CREAT(IV)E COMMUNITY GROUND

Erasing dwelling anonymity in the 'lost' spaces

ADVANCED HOUSING
Research
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Introduction

When having to design a vertical dwelling complex in Amsterdam for the graduation studio we might run into the problem of designing for a large group of people with different backgrounds, that have different wishes and needs. As an architecture student with experience of living in Amsterdam, I looked back at the building complex I have lived in. Both the qualities as well as downsides of living in these came in to mind. Though the location of living in the city and having almost everything in walking distance, we might feel lonely living in a building like this with no apparent connection to others around us and being disconnected to the ground floor where the city life emerges.

What I can perceive through a casestudy of my own dwelling complex is that; the corridors that lead up to the entrances of the dwellings are very anonymous, even so anonymous that I would not even recognize one of my direct neighbor by face. The corridor is just an area of passing with no sense of belonging and therefore it is uninteresting to dwell there. This thesis explore's ways of erasing this anonymity to create familiarity.

Keywords

community – loneliness – anonymity –
sense of belonging - lost space –
vertical dwelling complex

Problem statement

The municipality of Amsterdam did research to understand the rate of lonely residents and came to a shocking conclusion that almost half of the Amsterdam population of 19 years and older (47%) feels lonely at times (Eenzaamheid in Amsterdam, 2018). Emotional loneliness is applicable for 45% and social loneliness for 36%. 13% struggles with an intense sense of loneliness. The municipality of Amsterdam considers these two types of loneliness with defining emotional loneliness as feeling alone in terms of having intimate relationships such as; family members and friends to spend time with. Social loneliness is defined by feeling alone in terms of having meaningful relationships with; acquaintances, co-workers and neighborhood residents. As COVID started and caused most of the population to sit inside the intense feeling of loneliness amongst the population of Amsterdam started to become worse, going from 15% in 2020 to 23% in 2023 (Parool, 2023). After the COVID situation there seems to be more of a mutual understanding of the importance of community and interaction in our surroundings. We now more than ever seek social engagement in our public realm.

When we look at the building complexes that are being build right now, we don't often see a reflection of this social need. When designing a vertical dwelling complex architects might run into the problem of having to apply certain thresholds to keep a certain privacy and anonymity for inhabitants while still trying to maintain an accessibility and open identity to the building, to enable interaction in the collective/public spaces of the complex.

Therefore I would like to address the problem of; designing the transitional spaces of a vertical dwelling complex to host a variety of different types of people, to enable unforced engagement. These transitional spaces are well designed, but can start to feel like non-spaces in the way they are just a 'intersection of bodies passing.' (Augé, 1992) Turning the in-between transitional 'non-spaces' of the complex into a place. A place where people can feel a sense of belonging through the place having a function more than passing through, but rather making users slow down their movements. Understanding certain thresholds that might exist, but trying to break the normality of designing something I would want to introduce as 'lost space.'

Aim of research

The objective of this project and this research is to design a dwelling complex that is functional and sustainable technically but also socially. Introducing the notion of community by quite literally creating spaces where unforced engagement may emerge by slowing down the pace of living in these transitional areas of the complex, right in the place of intersection where space is now lost as purely passthrough. When creating a vertical dwelling complex with different types of living typologies we should understand that social sustainability is important especially looking at the rate of growth of loneliness.

Therefore I like to ask the following research question:
How can we design the transitional 'lost' spaces, of a vertical dwelling complex, to be a multifunctional place of unforced engagement for a diversity of different users?

To truly understand how to approach this design assignment it is necessary to understand people's behavior and their instincts and how certain spatial decisions can lead to certain behaviors, engagements and possibly interactions. I think we, as architects, might need to have more focus for this topic when it comes to designing dwellings, understanding the responsibility in rethinking social structures and the impact we can make in the quality of living as densifying is becoming more important. To get the most out of the building design for its users in its slightest details.

