

SHARING A HOME

in Poblenou, Barcelona



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Family and Friends, who always cheered on me and were available when I needed them!

ABOUT ME



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Universitat Politècnica de Catalunya, Barcelona
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Ohmoor Gymnasium Hamburg
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Student Exchange
- 2007-2011
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Work Experience

- Februray 2020
Hanse Holzbau, Hamburg
Internship in Carpentry
- March 2019
Tinsley Woodcrafters, Cape Town
Internship in Carpentry
- 2015-2016
Ohmoor Gymnasium, Hamburg
Break Supervision
- June 2014
Elsner Architects, Hamburg
Temporary Help
- September 2012
Heinrich Meier Architects, Hamburg
Internship

Experiences

- Since 2021
Vice President of the Student Commitee Architecture
- Since 2020
Activist for Architecture For Future, Petition Team and Public Relations Team
- 2020-2021
Member of the Student Commitee, TU Berlin
- 2017
Volunteer work in the town hall of a village for two months near Huancayo, Peru
- 2014-2019
Volunteer work for AFS, support of exchange students in Germany and Germans going abroad

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A SHARED HOUSING DESIGN APPROACH IN BARCELONA

ABSTRACT

By designing our environment, we are not only creating new spaces to go through, pass by and be in, but we are also creating a surrounding that dictates how we live. Everything is designed for a certain user. The things designed for a broad variety of users are often designed for an imaginary norm. In the case of housing this norm is to live either by yourself or with a core family. In Europe, the average household size is 3,1 people and many apartments are designed for this average. When looking for an apartment without fitting these norms, the options get sparse and inhabitants need to try to appropriate a space that is not made for them. While populations in cities are increasing, space per person is increasing and rents rising, many people decide to move in with other people outside of their core family. This means a new way of living together is calling for an adaptation of housing. The new user group that becomes more of a norm needs facilitation to do so.

In this master thesis, I will experiment with shared housing. I want to discover the alternative ways of living in a community and how to open up new opportunities.

Who is it good for? How is it used? What is it still missing? In this thesis, I present a cluster apartment design that works within the context of the neighborhood Poble Nou in Barcelona. A city that as one of the highest densities in Europe and fastest rising rents in Spain. A city that is modern, open to change, but presents a sense of community and neighborhood that I so far haven't experienced in other cities.

Keywords:

shared housing, barcelona, low-tech, community, cluster apartments

THESIS FRAMEWORK

THESIS QUESTION

How can a program for shared housing be designed for a specific location (Poblenou, Barcelona) in a specific context with sustainable building methods?

AIM

- Design functioning shared housing with focus on community and connectivity
- Selection of best suitable sustainable methods
- Shared space, as well as a space that invites the neighbourhood
- Small, functional apartments (reduce squaremeters per person)

SCOPE AND DELIMITATIONS

	IT IS ABOUT	IT TOUCHES UPON	IT IS NOT ABOUT
SOCIAL	<ul style="list-style-type: none"> Community Living Concepts Reduce Inequality Mental Well-Being Promotion Culture Politics 	<ul style="list-style-type: none"> Participation Affordability Financial Planning 	
SUSTAINABILITY	<ul style="list-style-type: none"> Social Sustainability Climate Responsive Design 	<ul style="list-style-type: none"> Material 	<ul style="list-style-type: none"> Carbon Neutral/Climate Positive Local Material Flow Circular Economy
ARCHITECTURE	<ul style="list-style-type: none"> Functional Flexibility 	<ul style="list-style-type: none"> Aesthetics Urban Planning 	<ul style="list-style-type: none"> Artistic Standards
TECHNOLOGY	<ul style="list-style-type: none"> Low Tech 		<ul style="list-style-type: none"> Technical Innovation Acoustic Design Air Quality Control Performance Simulation
PROCESS	<ul style="list-style-type: none"> Experimenting 		<ul style="list-style-type: none"> Deep Theoretical Research

METHOD

January	February	March	April	May
3 4	5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20
Research for Design		Research by Design		
Preparation	Survey	Design		Design Proposal
	Case Study	Experimenting		
	Poblenou Visits	Modeling		
Analysis		Drawing Plans etc		
Literature Review		Layout		

LITERATURE REVIEW

The literature review is used to gather information by reading and analysing existing research on a shared housing. I use this method to gain a broad understanding of the topic, and to identify important findings from existing research to later implement them in my master thesis.

CASE STUDY - THROUGH LITERATURE

This method involves the in-depth examination of a specific building or design project. In these case studies, I gather detailed information about the design, construction, and performance of a three buildings through literature and references.

SURVEY

I have created a survey to understand the needs and ideas of other people. Who would be a potential resident in a shared housing community and what are their needs? It helped me to understand people's preferences, opinions, and experiences with shared living.

CASE STUDY - THROUGH VISITS

This is an analysis of different common spaces in students residencies in Gothenburg. Through visits of the buildings and interviews with at least one resident of each building a collection and an assesment of the shared facilities is made.

MODELLING

Modelling and simulation are used to create virtual and analogue models of the buildings. These models are made to evaluate the performance of different design options, and to predict the qualities and issues of the building.

FIELD TRIP

The field study involved observing and collecting data on buildings and design in the field. This method is used to gather information on the performance of existing buildings and to identify potential design solutions.

READING INSTRUCTIONS

The reading of the booklet is straightforward as it follows the order presented in the contents.



PROBLEM STATEMENT

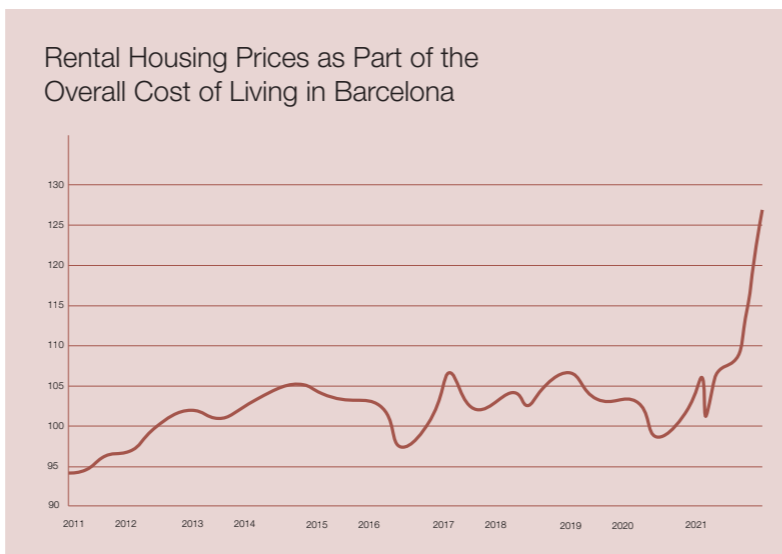
Housing is becoming unaffordable and very standardized. (Instituto Nacional de Estadística, Spain, 2020) Many people have a difficult time finding a suitable place to live and Barcelona is no exception to this. The City of Barcelona has created a plan for the neighbourhood of Poblenou that demands publicly protected housing. It is mainly intended for rent, but the municipality accepts concepts that allow the participation of other types of non-profit operators, such as housing cooperatives, which maintain the public ownership of the land. (Ajuntament de Barcelona, n.d.) This is an opportunity that I plan to fill with my thesis.

Especially in Spain, neighbourhoods have been an important factor of social life and belonging. With the city of Barcelona growing in population and people having to move away from their original neighbourhood, how can we assure that they feel at home in the new one?

1. Loneliness in Cities

2. Housing is very standardized

3. Housing is becoming unaffordable



Source: Instituto Nacional de Estadística, Spain

MOTIVATION

Shared housing can be a way to make housing more affordable, but to also connect the people that live in the same building. (IMAGINE 2, 2018) In my master thesis, I want to discover the different forms of shared housing and come up with a new design for the plot in Poblenou that tackles the problem of overcrowded housing and the anonymity of big cities.

Having lived most of my university years in flat shares, I really became fond of living together in a community. The flats I have lived in, however, were rarely suited for its usage. And I know my friends have had similar issues with the hunt for appropriate flat shares. Apart from a few newly built official students residences, there does not seem a big variety of housing options for people that want to share housing with someone other outside of their relationship or family.

Especially in Barcelona, the housing market is tense. (Ajuntament de Barcelona, n.d.) Those who come from the city and its surrounding area usually stay

with their family even while working as they can't find affordable housing. Families and single people often share apartments with strangers and generate some additional income. In beautiful big apartments, larger rooms are divided into several smaller ones. As a result, students or young professionals live in rooms without windows or ones that can't be closed properly. Change of values in the past decades lead to more singles and new family constellations. It seems that the dominating single-family apartment no longer matches the need.

As Space10 and Urgency.Agency are mentioning in their magazine, loneliness is an ongoing and growing social problem. Therefore we need to turn attention to ways we can combat it through new practices in our daily lives. One possible way is shared housing in a community-led form of housing that focuses on providing self-sufficient dwellings clustered around communal spaces and facilities designed to encourage collaborative living. (IMAGINE 2, 2018)

AFFORDABILITY AND CONNECTIVITY

CREATING NEW HOUSING OPTIONS

INTRODUCTION

What is shared living?

Shared living refers to a living arrangement where two or more people (in this case not only as part of a family) live together in a shared space, such as a house, apartment, or community. (Leo L. Cram, 1993) In shared living, residents can share any kind of common spaces. These could include more private spaces such as kitchens, living rooms and bathroom, but also less private ones like co-working spaces, multifunctional rooms, a gym, outdoor areas and many others. Collaborative housing with a “strong social dimension” is an umbrella term that encompasses all international variations and a wide range of housing typologies, in which housing practice is inhibited collectively (Fromm, 2012) It can take forms that range from co-housing, co-living, boarding houses to even room-sharing. The main goal of shared living is to foster a sense of community and support among residents, while also reducing the costs of housing and living expenses. Overall, one could say that shared living is a flexible and cost-effective housing option that can offer a variety of benefits for residents, including increased social interaction, shared responsibilities and a collective experience.

Co-Living

In this housing type a group of people live together in a shared living space, often in a shared apartment or house. The emphasis is on shared living spaces, rather than shared community spaces. Residents share common spaces such as kitchens, bathrooms, and living areas. Co-living spaces are often rented out to young professionals, students, or digital nomads who are looking for a flexible, affordable, and social living option. It can range from privately rented apartments to commercial companies. The more commercial examples often offer fully furnished and managed apartments with amenities such as housekeeping, Wi-Fi, and community events.

Co-Housing

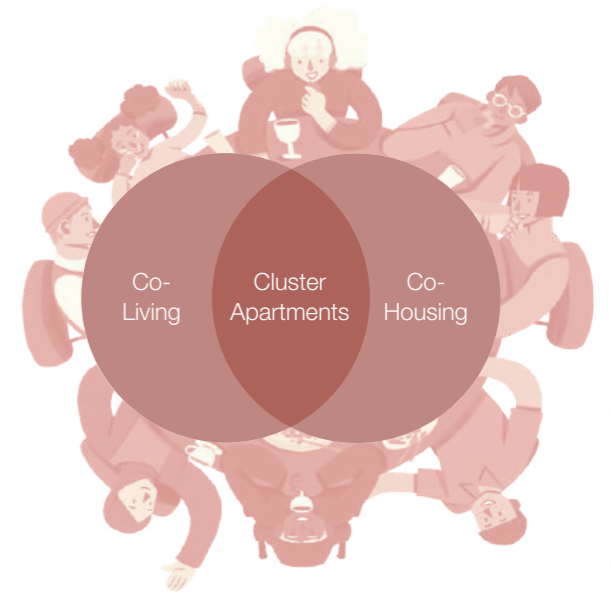
Co-housing is a type of intentional community where residents live in individual homes or apartments, but share common spaces and resources. This can include things like community kitchens, gardens, dining areas, and sometimes even a guest apartment. (The Cohousing Association of the United States, 2023) The goal of co-housing is to create a sense of community and connection among residents, while still allowing for privacy and independence.

The Difference between Co-Housing and Co-Living

Co-housing and co-living share similarities, but have key differences. Generally speaking both concepts are about sharing spaces, but in diverging quantity. Co-living refers to a living arrangement where people share living spaces (kitchen, bathroom, living room), while co-housing emphasizes (additional) shared community spaces and resources.

Co-living is often seen as a flexible and cost-efficient way of living that typically appeals to a younger demographic. A main driver can be the economic aspect, as it could be seen as a cost-efficient and flexible way of living.

This is often not the case for co-housing, in which residents almost always purchase or long-term rent these homes and live there for decades. While affordability does affect the choice, people often choose co-housing to be part of an intentional community where residents live in individual homes or apartments, but share common spaces and resources. The ultimate objective of co-housing is to cultivate a strong sense of belongingness and interconnectedness among individuals, while simultaneously respecting their privacy and autonomy. The emphasis is on sharing resources and the community aspect.



Source Illustration: Canva

Cluster Apartments

Cluster apartments combine the advantages of co-living with those of co-housing. They are a type of shared housing where individual living units are arranged around commonly used rooms. Cluster apartments are designed to provide residents with the benefits of both, individual living spaces and community living. The individual units usually offer one or more rooms that are equipped with their own bathroom and optionally a kitchen. (LaFond and Tsvetkova, 2017) The common area consists of one or more living, cooking and dining areas; additional sanitary rooms, utility rooms or flexible guest rooms can also be included. Cluster apartments are a flexible and cost-effective housing option that can offer a balance between privacy and community living. They do so by assuring privacy and independence in the individual spaces, while the shared spaces provide opportunities for social interaction and a sense of community.

Cluster housing addresses five major social trends affecting housing and urban development:

1. Desire for individuality and retreat
2. Need for community
3. Desire for participation and self-determination
4. Need for low-cost housing
5. Reduction of resource and land consumption

SHARED LIVING

Why do we need shared living?

Our cities will grow like never before as more people move to urban areas to find better lives. According to a report by the United Nations (2018), today, 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050. Billions of people could struggle to find an adequate and affordable place to live. The State of Housing in Europe report by the Housing Europe's Observatory (2021) shows that already now nearly 10% of the EU population experiences housing cost overburden and over 17% of Europeans live in overcrowded homes with space becoming scarcer and higher living costs. The housing debate today is mainly focused on building more homes. As important as that is, we also need to think about how an adaptation of our living space can change future and ease those problems in a different way. The idea of sharing resources might not only be part of the answer to many other issues that come with

population growth and climate change; it could also be the answer to many housing issues in big cities. Shared living tackles the lack of affordable housing, loneliness, our aging populations, while enabling a better and more sustainable way of life for many people. (IMAGINE 2, 2018)

Some can easily envision living in a scenario where communal sharing of kitchens, laundry, workspaces and dining rooms replace individual ownership. For those, open to this idea, it can lead to smaller private spaces, but with greater efficiency and access to better facilities at a reduced cost.

Shared living is in demand as a housing option in Spain, particularly among young people, students, and professionals who are looking for affordable and community-oriented living arrangements. (Rowan Arundel & Richard Ronald, 2016) Additionally, shared living can also provide a supportive environment for people who may need assistance with daily tasks, such as elderly or disabled residents.

Demand Drivers for Shared Housing

Urbanization

More than half of the world's population already lives in urban areas. In Spain this number is already at 80%. (worldometers, 2020) Since this number is still rising, more people need to share the space and resources.

Affordability

Rental prices and housing prices are rising faster than wage raise, which is why housing is becoming more expensive than before.

Social Changes

Loneliness is becoming a greater problem in today's society and especially bigger cities. This creates a demand for new ways to connect to each other.

Learning from „A History of Collective Living“

Four Levels of Action: A Perspective

Influence: Market Determined Vs Co-Determined

In European cities most residential buildings are built by providers of standardized housing. The development of those projects are usually rather conservative and done without the influence of future residents. To create spaces for alternative living costs, initiators (often future residents) have to take on a major role in planning and organizing, which gives them a lot of power over the project, but also requires high dedication. A new approach to planning processes may offer a balance by having professional organizations oversee the project, while enabling both those who were part from the beginning and newer members to have a say in shaping their future home.

Layering: Temporary Vs Permanent

Allowing private spaces to be qualitatively extended into shared spaces is the spatial and social infrastructure referred to as the principle of layering. This can happen either temporary or permanently, depending on the functions. Through different stages of life, the needs of a person changes, and with them the spaces around them can/need to adapt. Flexibility within a building is also beneficial, when residents change. A lot of life quality is won, when the living space can adapt to different users; from traditional families, to single parents, old couples, singles, flat shares and patchwork families.

Living Together: Heterogeneity Vs Homogeneity

Regardless of their life stage, people can identify with a community of co-residents and connect with others who share similar mentalities, interests, and objectives, thanks to the culture of sharing. In collective living, individuals with comparable ideals and philosophies frequently unite, creating a community that is rather homogeneous. Its homogeneity can minimize conflict while positively influencing communal activities, solidarity, interpersonal connections, and social commitment. Collective living should, however, support the entire range of stimulation and enhancement that diversity and respect for one another may produce. As layering of shared space necessitates a diverse population that uses them at various times of the day and for various functions. Strong homogeneity can, over time, lead to instability, especially as generations change.

Flexibility: Sharing Vs Owning

In our modern society, we tend to have a lot of changes, be it in work or living situations, as well as in housing and mobility. Younger generations seem to value ownerships less, while praising mobility and having more options are getting more important. Many other parts are adapting to this and we now have services that help us share resources like car and bike sharing. Sharing can also be an option in housing, as it disperse our way of living and optimizes access to communal areas and other intangible assets. Another advantage is that all residents have different competencies and deficiencies, which can lead them the residents to create a better home.

LEARNINGS

- Rooms with flexible usage, different types of apartments with different layout and levels of flexibility
- Since people know each other, its easier to swap apartments, when life circumstances change
- Residents should be able to choose who they live with. While its good to have the same interests, it can also be beneficial, if lifestyles do differ a little bit from each other for optimizes use of spaces
- Less owning and more sharing

TYOLOGIES OF SHARED LIVING

People have different reasons for why they want to live in a shared space, which is why there are different typologies as well. To understand them, I present two perspectives as a way to organize them.

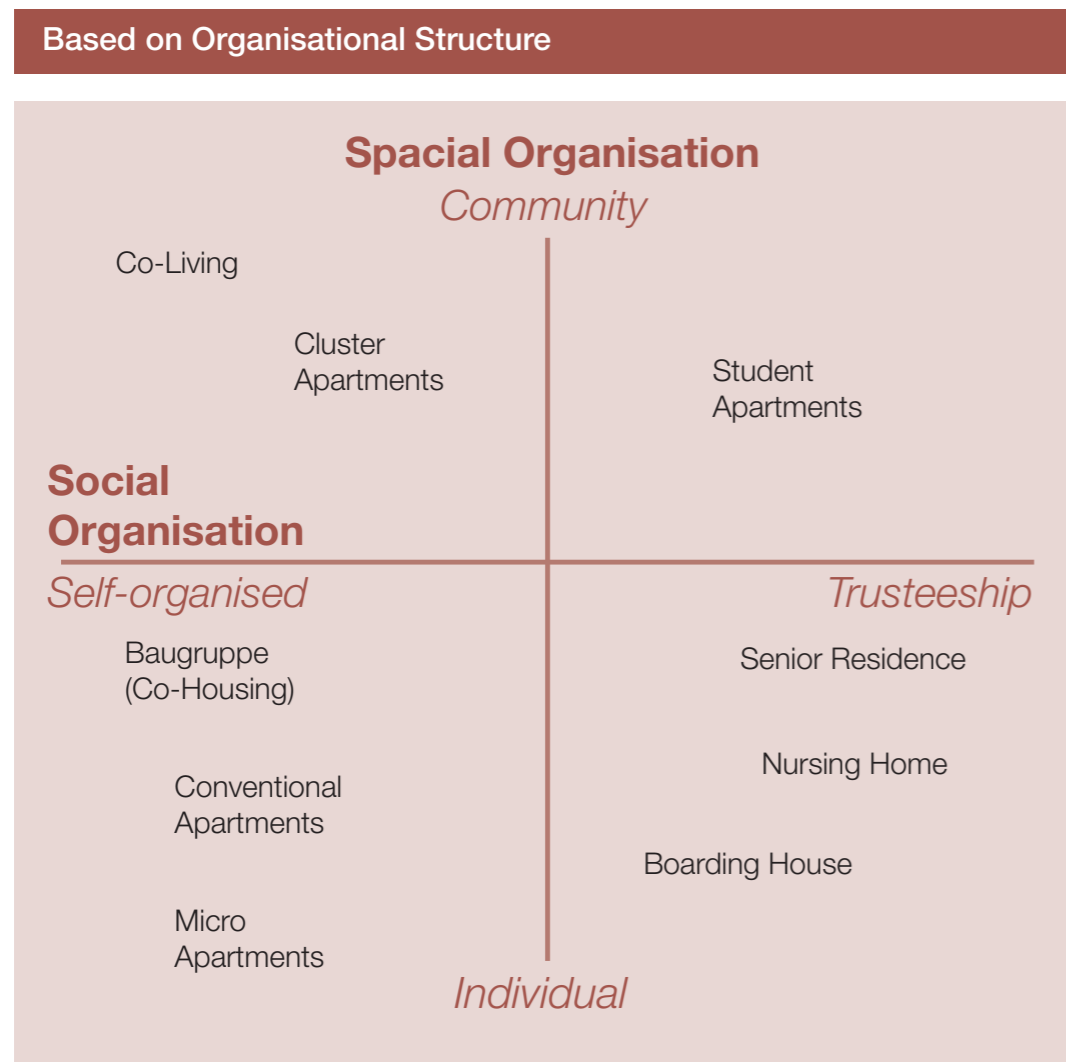
The first one is more about the organisational structures. Does a project have more communal or individual focus, do residents organise themselves or is there some kind of management? The same chart I will be using in the Case Study as well.

