in the city of Göteborg. The first dialogue of the project started on 2011 and it is going to be completed around 2050 on different stages. The vision is based on three core strategies: connect the city, reinforce the center and embrace the water.



Main principles

### Plans for Södra Älvstraden

The area of Södra Älvstraden (south riverbank), which include Stenpiren, Skeppsbron, Järntorget and Masthuggskajen, is a part of that project and has already been transforming into a new, inclusive and sustainable area. The area is going to be densified both in

residential buildings and workplaces. Moreover the municipality plans to create a new meeting space along the river by Stenpiren with green areas. The project is going to be completed by 2027.



Areas of intervention

Images and information retrieved from:  
<http://alvstaden.goteborg.se/?lang=en>

### Västlänken

Västlänken is a urban project related with mobility in the area of Göteborg. It is an underground railway which connects three mains traffic nodes of the city, Central Stationen, Haga (close to Järntorget) and Korsvägen with southern and eastern parts of the city. The construction has already started and is expected to be finished by 2026.



Figure 5: Västlänken station  
 (Abako arkitektkontor AB)

<http://www.abako.se/vara-projekt/vastlanken-station-haga-2/>



## Understanding of the context

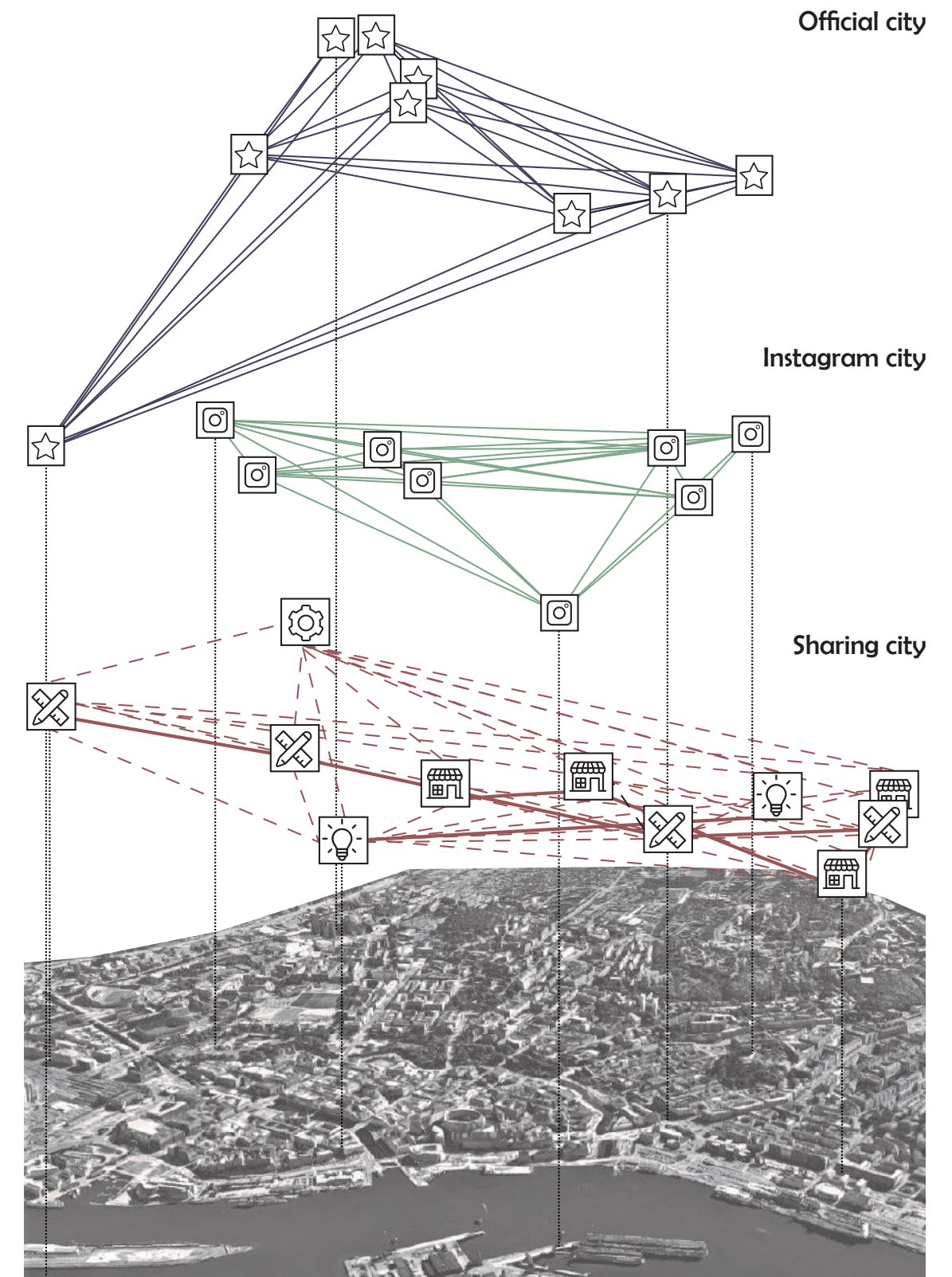
### Layers of the city

The city of Göteborg is selected as the case study of the thesis. The analysis starts with the overlapping of 3 maps related with the subject.

The first map is the “Official city” which represents the area suggested from the official website of the municipality as the best areas to visit.

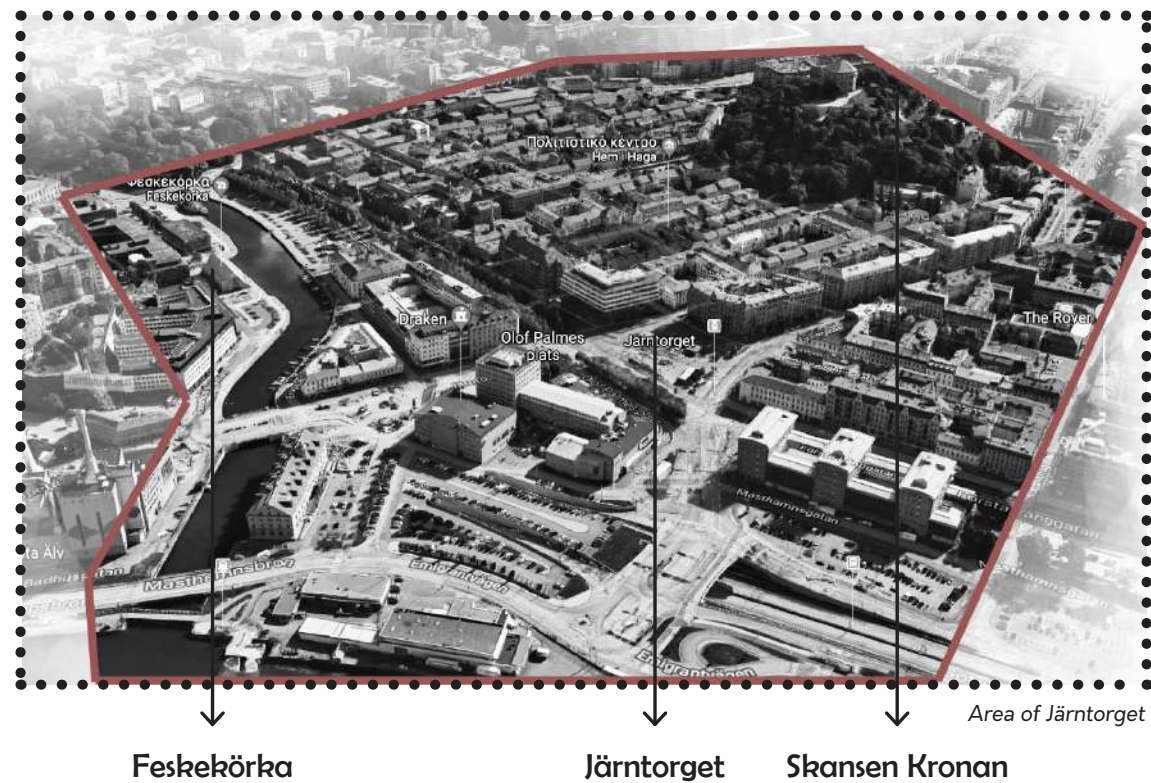
The second map, named “Instagram city”, is including the spot that are more appealing for photos in social media. This information is interpreted as a specific moment of “famous points” in the city that could potential change over longer or shorter time.

The third layer, “Sharing city”, is including the points of sharing initiatives in the city as mapped in the Smart Karta.



Overlapping of layers of the city

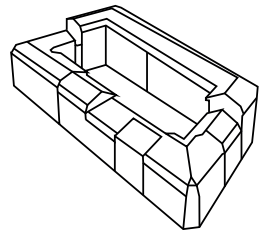
## Selected area



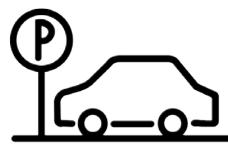
The map indicates the selected area of testing the proposal. The area around Järntorget is the most intense in the sense of overlapping of the city layers from the previous map. There are intense the points as well as the connections between them. The next

maps will explore the potential positions of the proposal and create categories from the perspective of public-private-common idea. Specific spots will be examined from the perspectives of borders, uses located around and the velocity of objects passing by.

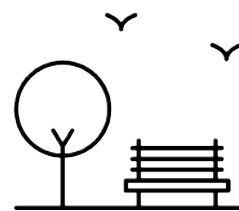
## Sites of analysis



Inner courtyards: for offering the solution of accommodation while residents don't need to move out, opportunity of sharing spaces between existing residents or people working around.



Parking plots: big plots, located in strategic positions, could host both public and private uses.



Squares: sites with many people passing by, waiting for trams or resting while walking, areas that could promote the sharing city idea.



Qualities of sites



Analysis map

Legend



Grouping of similar sites



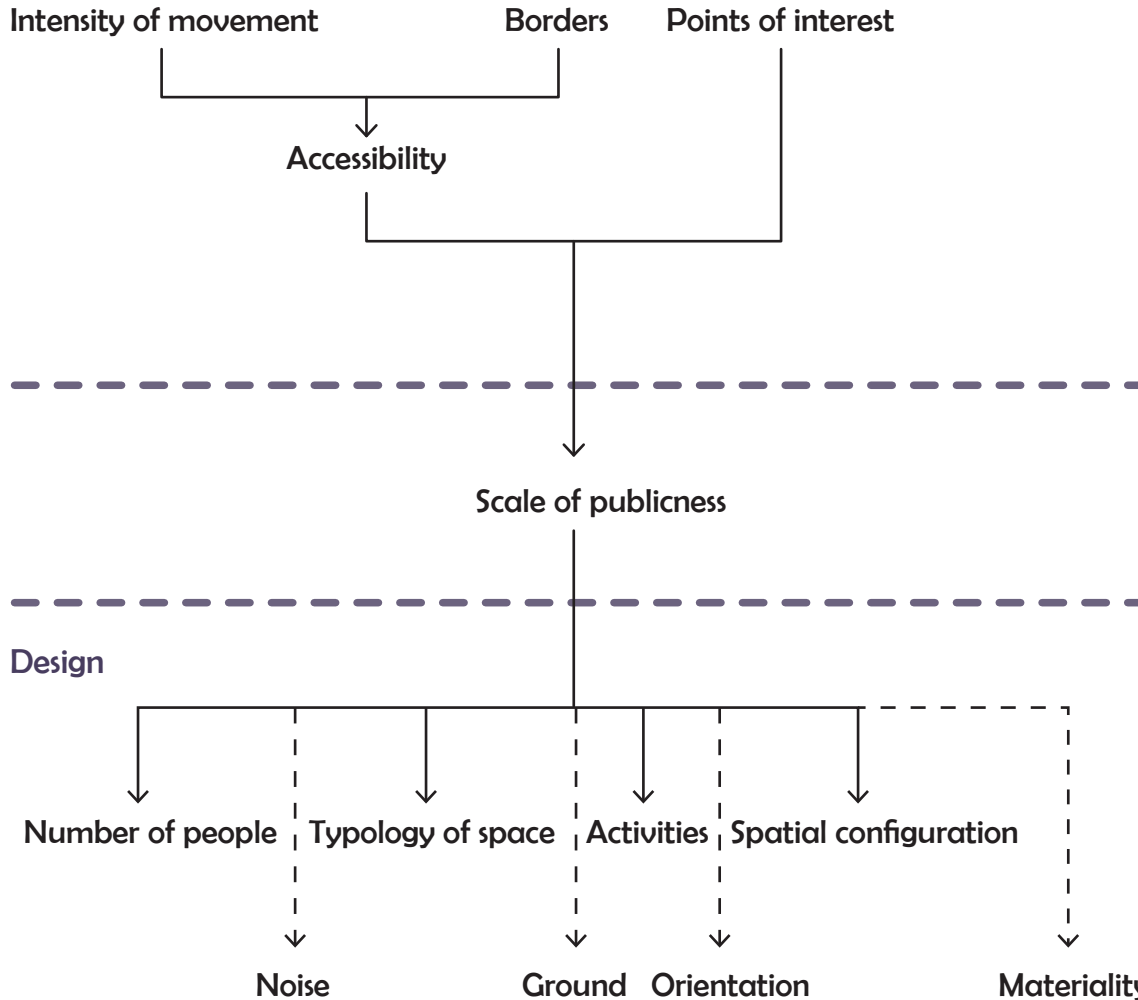
Map of categories

The sites are categorized in groups according the mapping of the previous steps. Each category has similar situations related with the borders, the points of interest and the intensity of movement and therefore could be considered as one typology.

# Classification

## Process

## Analysis



Mapping is the main method of analysis. Intensity of movement, borders and points of interest are the main important parameters needed to be investigated at the area. By the first two parameters, an accessibility grade is given to each site. The accessibility grade compared with the relation of the site with the points of interest will conclude to the grade of publicity investigated in the site.

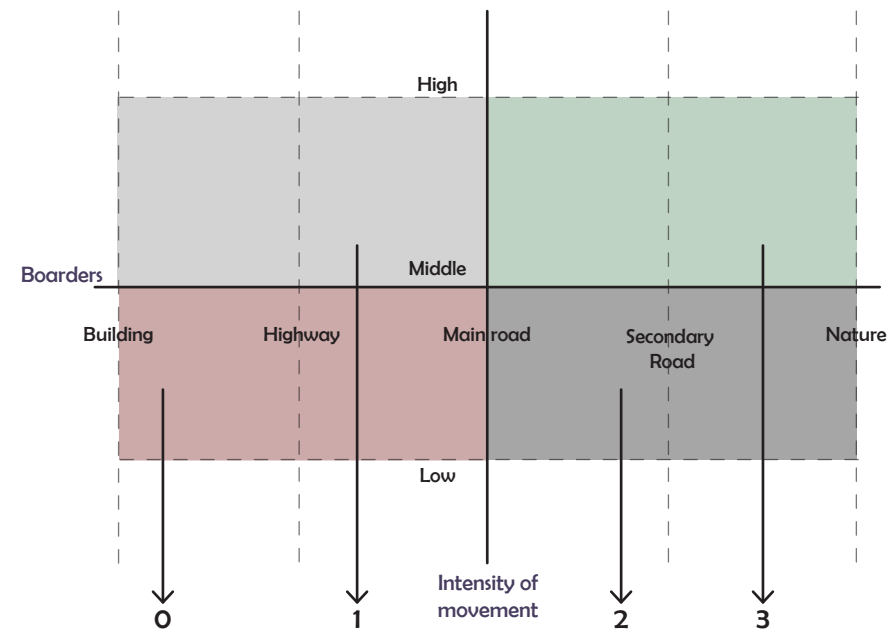
The spectrum of the sites depending on their public/private characteristics is considered as the outcome of the analysis and at the same time an important factor of the design.

The scale of publicness is translated into number of people, typology of space, activities, spatial configuration. Furthermore it is secondary related with some more technical aspects as for example the distance for the noise, the distance from the ground and the orientation.