The contribution to the larger discourse is aiming to further research how to stimulate coherence and creating an advanced vertical dwelling complex that can host a melting pot of different social, financial and cultural backgrounds in the cityscape of Amsterdam. We need to keep in mind the way we used to live years back and what the quality of that way of living was and what imperfections we might need to mprove to be able to translate this town-like community feeling in a vertical way.

PROBLEM STATEMENT

2020   **2022**

Overall healthy
79%
68%

Experiencing loneliness
15%
23%

anxiety and depression complaints
9%
16%

Stress due to financial instability or work related pressures
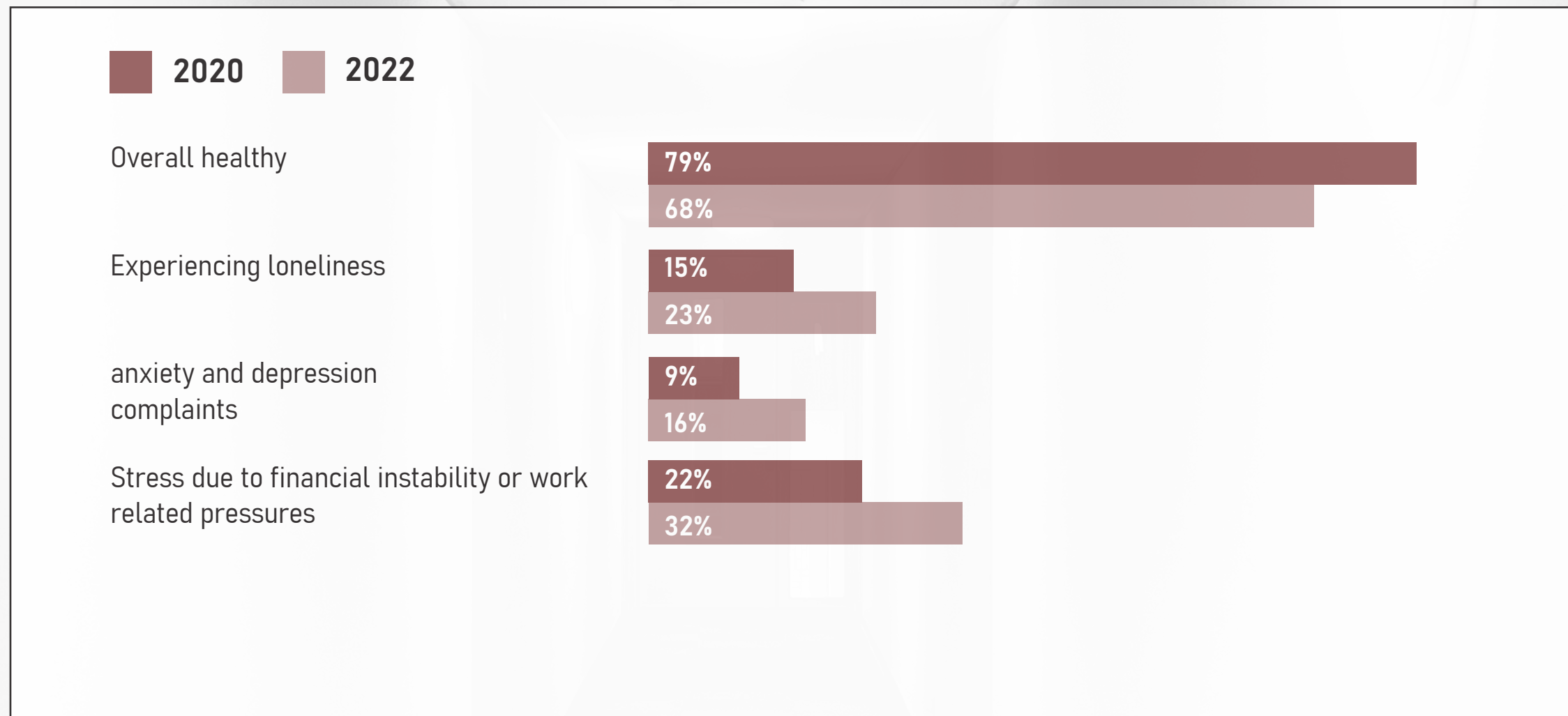22%
32%

figure 2: Loneliness graphic (Parool, 2023).