The other is based on intentions. I identified three mayor ones: economic, social and health intentions (people that need regular assistance). Often these intentions overlap and lead to different typologies. For me co-

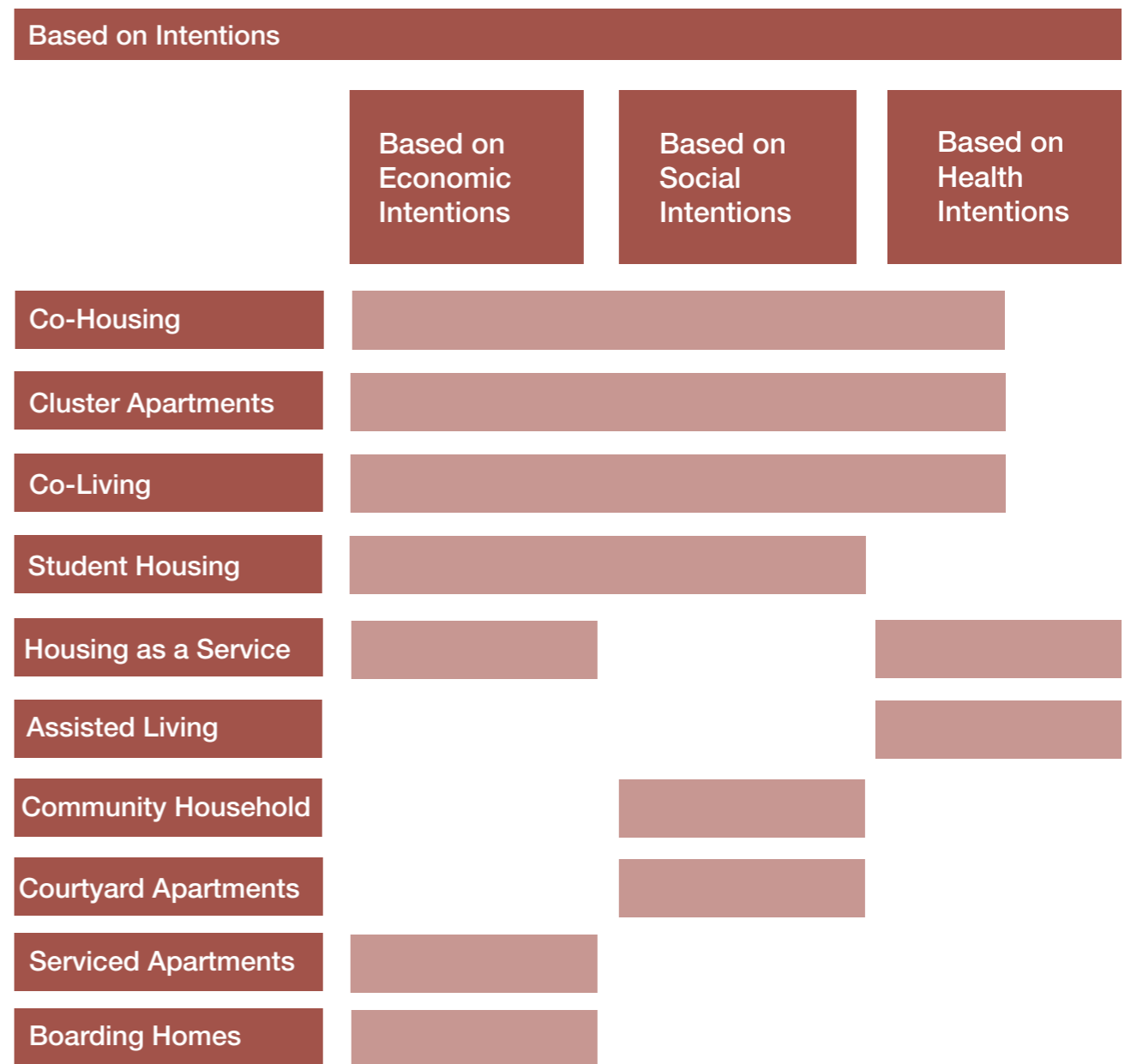
housing, co-living and cluster apartments are the most interesting ones, as they cover all three intentions.

Generally typologies like co-housing, co-living, boarding homes, serviced apartments and student dorms seem to be more commonly known, also to me. During my research and especially the case study, I then came across the concept of cluster apartments, which is the concept I will use for my design. Another important aspect is the time that people plan to stay in a specific housing situation.

Housing like student dorms and co-living are usually rather short-term arrangements, while co-housing and cluster apartments seek to be a long-term solution.



Source: Zukunft Bauen - Cluster Wohnungen, p. 9
Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSF)



CASE STUDY

La Borda



La Borda is the first housing cooperative in Barcelona. It is located in the neighbourhood of Sants. The Forward-thinking and eco-friendly residential development was initiated by a group of individuals that came together with the help of the community centre in Can Batlló. La Borda aims to achieve multiple goals: it provides social and affordable housing that is ecologically sustainable to its cooperative members, while also fostering intergenerational relationships and promoting community integration. The cooperative was established in 2013, and after several years of planning and construction, the building was completed in 2018.

La Borda consists of 28 apartments of three different types and a number of shared spaces. The project was designed to promote social commitment and community solidarity. Apart from that, sustainability and climate adaption were very important in the design process. Some environmentally-friendly features are rainwater harvesting, solar panels, and a green roof.

Spreefeld



Spreefeld is a housing cooperative located in Kreuzberg in Berlin, Germany. It is an innovative housing project that was developed by a group of architects, urban planners, and activists who were committed to creating a sustainable and socially-conscious community in the central location of the city. In 2007, the cooperative was founded, and it was ready for occupancy by 2014. The three free-standing buildings, located directly on the banks of the Spree, is considered a pioneer for a large-scale community project that combines different forms of housing, shared spaces and small scale commercial space. An important component of the concept is the inclusion of people with low income.

The project includes 64 residential units of different sizes, in which between four to 22 people live. The result is a lively, mixed neighbourhood that opens up to the neighbourhood with public passageways, event spaces and a daycare centre. The residents are encouraged to participate in the management and maintenance of the building and its shared spaces.

There are two cluster apartments in the project and in this case study, I have chosen to look at one of them.

Mehr als Wohnen



Dialogweg 6, is part of the urban scale housing project *Mehr als Wohnen*. It is a cooperative located in the city of Zurich, Switzerland. The self-image „innovation and learning platform for non-profit housing“ is linked to the willingness to experiment in all phases of planning and building in order to develop new, sustainable concepts for the city of the future. The whole neighbourhood includes a many shared spaces with different qualities for all residents to use.

There is a total of 14 cluster apartment, housing between 7-12 residents in each. Characteristic for this project are floor plans with private rooms arranged like islands, which are surrounded by generous communal areas for the kitchen-living room, sofa corner or work area. These functional areas allow for different uses at the same time; the flowing transitions open up views across the cluster flat and thus convey a feeling of space and connectedness at the same time. Within the private units, a variety of floor plan solutions were tested: the single, double or en-suite (through) rooms are partly equipped with a kitchenette and partly only with corresponding connections.

Common Spaces Compared



In the second part of the case study, I look at different common rooms in student accommodation in Gothenburg. It was important for me to find out which places are available, how to find them, how easy they are to use and how often they are used.

For this I visited all buildings, accompanied by a resident of the student residence, and took photos of all common rooms. While getting a tour through the building, I asked about how frequently the spaces are used, by whom and for what occasions. Interesting for me was also to understand, how satisfied my guide was. What are things they would change? What makes them comfortable in common spaces? Why have they never used a certain room?

I then draw conclusions that influence the arrangement and provision of common spaces in my own project.

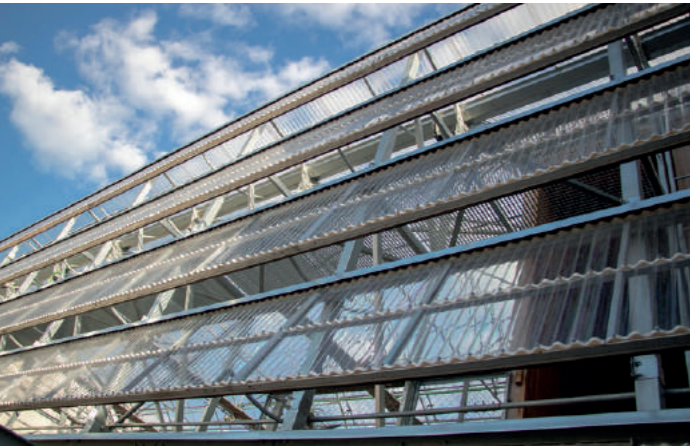
As all the accommodations in this part are occupied by students, who in most cases could not choose who they live with, it is important to recognise these variables when incorporating the learning into a cluster housing project.

CASE STUDY LA BORDA

Architects: Lacol
 Year: 2018
 Location: Barcelona
 Sqm Plot: 555m²
 Sqm Building: 3000m²
 People : 50
 Sqm per person: 60m²
 Price: 1000€/m²
 Rent: ca. 500€
 Apartment sizes: 40m², 55m², 70m²
 28 apartments



Source: <http://www.laborda.coop/es/>



Private Space

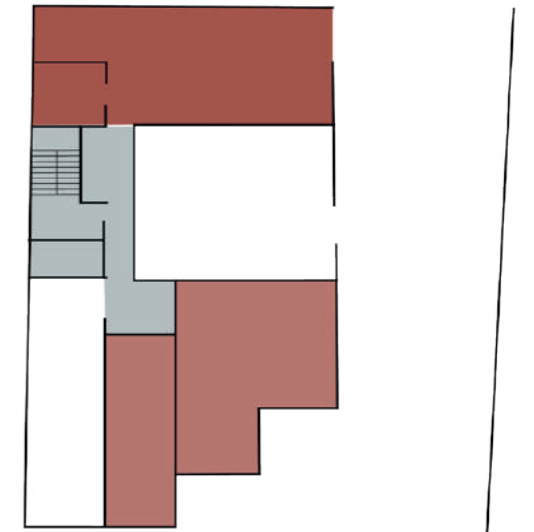
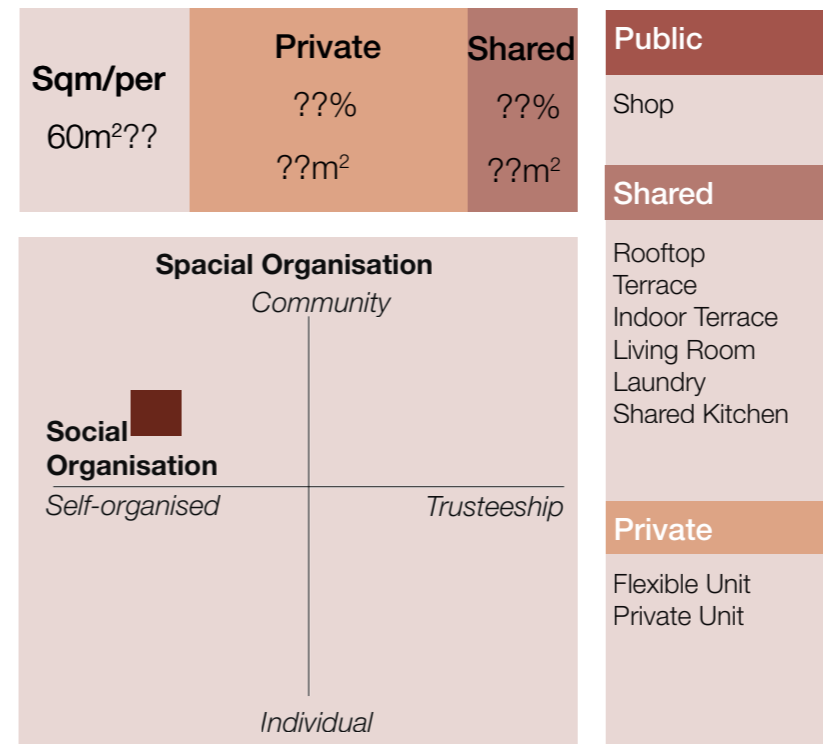
There are three different sizes of apartments, that all have a kitchen, bathroom and space for living and sleeping. Apartment sizes can be adjusted as some rooms can be taken from one apartment to add it to one next to it.

Shared Space

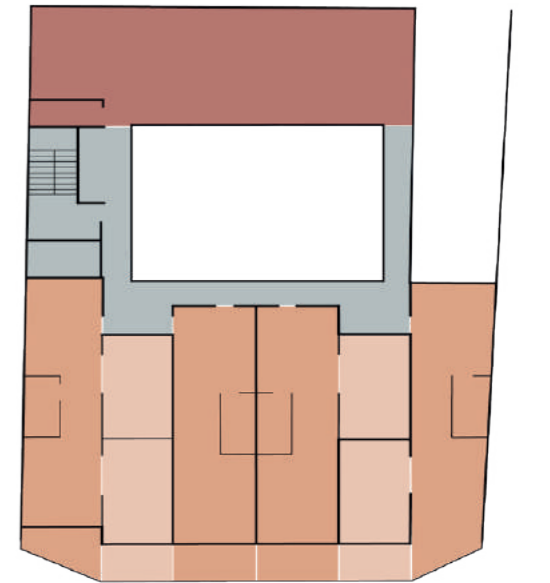
The residents share bicycle storage, a kitchen with living room on the ground floor, and indoor terrace, a guest apartment, laundry machines and two terraces.

Public Space

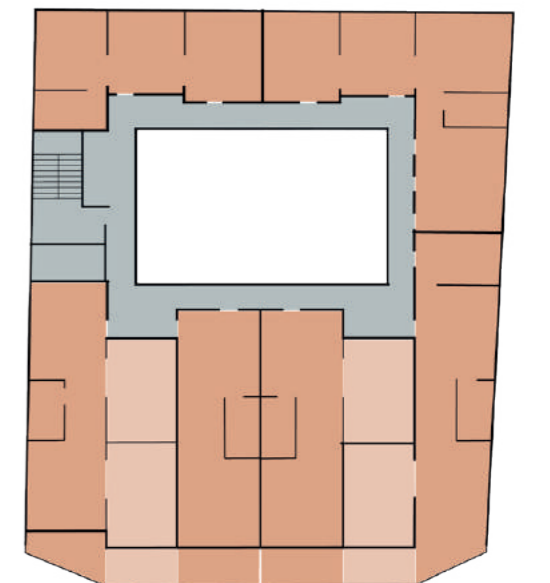
The cooperative decided too not have to many public space, but there is a little shop for unpackaged groceries on the ground floor.



Ground Floor



First Floor



Second Floor

ADVANTAGES

- + very affordable
- + residents were part of the planing process.
- + low cost, but high living quality (good ventilation, lots of light, practical floorplans)
- + several rooms can be connected to either one or another apartment which leads to long-term flexibility
- + focus on sustainable building

DISADVANTAGES

- closed to the neighborhood

CASE STUDY SPREEFELD

Architects: BAR Architekten
 Year: 2014
 Location: Berlin
 Sqm Plot: 540
 Sqm Building: 7.376m²
 People : ca. 85
 Sqm per person: ca. 41,2m²
 Price: 2050€/m²
 Apartment sizes: 25m² - 600m²
 54 apartments,
 8 business units,
 3 flexible rooms



Source: <https://fatkoehl.com/en/housingmixed-use/reefeld-Berlin/>



Private Space

Most private spaces include their own private bathroom, small kitchenette and access to a balcony.

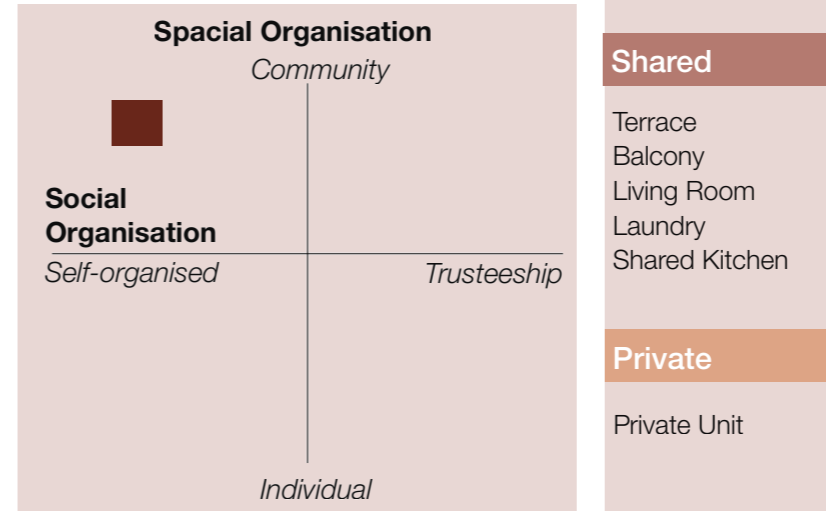
Shared Space

Since the project is fairly big, there are many facilities geared towards all age groups. You will find a kinder garden for kids, youth and clubrooms for teens, maker spaces and multifunctional rooms.

Public Space

The property has open access for any visitor who want to come. There is a nice garden and access to a small beach on the river. There is also a few businesses and organisations on the ground floor, just as well as two multifunctional rooms that you can book.