## Tables of comparisons

### Accessibility



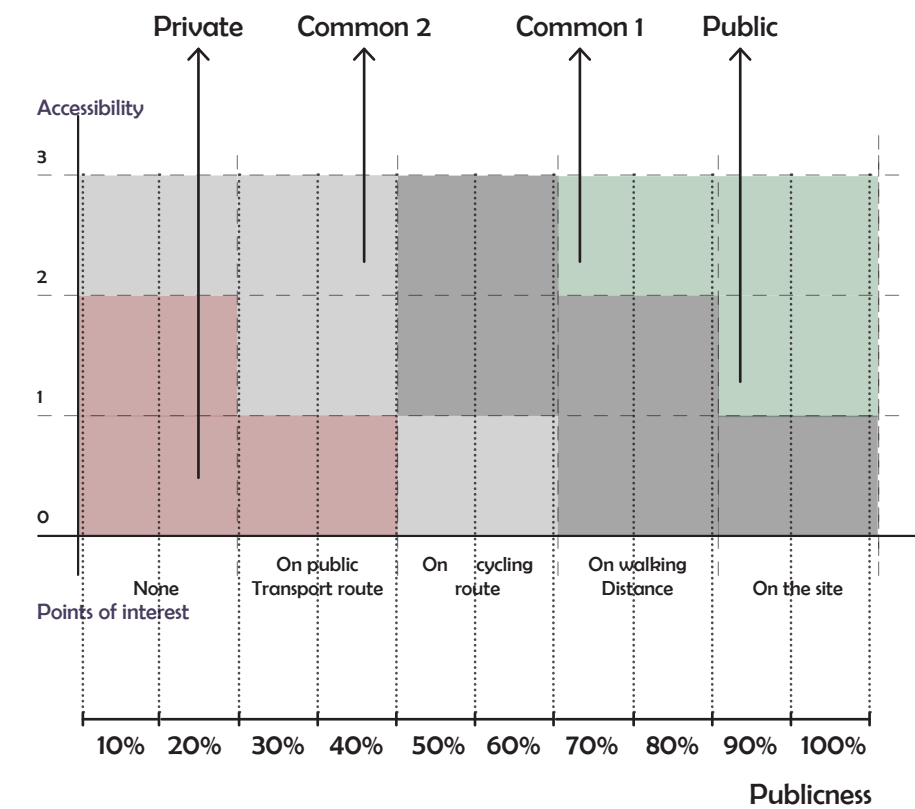
**Grade 0:** The areas that are graded with 0 are those surrounded by buildings or highways and appearing to have low intensity of movement. Those two boarders are identified as 'harder' to cross.

**Grade 1:** The area with the same boarders as the "Grade 0" and high intensity of movement are belonging in the 1st grade. Even though the boarders are hard, the spaces are active.

**Grade 2:** Sites surrounded by secondary roads or natural boarders, as hills or water, and having low intensity of movement are categorized in the 2nd grade of accessibility.

**Grade 3:** The last grade is the most "accessible" as it contains site with soft boarders (secondary roads, nature) and high intensity.

### Scale of publicness

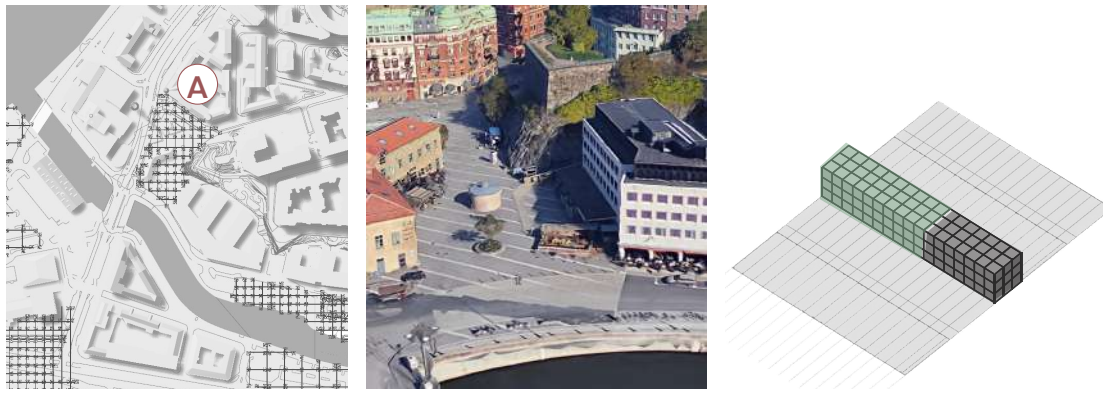


There are 4 level of publicness in the classification of the sites at the last step. "Public" are considered those having either on site or in very close distance one or more points or interest and a high grade of accessibility. "Private" are considered the sites having low

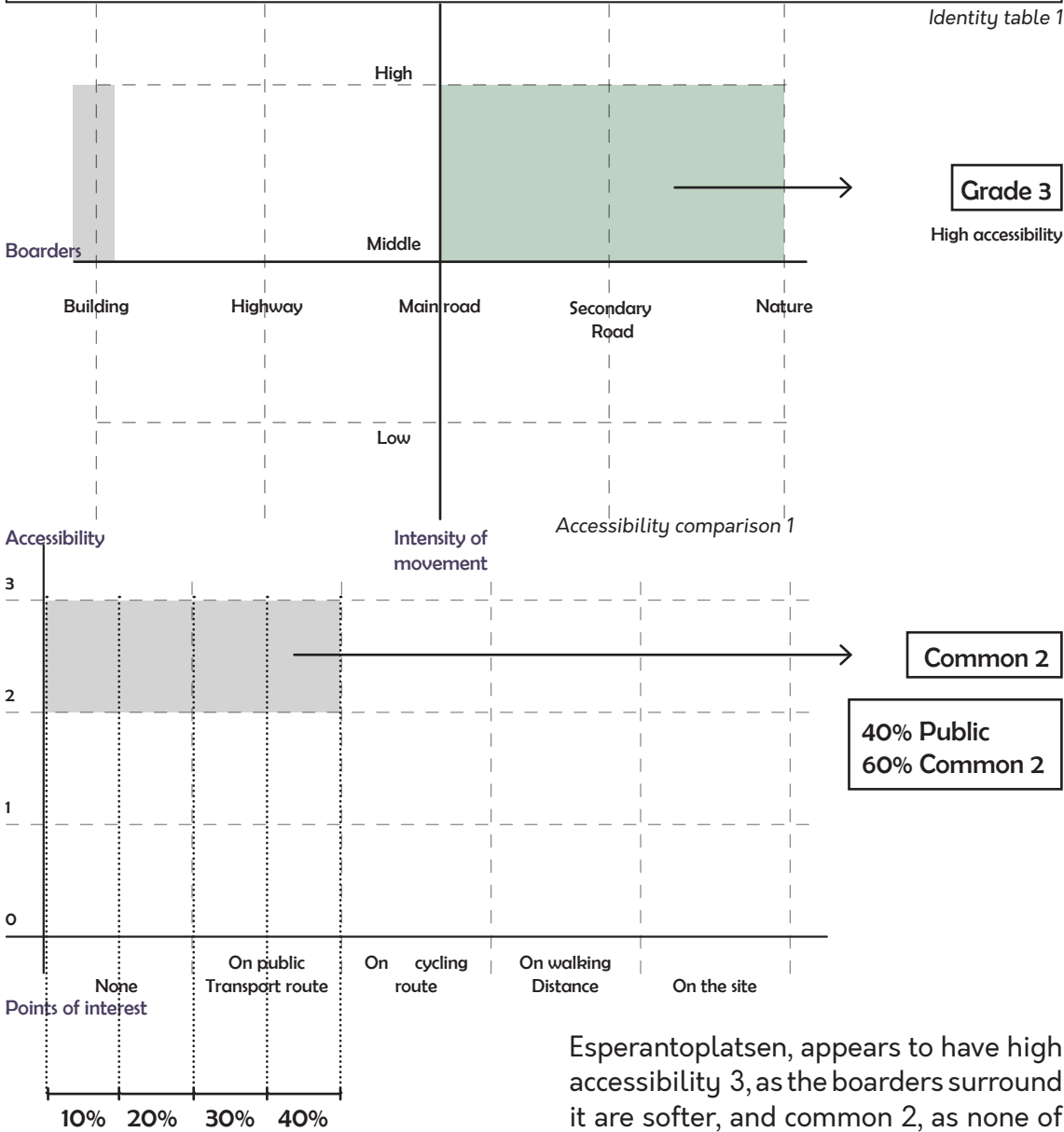
grade of accessibility and close to a point of interest by using public transport. Finally, the rest of the area are divided between the categories "common 1" and "common 2" with the factors of accessibility, close by using a bicycle or by walking being important.

# Catalogue

## Esperantoplatsen



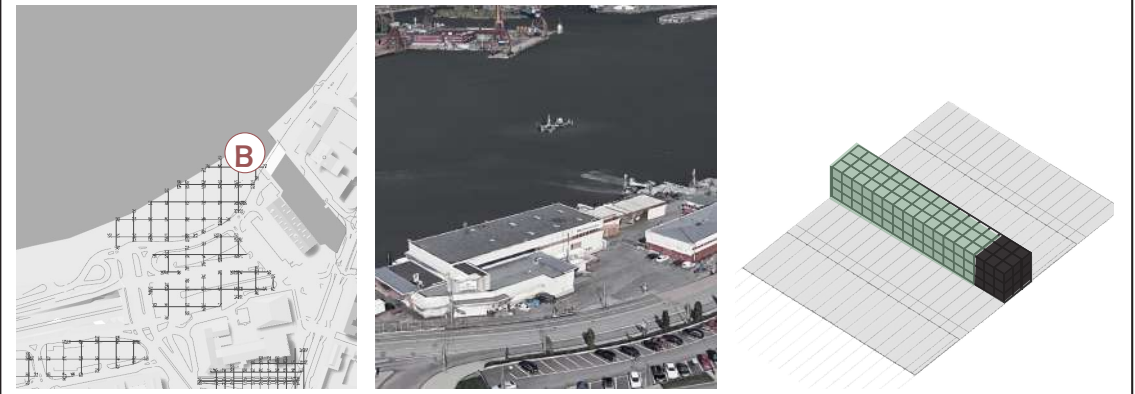
*Identity table 1*



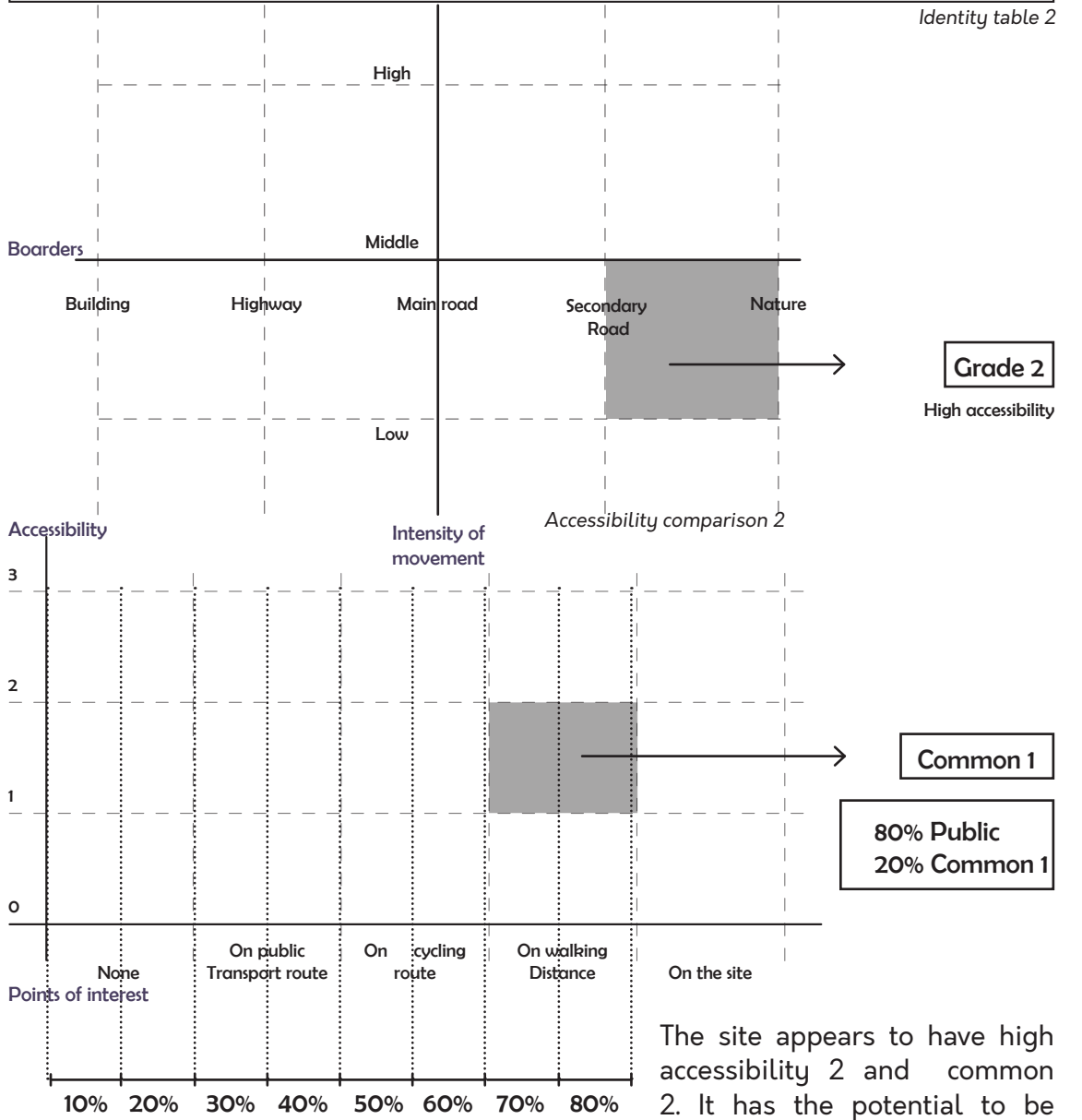
Esperantoplatsen, appears to have high accessibility 3, as the borders surround it are softer, and common 2, as none of the points of interest are located close by.