Methodology

The approach to this problem of redesigning 'lost' space, will be to first do literature research, to learn about certain definitions and past researches on this topic. When gaining knowledge of these definitions it will be interesting to see what design solutions other architects use to approach this problem. This will be researched in several case studies. From there on I hope to get more knowledge on important design principles and design strategy's that I will be able to use to anwser some of my subquestions.

Furthermore I would like to experiment with the (spatial) design principles that were concluded from the literature research as well as the case studies and form a survey in which some of these (spatial) design principles are questioned in what...if statements. For example: "what if the washing machine would be part of a collective space for all residents of the building would you still use the washing machine as much as before?" From this survey I hope to take away more information about were the thresholds lay between private and collective, to understand in how far it is still comfortable to manipulate this boundary and place certain functions outside of the dwelling. The outcome of the survey will allow me to re-evaluate (spatial) design principles. I will try these updated design principles out during the whole course when practicing research-by-design. Which allows me to experiment and form ideas for design solutions with the design tools I gained from the design princples.

In figure 3 you can find a scheme of the expected order that will be applied to be able to get the most out of this research.
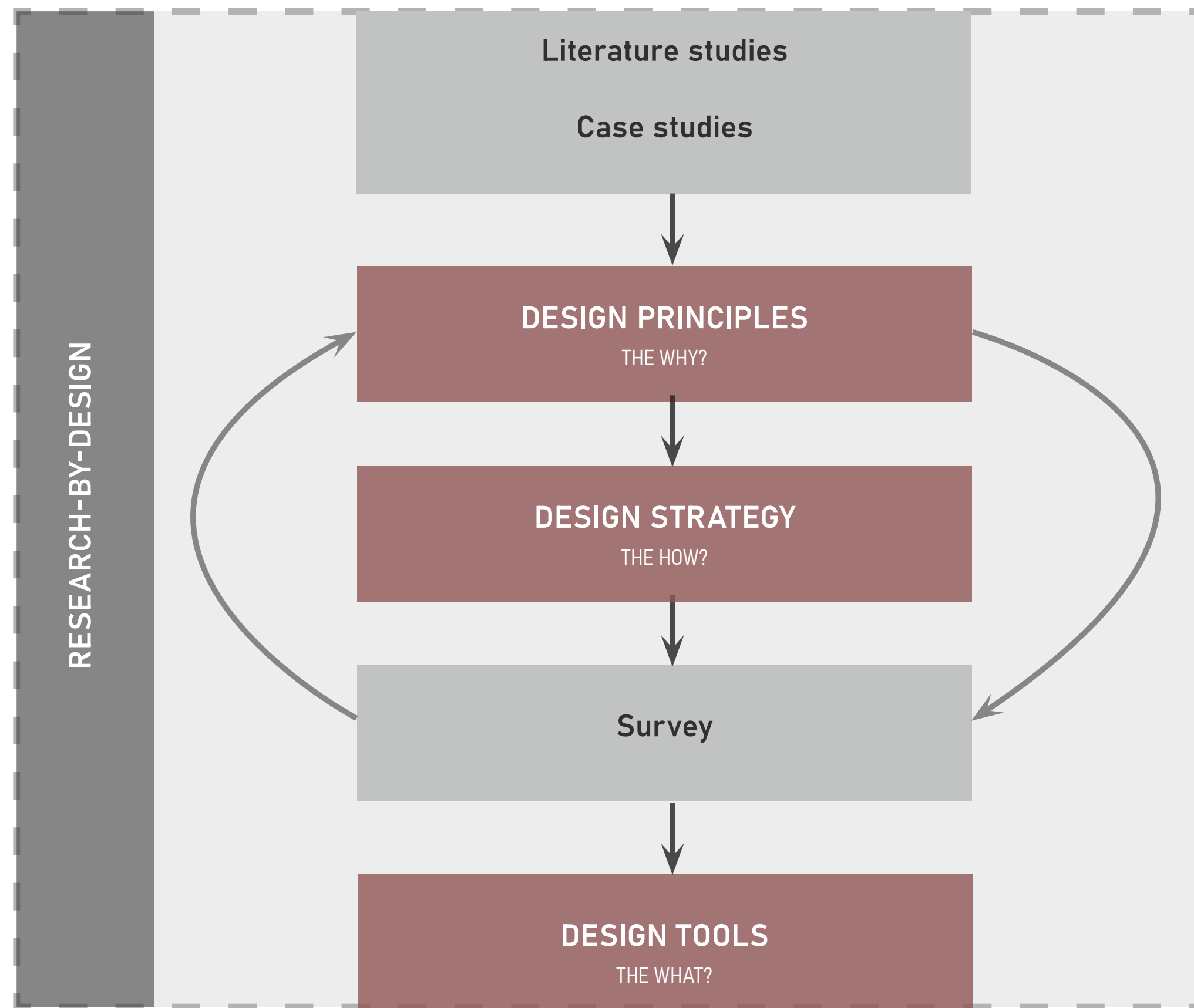
RESEARCH-BY-DESIGN