Sqm/per	Private	Shared	Public
41,2m ²	75%	25%	Commercial Workshop Garden Option Rooms
	31,2m ²	10m ²	



Second Floor

ADVANTAGES

- + balance between the public and private
- + public spaces create relationships outside the cooperative group
- + privacy for its residents on the upper floors.
- + urban feeling, while still making sure nature is around
- + barrier-free
- + affordable housing with a simple standard of new fittings
- + high energy standard
- + scale of the housing allows for this movement between apartments

DISADVANTAGES

- despite the big plot , there is no space for additions



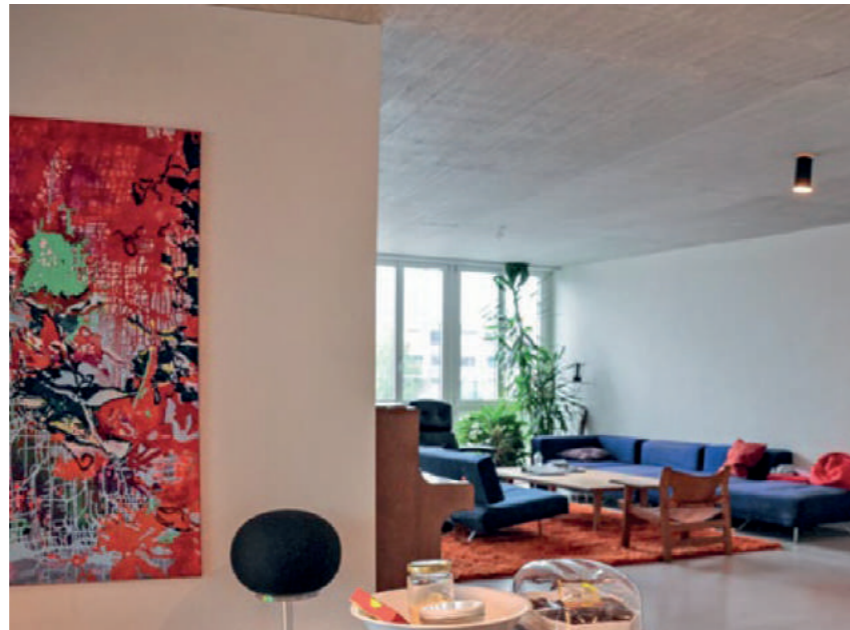
First Floor



Ground Floor

CASE STUDY MEHR ALS WOHNEN

Architects: Duplex Architekten
 Year: 2015
 Location: Zürich
 Sqm Plot: 1140m²
 Sqm Building: 4.657m²
 People : 121
 Sqm per person: 51 m²
 Price: ca. 3600€/m²
 Apartment sizes: 312 - 399 m²
 (Satellite Apartments)
 25-41m²
 (private units)



Source: „Zukunft Bauen“ Bundesamt für Bauwesen und Raumordnung



Private Space

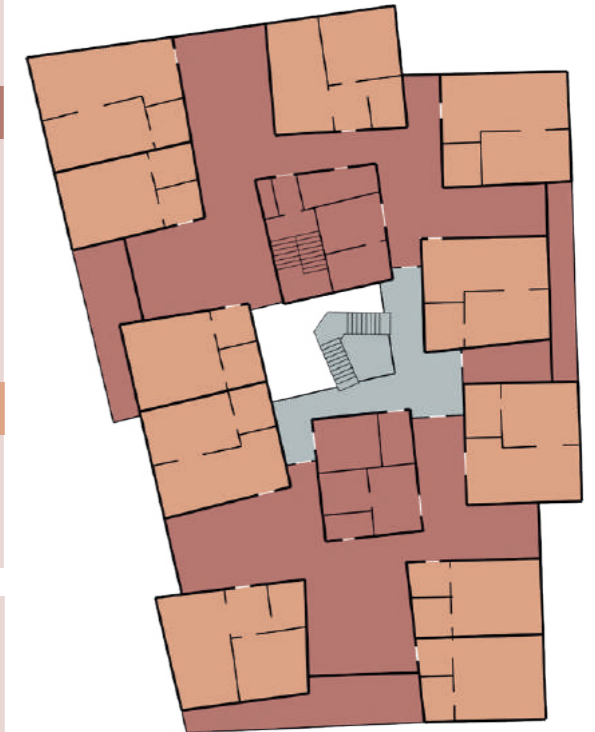
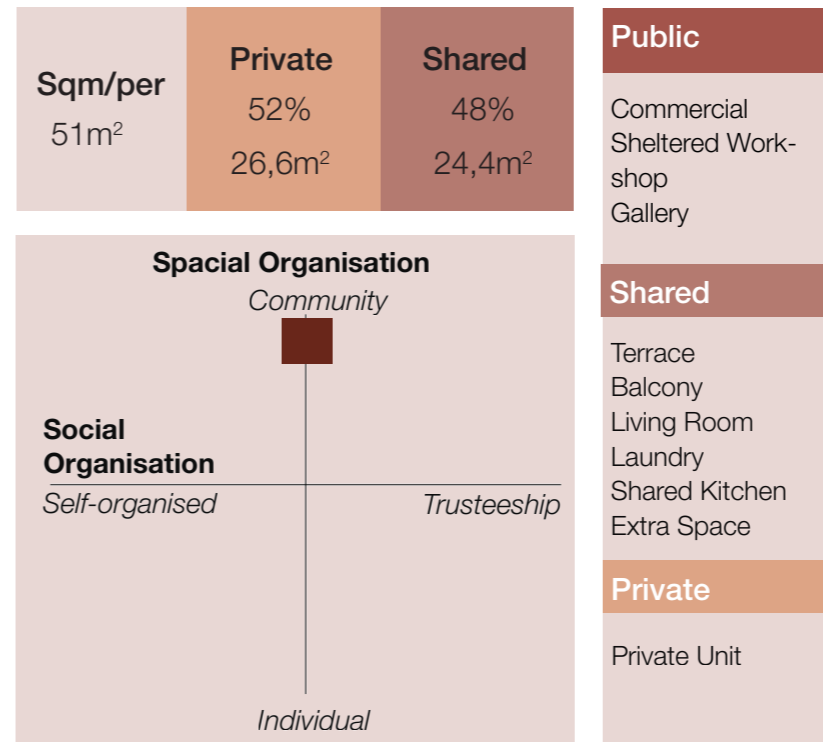
All units have a living room and at least one bed room, in some cases two. Every unit has a private bathroom and a little kitchen corner.

Shared Space

The clusters are sharing a main living room, a dining space and a kitchen, a common bathroom, terraces and extra shared services like e.g. a laundry room.

Public Space

The whole neighbourhood is open to people to come in. In this building in particular there is an office/atelier and a small gallery space.



Example Floor

ADVANTAGES

- + units allow the creation of different areas and direct access from the private units into the shared space without using dividing walls
- + common bathroom
- + sharing practical services like the laundry
- + kitchen area creates a place of interaction and togetherness
- + whole neighborhood has a focus on community
- + transparency between cluster apartments
- + community leads to more sustainability

DISADVANTAGES

- units are inflexible
- unuseful left over spaces within the shared area
- no room for home office
- shared space can't be accustically devided
- kitchen relatively small
- residents would have wished to decide if they need a private tea kitchen
- lack of green in the outdoor space



Ground Floor

Source: Saskia Langbein
Source Emilsborg: <https://www.chalmersstudentbostader.se/vara-bostader/emilsborg/>



Liljeforsgatan

Dan Broströmhemmet

Rotary

Flatshare
12 people
Shared kitchen, bathroom and extra room

Student Dormitorios
ca. 50 people in the building
12 people on a corridor
Shared kitchen and living room, but individual bathroom

Student Dormitorios
ca. 600 people in the building
5 people on a corridor
Shared kitchen and living room, but individual bathroom

Shared Facilities:

- Two Kitchen
- Laundry
- Garden

Shared Facilities:

- Kitchen
- Living Room
- Laundry
- Bookable Sauna
- Terrace
- Balcony

Shared Facilities:

- Kitchen
- Bookable Study Rooms
- Laundry
- Bookable Sauna
- Bookable Gym

+ Everyone knows each other

+ People frequently spend time together

+/- Bond is stronger with people on the same floor

+ Friendly interactions with people on the corridor, some people join shared dinners and spend time together

+ Facebook group with nearly all members in the house, where people borrow or sell each other things, discuss important issues

+/- Shared kitchen are frequently used, but many people prefer to spend time by themselves

- People live by themselves

- Not many interactions

+/- Some people get along with the other people on the corridor

- Shared facilities are hard to find

+ Sauna is used a lot

- Other spaces are used not that much



Victor Rydberg

Guesthouse

Emilsborg

Student Dormitorios
ca. 400 people in the building,
15 people on a corridor
Shared kitchen, living room and showers, but individual toilets

Student Dormitorios,
102 people
Individual kitchen and bathroom

Student Dormitorios
ca. 1000 people
Individual kitchen and bathroom

Shared Facilities:

- Kitchen
- Study Rooms
- Laundry
- Bookable Sauna
- Bookable Game Room
- Workshop

Shared Facilities:

- Gym
- Table Tennis
- Laundry
- Study Area
- TV Room
- Several Other Common Areas

Shared Facilities:

- Bookable Event Space
- Terrace
- Outdoor BBQ
- Pool
- Laundry
- Bookable 2 Saunas

- People live by themselves

- Not many interactions

+/- Some people get along with the other people on the corridor

- Shared facilities are hard to find

+ Sauna and game room is used a lot

- Other spaces are used not that much

- People live for themselves

- Not a lot of interactions with people

+/- Shared facilities are mostly used to invite friends over

- People live for themselves

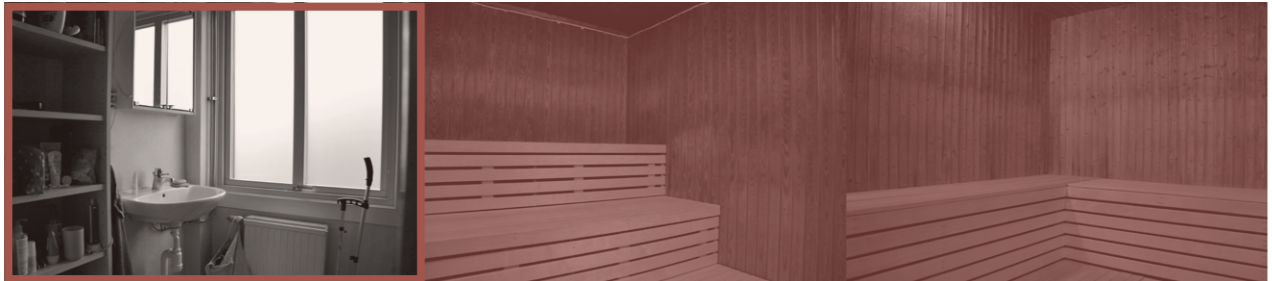
- Not many interactions

+ Trading of second hand furniture

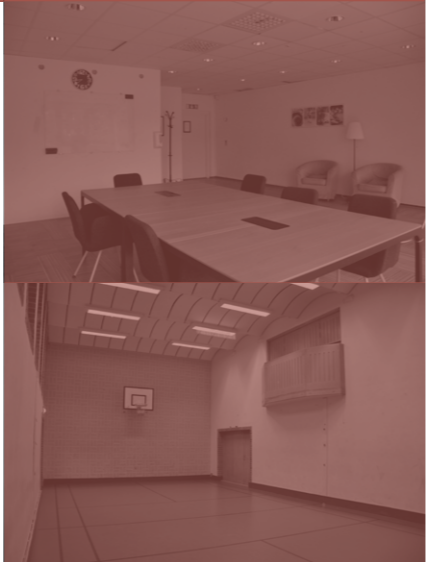
- I did not get the feeling that shared facilities are used a lot

COMMON SPACES COMPARED

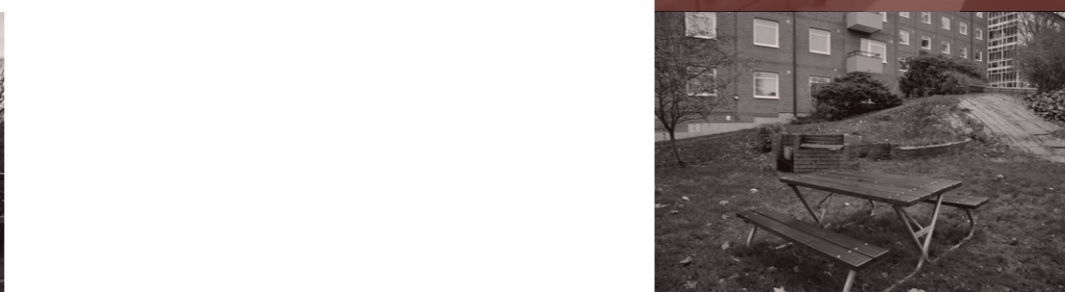
Private



Liljeforsgatan Dan Broströmhemmet



Public



Guesthouse



Emilsborg



Victor Rydberg



Bookable

All Time Access

Open Access

Daily Use

SURVEY

BACKGROUND

To better understand people's attitudes towards shared living, I conducted an online survey asking individuals about their preferences and opinions on shared living arrangement. The survey aimed to explore the factors that influence people's decisions to live in shared housing, the amenities they are willing to share, and the benefits they expect from such arrangements. By analyzing the data, I hope to better understand the opportunities and challenges of shared living and inform the development of innovative shared housing models that can meet the needs and desires of the future residents. In this report, I summarize the results of the survey and share insights into the perspectives and preferences of respondents towards shared living.

I received a total of 72 responses from individuals sharing their opinion about in shared living arrangements. Majority of the respondents were between the ages of 19 and 35. Out of the 72 respondents, 45 identified as female, 21 identified as male, and 6 identified as non-binary. The majority of respondents were from European countries.

As for the living situations of the respondents, half of them lived in cities with a population of over one million, while 37% lived in cities with a population under 1 million. Only 13% lived in towns or villages with a population below 300,000.

A significant number of respondents had prior experience with shared living arrangements, with most having lived in flatshares or student housing. This suggests that shared living is a popular choice among individuals who prioritize community-oriented living arrangements.

WHO WANTS TO SHARE?

- 47%** prefer sharing housing over living alone
- 33%** prefer shared housing with their family over having their own space
- prefer having a bigger, but shared apartment, rather than a smaller apartment by themselves
- 50%**

BASED ON EXPERIENCE

ADVANTAGES

- Great People
- Activity
- Cooking together
- Shared Resources
- Active Time together
- Comfort
- Consistency
- Cleanliness
- Meet people you would otherwise not meet
- Living with friends
- Cheaper
- More central
- Deviding responsibilities
- Communal Spirit

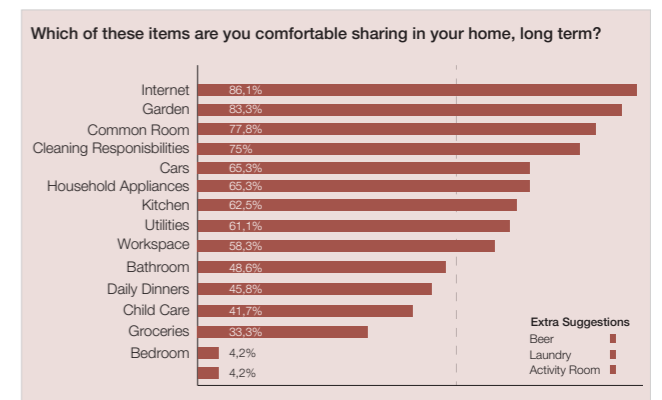
DISADVANTAGES

- Cleaning Responsibilities
- Lack of Privacy
- Cold Corridors
- Communication
- Stolen Food
- Disagreement about Finances

According to the survey, the top reasons why individuals are interested in shared living arrangements are to have more opportunities for socializing (79%) and to split costs and get more value (78%). Additionally, many respondents (64%) expressed interest in having a community outside of work or school, while others (58%) saw the benefits of having people to ask for help when needed.

However, the survey also revealed that some factors were deemed less important in the decision to live in shared housing. For example, only a minority of respondents found splitting environmental impact or having access to more facilities like a gym to be significant factors. Convenience levels were also ranked low among respondents.

These findings suggest that while shared living arrangements can offer numerous benefits, social connections and cost-effectiveness remain key motivators for individuals interested in this lifestyle. Developers and designers of shared living spaces should consider these factors when creating new shared housing models.



When asked about how the fellow house members should be, respondents had a very different view on if they should be similar to them or have different backgrounds. Many replies did state, however, that they want to live with people that share a similar perception of cleanliness, similar social needs and that are respectful.

Living together can easily result in conflicts. Within the study people showed different approaches to resolve them. Some voiced a stronger need for harmony and conflict avoidance, while others value honesty higher. In any way, having good private spaces, can minimize the tension.

THE PERFECT COMMON ROOM

WHAT

- Atelier
- Workshop
- Space to use as "Conference Room"
- Big Kitchen
- Living Room
- Dinning Room
- Quiet Zone
- Access to Balcony
- Small Semi Private Spaces

HOW

- Natural Light
- Big Windows
- Comfort and Room Design
- Large Space
- Room for Guests
- Connected in a natural way
- Open Doors
- Open Layout
- Homey Accustics
- Boundaries between Shared and Personal
- Warm Lighting
- Minimalistic but Cozy
- Flexible Spaces
- Clean
- Maximal Control over indoor climate
- Personalization
- Sense of ownership
- Bright and Cozy Lights
- Easy Access

ITEMS

- Large Table
- Several small tables that you can connect
- Plants
- Decoration
- Art and Posters (by Inhabitanace)
- Couches
- Sufficient Storage
- TV
- Stereo
- Shared Things (like books, sewing maschine, scanner, printer)
- Mutliple Chair Groups
- Projector
- Candles
- Blankets and Pillows
- Common Shelf
- Games
- Pool Table, Darts, Game Consol
- Board Games
- Bear Pong Table
- Tablekicker

LEARNINGS

LITERATURE

The main learnings are that shared housing can offer a range of benefits, such as reduced living costs, increased social interaction, and flexibility in living arrangements. Shared living that involves sharing of resources such as kitchens, laundry, workspaces and dining rooms can lead to smaller private spaces, but greater efficiency and access to better facilities at a reduced cost.

When designing shared housing, there are several key factors to consider, such as the influence of future residents, the layering of temporary and permanent spaces, the balance between heterogeneity and homogeneity in the community, and the flexibility of sharing and owning resources.

It can be helpful to involve future residents in the planning and organizing of shared housing projects to give them a sense of ownership and ensure their needs and preferences are taken into account. Too much involvement, however, can prolong the process and needs

Demand Drivers for Shared Housing

- Urbanization
- Affordability
- Social Change

high dedication. Additionally, a mix of temporary and permanent spaces, along with flexible arrangements for different stages of life, can enhance the quality of life of the residents. The flexibility of sharing and owning resources can optimize access to communal areas and other intangible assets while providing residents with options that fit their preferences and changing lifestyles. Creating a balance between heterogeneity and homogeneity is also essential to promote communal activities, social connections, and a sense of community while also allowing for diversity and respect for different values and beliefs.

The typology of the shared housing should be based on the intentions of the future residents. For me co-housing, co-living and cluster apartments are the most interesting ones, as they cover all three intentions. Another question should be: What is needed to create the organisational structures that result in the fulfillment of the inhabitants?

CASE STUDY

All of the projects are build with a higher sustainability focus, but La Borda features sustainable building method that are adapted to the climate in Barcelona, which means I can learn most from its strategies. The floors also have long-term flexibility, as certain rooms can be connected to different apartments. Spreefeld emphasizes openness to the neighborhood by offering space for local businesses, rooms that can be booked by anyone and nature that connects the neighborhood to the river Spree, as well as barrier-free design. Meanwhile, Mehr als Wohnen offers cluster apartments that comprise the entirety of the building with open floor plans where the shared spaces are integrated into the everyday life of its residents.

LA BORDA

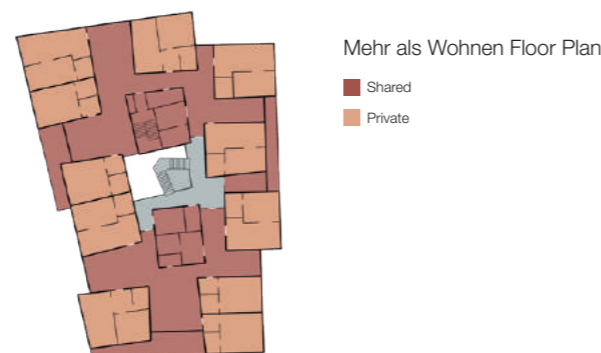
- + Sustainable Building Methods
- + Flexibility of Apartments

SPREEFELD

- + Openness to the Neighbourhood and Nature
- + Barrier-Free Design

MEHR ALS WOHNEN

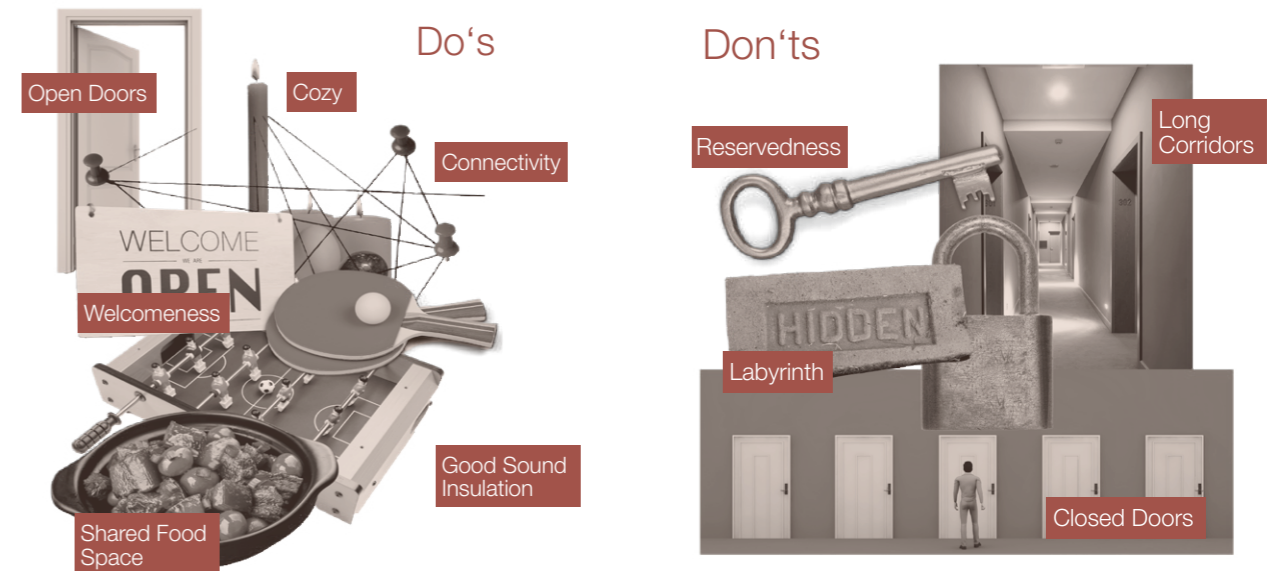
- + Open Floor Plan / Shared Spaces as part of everyday life
- + Whole Building with Cluster Apartments



COMMON SPACES COMPARED

When talking to the residents it became clear that they knew that shared spaces exist, but not how to find or get access to them. The rooms were hidden and booking systems rather inconvenient. Having to book a room in advance for yourself also meant that residents cannot use the rooms together, but only individually. While conversations can start in shared kitchens, there does not seem to be a significant interest among residents in spending time together in most cases. However, one exception to this trend is the house in

Liljeforsgatan, where residents seem to spend more time together. This may be due to the flat-like feeling of the space and the direct connection between rooms, which has a significant impact on how people live together. Unlike other shared spaces where doors require a key to move between rooms and floors, in the Liljeforsgatan collective, only the key to enter the building is necessary, and other doors are often left unlocked or even completely open.