## Contextualization

## Emigrantvägen



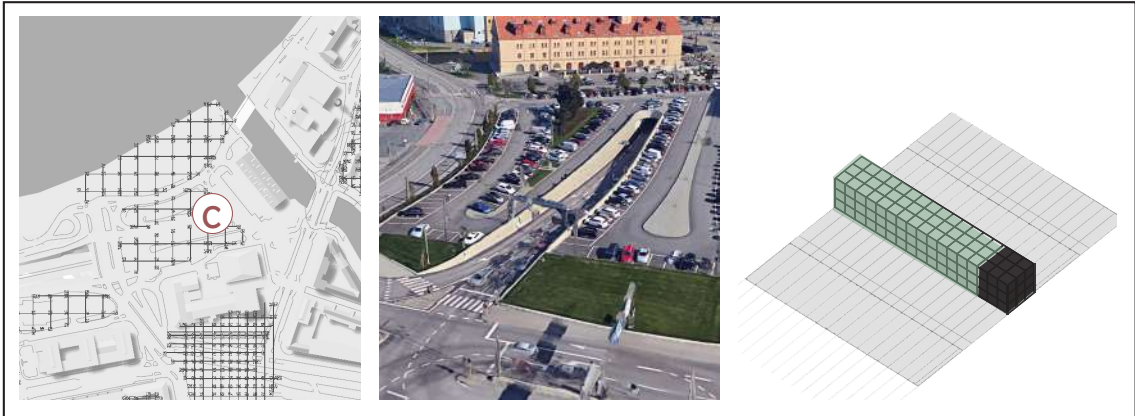
Identity table 2



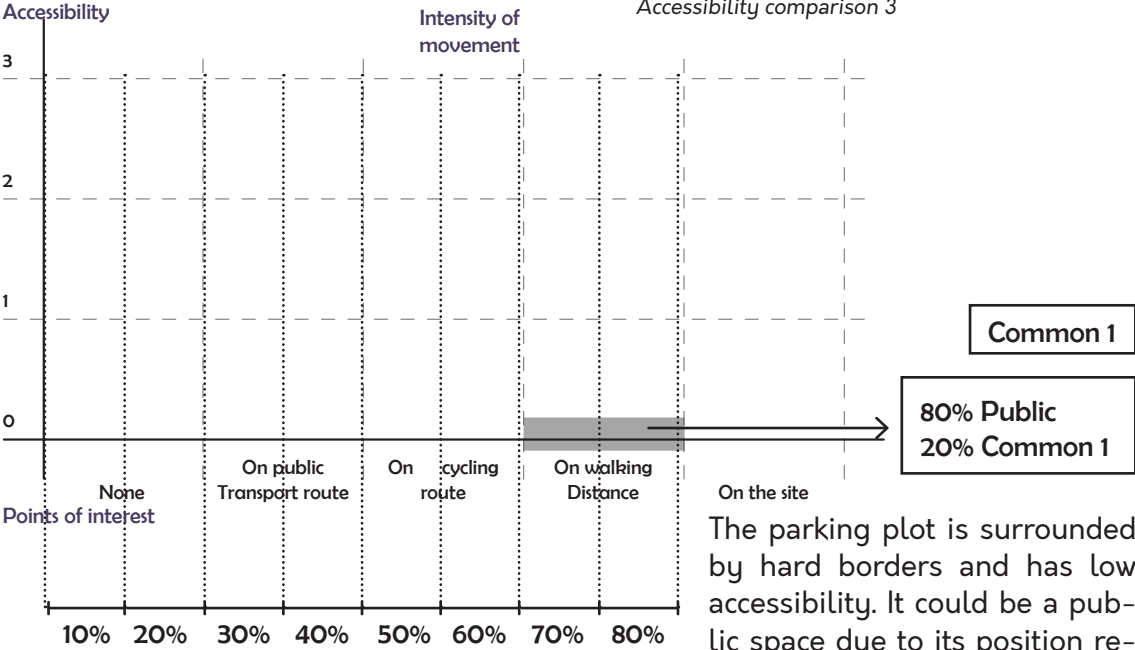
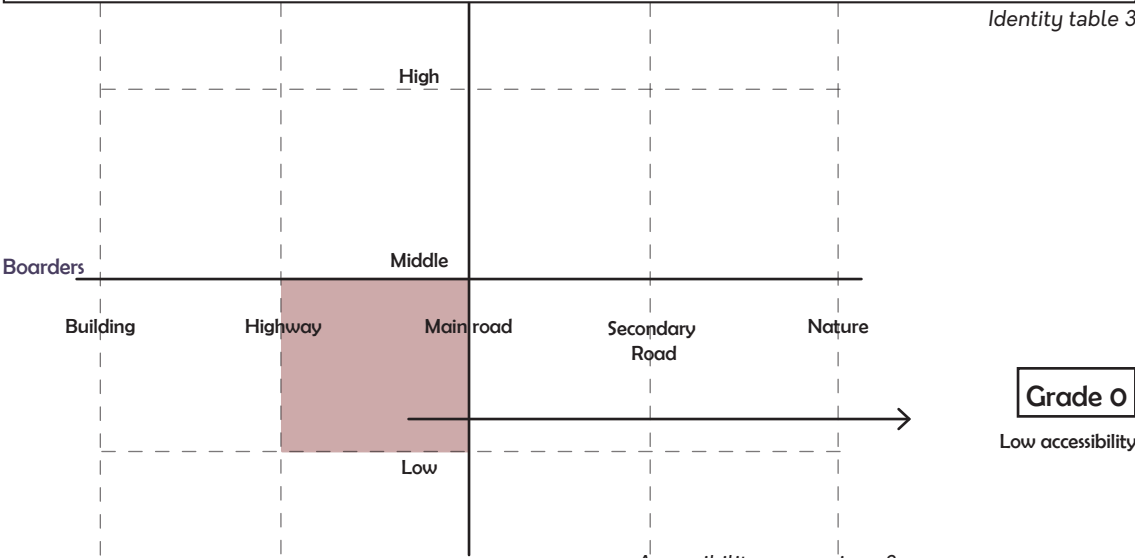
The site appears to have high accessibility 2 and common 2. It has the potential to be one of the most public site .

## Contextualization

Heurlins plats



Identity table 3



Publicness comparison 3

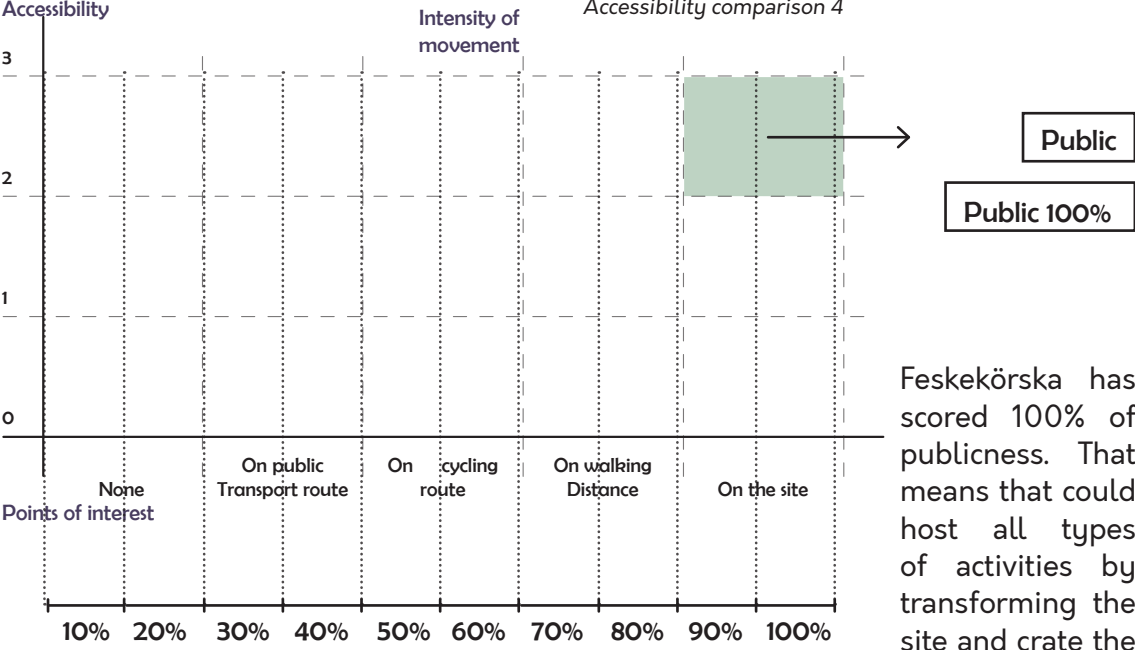
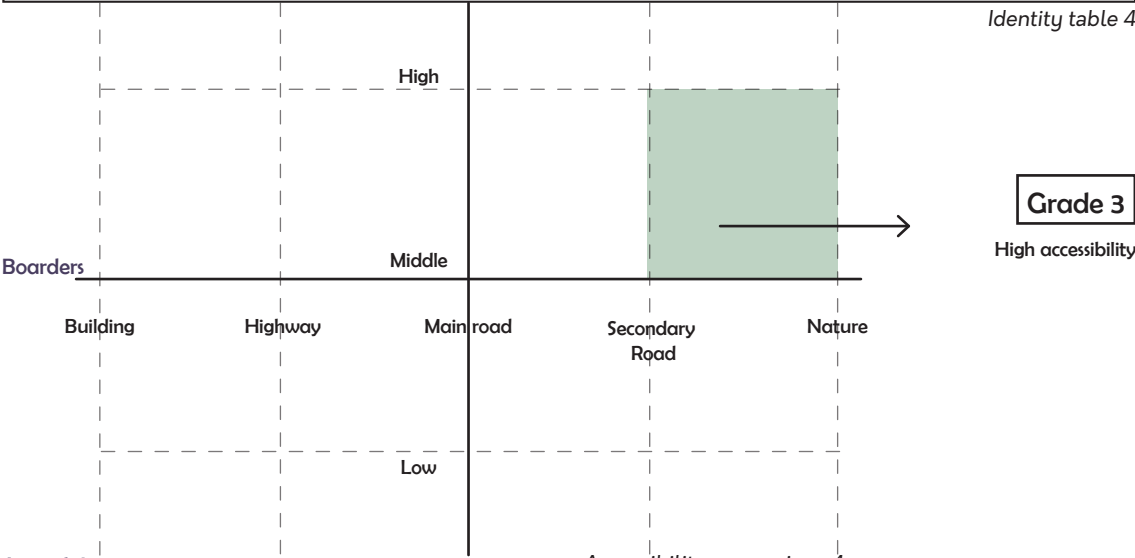
Contextualization

The parking plot is surrounded by hard borders and has low accessibility. It could be a public space due to its position related with the point of interest

Feskekörka



Identity table 4



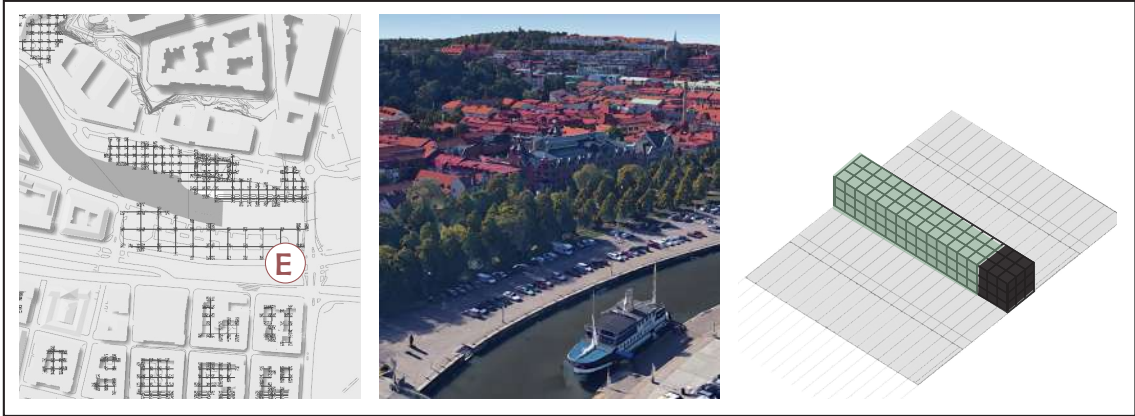
Publicness comparison 4

Contextualization

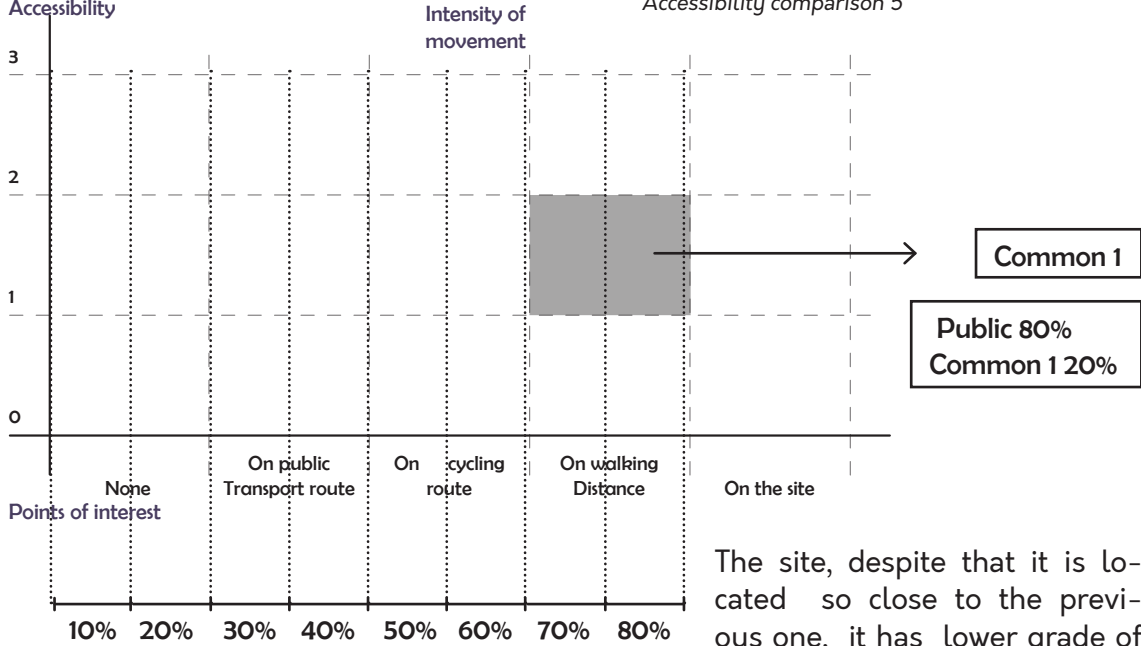
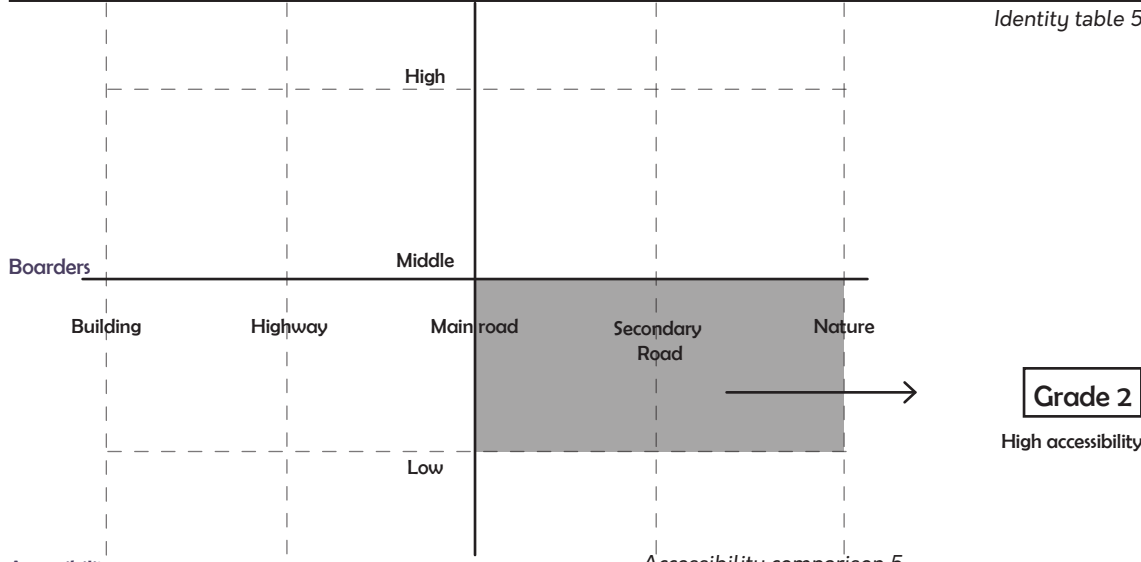
Feskekörka has scored 100% of publicness. That means that could host all types of activities by transforming the site and crate the willing borders.