Literature studies

Case studies

DESIGN PRINCIPLES

THE WHY?

DESIGN STRATEGY

THE HOW?

Survey

DESIGN TOOLS

THE WHAT?

figure 3: reseach methodology (Own work, 2024)

CHAPTER 1 RESEARCH HYPOTHESIS

This chapter describes my hypothesis on my own research question and some concerns I have when it comes to introducing and implementing co-housing in the intermediate spaces of the residential building.

1.1 How to design the in-between

To anwser the research question we must understand the meaning of this in-between space that directly relates to the dwellings and melts into its surroundings.
The meaning of these spaces are directly related to what defines these spaces. Usually these spaces are identified as long hallways that connect the dwellings to the elevator/ stairs. People might cross their paths moving along these hallways, but just to reach to their final destination which is either they dwelling or the outside world. Particullary it is not used as a space to interact, the way it is usually designed does not allow for it. To a lot of people this might be an escape from their neighbors or the outside world. But as noted in the problem statement we can see that their is a noticeable percentage of Amsterdam inhabitants that feel enstranged from their surrounding residents and seek this sort of interaction.

The way the corridors, galleries and portico's are designed they seem to be able to be categorised as non-spaces. Michel de Certeau defines the non-space as "an intersection of moving bodies." (Augé, 1982) Therefore this space in the dwellingcomplex is not at all used to dwell. To further investigate this notion of the corridor as a non-space it would be interesting to study the behaviors of people in this non-space and to understand how we can turn this transitional 'lost' space into a more multifunctional place where unforced engagement for a diversity of users can be hosted by the design of the building.

To host a multifuntional place in a dwellingcomplex I found myself wondering what I would need to feel confident sharing collectively with other residents within a dwellingcomplex. Before even thinking about what those functions could be and what that might look like, it was brought to my attention that the psychology behind it and the feeling of 'togheterness' means a lot in circumstances of collectively sharing, as it would be in no one's interest to share with a stranger.

Trying to understand what it might take to be able to share such functions as a laundry room or a kitchen, clearly needs some kind of trust between the different residents of the building. Not only has the architect the responsibility to create the spaces and place them strategically, it is also important to take the responsibility of understanding how to create a social infrastructure.

Meaning understanding the different targetgroups, how they are different from eachother and how they can be arranged in the dwelling complex, while still taking in mind their needs and wishes.

Therefore I started to be interested in 'Community living' and the concept of cohousing. In specific clusterdwellings, where multiple dwellings share a variety of collective spaces that are placed in the in-betweenspaces of the building. In that way the hallways, corridors and portico's we know today are not just a waste of space being purely used to commute, but they can actually be multifuntional and host for identities to emerge in a space that now lacks any sign of human activity. Furthermore it is not only interesting from social standpoint, it is also interesting financially. While a lot of Dutch dwellings in Amsterdam are currently so overpriced that people who need dwellings can not afford them anymore, this concept of living together can take away this dwelling scarcity. As the dwelling itself is less big, because several functions are placed outside, the rent and price of these houses can be lowered. As well as the developer not losing any space over transitional zones as now they are multifunctionally used by residents.