SURVEY

The survey results indicate that there is a significant demand for shared housing, but the supply of such housing options is currently limited. Respondents reported positive experiences with shared housing, with flatshares and student housing being the most common and intimate living arrangement. Despite or because of previous experiences, their

expectations about how good shared housing should look like are widely overlapping. However, to meet the needs and expectations of prospective residents, factors such as cleanliness, communication, and compatibility among housemates, need to be prioritized, while also offering a community-oriented and cost-effective living arrangement.



03 Site Analysis



Source: Saskia Langbein

SITE

The site is located in Poble Nou, right next to the metro station Bogatell. It is a corner plot of Barcelona famous blocks and has around 1140 m².

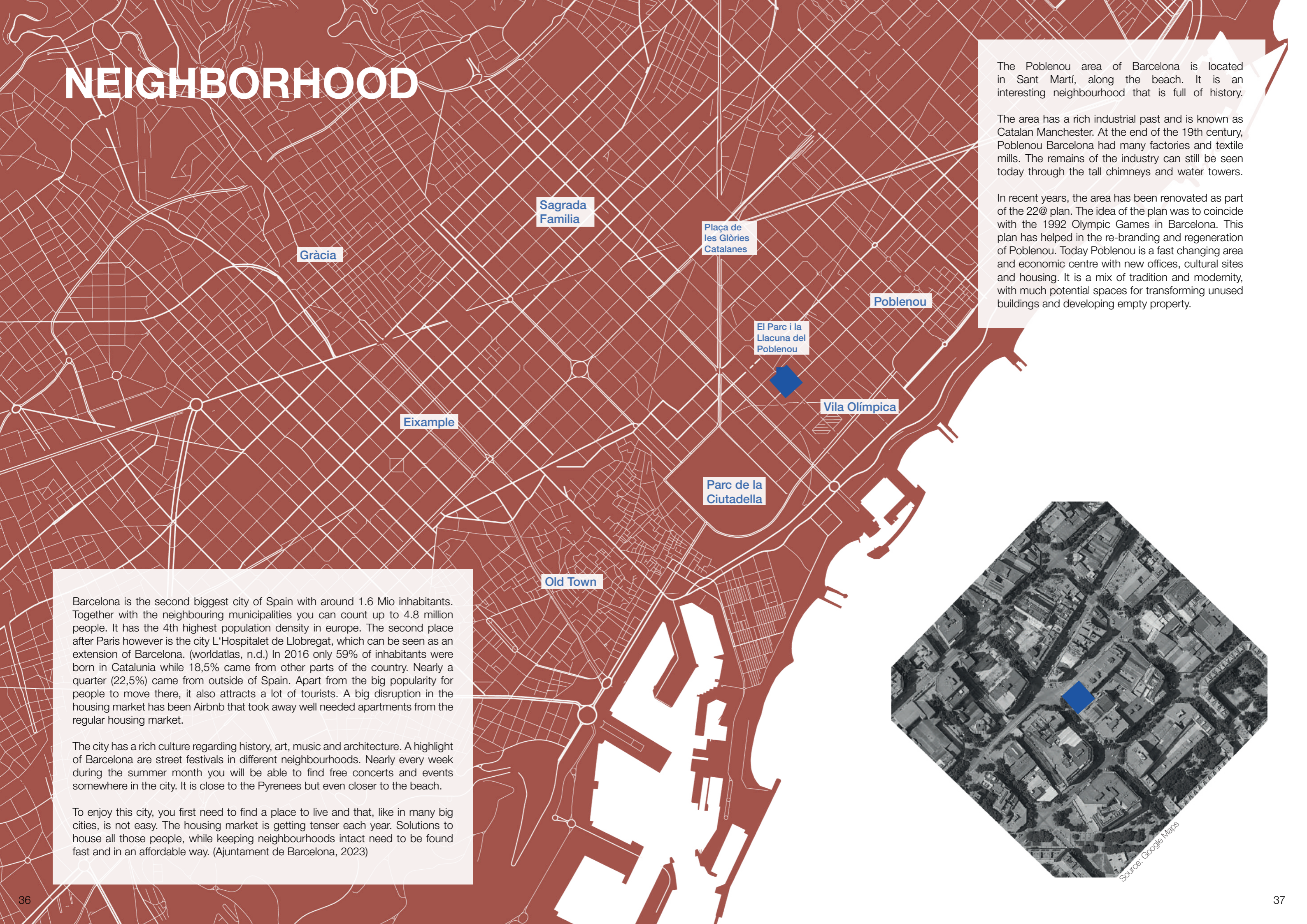
On the same block you can also find residential units, offices, a print shops, a small market, a restaurant and a few shops.

As visible on the photos, there is different kind of materials on the ground of the plot and the surrounding building are sprayed on with graffiti.

The site is around a kilometre away from the Parc de la Ciutadella, Plaça de les Glòries Catalanes and the closest beach.



NEIGHBORHOOD



The Poble Nou area of Barcelona is located in Sant Martí, along the beach. It is an interesting neighbourhood that is full of history.

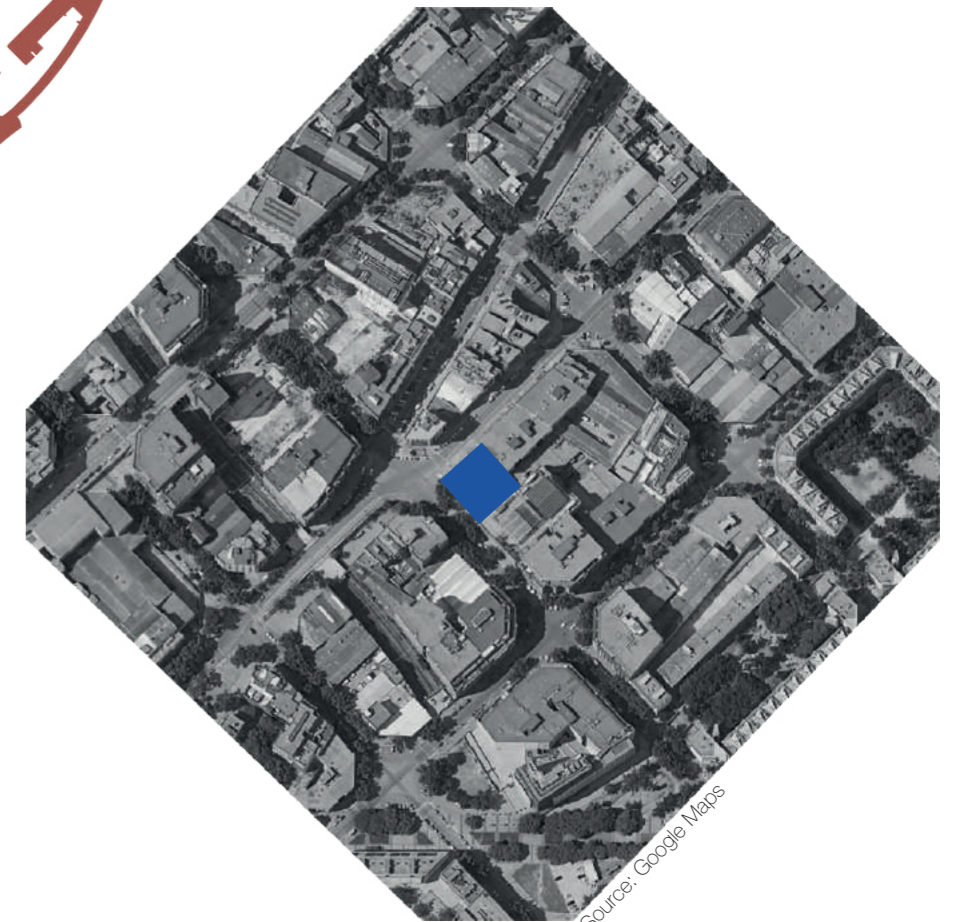
The area has a rich industrial past and is known as Catalan Manchester. At the end of the 19th century, Poble Nou Barcelona had many factories and textile mills. The remains of the industry can still be seen today through the tall chimneys and water towers.

In recent years, the area has been renovated as part of the 22@ plan. The idea of the plan was to coincide with the 1992 Olympic Games in Barcelona. This plan has helped in the re-branding and regeneration of Poble Nou. Today Poble Nou is a fast changing area and economic centre with new offices, cultural sites and housing. It is a mix of tradition and modernity, with much potential spaces for transforming unused buildings and developing empty property.

Barcelona is the second biggest city of Spain with around 1.6 Mio inhabitants. Together with the neighbouring municipalities you can count up to 4.8 million people. It has the 4th highest population density in Europe. The second place after Paris however is the city L'Hospitalet de Llobregat, which can be seen as an extension of Barcelona. (worldatlas, n.d.) In 2016 only 59% of inhabitants were born in Catalonia while 18,5% came from other parts of the country. Nearly a quarter (22,5%) came from outside of Spain. Apart from the big popularity for people to move there, it also attracts a lot of tourists. A big disruption in the housing market has been Airbnb that took away well needed apartments from the regular housing market.

The city has a rich culture regarding history, art, music and architecture. A highlight of Barcelona are street festivals in different neighbourhoods. Nearly every week during the summer month you will be able to find free concerts and events somewhere in the city. It is close to the Pyrenees but even closer to the beach.

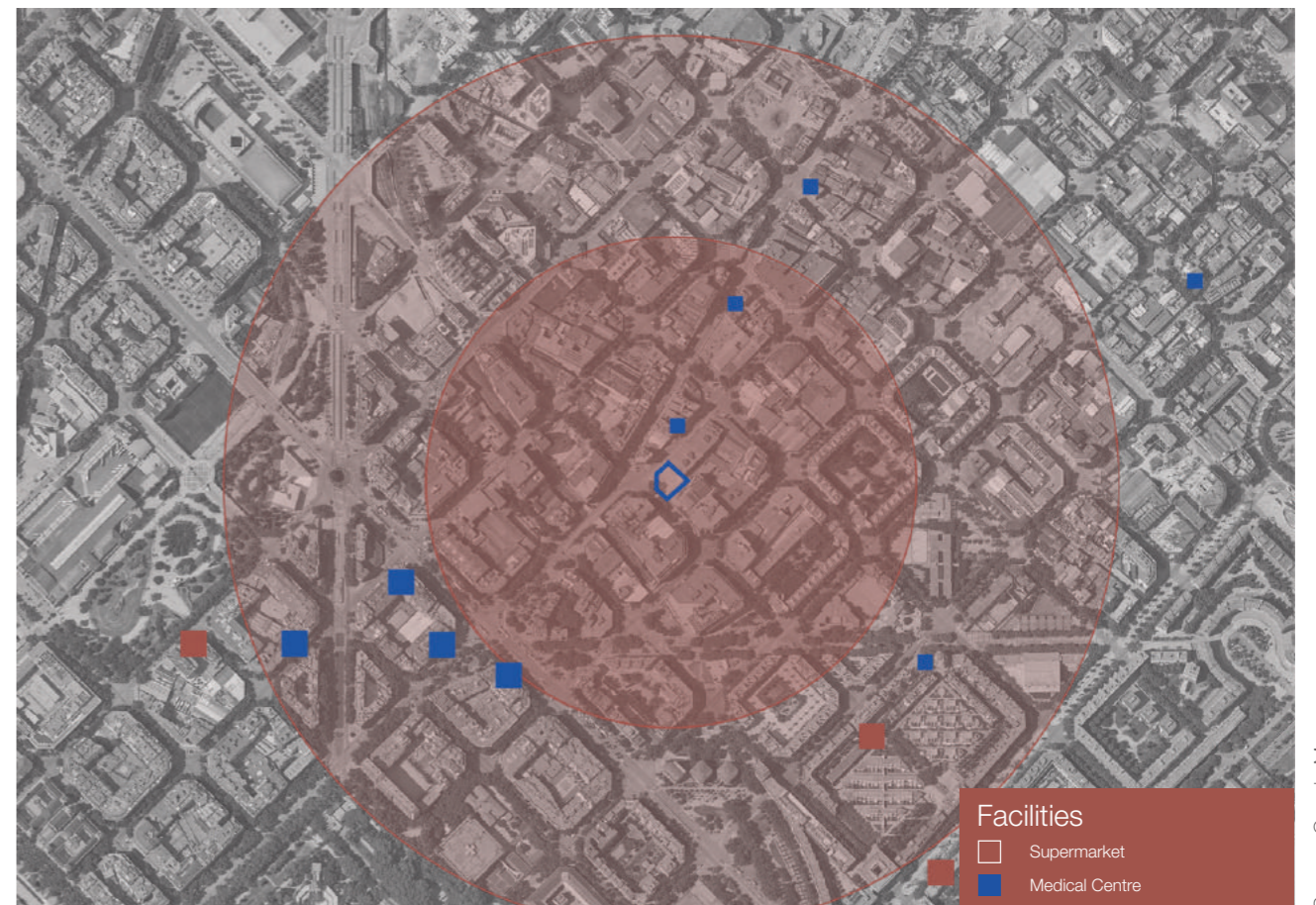
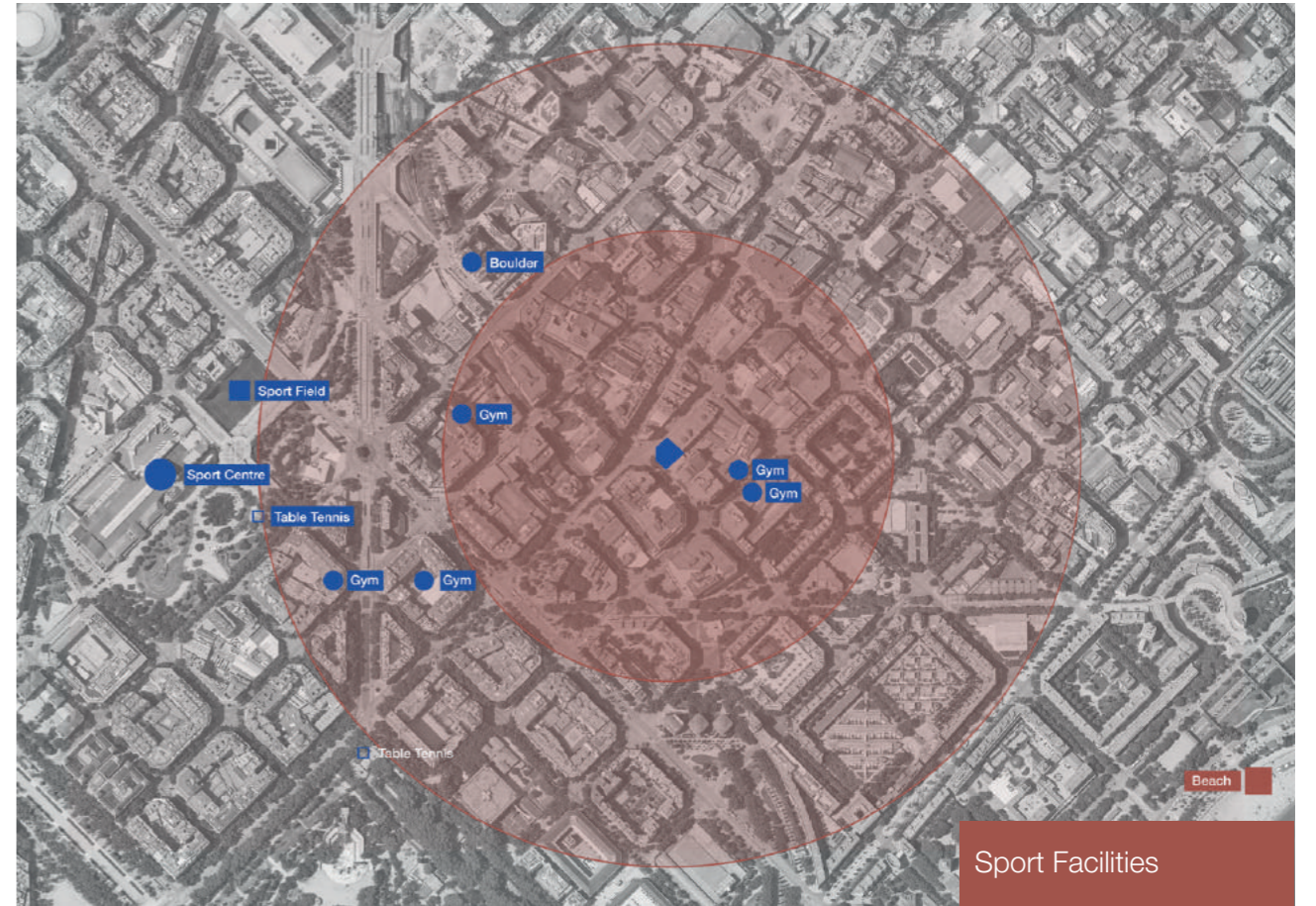
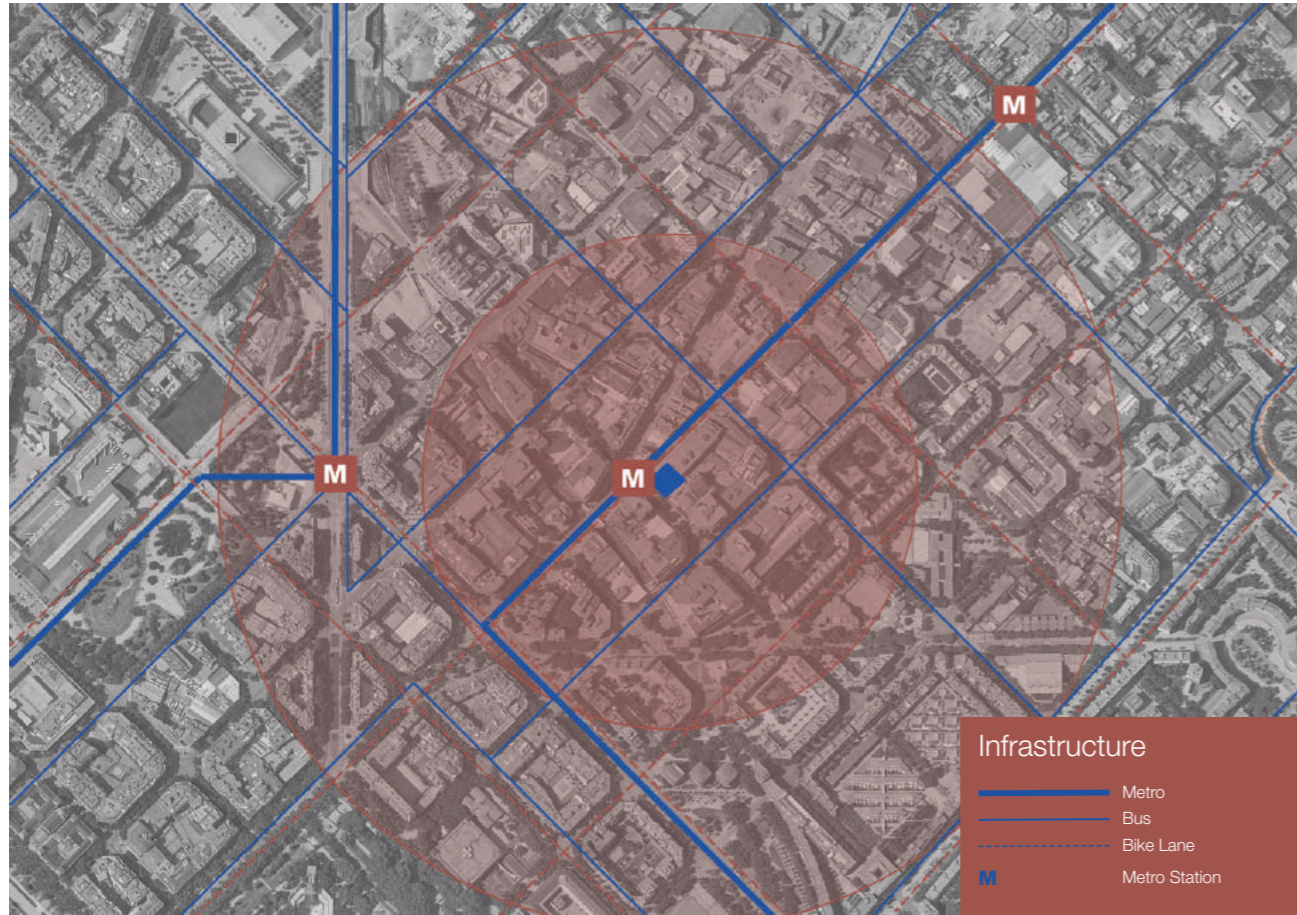
To enjoy this city, you first need to find a place to live and that, like in many big cities, is not easy. The housing market is getting tenser each year. Solutions to house all those people, while keeping neighbourhoods intact need to be found fast and in an affordable way. (Ajuntament de Barcelona, 2023)



Source: Google Maps

Poblenou is an area of Barcelona, with a mixture of commercial spaces, offices and housing. Unlike other parts of the district, there was still the opportunity to incorporate open public areas and green spaces into the neighborhood. As part of my research, I carefully mapped out the infrastructure of the area, including locations such as supermarkets, health centers, educational facilities and sports centers. It became apparent that most necessary facilities are within a 5-10 minute walk of the site, making it a highly desirable location for shared housing that caters to a variety of needs.