Pustervik Parking



Identity table 5



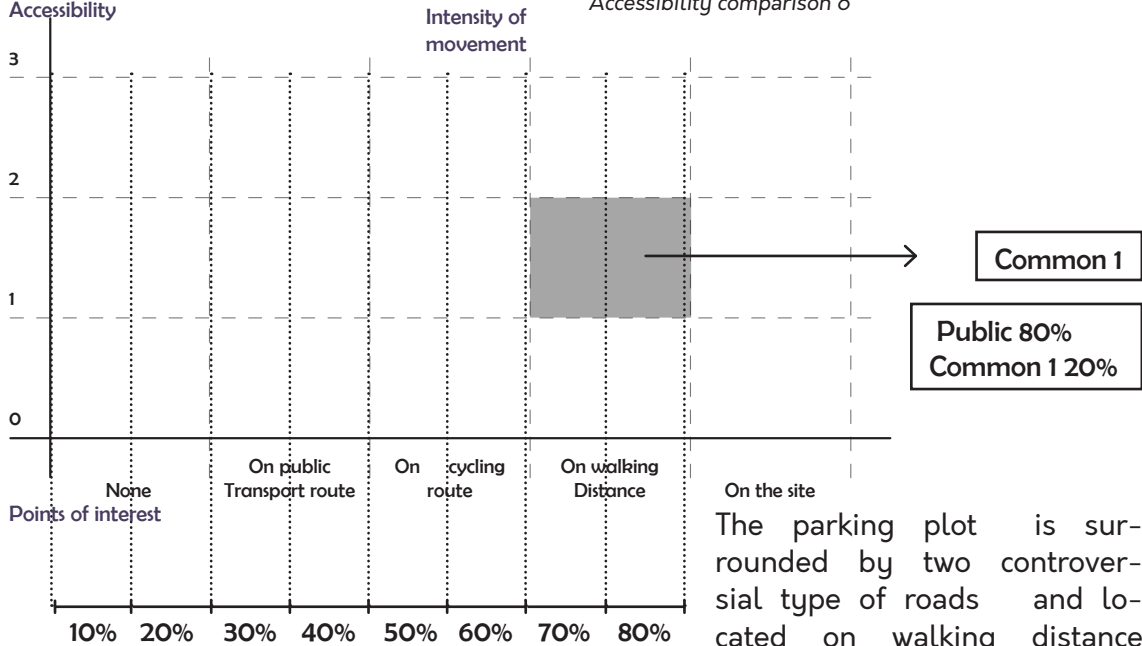
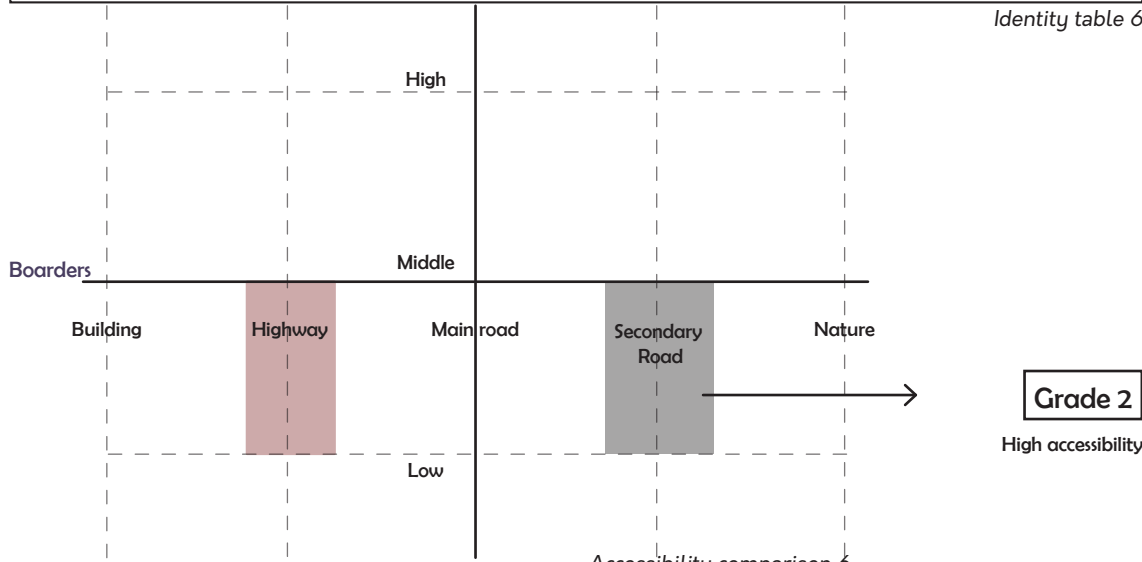
The site, despite that it is located so close to the previous one, it has lower grade of accessibility and publicness.

Publicness comparison 5

Masthamnsgatan



Identity table 6

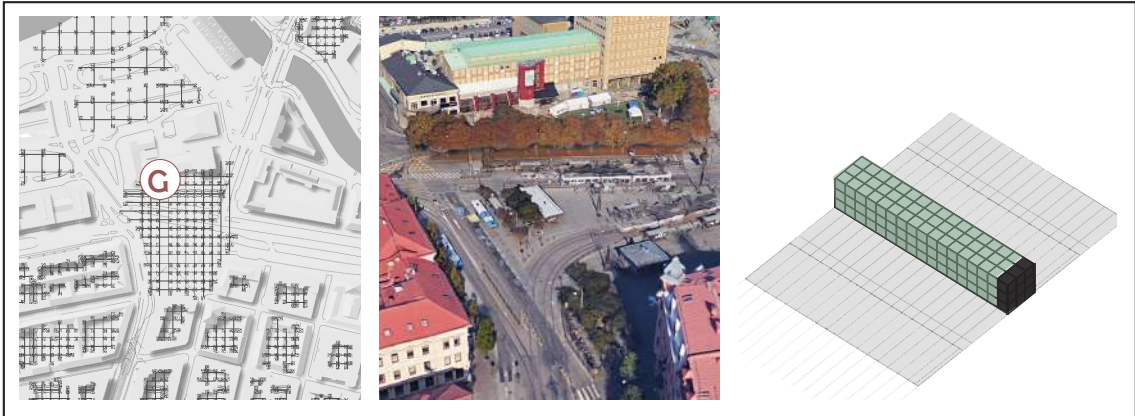


The parking plot is surrounded by two controversial type of roads and located on walking distance close to a point of interest.

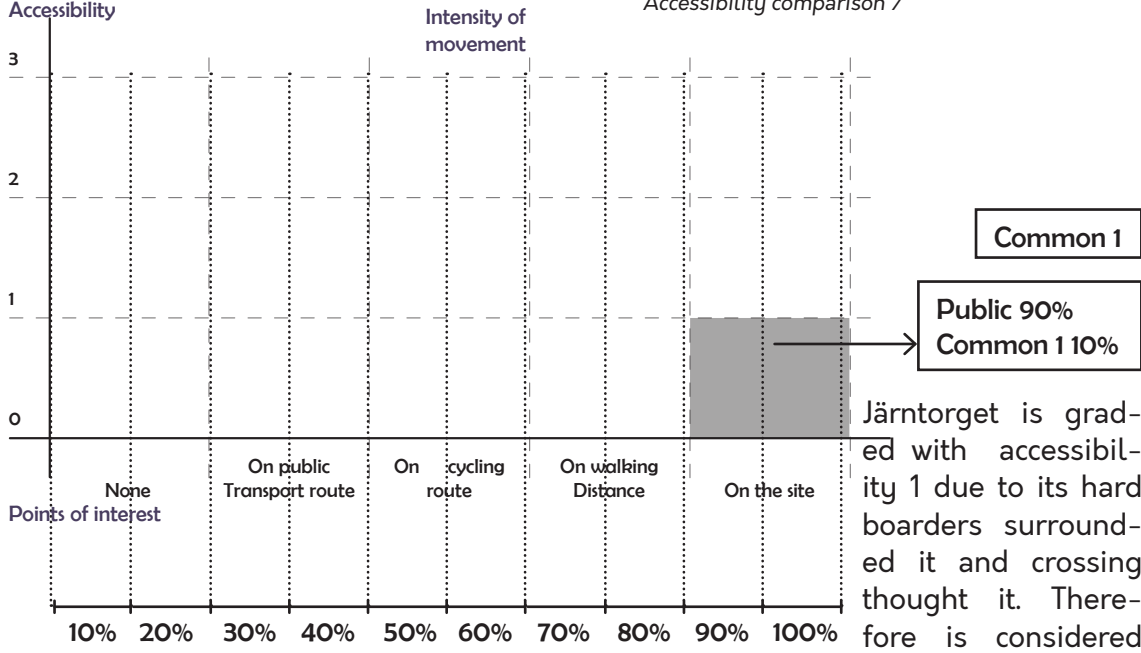
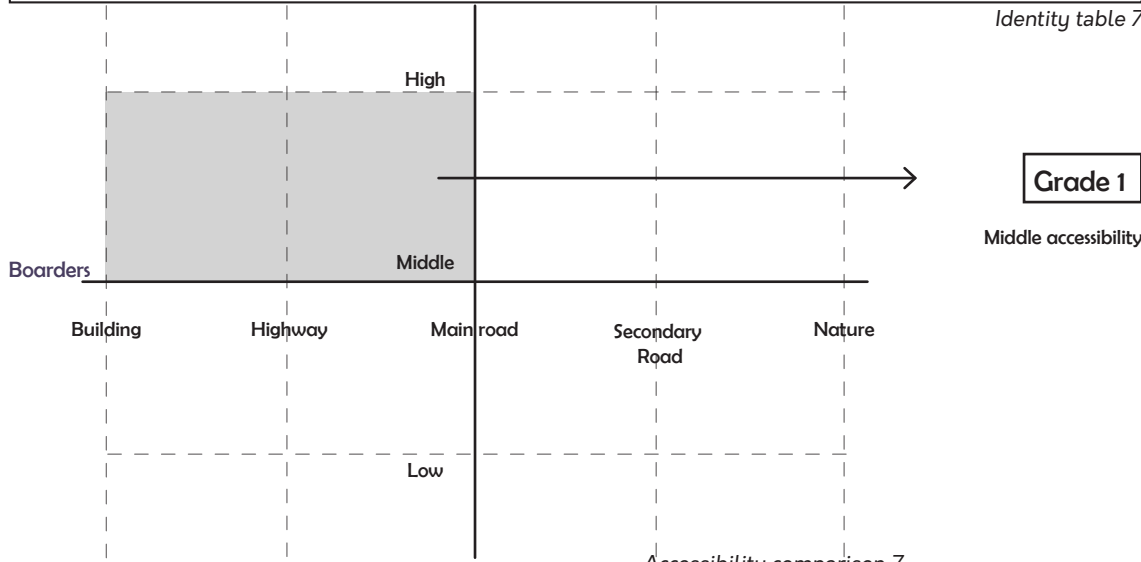
Publicness comparison 6



Järntorget



Identity table 7



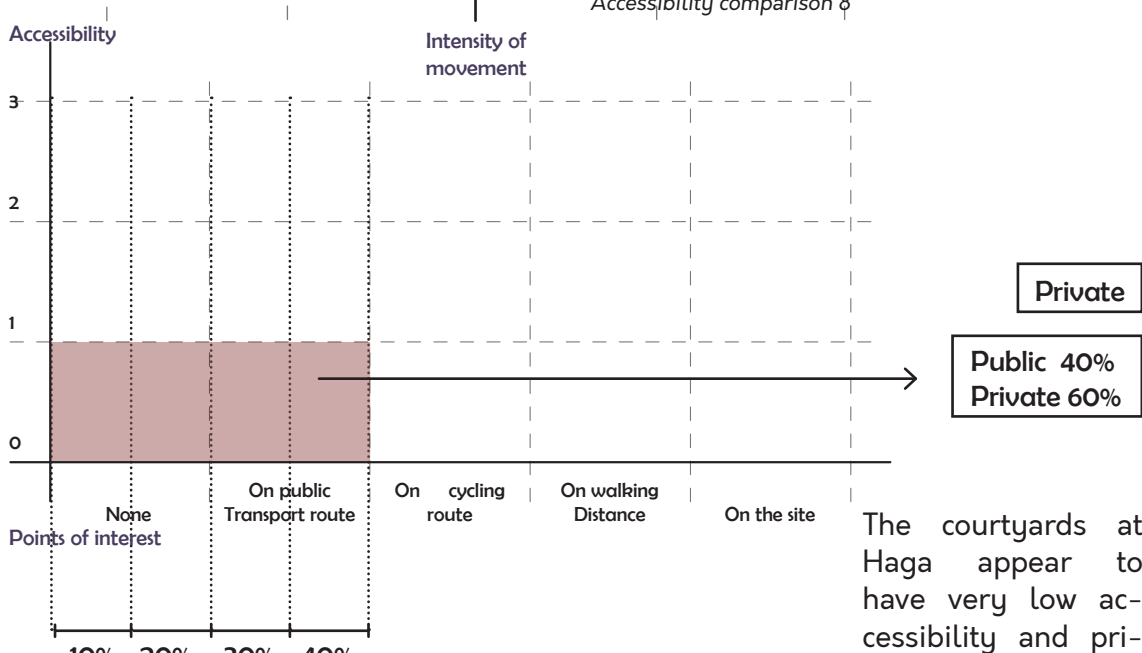
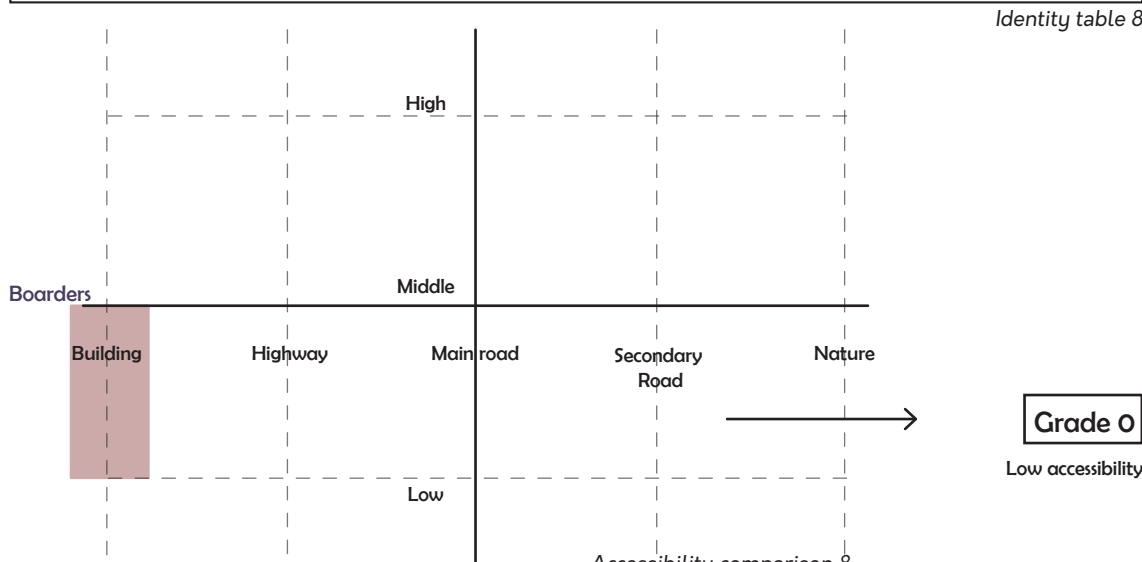
Järntorget is graded with accessibility 1 due to its hard borders surrounded it and crossing thought it. Therefore is considered a common 1 space.

Publicness comparison 7

Courtyards



Identity table 8

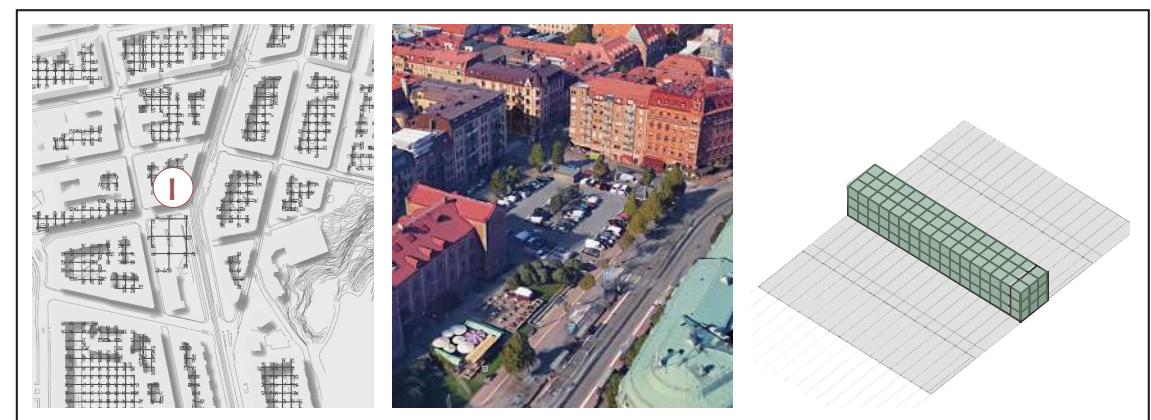


The courtyards at Haga appear to have very low accessibility and private characteristics.