Community living opens a lot of doors for all stakeholders attached to the project. Though sharing several functions might not sounds appealing at the first sight, I believe the finishes can make the difference. For example sharing a kitchen with six other dwellings does not sound appealing at first. Though if properly designed and offering the residents a small kitchennette in their own house and a very large and luxirious kitchen in the communal area to also be able to host for other people and having a clear cleaning schedule. I believe it can warm people up to the idea.

Though community living/cohousing/clusterliving opens a lot of doors I do wanna share some concerns on this topic that I thought of while considering this typology as an option. As we always have to refute our own subjective opinions to understand the challenges that might arise when introducing this typology in Amsterdam.

1.2 Community concerns

The five main themes of challenges when thinking of community living through own experience are:

QUALITY OF LIVING
A concern with community living and cohousing for me would be to keep the standard measurement of comfort within the more compact dwelling. Some functions will be placed outside, though they might be more detailed, luxurious and spacious in the collective space. I wonder if there is people that might isolate themselves from these collective spaces. How can we design a dwelling that is still as comfortable even when sharing some of the functions with other people. Will this sense of belonging still be applicable if these functions are shared. Or am I just creating another non-space?

OWNERSHIP
A big challenge of community living would be responsibility and ownership. As it is situated in the in-betweenspace of the buildings it is important to think about who is able to use the space and the constrains that it might need to have to make sure it will not be territorialized by one household or a certain collective. In that case the purpose of community living is not fulfilled and will create uncertainty and enstrangement between different users of the building making them feel even more isolated and out of place. Therefore it is very important to set up even rules for all users of the space and optionally point out someone externally to keep track of the usage of the space, being able to even be a mediator if parties end up having a discussion or fighting over the communal area.

SCALE AND POSITIONING COLLECTIVE SPACES IN THE TRANSITIONAL SPACE
Another concern of mine is the scale and positioning of the collective spaces in the transitional space. As you don't want to design too much of a baricade by inserting functions there and distract the purpose of its user to be functional. The scale is also an important factor of making this collective space work as an outragous big collective space asks to be maintained by its users whom might not have the time. But also it the fact that if the same collective space is used by too many people the space will become more anonimous again, the sense of belonging to the place will then not be as strong and the feeling of responsibility to take care of it will no longer be a priority in one's daily life.

THRESHOLDS
The challenge of boundaries and threshold is also one that should be carefully designed. It is very important and in everyone's interest to know and understand what is to be used by which user and when. This can relate to walls, fences, but also temporality. When there is no threshold implemented we risk falling in the habit of territorialisation or a specific user(group) to misuse the assigned collective space which can again cause for conflict within the specific cluster of the collective space. This is something to be avoided, because of the negative effect conflict can have and the constrains that might have to follow as outcome of the conflict.

INTERACTION
The challenge we as architects might face is that we want to create designs which evoke interaction, though this approach can be very dissapointing because interaction between residents is not something we can force to happen by certain spatial decisions. Though I am convinced that with carefully designing the transitional spaces to partially be a place of stasis can make the chance for unforced engagement between people bigger, as it slows down the movement at the intersection to the user's destination.
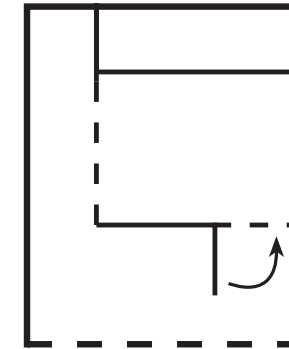
1.3 Design principles
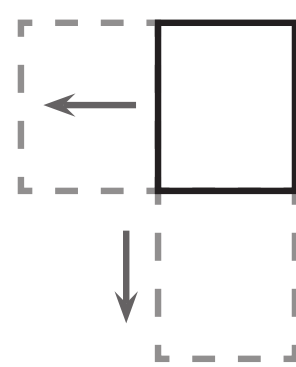
GRID DWELLINGS FOR EASY STACKING
By using the grid, the different homes can be easily connected above and next to each other.
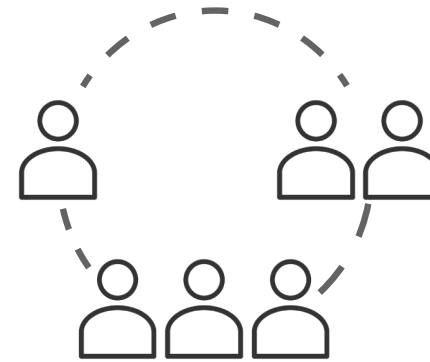
DWELLINGS FOR DIFFERENT FAMILY SITUATIONS
Designing a housing block in which people can grow in their own living environment, thus creating a community.