WALK IN POBLENOU

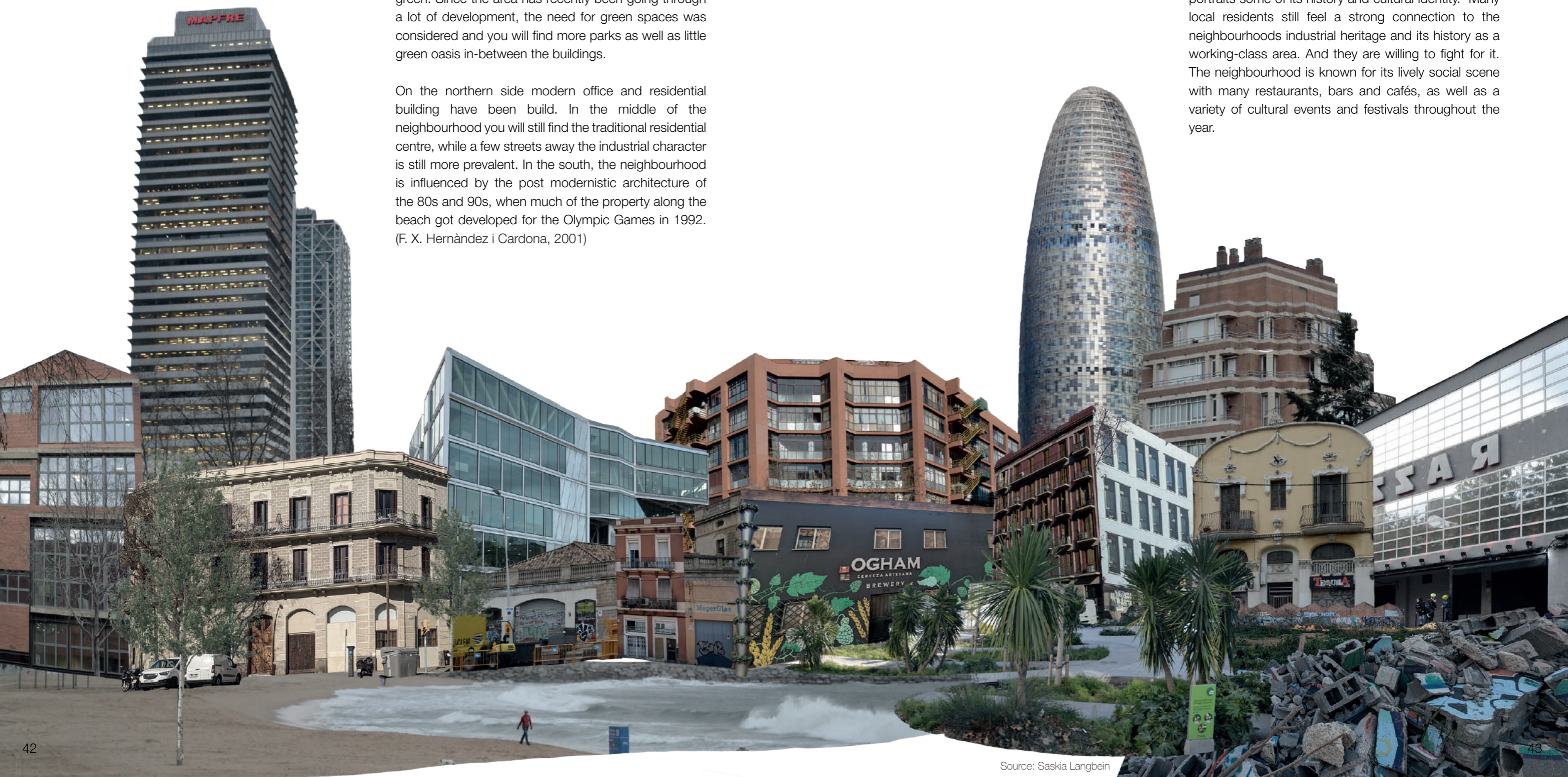
Poblenou is located on the north-eastern edge of Barcelona. It is often described as a vibrant and eclectic neighbourhood with a rich history and a modern, creative spirit. The area has a unique character, where every house looks different to the next one. When walking through the streets, you will come across wide boulevards, small streets, new superblocs (pedestrian streets) and little projects on many corners. The district has a mix of residential and commercial areas, with many former industrial buildings now re-purposed as cultural and creative spaces. Compared to other areas in the city, Poblenou seems more spacious and green. Since the area has recently been going through a lot of development, the need for green spaces was considered and you will find more parks as well as little green oasis in-between the buildings.

On the northern side modern office and residential building have been build. In the middle of the neighbourhood you will still find the traditional residential centre, while a few streets away the industrial character is still more prevalent. In the south, the neighbourhood is influenced by the post modernistic architecture of the 80s and 90s, when much of the property along the beach got developed for the Olympic Games in 1992. (F. X. Hernández i Cardona, 2001)

Descriptions on the internet and especially on the website of the municipality will most likely describe Poblenou as a hub for innovation and creativity with a thriving start-up scene, and a growing reputation as a centre for design and technology. While this is visible in some parts already, Barcelona's aim is to transform the whole neighbourhood into it. To archive this Poblenou became home to many co working spaces, galleries, and studios, as well as the famous Design Museum of Barcelona.

Even when looking at all the improvements made, one topic can not be left out: the justified debate about gentrification in the neighbourhood. Gentrification has led to the displacement of long-time residents, rising housing costs, and if not prevented now will lead to a loss of the neighbourhood's cultural identity. The commercialisation of Poblenou has resulted in the destruction of historic and cultural landmarks and by looking at the form of transformation will not likely take more consideration of preservation in the future.

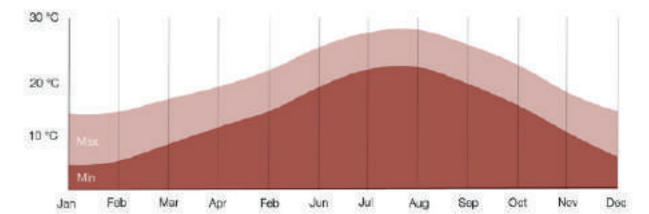
Despite all the changes, the neighbourhood still portraits some of its history and cultural identity. Many local residents still feel a strong connection to the neighbourhoods industrial heritage and its history as a working-class area. And they are willing to fight for it. The neighbourhood is known for its lively social scene with many restaurants, bars and cafés, as well as a variety of cultural events and festivals throughout the year.





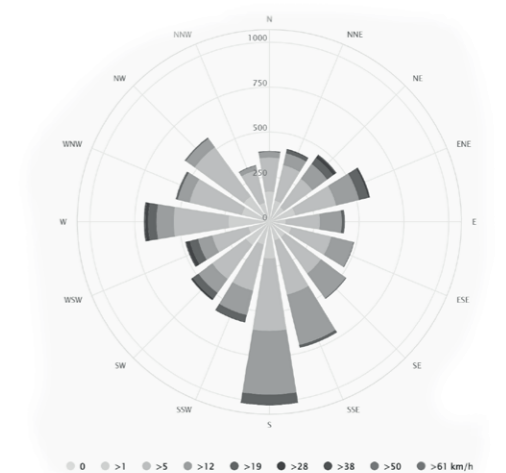
WIND AND WEATHER

Temperatures in Barcelona



Barcelona is located on the northeastern coast of the Iberian Peninsula and has a Mediterranean climate. The city is known for its mild climate with an average temperature of 16.5°C and an average annual rainfall of 620 mm. Especially in summer, however, the temperatures are quite high. July and August are the warmest months, with average temperatures around 28–29 °C during the day and 22–23 °C at night. The wind in Barcelona is generally light to moderate. The wind direction is mainly from the north. The wind rose for Barcelona shows how many hours per year the wind blows from the indicated direction.

Wind Rose



POBLENOU REFERENCES

FACADES



Wooden Facade
Yakisugi Method



Green Facade



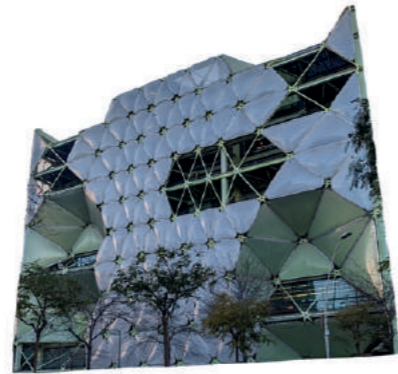
Outside Shading



Windows for
Interaction



Big Windows in
Shared Spaces



Innovative
Shading Strategy

FORMS



Different Level



Shaded Public
Entrance



Walk through
the Building

ELEMENTS



Art



Wind Tower



Traffic-calmed
Street



„Green Facade“

On these two pages, you are seeing some inspirational references that I found in Poblenou. I walked through the streets around my site and had a look at social spaces, sustainable building techniques and generally elements that stood out to me, when passing by.



Outdoor Seating



Community Garden



Water Collection



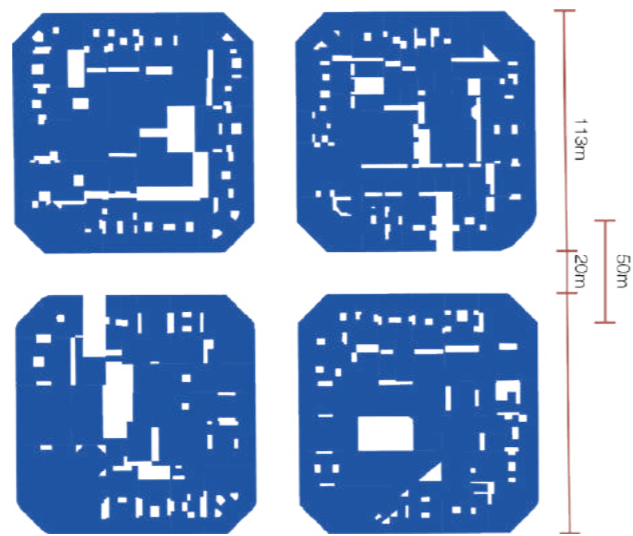
Staircase as
Extension

BARCELONA AND THE CERDÀ PLAN

The Cerdà Plan was developed by the Catalan engineer Ildefons Cerdà in the mid-19th century for the city of Barcelona, Spain. The plan was designed to expand the old city centre and connect the villages to the city. The aim was to create a modern and functional urban layout. One of the most important features of the plan was the emphasis on public space and social integration. Regardless of their social status, there was to be space for all residents in one block.

The Cerdà Plan is based on a grid system. The city blocks are 113.3 by 113.3 m² to create an optimal space with 6 m² of air volume per person. In addition, the traffic flow has been improved and reorganised in comparison to the old city. The corners of the blocks were sloped so that carriages (now cars) could stop at the side. The streets are divided into two parts, one for pedestrians and one for vehicles, with a width of 20m (originally 35m were planned). In the most important places, the road is 50-80m wide. The "interior blocks" were supposed to serve as gardens, playgrounds,

and community areas, but that was disregarded. Developers built higher and the interior of the blocks got occupied by parking, shopping centres, and private quarters. Only in recent years the municipality tried to recover spaces in the „manzanas“ (interior blocks) to open them up to the neighbourhood. (J. Urbano, 2016)



THE CORNER HOUSE



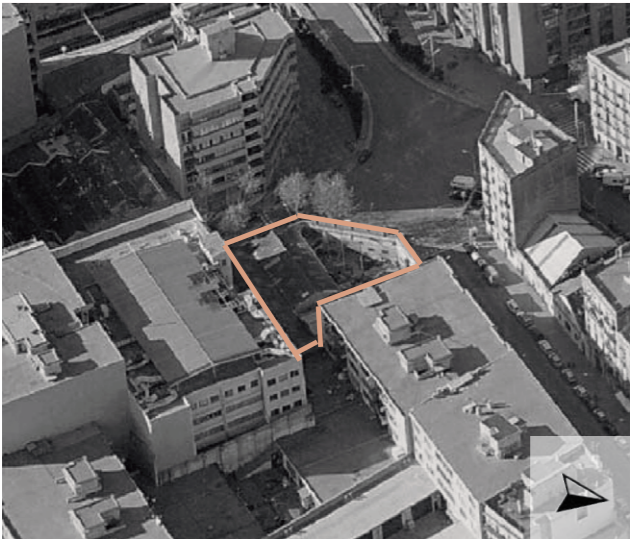
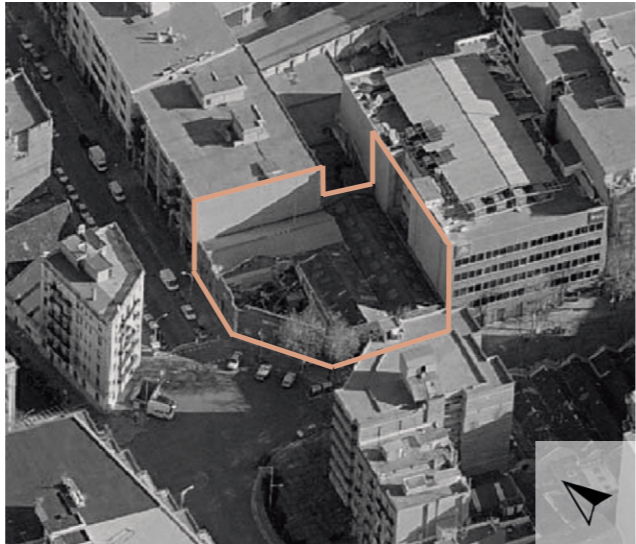
Source: Saskia Langbein

Cerdà Plan

HISTORICAL



Source: Google Maps

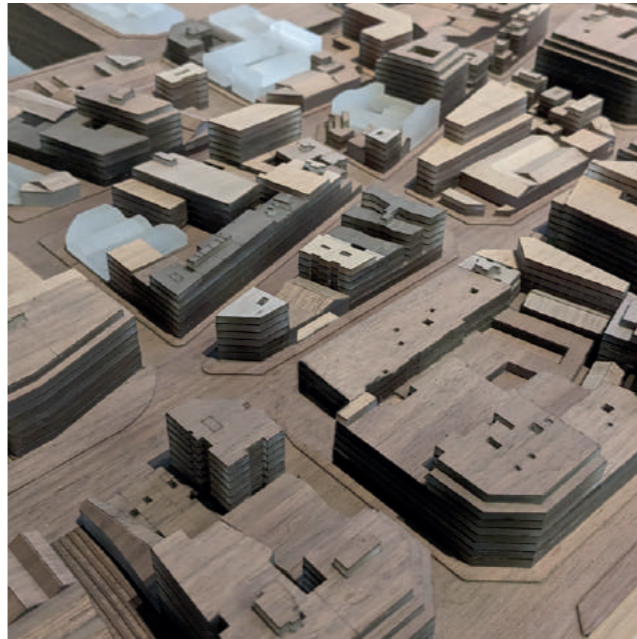


February 2010

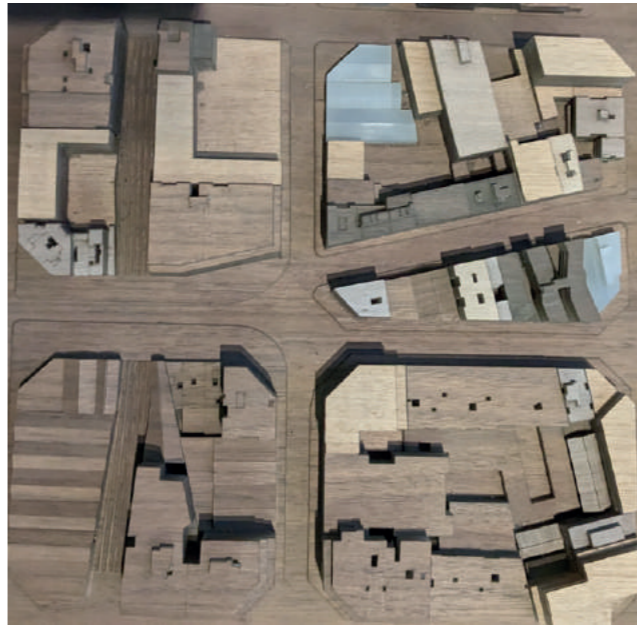
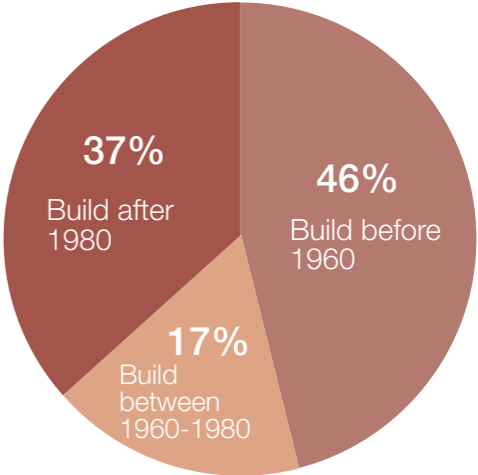


Source: Ajuntament de Barcelona

Before 2012, there was a typical brick style factory building on the property. Despite a shared facade, from above it looks like several buildings, out of which the middle one has been missing, even before the rest of the buildings on the plot got demolished. Unfortunately, apart from these pictures, I did not find further information about the property.



Age of Poblenou Buildings



- after 2000
- 1900-1950
- 1951-1999
- recent buildings
- protected buildings

Model from MUHBA Oliva Artés

Most buildings in the direct surrounding are built in the early 20th Century. It is visible that after 2000 many buildings have been demolished and replaced by new building, following the 22@ plan. For an area with rich history, not so many building are protected, which leads to major changes in the atmosphere of the neighbourhood in recent years.

22@ PLAN

In the Sant Mart district, 200 hectares of industrial property are to be converted into a centre of economic activity linked into neighbourhoods with a well-balanced mix of uses according to the 22@ Plan. This plan has been approved by the Barcelona City Council in 2000 and Poblenou has been changing rapidly ever since. The advancement of this district has been approached strategically by the city. The plan involves the construction of new formations, residential developments that includes social housing, live-work spaces, the relocation of universities, the development of leisure facilities, new green areas, and rapid transit systems that connect the district to the rest of the city. To be precise, the project enables the creation of up to 3.200.000m² of new business area, 114.000m² of new green spaces, 4000 social housing units and has the aim to transform the old industrial land into an area with the highest environmental qualities. (22@ Barcelona (2010), 22@ Barcelona Project Presentation Dossier, Ajuntament de Barcelona)

After more than 15 years of development it became evident that there were new urban, social, and economic concerns that required attention. Those have previously been falling behind the economic and innovative process. In order to create a shared road map that directs Poblenou's future change, the City Council started a participatory reflection with all of the territory's agents in 2017. The "Let's rethink the 22@" process involved more than a thousand participants from various organizations and industries. The improved concept put more emphasis on the social and cultural development of the neighbourhood.

The Goals

1. Transform the former industrial district of Poblenou into a hub for the knowledge economy, technology, and creative industries by attracting new businesses, entrepreneurs, and investors to the area
2. Promote innovation and the development of new technologies and products
3. Improve public spaces, infrastructure, and services, and create a more sustainable and liveable urban environment
4. Foster social and urban development, promote cultural diversity and creativity, and enhance the quality of life for residents and workers
5. Create a dynamic and inclusive urban community

Housing in 22@

With numerous facilities and services, the neighbourhood has developed into one of Barcelona's best-connected regions. Its convenient location near recreational areas and neighbourhood-like feel make it a popular destination for people moving to Barcelona from other parts of the city or outside. While Barcelona's population fell between 2007 and 2014, the Sant Mart district showed a positive percentage, which was mostly driven by population growth in the Diagonal Mar (34.59%), La Llacuna del Poblenou (11.52%), and Poblenou (9.38%) neighbourhoods. This appeal is only possible due to the considerable amount of residential stock.

The Sant Mart neighbourhood has experienced an uneven rate of house building throughout the years. There are established neighbourhoods with an old housing stock alongside recently developed neighbourhoods like Vila Olimpica and Diagonal Mar. Even in mainly industrial streets, you will still find housing amidst old factory buildings. Visible is also that many hotels have been added to the neighborhood in the last 20 years.