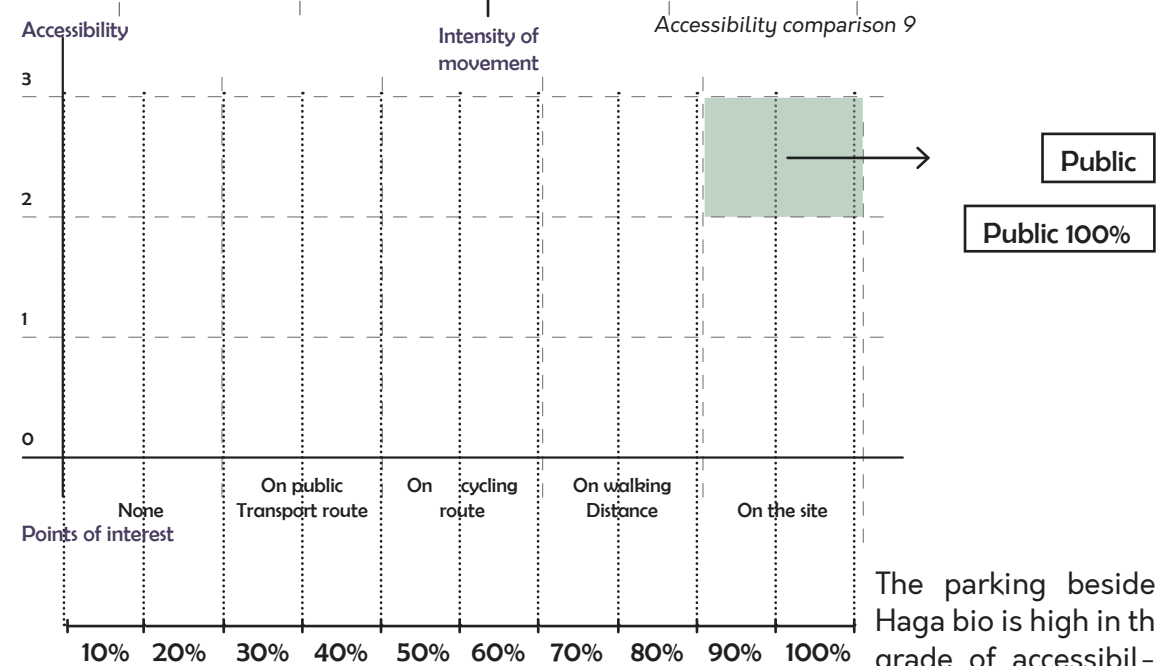
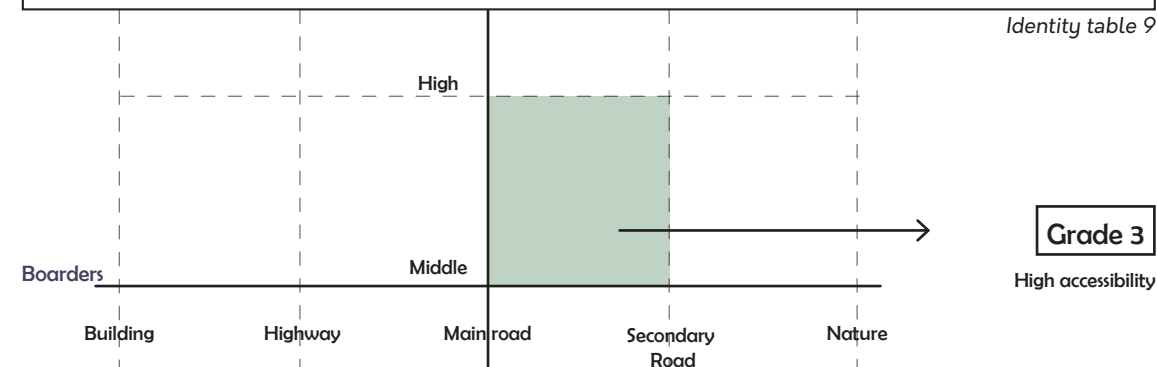
Publicness comparison 8

## Outcome

### Hagabio / parking



Identity table 9



Publicness comparison 9

The parking beside Hagabio is high in the grade of accessibility and very public.

### Contextualization

The process of classification creates a catalogue where every site is graded with grade in the scale of publicness. This is a way of understanding of the current condition of the spot. The catalogue is a help, rather than an obligation, of what activities could be placed in each spot. A site graded as “public” doesn’t mean that it can’t host a private activity. A “public” site can be handled spatially. That could create different conditions in the scale of publicness, so it can host multiple activities at the same time. On the other hand a “private” site, a inner courtyard for example,

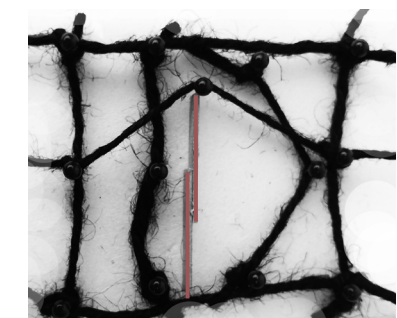
could not easily host a public activity. However, this is not a restriction.

Next step, is the creation of a system that could adapt to different demands of publicness. There are selected three sites, A: Esperantoplatzen, site D: Feskekörka and site H: a courtyard located at Haga in order to test this conceptual idea. This experimentation will also give an insight on the spatial possibilities and restrictions of the sites. The selected spots have different grade of publicness and this is the main criteria for their selection.



Sample from the catalogue

The experimentation is testing the effects that an element or a situation creates (cardboard) on site (grid).



Conceptual model

### Contextualization



## Experimentation

### Site H

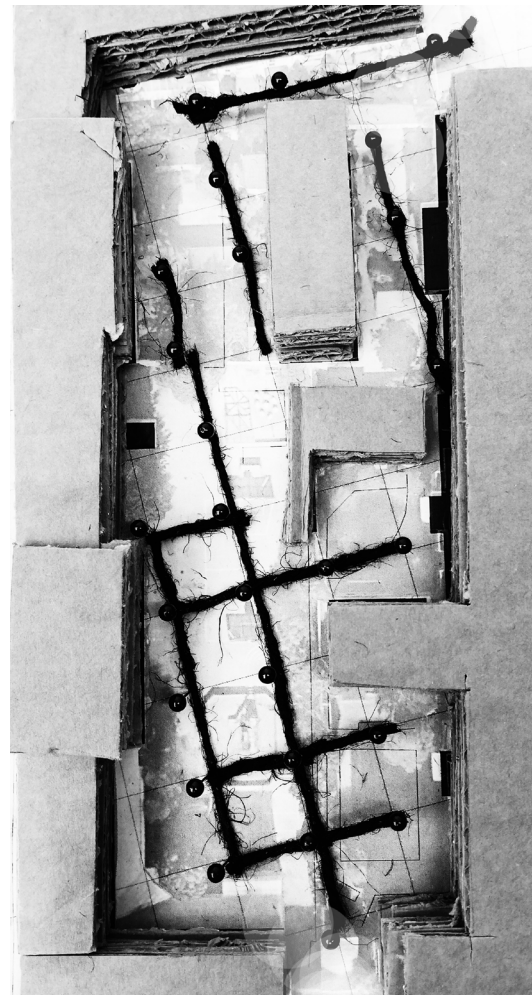
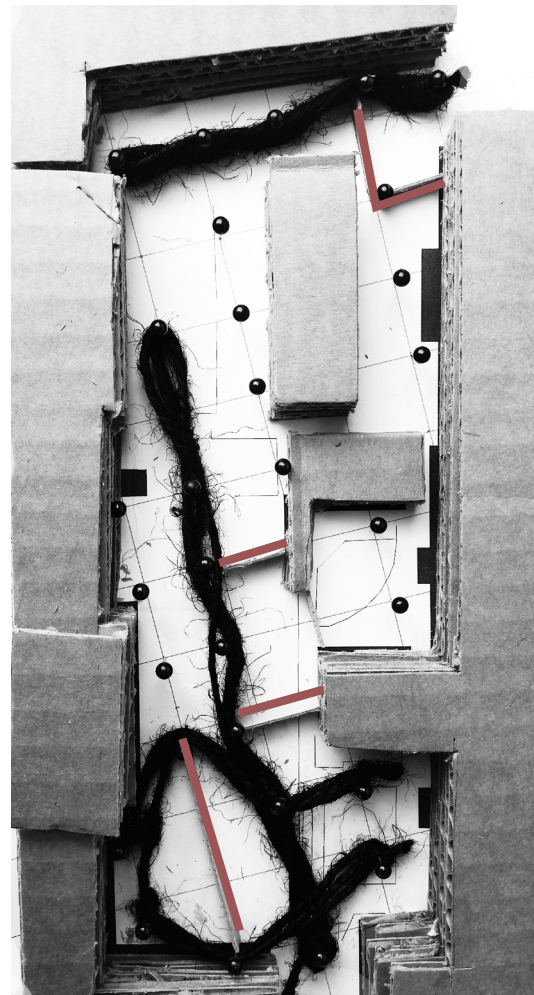
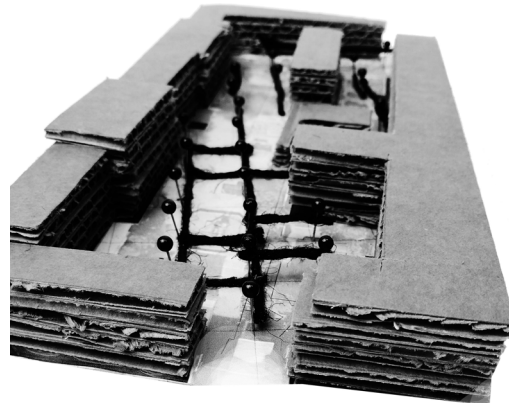
Experimentation and exploration of the system at a courtyard at Haga. The site is too close and there are very few people passing by.

Investigation of possible different height of the grid and interaction with the existing activities of the site.

Model 1



Model 2

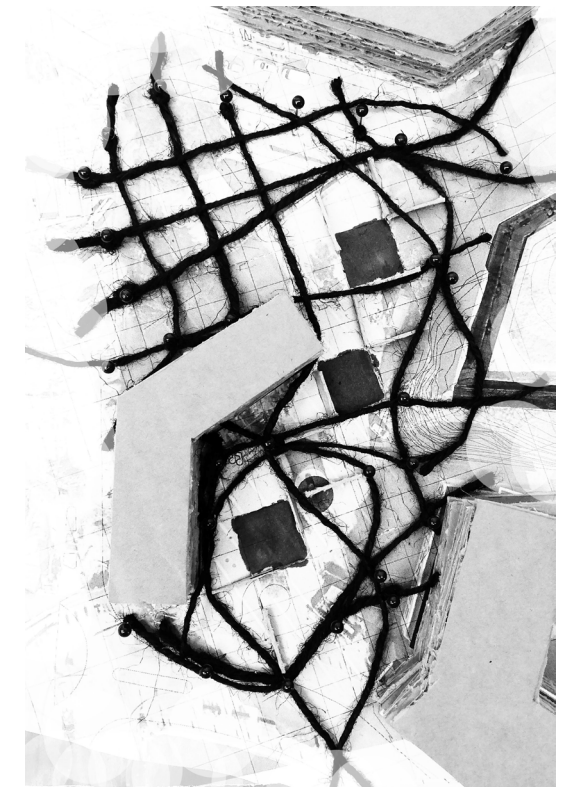
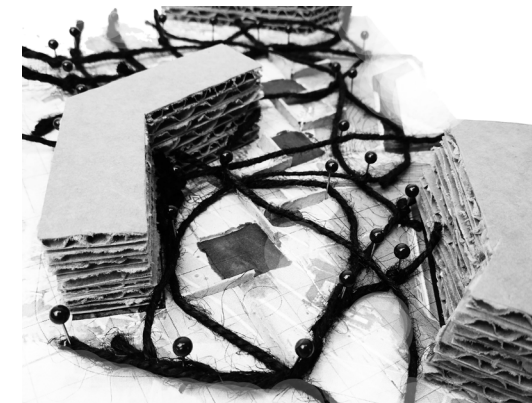


### Site A

The site A is an open space with a significant flow of people passing through it and specific activities happening in the perimeter of the space. Moreover there is an existing design and objects in the square.

Investigation of transition of the grid due to moving objects in the square. The changes can be visible and tangible. One transition in an area could affect how the other areas on site are functioning.

Model 3





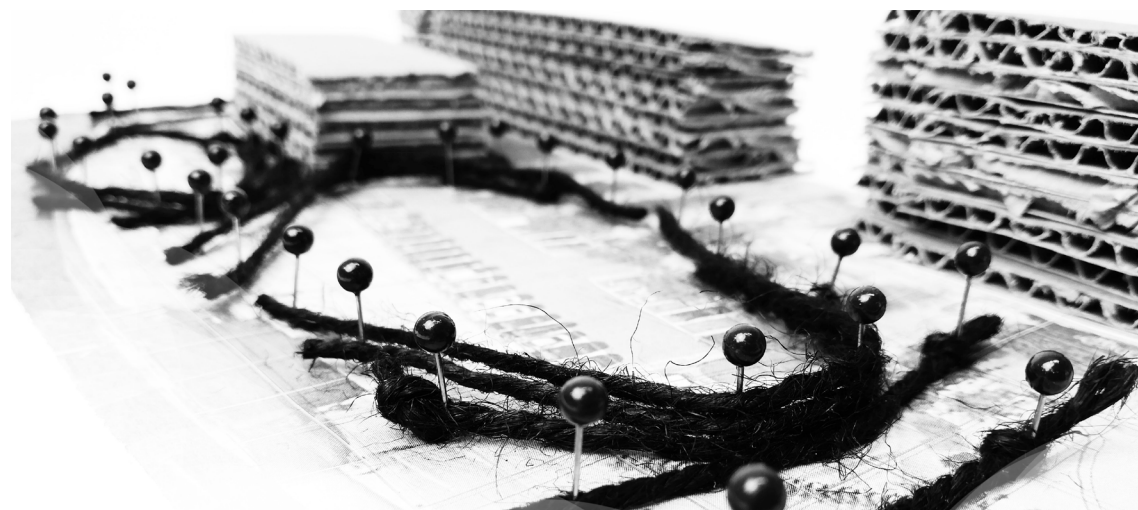
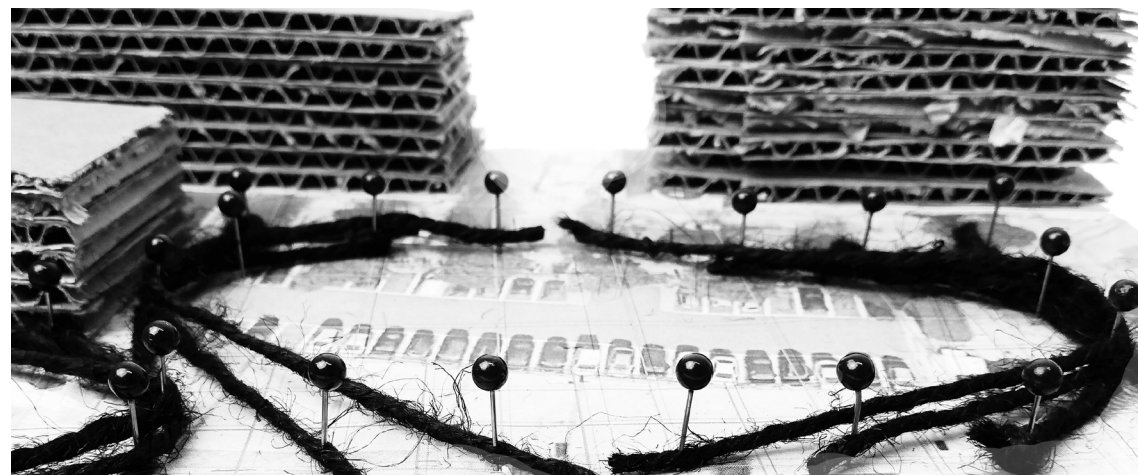
## Site D

The site D is an parking plot located by the river. This kinds of plots are underused, common in the city and potential site of intervention for future developments.



The model experiments the transition of the grid due to the 'size' of activities.

Model 4



## Conclusions

### Interpretation of publicness in relation with urban scale

The mapping and the classification give a different perspective of analysis of the city. However the scale of publicness need to be translated into something more easily related and tangible

from everyday life. The next table express the personal interpretation of the scale of publicness in relation with number of people, representative type of spaces and types of activities.

Scale of publicness	People	Space	Activities
Private	Individual Partners	ROOM	Sleeping Relaxing Toilets
Common 2	Family Friends Housemates	APARTMENT	Entertainment Cooking Dinning Gathering
Common 1	Neighbors Colleagues	COURTYARD	Laundry Cooking Repairing Allotment Market Stuff library
Public	Citizens Everybody	SQUARE	Co-work Market Recycle Workshop Swapping Events

### Site of implementation

The selected site that the system will be implemented and tested in the parking area by Feskekörka, Rosenlundsplatsen. The specific site was graded as "public" so it is the perfect spot to test the combination of different types of activities. Moreover, it is a site located by the river and a parking plot. There are many areas around the city of Göteborg that appear to have those two conditions so the site is a representative example. Finally, it's location compared with the activities, public transport, and the center is very crucial for the city in general.



