I would like to extend my sincere thanks to those who with your help, input, and time during the process made it possible to carry out this thesis.

Tina Wik, my supervisor, who was always a great help to develop my idea and accomplish this thesis.

Paula Femenias, my examiner, for the great feedback and encouraging me to develop my ideas.

Can Masdeu for letting me be part of their activities and showing me how a self-organised community can work.

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

EDUCATION

Since 2021
Architecture and Urban Planning
Chalmers University of Technology, Gothenburg

2017 - 2021
Technical University of Berlin
Architecture, Bachelor of Science

2019-2020
Universitat Politècnica de Catalunya, Barcelona
Erasmus

2011-2016
Ohmoo Gymnasium Hamburg
Graduation: Abitur

2013-2014
Alexander Sinton High School, Cape Town
Student Exchange

2007-2011
Humboldt Gymnasium Radeberg

WORK EXPERIENCE

February 2020
Hanse Holzbau, Hamburg
Internship in Carpentry

March 2019
Tinsley Woodcrafters, Cape Town
Internship in Carpentry

2015-2016
Ohmoo Gymnasium, Hamburg
Break supervision

June 2014
Elser Architects, Hamburg
Temporary help

September 2012
Heinrich Meier Architects, Hamburg
Internship

EXPERIENCES

Since 2021
Vice President of the Student Committee Architecture

Since 2020
Activist for Architecture For Future, Petition Team and Public Relations Team

2020-2021
Member of the Student Committee, 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
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 Poblenou 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 square meters per person)

SCOPE AND DELIMITATIONS

<table>
<thead>
<tr>
<th>IT IS ABOUT</th>
<th>IT TOUCHES UPON</th>
<th>IT IS NOT ABOUT</th>
</tr>
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<tbody>
<tr>
<td>Community Living Concepts</td>
<td>Participation</td>
<td></td>
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<tr>
<td>Reduce Inequality</td>
<td>Affordability</td>
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<td>Mental Well-Being Promotion</td>
<td>Financial Planning</td>
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<td>Culture</td>
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<td>Politics</td>
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<td>Social Sustainability</td>
<td>Material</td>
<td>Carbon Neutral/Climate Positive</td>
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<td>Climate Responsive Design</td>
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<td>Local Material Flow</td>
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<td>Circular Economy</td>
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<td>Functional</td>
<td>Aesthetics</td>
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<td>Urban Planning</td>
<td>Standards</td>
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<td>Low tech</td>
<td>Technical Innovation</td>
<td>Acoustic Design</td>
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<td>Acoustic Design</td>
<td>Air Quality Control</td>
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<td>Performance Simulation</td>
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<td>Deep Theoretical Research</td>
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METHOD

<table>
<thead>
<tr>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
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<tbody>
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<td>3 4 5 6 7 8</td>
<td>9 10 11</td>
<td>12 13 14 15 16</td>
<td>17 18 19 20</td>
<td></td>
</tr>
</tbody>
</table>

Research for Design | Research by Design
Preparation | Design Proposal
Survey | Design
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.

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 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.

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.

READER 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?

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)
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.

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. In 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.

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 community 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. (LaFord 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 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

Cluster Apartments

Source: LaFord, Tsvetkova, 2017
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
- Affordability
- Social Changes

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.

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

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.

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 temporarily 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.

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 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 dispense 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
- 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

LEARNING FROM “A HISTORY OF COLLECTIVE LIVING”

Four Levels of Action: A Perspective

Influence: Market Determined Vs Co-Determined

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 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 dispense 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.
TYPOLOGIES 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.

### Based on Organisational Structure

<table>
<thead>
<tr>
<th>Spacial Organisation</th>
<th>Social Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Living</td>
<td>Self-organised</td>
</tr>
<tr>
<td></td>
<td>Baugruppe (Co-Housing)</td>
</tr>
<tr>
<td></td>
<td>Conventional Apartments</td>
</tr>
<tr>
<td></td>
<td>Micro Apartments</td>
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<tr>
<td></td>
<td>Cluster Apartments</td>
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<td></td>
<td>Student Apartments</td>
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<tr>
<td></td>
<td>Trusteeship</td>
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<tr>
<td></td>
<td>Senior Residence</td>
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<tr>
<td></td>
<td>Nursing Home</td>
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<tr>
<td></td>
<td>Boarding House</td>
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<tr>
<td>Community</td>
<td>Individual</td>
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</tbody>
</table>