In the new enhanced concept proposed for the 22@ region, it calls for a more balanced urban model, where residential uses get a higher priority than before. Housing in this area is going to be under public protection, where especially renting and participation in cooperatives will be encouraged.



Source: Google Maps

People



Age in el Parc i la Llacuna del Poblenou
Source: Ajuntament Barcelona

04 Design Proposal



PROBLEMS AND AIMS



The overarching objective is to develop a project that encompasses three fundamental aspects: efficient spatial organization, fostering a sense of community, and employing sustainable building practices. Regarding spatial organization, a key focus is on optimizing space allocation by minimizing square meters per person. Given the housing shortage in Barcelona, the aim is to provide accommodation to as many individuals as possible. This is achieved by offering compact private units while dedicating ample areas to shared and public spaces. By implementing a well-thought-out floor plan, the intention is to allow for a certain degree of flexibility and adaptability.

Creating a vibrant community space is not solely intended for the residents themselves but also endeavours to engage and benefit the surrounding

Some questions that I have asked myself during the design process.

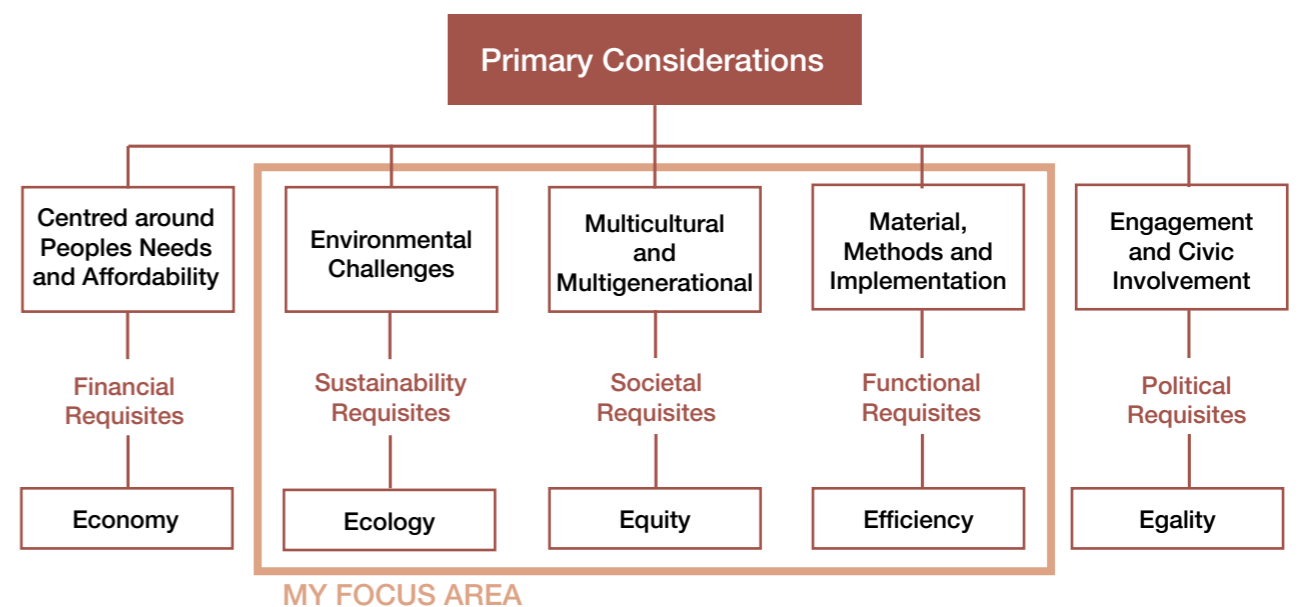
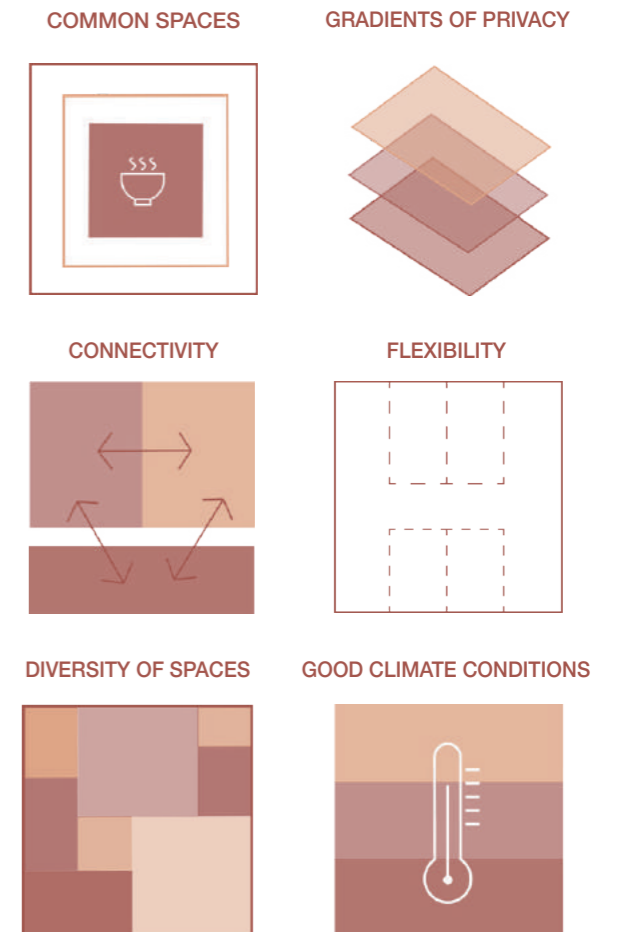
- Which rooms are accessible and how well?
- What uses are possible there?
- Does their use possibly cause (noise) disturbance?
- Are they provided with sufficient daylight?
- Do they relate to the outdoor space?

neighbourhood. Drawing inspiration from the positive impact of neighbourhood integration observed in Can Masdeu, establishing a connection with neighbours is believed to be pivotal in cultivating a genuine sense of home. Therefore, a primary focus of the project lies in the design and functionality of the shared areas.

Lastly, aligning with contemporary construction practices, sustainability is a paramount consideration in this project. Leveraging the mild winters and warm summers of Barcelona, an approach that harnesses the sun and wind to facilitate a favourable indoor climate is pursued. Additionally, the project is built on the foundation of sustainable materials, ensuring a reduced ecological footprint and long-term environmental viability.

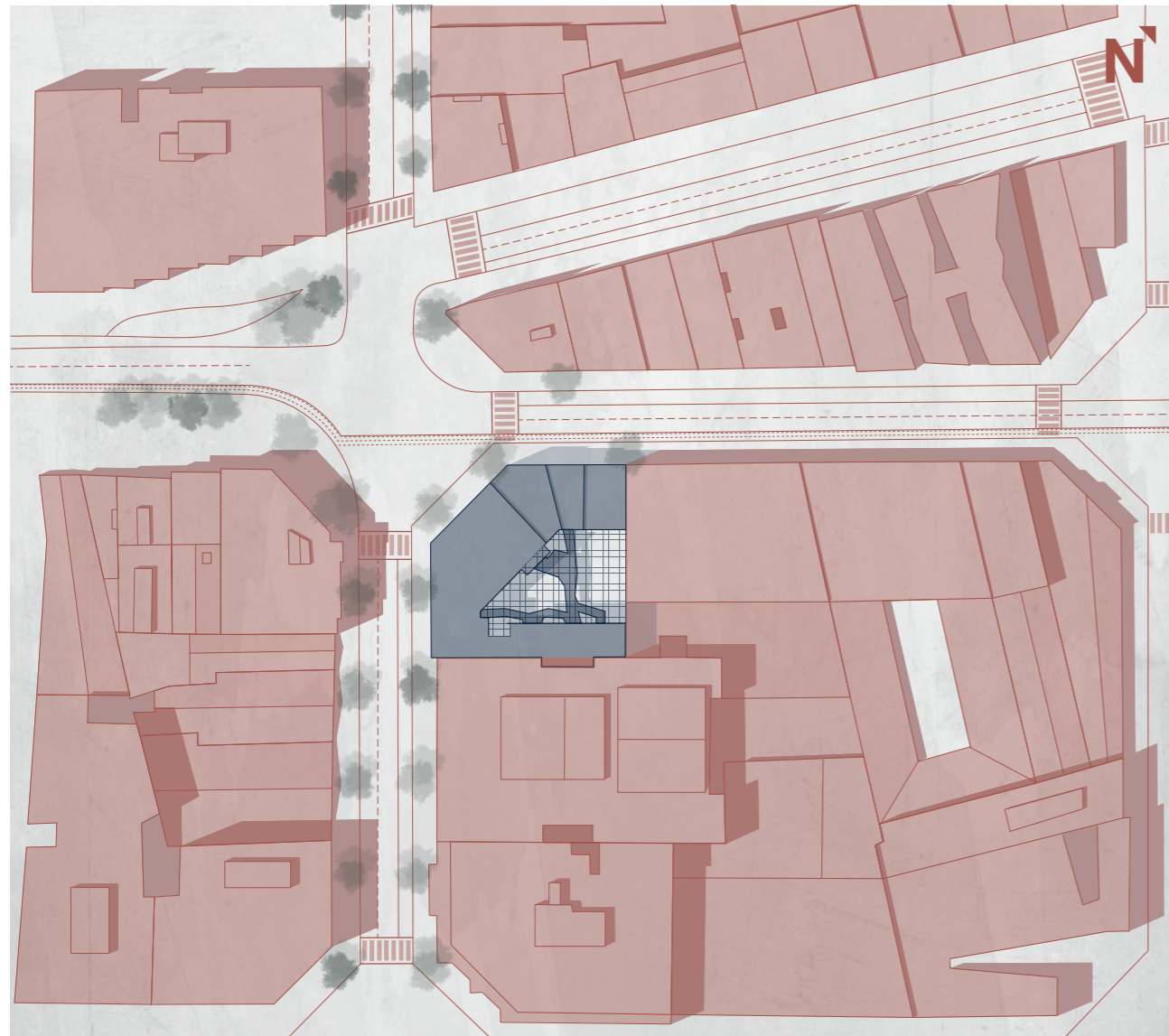
DESIGN STRATEGIES

Based on extensive literature research, a comprehensive case study, and a thorough survey, a synthesis of key findings has been formulated to inform the design strategies for the project at hand. With a specific emphasis on the common spaces, the second objective is to establish a strong interconnectivity between the private units and those designated for communal usage. Recognizing the diverse needs of individuals cohabitating within the development, the intention is to provide distinct spaces within each residential unit. These spaces have been thoughtfully arranged, sometimes delineated by clearly defined boundaries to promote privacy and at other times adopting a more open layout. The configuration is contingent upon the functional requirements of each space and, when necessary, can be further customized by the residents themselves. A paramount consideration for a comfortable living environment is the establishment of optimal climate conditions within the building, fostering a healthy and pleasant atmosphere for its occupants.

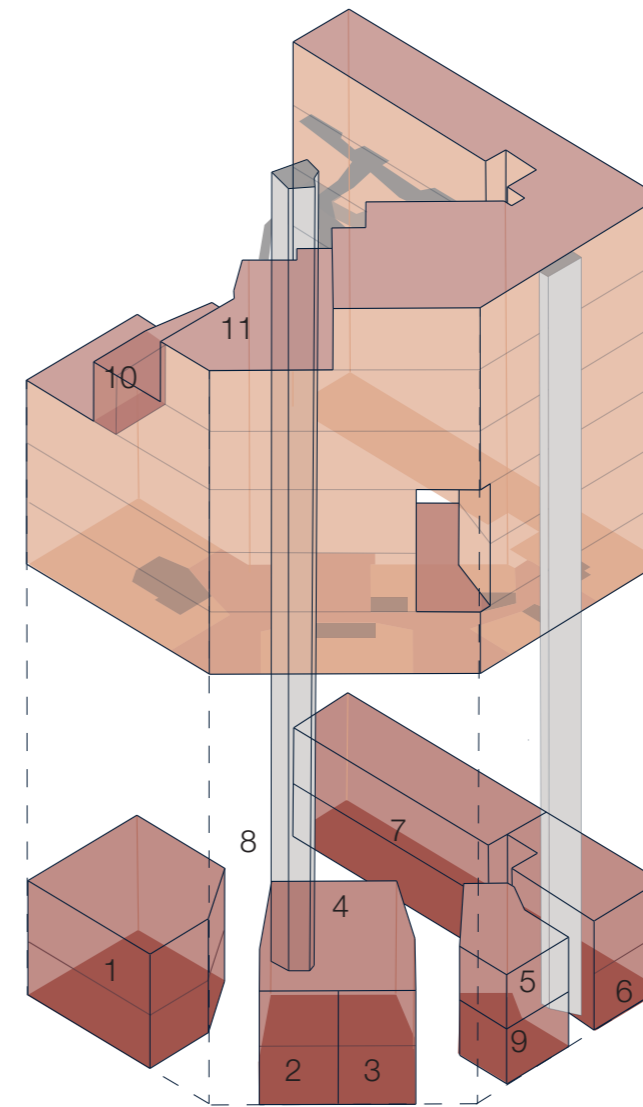


source diagram: <https://datacatalog.worldbank.org/search/dataset/0037712/World-Development-Indicators>

SITE PLAN



PROGRAM



PRIVATE



Private Units with
1-6 Rooms

SHARED



9 Bike Storage
10 Laundry
11 Terrace

Cluster Apartments

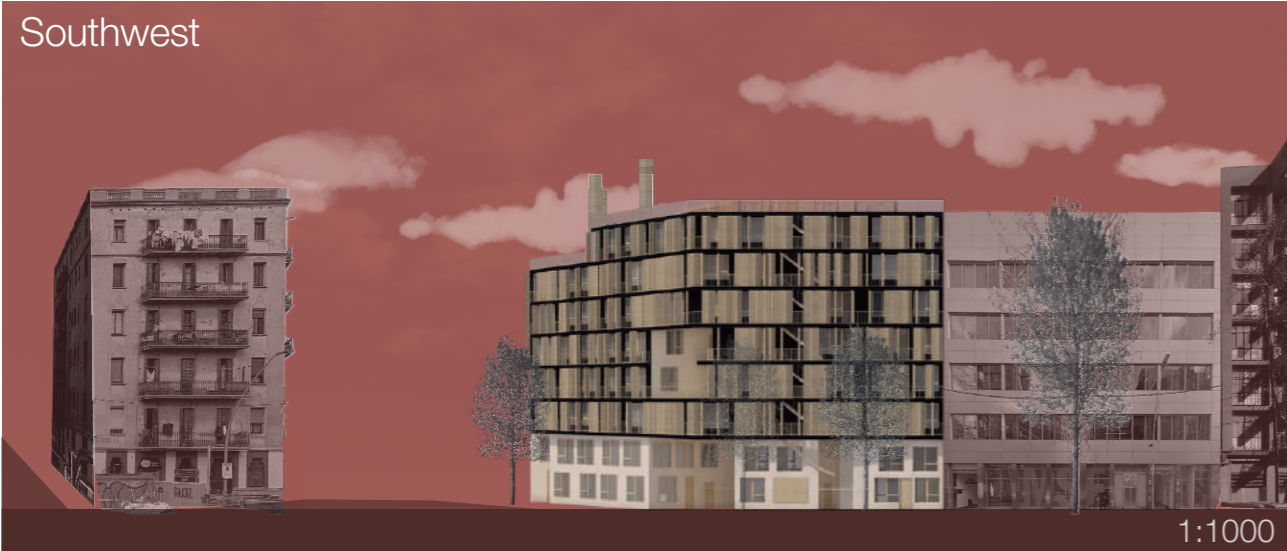
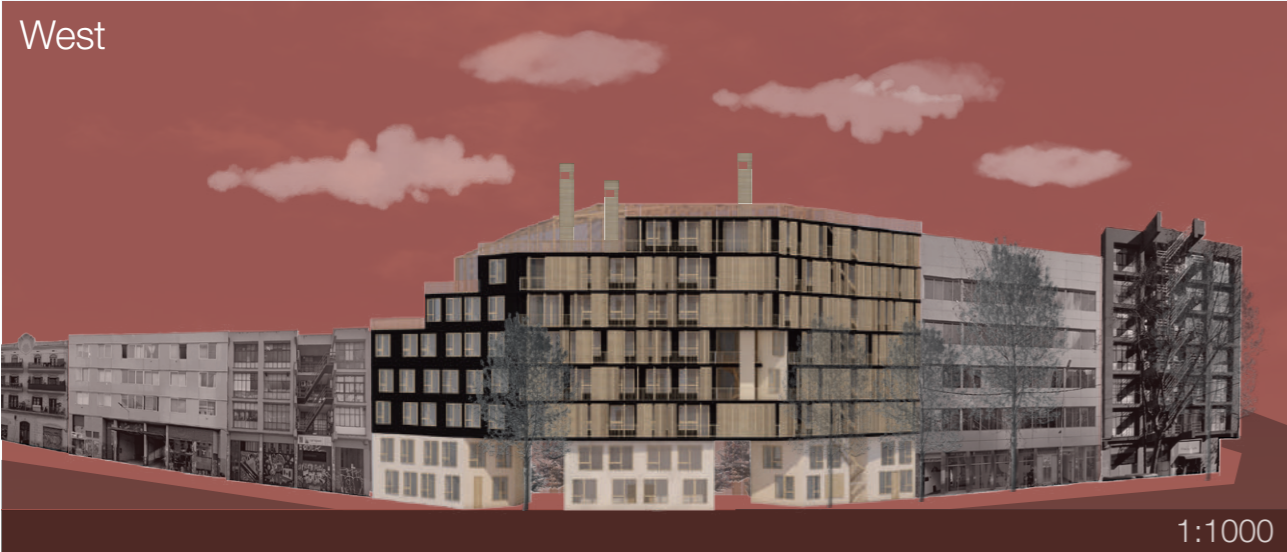
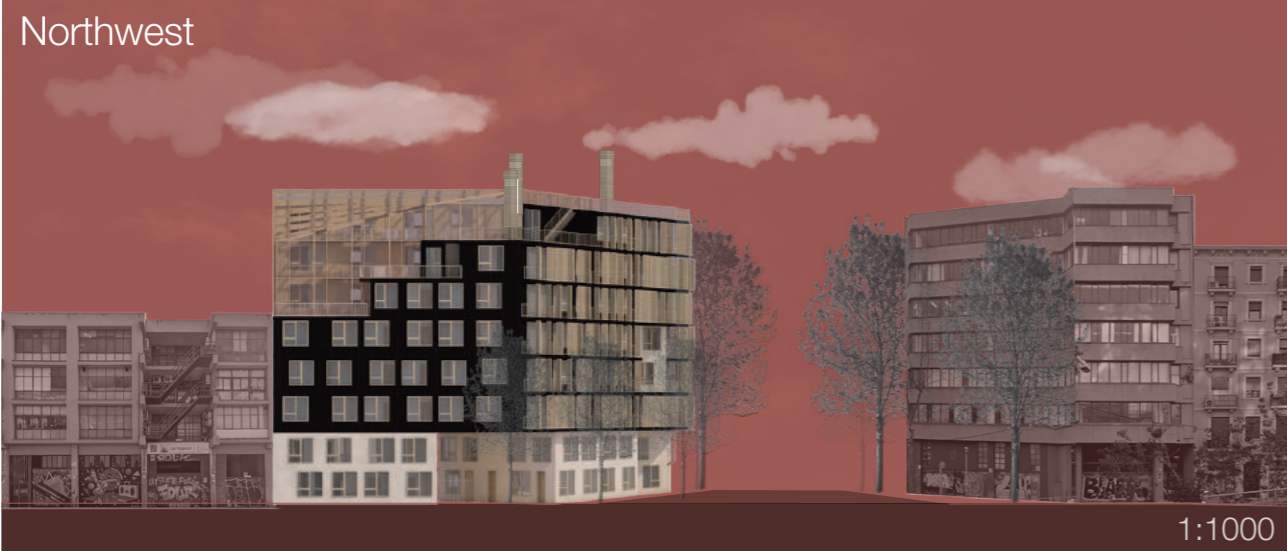
Big Kitchen
Living Room
Co-Working
Guest Room/Quiet Office
Sport Room
Game Area
Smaller Eating Area