Photo of the site

# ***CHAPTER 4***

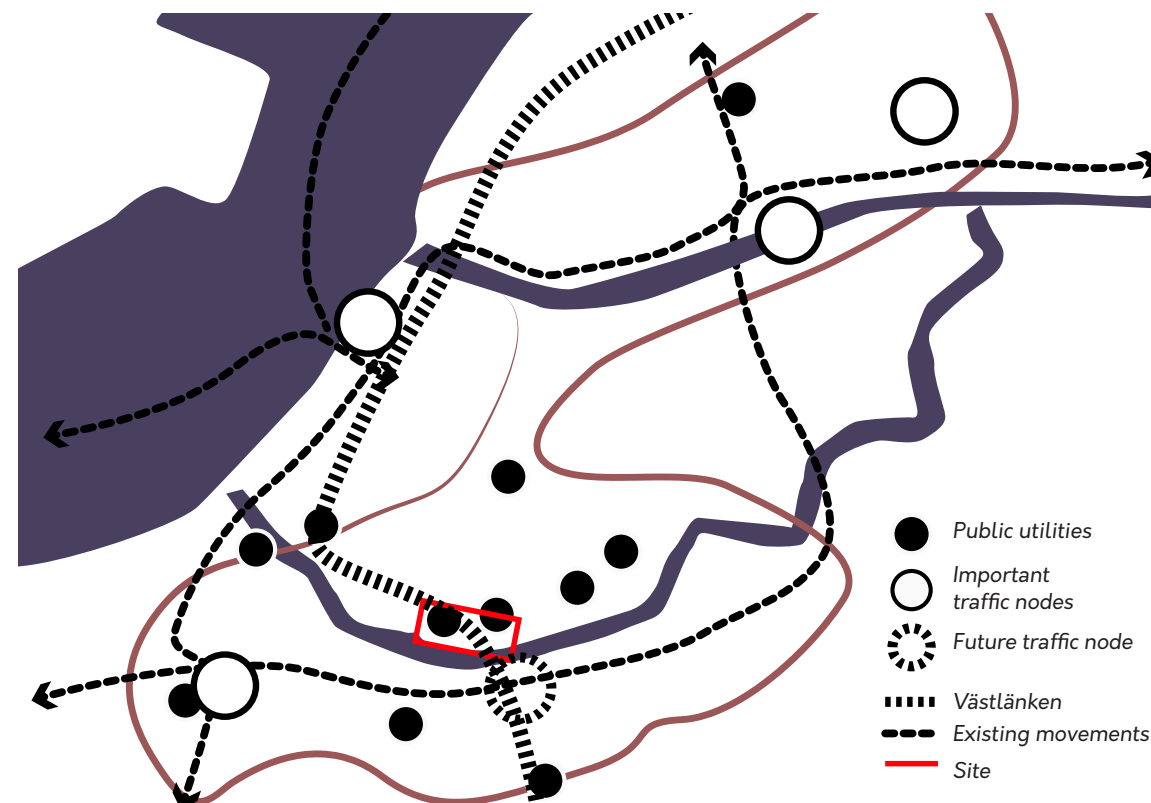
# ***IMPLEMENTATION***

This chapter analyses the current situation at the site of the case study. Then explains the design principles and how the idea can be applied on the location. Finally some drawing represents possible scenarios of the proposal.

Case Study  
Design Principles  
Set of guidelines  
The system  
Clusters  
Perspective  
Vision

## Case study

### Surrounding area

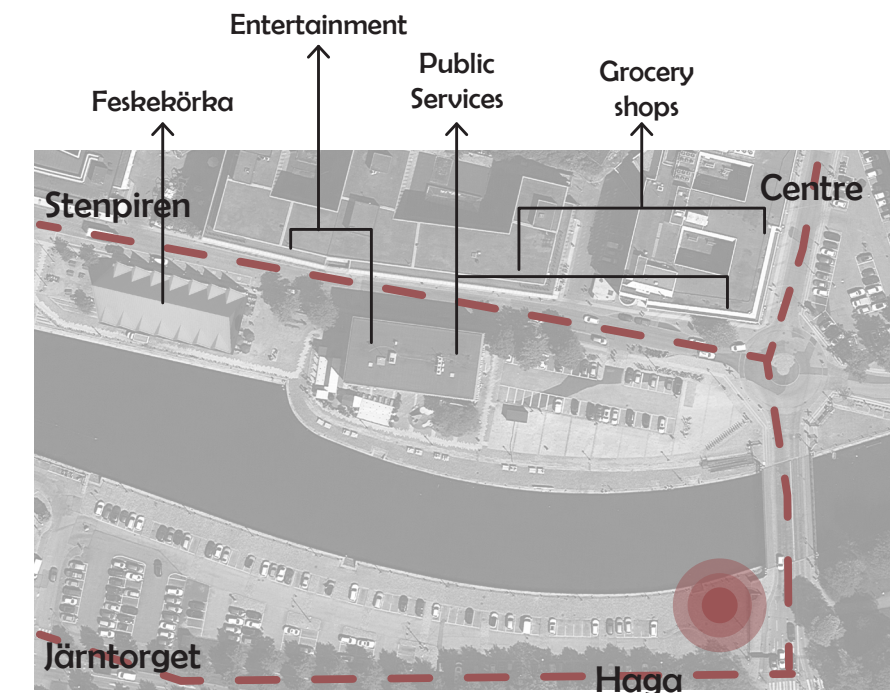


Map of movements around the site

The site is located in a central area of the city. There are 4 important traffic nodes, Stenpiren, Järntorget, Brunnsparken, and Central Station very close to it. All the parts of Göteborg are connected through those nodes. As the city is very segregated in different neighborhoods, those traffic nodes are some of the few places where different group of people meets each other. Furthermore, many important public services are located in the area around the site. Those

services, such as Skatteverket and Unemployment office, are important for the integration of people coming in the city. At the same time, this area is one of the most touristic parts of the city. Close are located popular touristic sites as Haga and Skansen. Finally, the development of the Västlänken will bring more people to the city center.

### Plans for the future and proposal



Map of the site

The center of Göteborg is at the moment under development and construction and according to the municipality's plan, this will be completed in the next 30 years. The plans, as mentioned before, are focused on the fulfillment of 3 goals, connect the city, embrace the water and reinforce the center. Even though the last goal aims at the creation of a welcome urban environment for everybody, currently, the developments are targeting mostly on investors rather than the citizens. At the same time, Göteborg is considered a segregated city into different areas. Adding to that and by taking into consideration that the city will grow and more people will come to the city center that poses the

risk of bigger segregation. Moreover, the need for housing will be more urgent.

Concluding, the site is a relevant space for the implementation of the infrastructure. The infrastructure in this case study will host a housing program for temporal citizens. Important in this project are the in-between spaces where activities and people can be blurred.

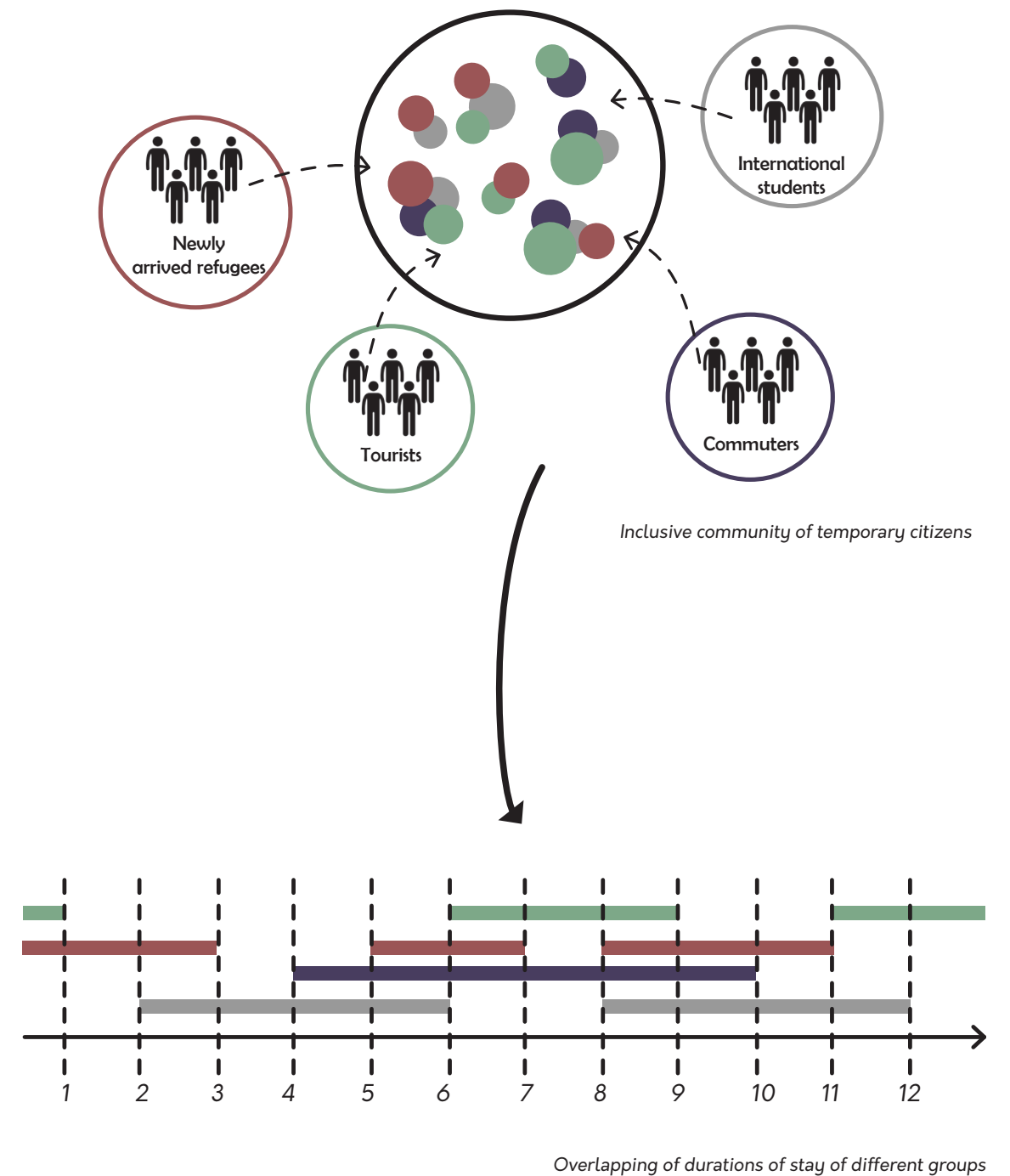
Finally, temporality and mobility are ideas that depending on each other. For this thesis, the nodes of traffic are important. The volumes could be dismantled into pieces and be transferred by using the means of public transport.



### Temporal and community

The infrastructure is intended to host people for a short period of time. But what and how can we measure temporal accommodation and which are the results of it? How could an inclusive community be built from people coming from different backgrounds and living for a short term at the place?

Short term accommodation in this thesis is longer than a short stay at a regular hotel. The term “period” in this case is referred to weeks and months rather than days. At the same time the absence of networking and proper establishment, compared with locals as actors and regular housing as a market, will reinforce the sense of community and the need of the creation of a network with starting point that group of people. Finally, even though the people come and leave, the sense of community will still last through the overlapping of different stays during the time.



## Design principles

The following principles are important for the design outcome of the thesis.

### 1. Set of guidelines

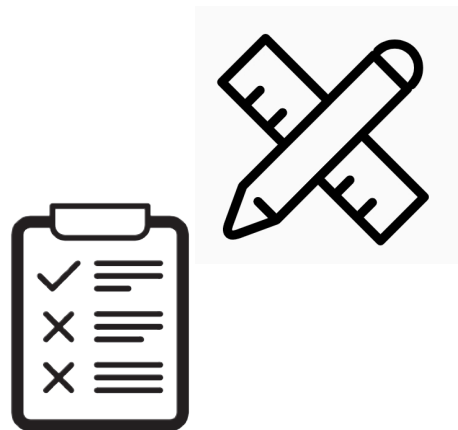
The proposal is an infrastructure that can host different kind of activities and events that are happening in the city and are need of a space for a short time.

*It could host a **Christmas market** for a month for example.*

*The next month it could create some spaces needed for a **Flea market** in a rainy day.*

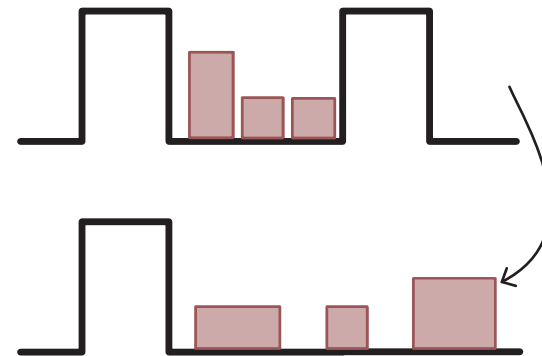
*While the next period could used as food tracks and other supporting uses for the **Carnival**.*

As a conclusion the uses can vary. Therefore a set of guidelines and instructions will be needed in order for the people to identify the qualities of the spaces they need and go on with its' construction.



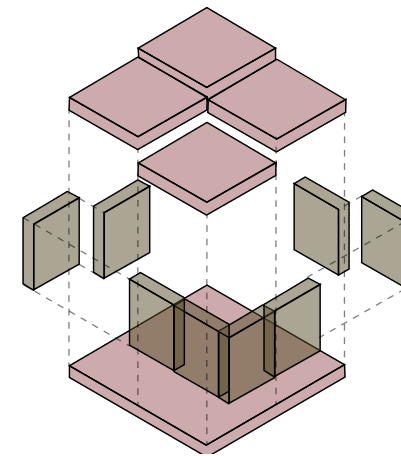
### 2. Adaptability

The proposal, except hosting different activities, need to be able to be positioned in different space, as for example parking plots, courtyards or squares. The different plots will have different qualities, borders, passages, and views. Therefore the infrastructure should be adaptable. The fact that there is no fixed and predestinated master plan, rather than a set of rules makes the idea adaptable.



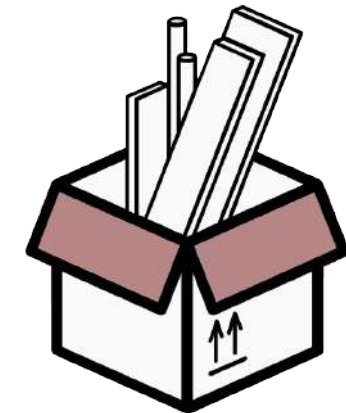
### 3. Panels

The volumes will be created by different panels and elements of walls, floors, roofs, and circulation. In this way, people will create the space themselves. The materials used for the panels are recycled and reused. Therefore the architectural image of the infrastructure can vary and not be understood as one but rather like a collage of different pieces.



### 4. Transportable

Finally, by the end of the activity, the elements are dismantled and packed in a "box" which can be transported through the public transport into different places around the city. In the next site, a totally new "complex" can be built by different people and with different activities.



The proposal embraces the temporal expressions of a city, celebrates the co existence and interaction of different people and supports their participation in the creation of space.



Set of guidelines

The following page will explain further which is the main framework of the building process and what people should take in consideration? There guidelines are not bindings but they propose a way of spatial development.

\*\*\*The guidelines, rules, and tables of advice are working for the case study and may need reconsiderations and small changes in other cases\*\*\*

1 TYPOLOGY OF SPACES

- 1.1 What type of activity do you wish to facilitate? Check the example of the table 1\_typology of spaces.
- 1.2 Select the type of space you are going to build (private, common 2, common 1, public)
- 1.3 Gather the panels needed.

Activities	Suggested spaces	Scale of publicness
Sleeping Resting Relaxing	Bedrooms	Private
Dinning Cooking Socializing	Kitchen	Common 2
Relaxing Gathering Playing Reading Having fun	Living room	Common 1
Washing	Laundry	
Storing Repairing	Stuff library Workshop	
Meeting	Square	Public

Table 1 \_ Typology of spaces

2\_CAPACITY

The next guidelines are relevant with the development of a cluster and the amount of spaces suggested.