### Based on Intentions

<table>
<thead>
<tr>
<th>Economic Intentions</th>
<th>Social Intentions</th>
<th>Health Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Housing</td>
<td>Cluster Apartments</td>
<td></td>
</tr>
<tr>
<td>Housing as a Service</td>
<td>Assisted Living</td>
<td></td>
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<tr>
<td>Community Household</td>
<td>Courtyard Apartments</td>
<td></td>
</tr>
<tr>
<td>Serviced Apartments</td>
<td>Boarding Homes</td>
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</tbody>
</table>

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

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 another.

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 too many public space, but there is a little shop for unpackaged groceries on the ground floor.

ADVANTAGES
+ very affordable
+ residents were part of the planning 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

Source: http://www.laborda.coop/es/
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: 54 apartments, 8 business units, 3 flexible rooms

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.

SPREEFELD

Private

Sqm/per
41,2m²

Private
75%
31,2m²

Shared
25%
10m²

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

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

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 acoustically devided
- kitchen relatively small
- residents would have wished to decide if they need a private tea kitchen
- lack of green in the outdoor space
<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Features</th>
<th>Shared Facilities</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liljeforsgatan Dan</td>
<td>Flatshare</td>
<td>12 people in the building</td>
<td>- Two Kitchen</td>
<td>Everyone knows each other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 people on a corridor</td>
<td>- Living Room</td>
<td>People frequently spend time together</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Kitchen</td>
<td>Bond is stronger with people on the same floor</td>
</tr>
<tr>
<td>Broströmhemmet</td>
<td>Student Dormitories</td>
<td>ca. 50 people in the building</td>
<td>- Bookable Study Rooms</td>
<td>+/- Bond is stronger with people on the same floor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 people on a corridor</td>
<td>- Laundry</td>
<td>People live by themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Sauna</td>
<td>Not many interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Gym</td>
<td>+/- Some people get along with the other people on the corridor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Terrace</td>
<td>Shared facilities are hard to find</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Balcony</td>
<td>Sauna is used a lot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other spaces are used not that much</td>
</tr>
<tr>
<td>Rotary</td>
<td>Student Dormitories</td>
<td>ca. 600 people in the building</td>
<td>- Kitchen</td>
<td>People live by themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 people on a corridor</td>
<td>- Living Room</td>
<td>Not many interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Study Rooms</td>
<td>+/- Some people get along with the other people on the corridor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Laundry</td>
<td>Shared facilities are hard to find</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Sauna</td>
<td>Sauna and game room is used a lot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Gym</td>
<td>Other spaces are used not that much</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victor Rydberg</td>
<td>Student Dormitories</td>
<td>ca. 400 people in the building</td>
<td>- Kitchen</td>
<td>People live for themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 people on a corridor</td>
<td>- Study Rooms</td>
<td>Not many interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Laundry</td>
<td>+/- Some people get along with the other people on the corridor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Sauna</td>
<td>Shared facilities are mostly used to invite friends over</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Gym</td>
<td>+/- Shared facilities are used a lot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Terrace</td>
<td>People live for themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Event Space</td>
<td>Not many interactions</td>
</tr>
<tr>
<td>Guesthouse</td>
<td>Student Dormitories</td>
<td>102 people</td>
<td>- Gym</td>
<td>+/- Trading of second hand furniture</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Table Tennis</td>
<td>I did not get the feeling that shared facilities are used a lot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Laundry</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Study Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- TV Room</td>
<td></td>
</tr>
<tr>
<td>Emilsborg</td>
<td>Student Dormitories</td>
<td>ca. 4000 people</td>
<td>- Bookable Event Space</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 people on a corridor</td>
<td>- Terrace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable Event Space</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Outdoor BBQ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Pool</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Laundry</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bookable 2 Saunas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Study Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- TV Room</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Several Other Common Areas</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Saskia Langbein

Source Emilsborg: https://www.chalmersstudentbostader.se/vara-bostader/emilsborg/
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 arrangements. 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 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 flats 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
- 50% prefer having a bigger, but shared apartment, rather than a smaller apartment by themselves

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.