PUBLIC

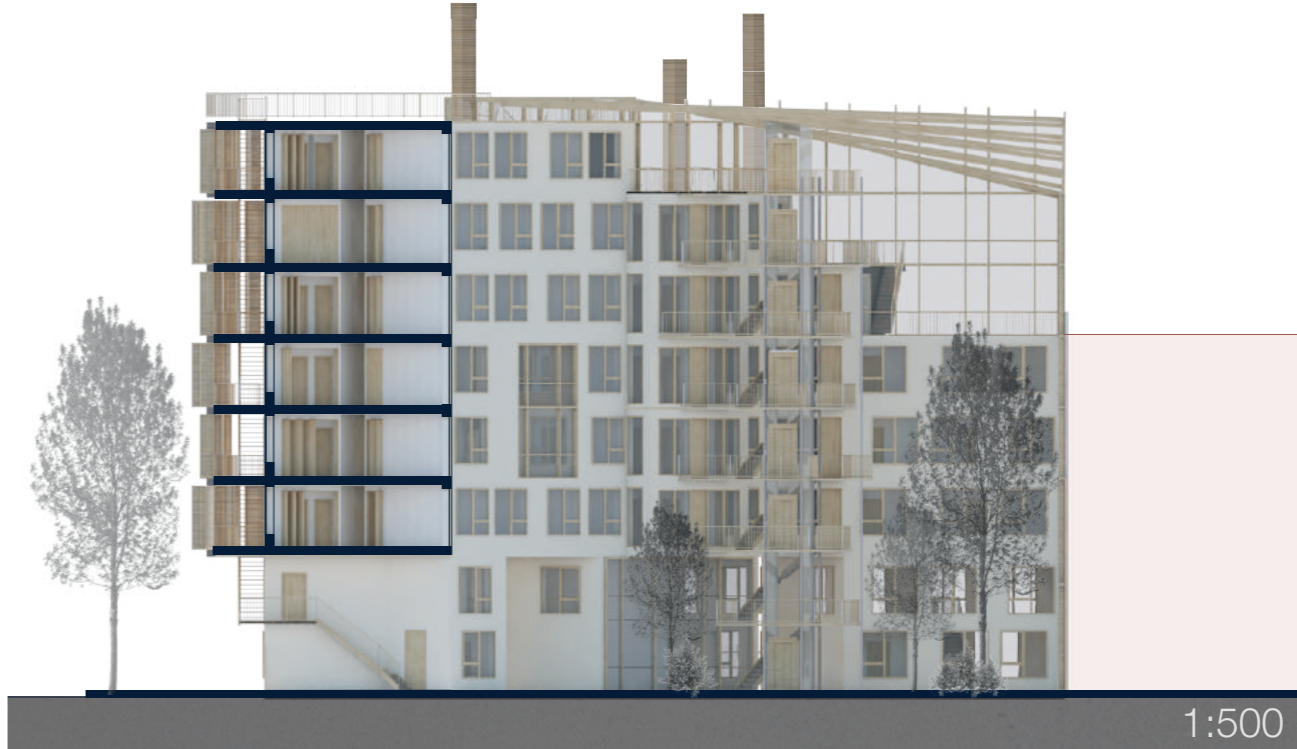
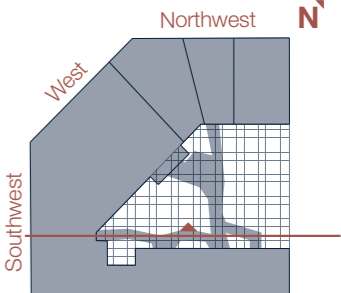


1 Café/Library
2 Art Studio
3 Workshop
4 Bookable Space
5 Atelier
6 Library
7 Ateliers/Offices
8 Garden

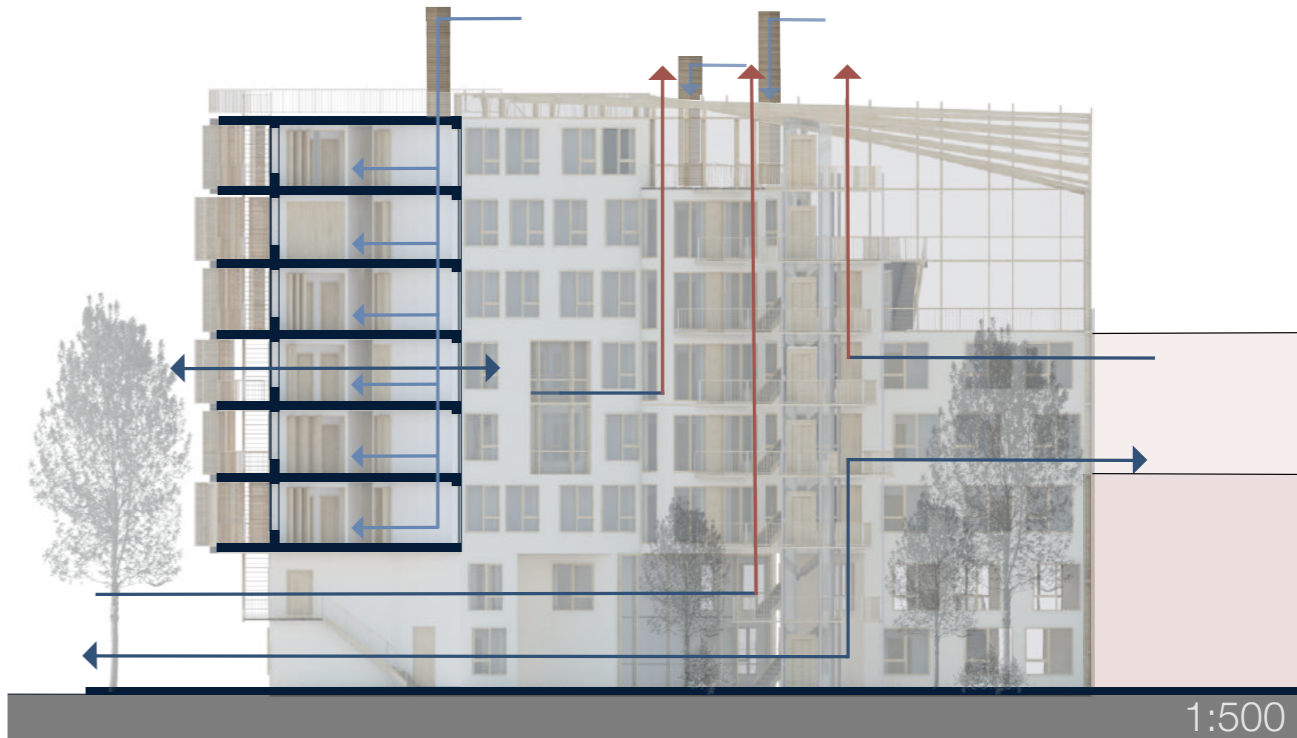
ELEVATIONS



SECTION



Ventilation





EXTERIOR BALCONY

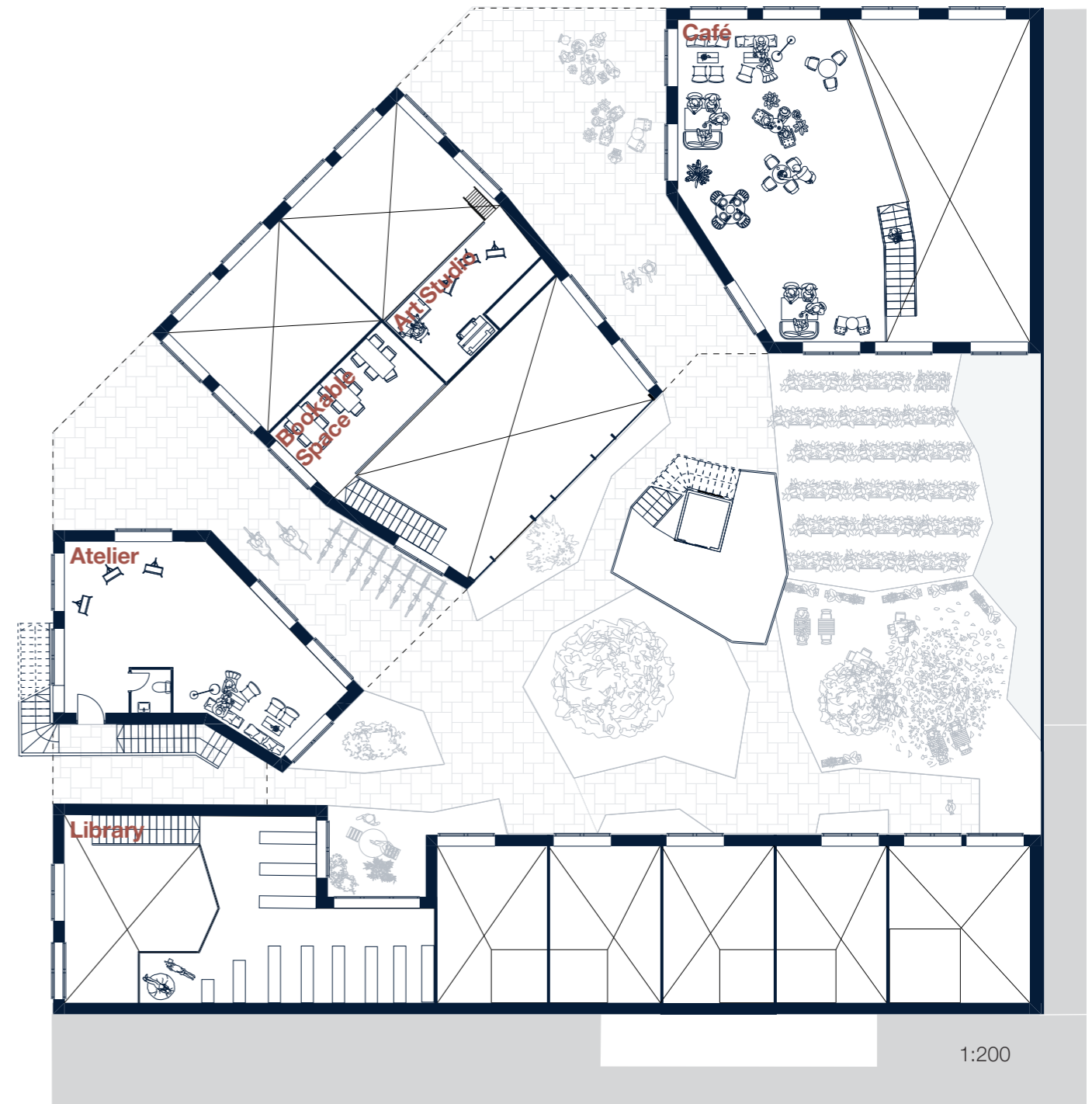
GROUND FLOOR

548 m²



GROUND FLOOR UPSTAIRS

162 m²





COURTYARD WITH GARDEN

1st FLOOR

698 m²



Wind Catcher
S Storage

1:200



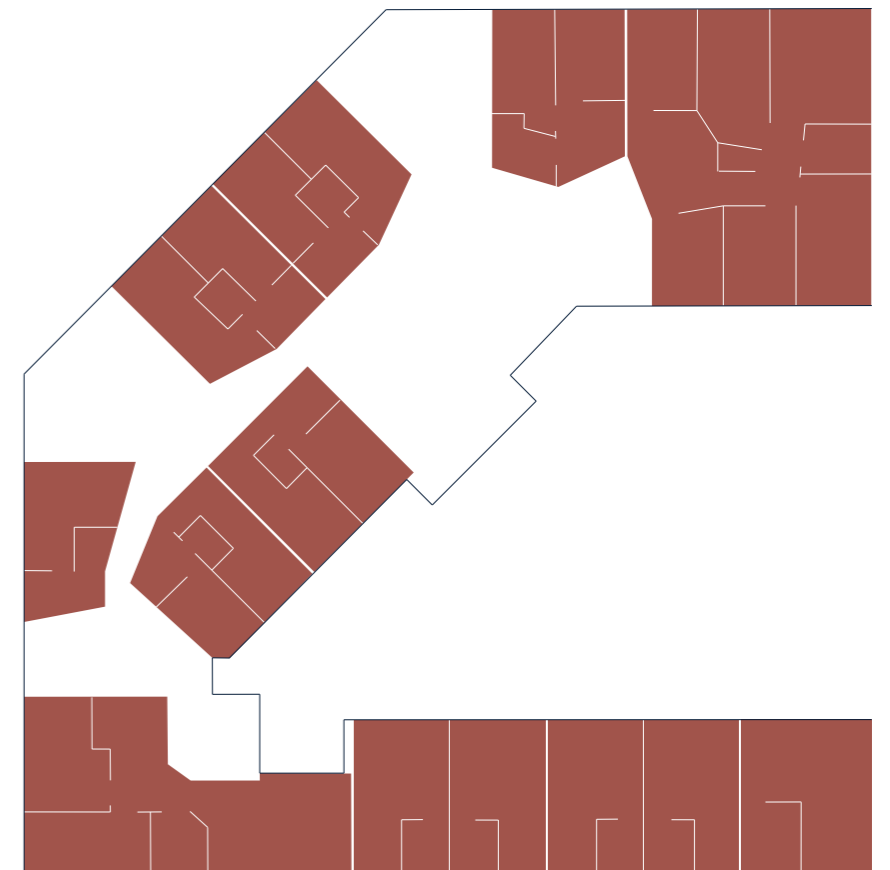
- Public
- Shared
- Private
- Flexible Kitchen