- 2.1 The "private" units are suggested to host 1 person or be shared between partners
- 2.1 The "common 2" units are suggested to host 10 people
- 2.2 The "common 1" units are suggested to host 10 people
- 2.3 The "public" units are suggested to host 20 people

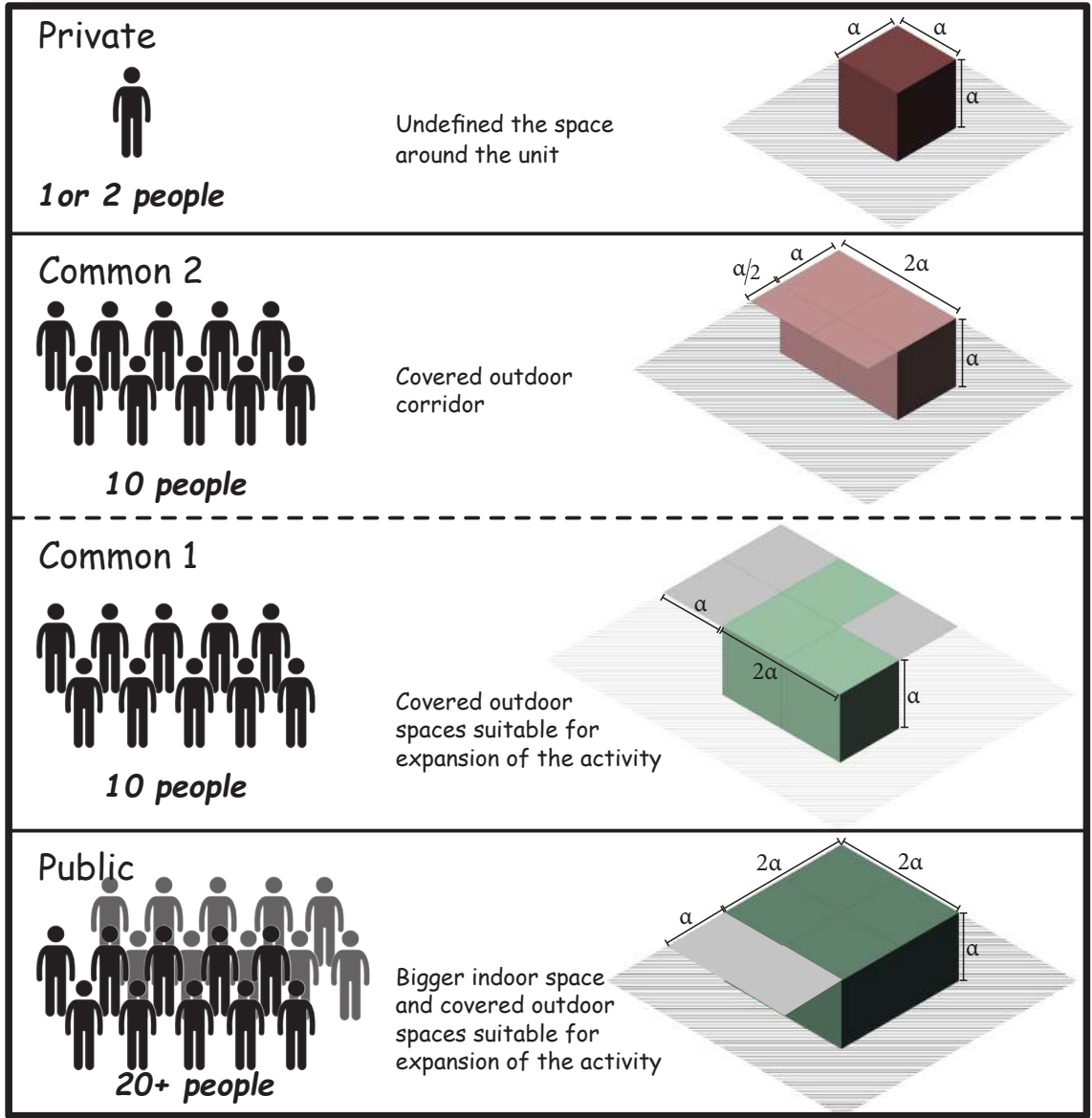
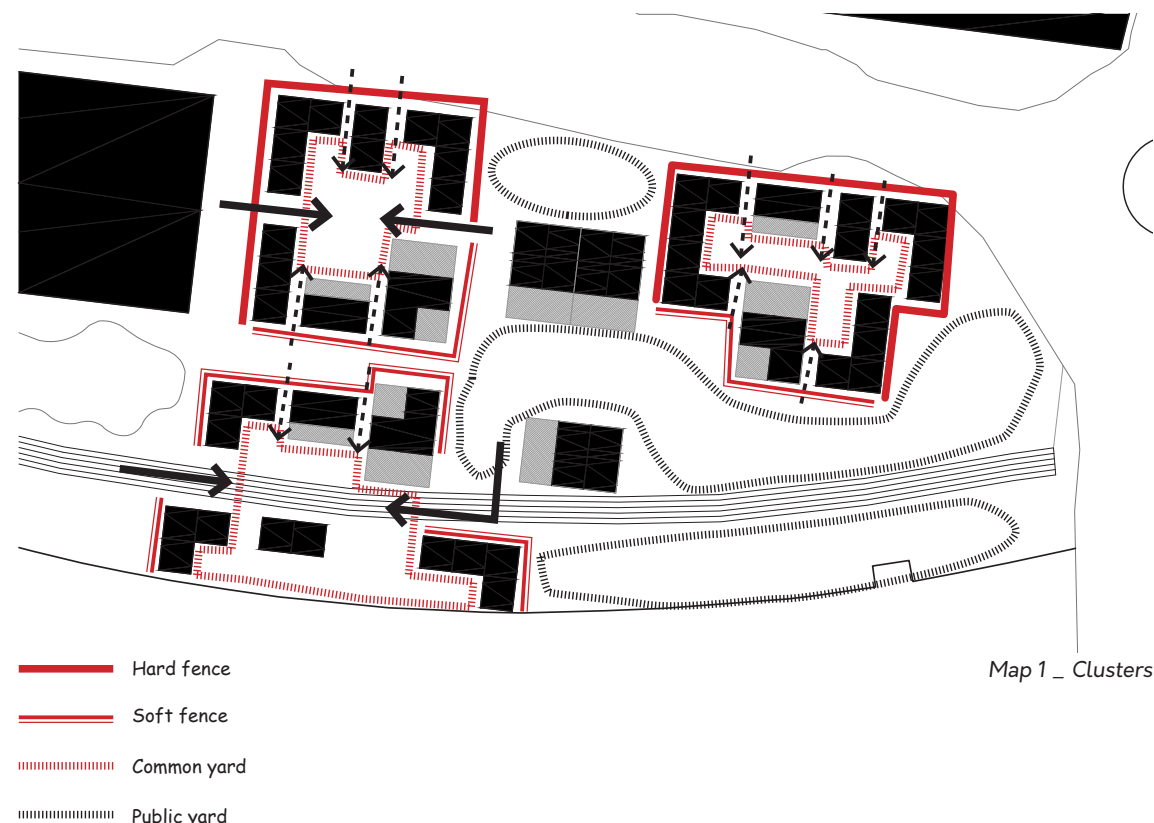


Table 3 \_ Capacity

### 3\_CLUSTERS

- 3.1 Find the best spot to place your room and connect with existing clusters and other residents.
- 3.2 Prefer to keep unbuilt a central area within the cluster to be used as a "courtyard".
- 3.3 Protect your "courtyard" by creating a "fence" from the street with the units.
- 3.4 Prefer to position "common 1" and "common 2" units close to another potential cluster.
- 3.5 Prefer the covered spaces of the typologies "common 1" and "common 2" to be placed inside the cluster.
- 3.6 You can built above existing volumes.
- 3.7 It s suggested to add spaces of same typology next or above to each other and don't spread them in another space of the cluster.



Map 1 \_ Clusters

### 4\_CIRCULATION

- 4.1 Take care of circulation areas.
- 4.2 There are not predefined. However by building according to guidelines 3\_CLUSTERS things will be easier.
- 4.3 The minimum dimension of circulation is 1.2m within the cluster.
- 4.2 The minimum dimension of circulation is 2.5m among different clusters.
- 4.3 In the case your space is placed on an upper floor don't forget the circulation. Move 1.5m the volume so a circulation corridor can be created.
- 4.4 Remember the stairs! The elements of the stairs need a full slot (3x3m).

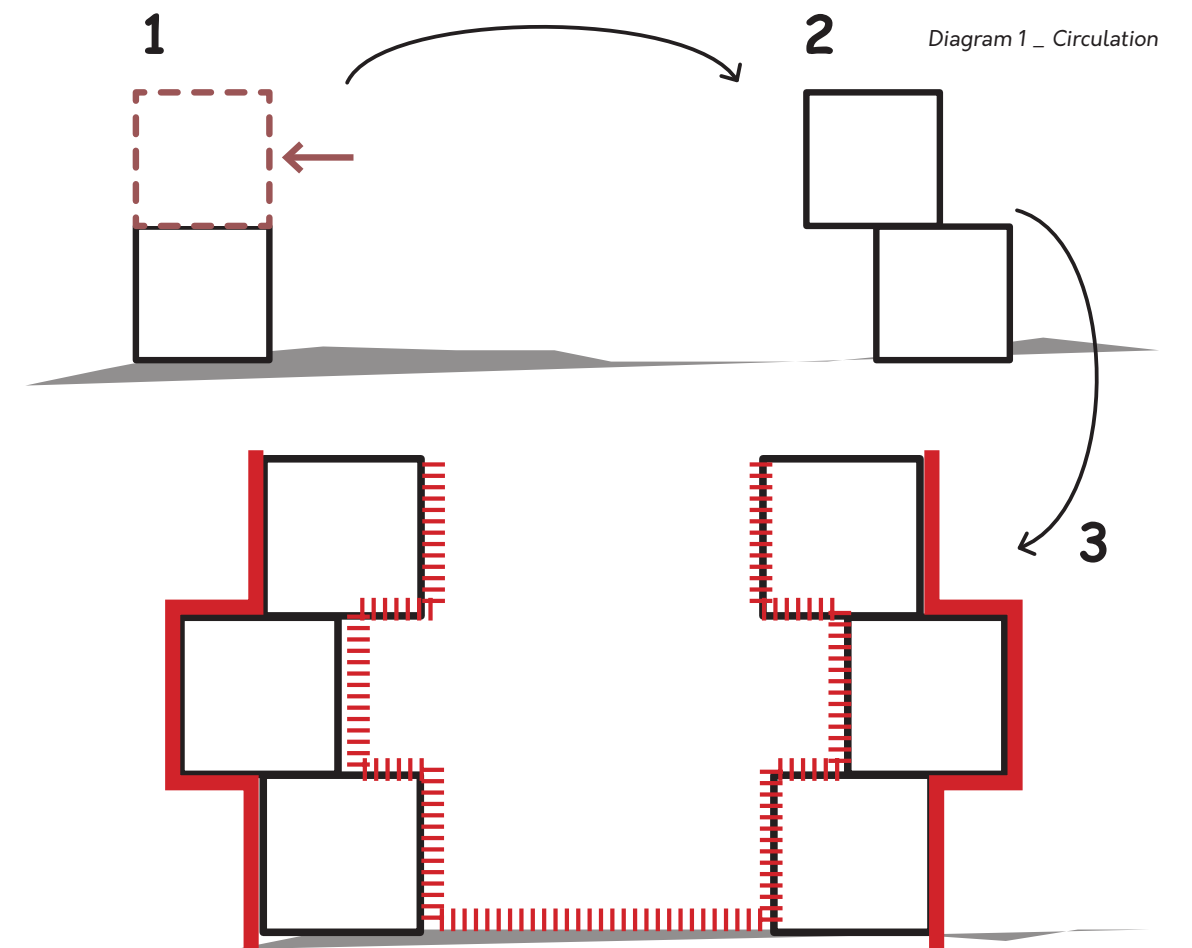


Diagram 1 \_ Circulation

## 5\_TECHNICAL ADVICES

- 5.1 If your activity is considered private, prefer to take a distance from noise, for example road. You can achieve it by turning the main facade inside the cluster, build on a upper level or away from the noise source.
- 5.2 Use less transparent materiality at private units rather than at public units.
- 5.3 Public units fit better to the ground level as they blend with the flows of the city. At the same time, higher floor achieve better privacy.
- 5.4 Check the advices regarding the orientation at the table 4 \_ Technical advices.

5.4 Check the advices regarding the orientation at the table 4 \_ Technical advices.

**\*\*\*EXTRA\*\*\***

E1. There exists an extra small volume.

E2. It is not suggested to be used as a main space for any activity due to its dimensions.

E3. It is movable and can support different temporal activities in the open spaces.

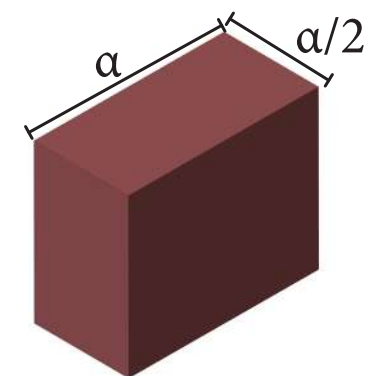
E3.1. Examples:

It can be used individually as a food truck during a movie evening.  
If multiple of them are used at the same time they could host an open market.

If multiple of them are used at the same time they could host a open market.

Scale of publicness	Distance from noise	Use of transparent materiality	Distance From ground	Orientation
Private	Less suitable ↓	Less suitable ↓	More suitable ↑	East
Common 2				West
Common 1				North
				South
				North
Public	More suitable ↓	More suitable ↓	Less suitable ↓	North
				-

## Implementation

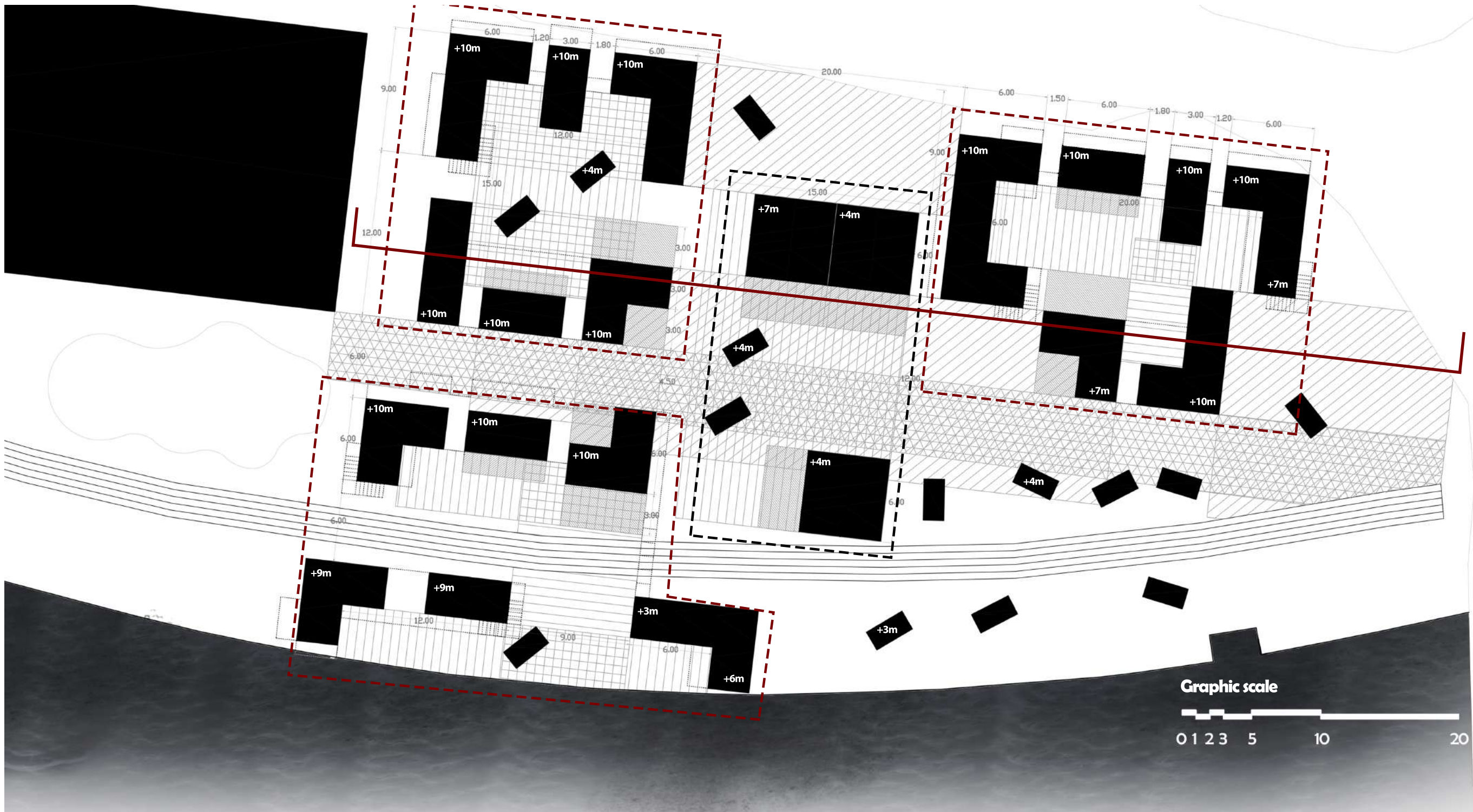




## The system

The configuration of the space is not based on a master plan drawing but on the application of the guidelines and personal preferences of the people using the space.