THE PERFECT COMMON ROOM

WHAT

- Atelier
- Workshop
- Space to use as “Conference Room”
- Big Kitchen
- Living Room
- Dining 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 inhabitance)
- Couches
- Sufficient Storage
- TV
- Stereo
- Shared Things (like books, sewing machine, scanner, printer)
- Multiple Chair Groups
- Projector
- Candles
- Blankets and Pillows
- Common Shelf
- Games
- Pool Table, Darts, Game Consol
- Board Games
- Bear Pong Table
- Tablekicker

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.

Which of these items are you comfortable sharing in your home, long term?

[Bar chart showing discomfort levels for different items]

Table showing discomfort levels for different items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Discomfort Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning Responisbilities</td>
<td>42%</td>
</tr>
<tr>
<td>Household Appliances</td>
<td>33%</td>
</tr>
<tr>
<td>Common Room</td>
<td>50%</td>
</tr>
<tr>
<td>Daily Dinners</td>
<td>75%</td>
</tr>
<tr>
<td>Workspace</td>
<td>75%</td>
</tr>
<tr>
<td>Bathroom</td>
<td>83%</td>
</tr>
<tr>
<td>Bedroom</td>
<td>83%</td>
</tr>
<tr>
<td>Internet</td>
<td>86%</td>
</tr>
<tr>
<td>Kitchen</td>
<td>86%</td>
</tr>
<tr>
<td>Garden</td>
<td>86%</td>
</tr>
<tr>
<td>Utilities</td>
<td>86%</td>
</tr>
<tr>
<td>Cars</td>
<td>86%</td>
</tr>
<tr>
<td>Tablekicker</td>
<td>86%</td>
</tr>
</tbody>
</table>

Extra Suggestions:

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

**Demand Drivers for Shared Housing**
- Urbanization
- Affordability
- Social Change

**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 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 organizational structures that result in the fulfillment of the inhabitants’ 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.

**CASE STUDY**

All of the projects are built with a higher sustainability focus, but La Borda features sustainable building methods 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

**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.

**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 where 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 Liefjorsgatan, 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 Liefjorsgatan collective, only the key to enter the building is necessary, and other doors are often left unlocked or even completely open.

**Do’s**
- Open Doors
- Cozy
- Connectivity

**Don’ts**
- Reservedness
- Corridors
- Closed Doors

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*Source Illustration: Canva*
The site is located in Poblenou, right next to the metro station Bogatell. It is a corner plot of Barcelona's famous blocks and has around 1140 m². On the same block you can also find residential units, offices, a print shop, 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 Citadella, Plaça de les Glòries Catalanes and the closest beach.
The Poblenou 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, Poblenou 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 Poblenou. Today Poblenou 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.
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 becomes 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.
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 superblocks (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 built. 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 portrays 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.
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.
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.
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 did the municipality try to recover spaces in the “manzanas” (interior blocks) to open them up to the neighbourhood. (J. Urbano, 2016)
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.

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.
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 hotel 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.
Design Proposal

04
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 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.

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?
ELEVATIONS

Northwest

West

Southwest

SECTION

Ventilation
1st FLOOR
698 m²

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
FLEXIBLE KITCHEN
ALL FLOORS

0 Ground Floor

0 Ground Floor Upstairs

1st Floor

2nd Floor

3rd Floor

4th Floor

5th Floor

6th Floor
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)
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
- 2× 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
- 2× 40/80 mm steel channel
- 160 mm cross laminated timber
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 filed on lower levels, with extra-lower levels featuring apartments with substantial depth. Many residents can 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 month 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 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, focusing on them as the central aspect proved to be an intriguing endeavor.

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 pressure on interpersonal relationships, as expectations towards each individual decrease.

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.

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 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 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 who helped in any way. I appreciate your feedback and I hope this thesis makes you curious about investigating this field further.
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Sustainability


Photos

Case Study (Photographies)
- La Borda: http://www.laborda.coop/es/proyecto/fotografias/
- Mehr als Wohnen: "Zukunft Bauen" Bundesamt für Bauwesen und Raumordnung
- 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

Detail Materials


Illustrations

- Canva