Example Floor

698m²
13 private units
25 individual rooms

Barcelona Average is 38m²

15ppl -> 46,5m²
20ppl -> 34,9m²
25ppl -> 27,9m²
30ppl -> 23,3m²





MAIN KITCHEN

FLEXIBLE KITCHEN



Closed



Open

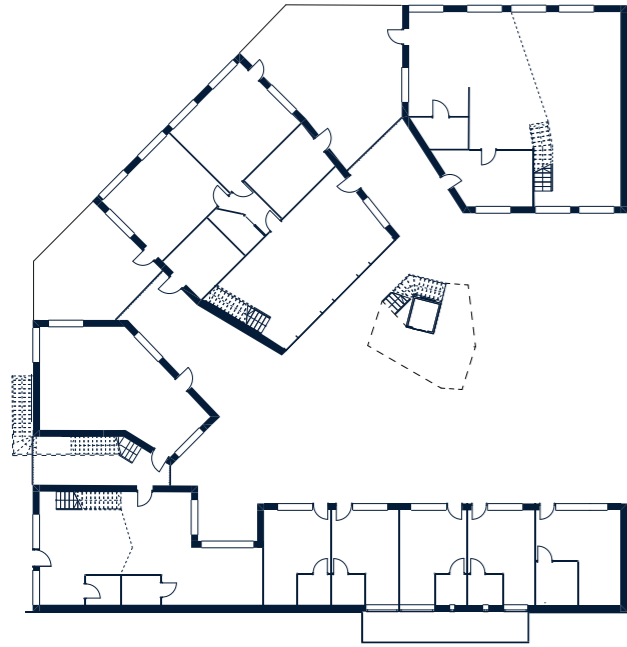


Closed

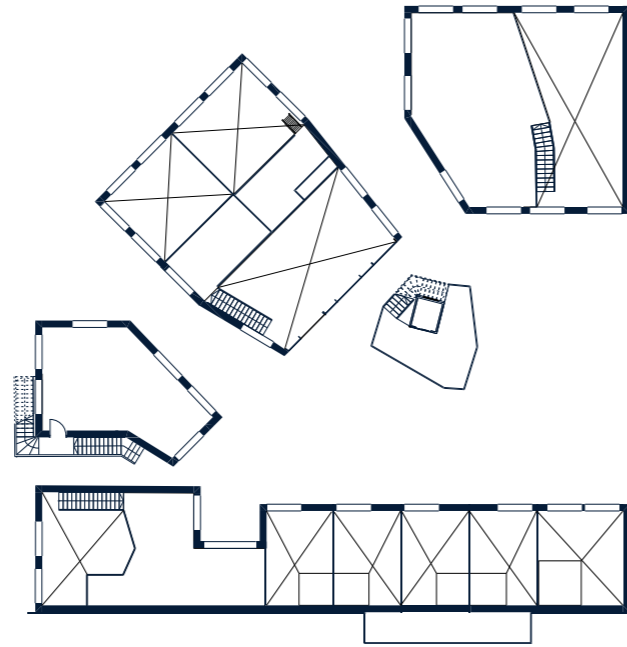


Open

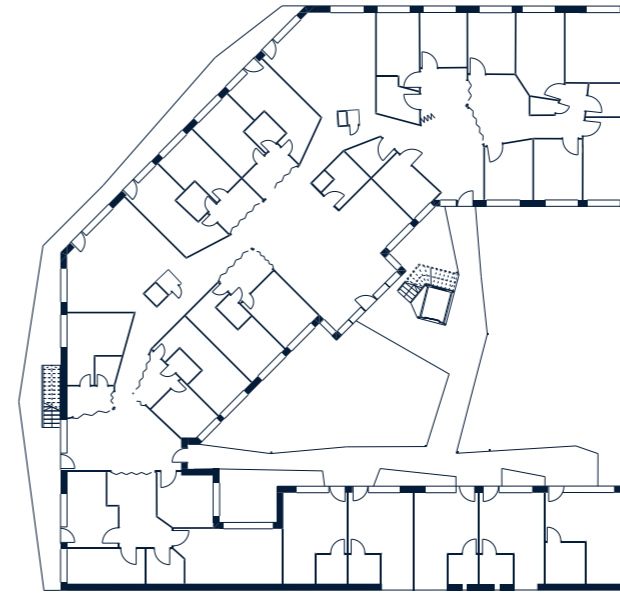
ALL FLOORS



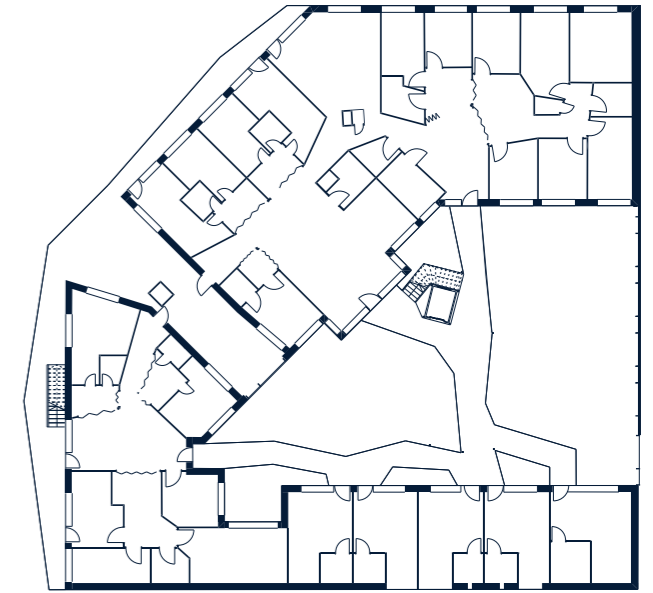
0 Ground Floor



0 Ground Floor Upstairs



1st Floor



2nd Floor



3rd Floor



4th Floor



5th Floor



6th Floor

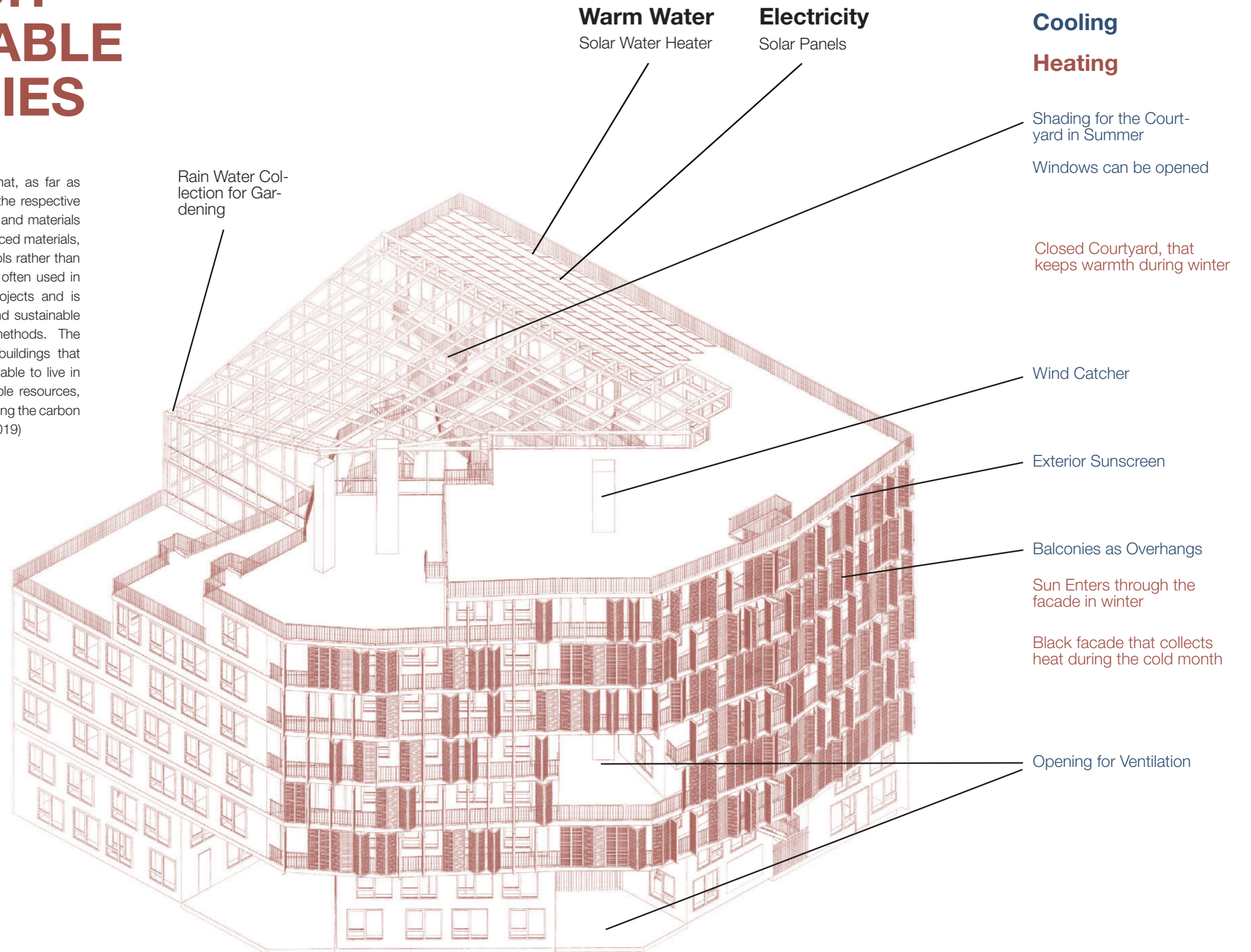


STAIRS IN THE COURTYARD

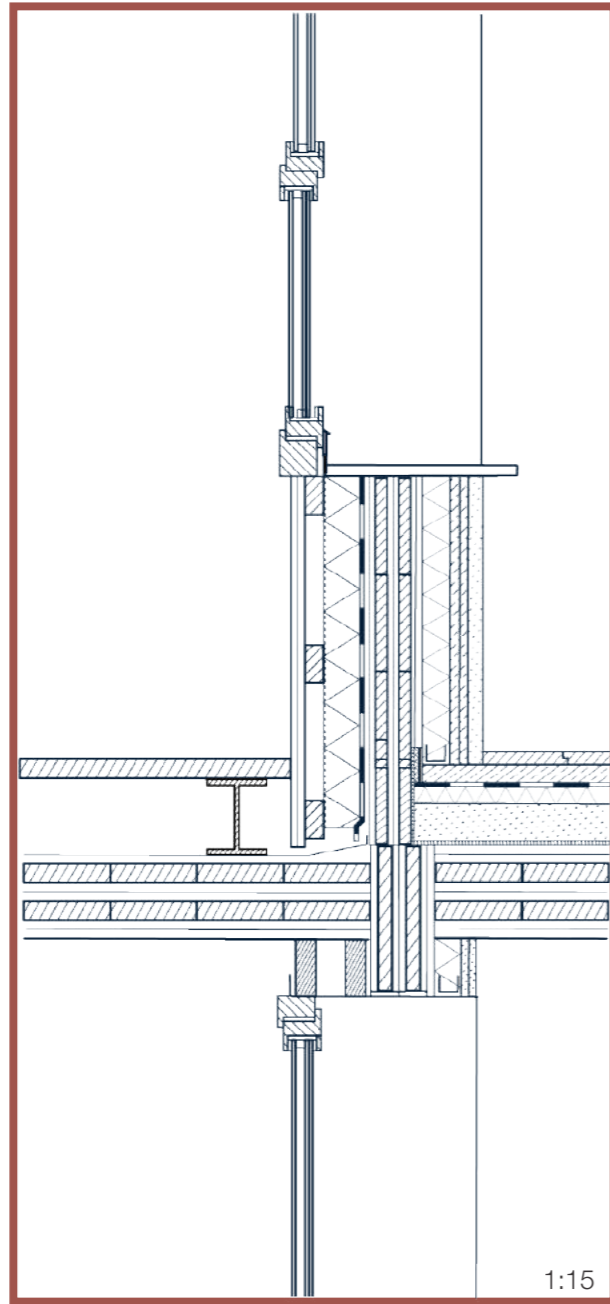
LOW-TECH SUSTAINABLE STRATEGIES

Low-Tech Building

'Low tech' stands for building design that, as far as possible, are using natural resources of the respective area. It refers to construction techniques and materials that use simple, traditional, or locally-sourced materials, and rely on manual labour and simple tools rather than advanced technology. This approach is often used in sustainable and eco-friendly building projects and is considered as a low-cost, low-impact and sustainable alternative to conventional building methods. The goal of low-tech building is to create buildings that are energy efficient, healthy, and comfortable to live in while minimizing the use of non-renewable resources, minimizing waste and pollution, and reducing the carbon footprint of the building. (Forum Verlag, 2019)



DETAIL



1:15

Wall

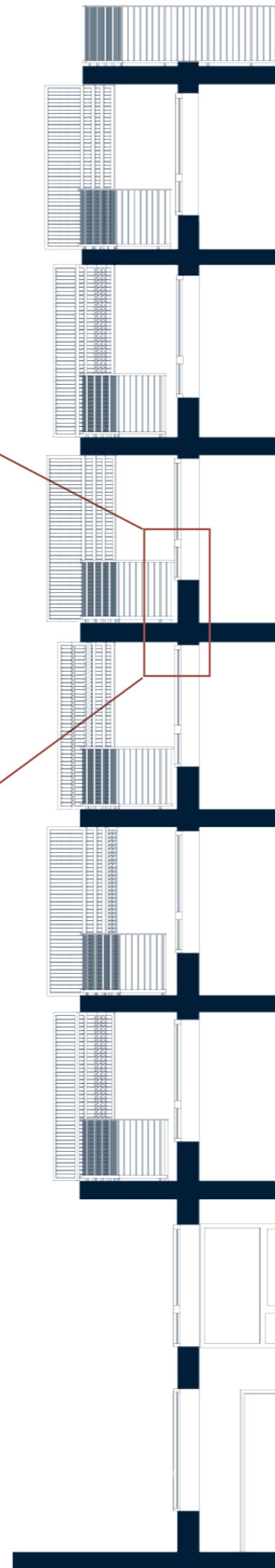
20 mm black charred wood façade that follows the Shou Sugi Ban method channel frame back ventilation
 24/48 mm counterbattens; windproof layer
 80 mm thermal hemp insulation;
 diffusion open synthetic wind barrier;
 100 mm cross laminated timber; steel channel
 48 mm inlaid mineral wool thermal insulation
 2x 13 mm fibre cement panel

Floor

35 mm light white oak panels
 35 mm reinforced screed
 PE foil separation layer
 30 mm hemp wool impact soundproofing
 1500 kg/m³ crushed stone infill in 60 mm honeycomb cardboard
 5 mm soundproofing mat
 160 mm cross laminated timber

Floor Balcony:

35 mm light white oak panels
 2x 40/80 mm steel channel
 160 mm cross laminated timber



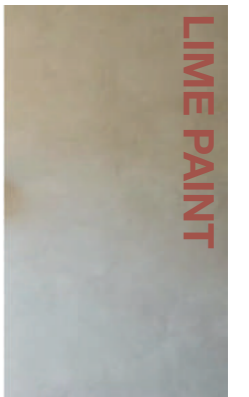
LIGHT OAK



BLACK WOOD
SHOU SUGI BAN



CROSS LAMINATED
TIMBER



LIME PAINT



CONCRETE

REFLECTION

Choosing this topic was the right choice for me, as shared housing gains importance in general and aligns with personal aspirations. While I have previously incorporated shared areas in my housing designs, focusing on them as the central aspect proved to be an intriguing endeavor. I have always been drawn to the concept that lies between co-living and co-housing, and prior to this master's thesis, I had not encountered the term "cluster apartments". Thus I am very glad, I have stumbled across this great discovery.

Although cluster apartments have been designed by others before me, the number of such developments built and accessible to interested individuals remains limited, particularly in Spain. Shared housing represents a very niche approach to construction in this country. La Borda (2018) stands as the first cooperative/co-housing initiative in Barcelona, offering standardized apartments in comparison to cluster apartments, albeit with noteworthy improvements.

Shared housing presents an array of possibilities, allowing for greater flexibility and space compared to traditional homes. This characteristic rendered the exploration of various floor plans captivating, leading to the emergence of diverse opportunities. In my master's thesis, the final building layout was heavily influenced by the constraints posed by the plot on which it is constructed. The plot's depth posed a challenge in creating adequately illuminated and ventilated rooms, while the limited space prevented the inclusion of a variety of open spaces between apartments. The solution presented in this thesis represents a compromise that maximizes the utilization of available space to accommodate as many individuals as possible, while also maintaining the appropriate scale for the block and offering "exterior space" within the property. From a Northern European perspective, with its dispersed urban landscape and different climate conditions, this building might appear less spacious and may evoke a desire for larger courtyards. Nonetheless, from my personal viewpoint, considering other buildings in Barcelona, I consider this design a remarkable achievement. For readers unfamiliar with apartments in Barcelona, a glance at the satellite view of a map can provide a basic understanding of how the interiors of blocks are entirely filled on lower levels, with even higher levels featuring apartments with substantial depth. Many apartments may offer a living room with a pleasant view, but most other rooms only have windows facing small ventilation shafts.

Having now worked with a property within a typical Barcelona block, I have gained firsthand insight into the challenges of designing small apartments that meet minimum comfort standards due to the plot's depth. Despite these limitations, I am pleased with the solution I have devised and possess confidence in its suitability for habitation. However, I would be particularly intrigued to explore the same concept on different plots of varying scales to assess its possibilities.

One thing I noticed over the last few months is that this "alternative way of living" seems to be more polarising. Since not so many people have experience with living in different kinds of shared housing, some people struggle to imagine what living in a cluster apartment could look like. The feedback I have received while explaining my idea has been diverse. While some exhibit skepticism towards the overall concept and the notion of opening personal spaces to communal areas, others eagerly asked about when this is to be built and the possibility of moving in. During the design process, I often felt compelled to create a space that would cater to everyone's needs and desires, to the extent that even those who may not initially be drawn to the idea of shared living would still be interested in moving there. However, it is crucial to acknowledge that this lifestyle is not suitable for everyone. The individuals I am designing for are those who do not resonate with traditional housing options and currently struggle to find a place where they can experience happiness.

I could notice that the feedback I received, was closely connected to previous housing experiences of the person I talked to. Most people either lived with people that they chose to live with, but in a space that was not designed for shared living or in a space designed for shared living (co-living or student housing) but with people that they could not choose. The concept I have presented remains unfamiliar to many people, necessitating a more detailed explanation compared to a standard apartment block. Even professionals in the field of architecture or those interested in long-term shared living tend to approach the project with a conventional perspective on apartments. I firmly believe that the idea of shared housing could resonate with a broader audience if we showcase various inspirational concepts of shared living. I am grateful that current residents of shared housing often take an active role in educating others about this living arrangement. It is essential to enhance awareness of shared housing to

attract the attention of interested parties, influence political and building regulations, and expand options in the housing market. This expansion can lead to enhanced social connectivity, stronger neighborhoods, affordable housing alternatives, and a more sustainable way of life.

The design presented at the conclusion of my thesis, while of medium scale in terms of the property, fosters a significant sense of community with numerous individuals sharing common spaces on a single floor. This approach enables the maximization of shared spaces, the provision of additional rooms for individual use, and the minimization of square meters per person—thus aligning with one of my primary goals, as Barcelona requires a considerable amount of new housing. I understand that a higher number of residents sharing space increases the potential for conflicts, as more people must reach agreements regarding space utilization and establish a community framework to avoid falling into anonymous patterns. However, based on personal experience, I have noticed that sharing with a larger number of people (in my case 12) instead of just one or two individuals alleviates pressure on interpersonal relationships, as expectations towards each individual decrease.

To minimize conflict potential, I have tried to strike a balance by providing a diverse range of available "rooms" and ensuring that private units are situated in proximity to the main communal spaces, without creating an excessive hierarchy. Something that one has to recognize and should be able to tolerate when deciding to 'share a home' is that everyone has different needs. It is important for the success of a cluster apartment that the residents can choose who they live with in order to make it easier to match different needs and agree on rules to create a comfort space for everyone. But in the end there will still be differences and the architecture needs to facilitate space for different people.

The shared housing option I have ultimately selected represents just one of many possibilities. While some individuals may be interested in sharing a home with 25 people, others may prefer to draw the line at five. Through my survey, I have discovered that most individuals are content to share their private apartment with 2-4 people (including bathroom and kitchen) but are open to sharing other facilities. My cluster apartments serve as an option for those seeking a higher level of privacy while desiring social interaction and community engagement. Within my project, I offer individual studios outside the core cluster apartment area, ensuring greater privacy, as well as apartments when opened become part of one big apartment.

As much as I have tried to understand the needs of hypothetical residents, the real-life outcome will inevitably differ. It would be highly valuable to gain more experience through real-life projects and further adapt the design accordingly. Personally, I believe that good design should incorporate the possibility of future adaptations. Thus, I perceive my thesis as a suggestion that can be tailored to suit the actual residents. For showcasing the main idea, I have now decided to give the common spaces a specific use, but apart from the main kitchen, each cluster apartment community can choose to use the rooms differently. Not every community may require a co-working area but may instead desire a music room. The good thing about sharing the space is that you have so much more than just only the necessities and so many options. Other examples of adaptations could be: Some rooms can easily be switched from being part of private units to shared, just as well as the other way around. Each private unit has space for a kitchenette, but as the reflections from *Mehr als Wohnen* show, some people might decide to not need it. Right now the living room and co-working area are open to the corridor, but it would not be difficult to turn it into a room with a door.

Final Thoughts

With this thesis, I address different obstacles in sharing a home, however, it should not be interpreted as a complete or unquestionable summary. Moreover, it should be seen as inspiration that gives a direction for further investigations in the field of shared housing. I have started with many ideas for a master thesis and I also finish with many ideas for further research and experimentation.

In the future, I will strive to keep working in the field of shared housing and sustainable architecture and will hopefully achieve my personal aim of working with participatory projects and maybe one day even be part of building and living in my own. Finally, I thank everyone who has read my thesis and I really hope this topic makes you curious about investigating this field further.

BIBLIOGRAPHY

Shared Living

- Schmidt, Susanne (2019) "A History of Collective Living". Birkhäuser
- Michael Prytula, Prof. Dr.-Ing., Susanne Rexroth, Prof. Dr.-Ing., Manuel Lutz, Dipl.-Ing., Friedrich May, Dipl.-Ing. (2020) *Zukunft Bauen - Cluster Wohnungen* Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR)
- Dana Kvietkute & Åshild Lappegard Hauge (2022) *Living with strangers: exploring motivations and stated preferences for considering co-housing and shared living in Bergen, Norway*, Housing and Society, 49:2, 128-149, DOI: 10.1080/08882746.2021.1972264
- Beck, A. F. (2020) *What is co-housing? Developing a conceptual framework from the studies of Danish intergenerational Co-housing*, Housing, Theory and Society, vol. 37:1, pp. 40-64.
- Space 10 & Urgent.Agency, IMAGINE Issue 2 (2018) „Exploring the brave new world of shared living“
- Fromm, Dorit (July 2012) *Built Environment, Volume 38, Number 3*, Alexandrine Press pp. 364-394 (31)
- LaFond, M. und Tsvetkova, L. (Hrsg.). (2017) *CoHousing Inclusive: selbstorganisiertes, gemeinschaftliches Wohnen für alle: self-organized, community-led housing for all*. Jovis Verlag: Berlin.
- Bundesinstitut für Bau-, Stadt- und Raumforschung (Hrsg.) (2019) *Gemeinschaftliches Wohnen im Cluster Ein praktischer Leitfaden zum Planen, Bauen und Wohnen*, STATTBAU Stadtentwicklungsgesellschaft mbH
- United Nations (16 May 2018) <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>
- Housing Europe (26 March 2021) *The state of Housing in Europe in 2021*, Research, Future of the EU & Housing, Housing Systems in Transition, <https://www.stateofhousing.eu/#p=1>
- Spain Population (2020) <https://www.worldometers.info/world-population/spain-population/>
- Rowan Arundel & Richard Ronald (2016) *Parental co-residence, shared living and emerging adulthood in Europe: semi-dependent housing across welfare regime and housing system contexts*, Journal of Youth Studies, 19:7, 885-905, DOI: 10.1080/13676261.2015.1112884

Cerdà Plan

- Urbano, Judith (2016) *The Cerdà Plan for the Expansion of Barcelona: A Model for Modern City Planning*, Focus: Vol. 12: Iss. 1, Article 13. DOI: 10.15368/focus.2016v12n1.2

Poblenou, Barcelona

- Ajuntament de Barcelona (2010) *Pla de Millora Urbana, Subsector 4 del PMU LLull-Pujades-Ponent del Districte d'activitats 22@bcn*
- Ajuntament de Barcelona (November 2018) *Pacte, Cap a un Poblenou amb un 22@ més inclusiu i sostenible*
- Ajuntament de Barcelona (n.d.) *Población y demografía* Retrieved February, 2023 from https://ajuntament.barcelona.cat/estadistica/angles/Estadistiques_per_temes/Poblacio_i_demografia/index.htm
- Ajuntament de Barcelona (2021) *Barcelona continues as a tense housing market area*, from https://www.barcelona.cat/infobarcelona/en/tema/housing/barcelona-continues-as-a-tense-housing-market-area_1094369.html
- Ajuntament de Barcelona (n.d.) *Towards a Poblenou with a more productive, more inclusive and more sustainable 22@* Retrieved February 15, 2023 from <https://ajuntament.barcelona.cat/ecologiaurbana/22barcelona/en/>
- Ajuntament de Barcelona (2020) *Estadística y Difusión de Datos* from https://ajuntament.barcelona.cat/estadistica/castella/Estadistiques_per_territori/Barris/Poblacio_i_demografia/Piramide/a2020/t366.htm

- Urban Sustainability Exchange (n.d.) *22@ Barcelona* Retrieved February 15, 2023 from <https://use.metropolis.org/case-studies/22-barcelona>
- *22@ Barcelona (2010) 22@ Barcelona Project Presentation Dossier*, Ajuntament Barcelona
- Benson, Rachel (2021) *El Poblenou, Barcelona: Impacts of urban renewal and green initiatives on a once working-class neighborhood*. from <https://storymaps.arcgis.com/stories/c71bbcaa132145f2b985b039468729aa>
- Team INNOVA coordinated by Montserrat Pareja-Eastaway, Research Group CRIT 'Creativity, Innovation and Urban Transformation' (n.d.) „22@Barcelona, 2010-2015, Barcelona's innovation district“ Faculty of Economics and Business, University of Barcelona, Council of Business and Tourism of the Municipality of Barcelona
- *Weather & Climate (2023) Climate in Barcelona* (Catalonia, Spain) Retrieved Mai 2023 from <https://weather-and-climate.com/average-monthly-Rainfall-Temperature-Sunshine,barcelona,Spain>
- Instituto Nacional de Estadística, Spain (2020) *Continuous Household Survey* Retrieved February 11, 2023 https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176952&menu=ultiDatos&idp=1254735572981
- Instituto Nacional de Estadística, Spain (2020) *Housing Price Index (HPI)*. Retrieved February 11, 2023 https://www.ine.es/en/daco/daco42/ipv/ipv0422_en.pdf
- Francesc Xavier Hernández i Cardona (2001) *història d'una ciutat*. Llibres de l'Índex, Barcelona
- Worldatlas (2023) *The Most Densely Populated Cities In Europe* Retrieved February 11, 2023 from: <https://www.worldatlas.com/articles/the-most-densely-populated-cities-in-europe.html>

Sustainability

- JS – Online-Redaktion (2019) *Lowtech vs. Hightech – Mit weniger Technologie in Gebäuden zu mehr Nachhaltigkeit* Retrieved March 3, 2023 from <https://www.forum-verlag.com/blog-bi/low-tech-gebäude>

Photos

Case Study (Photographies)

- La Borda: <http://www.laborda.coop/es/proyecto/fotografias/>
- Mehr als Wohnen: „Zukunft Bauen“ Bundesamt für Bauwesen und Raumordnung
- Spreefeld: <https://fatkoehl.com/en/housingmixed-use/reefeld-Berlin/>

Detail Materials

- Lime Paint: Vasari Retrieved May 10, 2023 from: <https://vasari.com.sg/vasari-malaysia-launches-lime-paint-a-flawless-finish-for-your-space/>
- Black Wood: LearnArchViz Retrieved May 10, 2023 from: <https://www.learnarchviz.com/learn-arch-viz-forum/3ds-max-pro-in-6-hrs/interior-texture-maps>
- Light Oak: Walls Republic Retrieved May 10, 2023 from: <https://wallsrepublic.com/products/faux-wood-tan-hardwood-wallpaper-r2247?variant=51820989203>
- Cross Laminated Timber: Archdaily Retrieved May 10, 2023 from: <https://www.archdaily.com/922980/is-cross-laminated-timber-clt-the-concrete-of-the-future>

Illustrations

- Canva