The plan and the section that follows, explains how the system works and represents a possibility of a configuration a specific moment.





The following drawing explains how the system works on section and what are the different types of spaces created due to the composition of the different models.

Legend

Primary Cluster

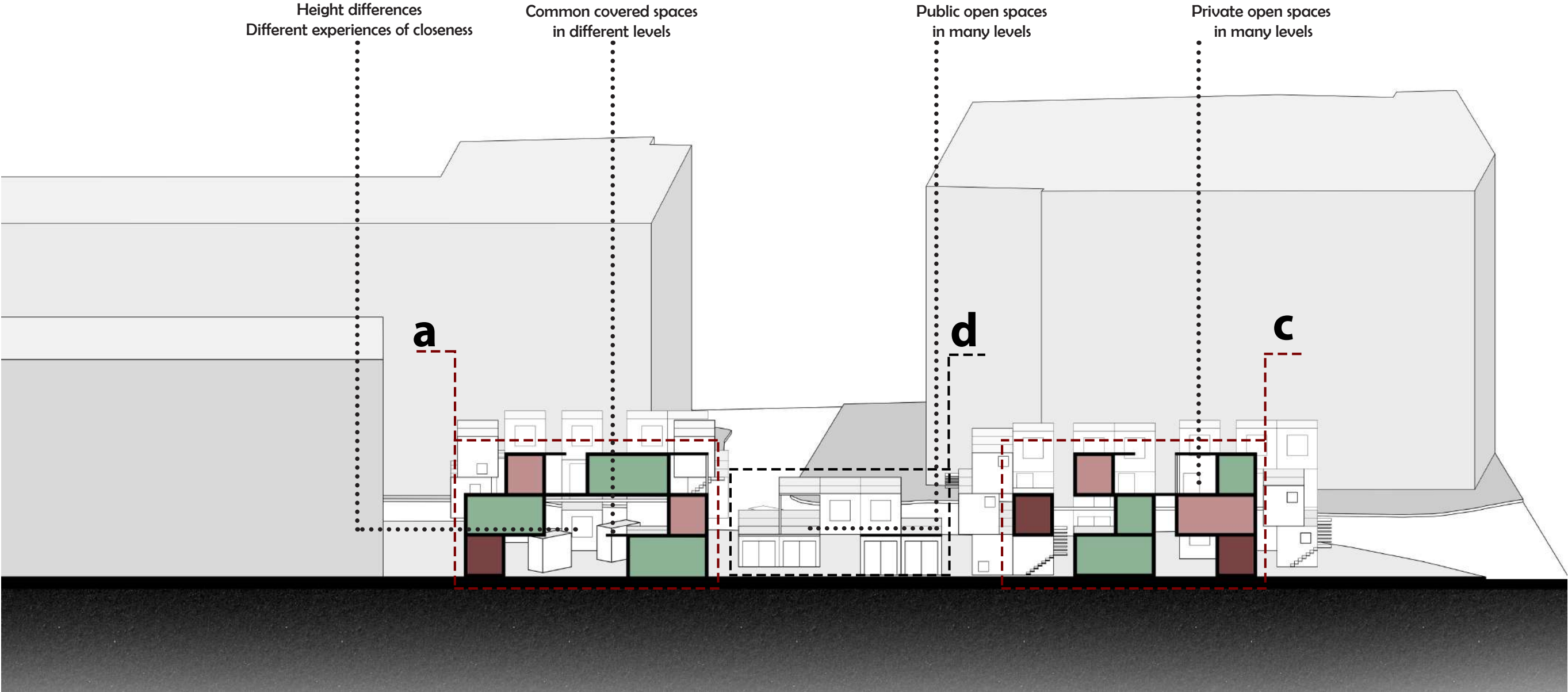
Secondary Cluster

Public

Common 1

Common 2

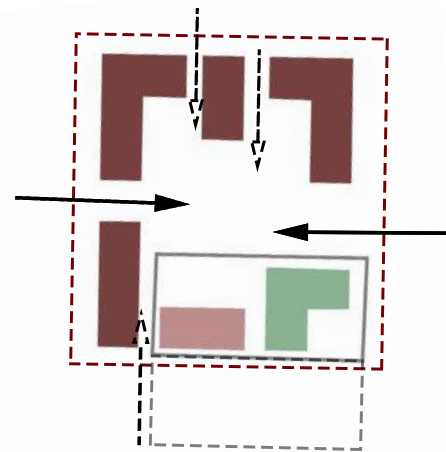
Private



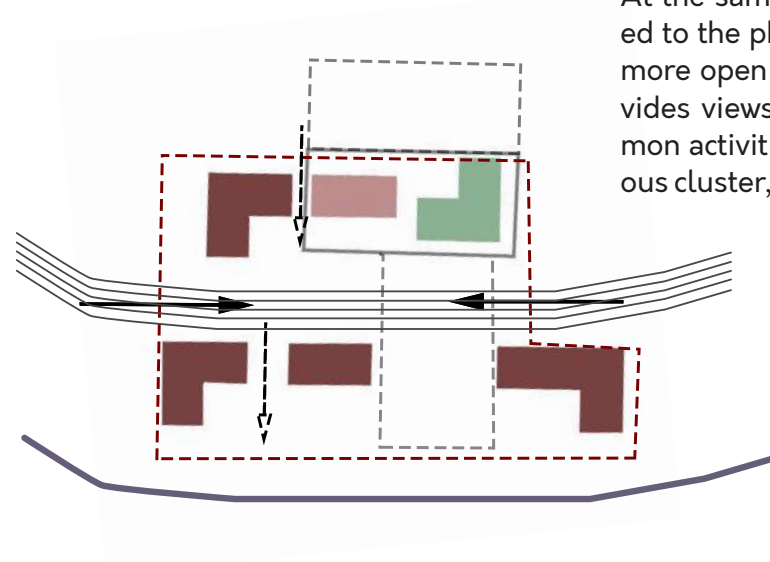
## Clusters

The next diagrams explain how the configuration of the space can change due to the position of the volumes, the activities and the flows.

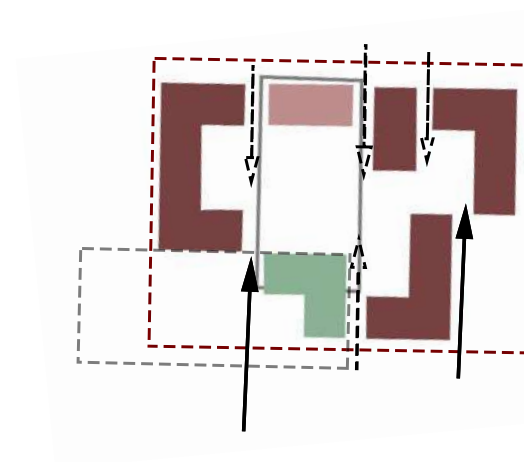
Those are just four out of many possibilities that could happen. They are taken from the plan and section above.



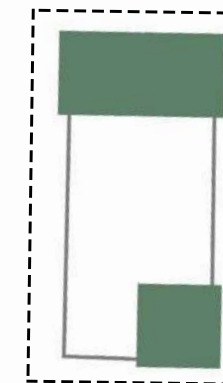
The cluster a is an example of a semi-closed cluster. The volumes are creating an inner open space in the middle of the cluster. The distances between the volumes create two main 'entrances' and two secondaries. The common activities are located side by side and that gives them the opportunity to expand from the inside but also possible connect with another cluster.



The cluster b is an example of a semi-open cluster. The volumes are creating two "rows" parallel to each other. This creates two smaller yards to each row. At the same time, the cluster is adapted to the physical limit of the river. It is more open towards the water and provides views and open space. The common activities are located, as the previous cluster, at the edge and side by side.



The cluster c is an example of a closed cluster. The position of the volumes and the distances between them are creating a protection border between the inner open space and the surroundings. Moreover, smaller corners have been created for appropriation from fewer people. The difference of cluster c is that the common activities are positioned opposite to each other, so the open space between them has a different character than the rest of the clusters.

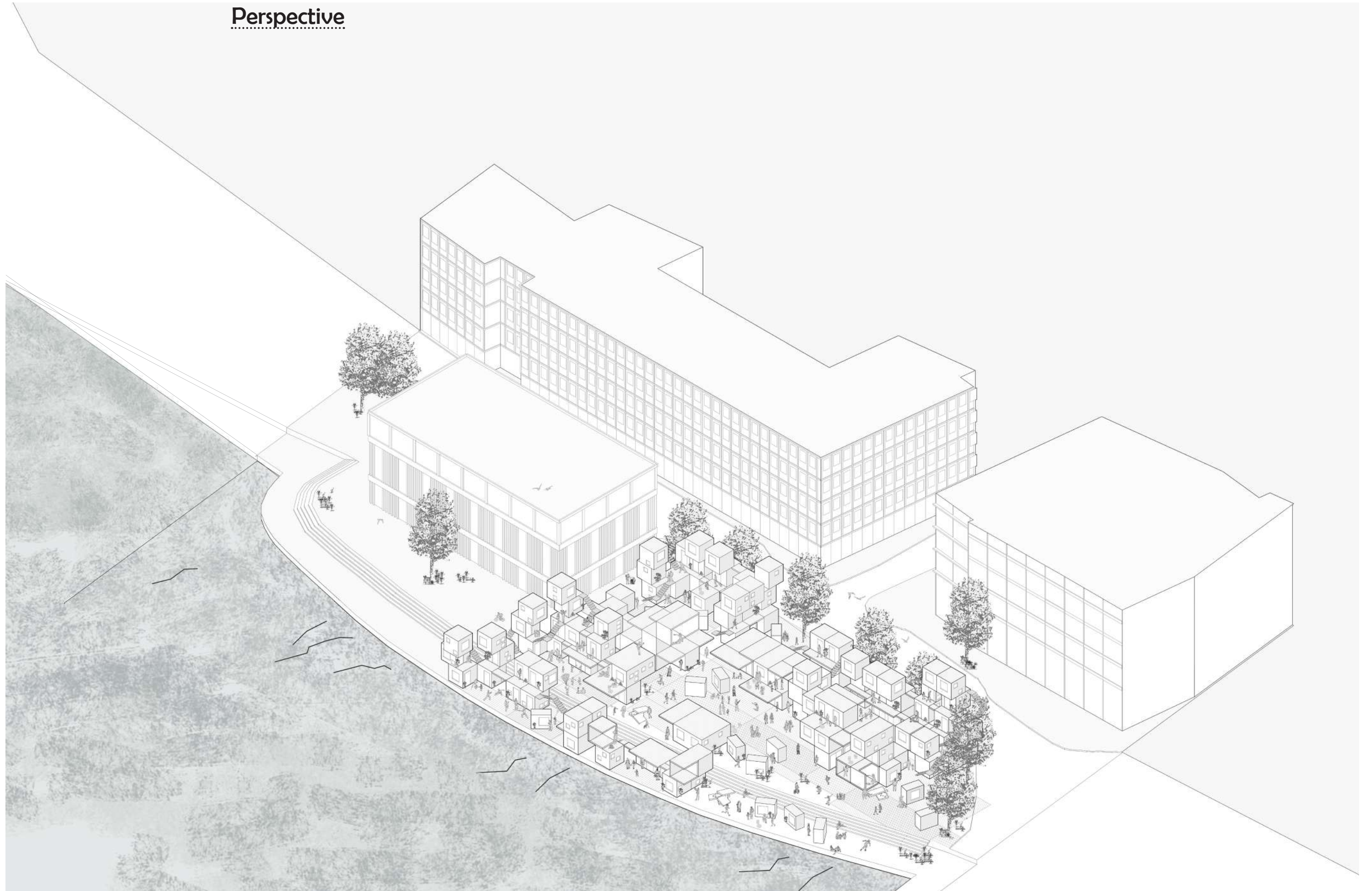


Finally, cluster d is considered an open cluster. It hosts totally public activities and the volumes are not creating any borders between the cluster and the surroundings. It is inviting everybody, from people living to the other clusters to people pass by, to use the inside and outside space. The interior and exterior space are united with no hard limits.

### Legend

Secondary flow	--->
Primary flow	—>
Connection of activities	—
Possible extension	- - -
Public	Dark Green
Common 1	Light Green
Common 2	Red
Private	Dark Red

## Perspective





## Vision

A movie is projected at the public square by the area where I stay. Would you like to come over? We can watch it with all the people that will be gathered there!





Are you coming to the barbecue this Sunday? Everybody is going to be there. Even the couple that just moved in!!

Of course! Can't wait to see everybody!









# ***CHAPTER 5***

# ***REFLECTIONS***

Reflections

Discussion

## Reflections

The process of the master thesis has been interesting both personal and professional. The starting point was deriving for my personal interest and background. Therefore the next exploration and investigation were based on personal interpretation and reflection on the idea of sharing, publicness, and densification.

The main point of the thesis was the understanding of sharing from a human perspective into different scales. It started by the understanding of the challenge in different cities around Europe, while at the next step was the understanding of the case in a Swedish city and by taking into consideration the local challenges. Next came the understanding of the urban scale of Göteborg and the exploration of different spots and finally narrowed down to a specific plot. The last step was the design of spatial configuration in that scale. This is the physical stop of the thesis. However, it will be interesting to zoom in further and investigate the way a single cluster functions. Design and think further how the different units can function on the inside as well. This could finally conclude and reflected an even smaller

scale. How the construction could be designed in order to serve the concept and link back to the greater scale? How could the construction and cladding be adaptable and made from reusable material so that the proposal isn't in line only with social sustainability but also with environmental sustainability?

In the very end, this thesis is talking about placemaking and proposes a way this could be done. A system that facilitates and support people to create their building environment and act spontaneously into a framework. Therefore I think what this thesis lacking is the theory and professional understanding of basic principles of placemaking and what makes such an idea successfully implemented. Furthermore, regarding that, the outcome of the thesis is intended to reach people from various background and nationalities what needs second in-depth processing is the communication of it. How can be represented both to a no architect crowd as people interested in the research, but also to people intended to build it and use it?

## Discussion

In the bigger picture, the thesis is relevant to the modern challenges cities are facing. Taking into consideration the current historical events, such as wars, climate change, economic crisis, more and more people are, by obligation or choice, living in motion. Those people are probably not the minority and need support and help in order to integrate their new homes. Therefore the thesis would be a solution both for housing but also for other temporal events and demands of a city.

Concluding, in this sense, another interesting continuation of the thesis would be the design of a spot that facilitates different activities than housing. That could lead to a catalog of different designs.





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### **List of figures**

Figure 1: MenoMenoPiu Architects, 2014, Short term housing in Paris, Retrieved from <https://www.archdaily.com/577304/menomenopiu-proposes-capsule-hotel-for-short-term-housing-in-paris>

Figure 2: Bhimanshu Pandel, 2018, Temporality, Retrieved from <http://www.artprize.org/68703>

Figure 3: Jeffrey Shaw, 1972, Aqua Airground, Retrieved from <https://www.jeffrey-shawcompendium.com/portfolio/aqua-airground/>

Figure 4: Marek Walczak, Martin Wattenberg, 2004, Apartment, Retrieved from <http://turbulence.org/project/apartment/#>

Figure 5: Abako arkitektkontor AB, Västlänken station, Retrieved from <http://www.abako.se/vara-projekt/vastlanken-station-haga-2/>

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# ***APPENDIX***

Final Model

Open seminar

Final Model



Open seminar



Open seminar