FLEXIBLE DWELLING FLOORPLANS
A floor plan that is adaptable to the extent to which you want to socialize with other residents of the neighborhood and to what extent the home is adaptable to changes in family situations and transitions from private to public

VILLAGE HOUSE TYPOLOGY IN HIGH DENSITY
Village living is characterized by the path along the front gardens that functions as a buffer from public to private. This is usually a place where people greet each other and have a chat. If you walk through the living room you arrive at the back garden/balcony.
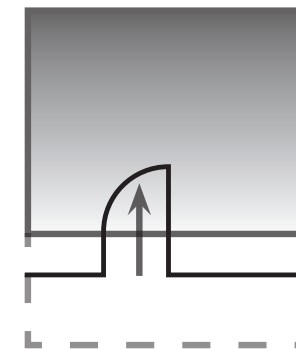
RECOGNITION OWN DWELLING
The higher the building, the less the users' private space is recognized. By creating a small buffer zone that functions as a front garden, the residents can give their house an identity.

figure 4: Hypothesis design principles (Own work, 2024)

When thinking of the main challenges of community living these different design principles emerge as hypothesis to these concerns. A big concern is creating connectivity in a high density area. Connectivity is found in the daily routine of the village house typology. What if we can take characteristics of these dwellings such as shared gardens and buffer zones for individualisation to create more connectivity with surroundings and different users of the building? Can we with this typology of living also create a sense of belonging. How should we design these spaces, so it is clear to who belongs what. Or should this be left open for the users to decide together? How do we stop territorialisation from happening?

In the village house typology we somehow understand what is who's, because we keep clear thresholds between private, semi-private and collective. Can we also create this feeling within the building and the in-betweenspaces? Implementing a clear grid will be able to strengthen the building and dwelling structure and will be helpful for constructional reasoning, but also to create structure and clarity in the in-between space. A concern that arises when thinking of co-living in the in-between space is the scale and poisitioning of this collective space, this design should not too much hinder any user routine.

CHAPTER 2 TARGETGROUP

This chapter is an exploration of different target groups in Amsterdam that I would possibly like to accommodate. This mainly concerns the target group of starters or singles who are currently unable to find a suitable home due to the high competition on the market and high house prices.

The second part of this chapter is a survey that serves as a research to further elaborate on the tolarancy of people when it comes to a co-living situation.

2.1 Amsterdam population statistics

In 2024 Amsterdam counted 515.181 households in total (CBS, 2024). From these 283.997 households consist of only one person, this comes up to a percentage of 55,1% of all the total of households in Amsterdam. The remaining households consist of 134.728 households (26,2%) with two people and 94.456 households (18,3%) with more than 2 people.

From all households 41.111 households (8,0%) consist of a single parents with a child or multiple childeren.

In figure 5 we can see the development of number of residents and the development of number of dwellings within Amsterdam. The difference between the number of people and the amount of dwellings is alarming. Especially after understanding that more than half of the residents have a single person household. The housing prices are rising and its becoming harder and harder for starters and inconsistent/ lower salary households to find a dwelling that meets their wishes and needs in the price range they are looking for.

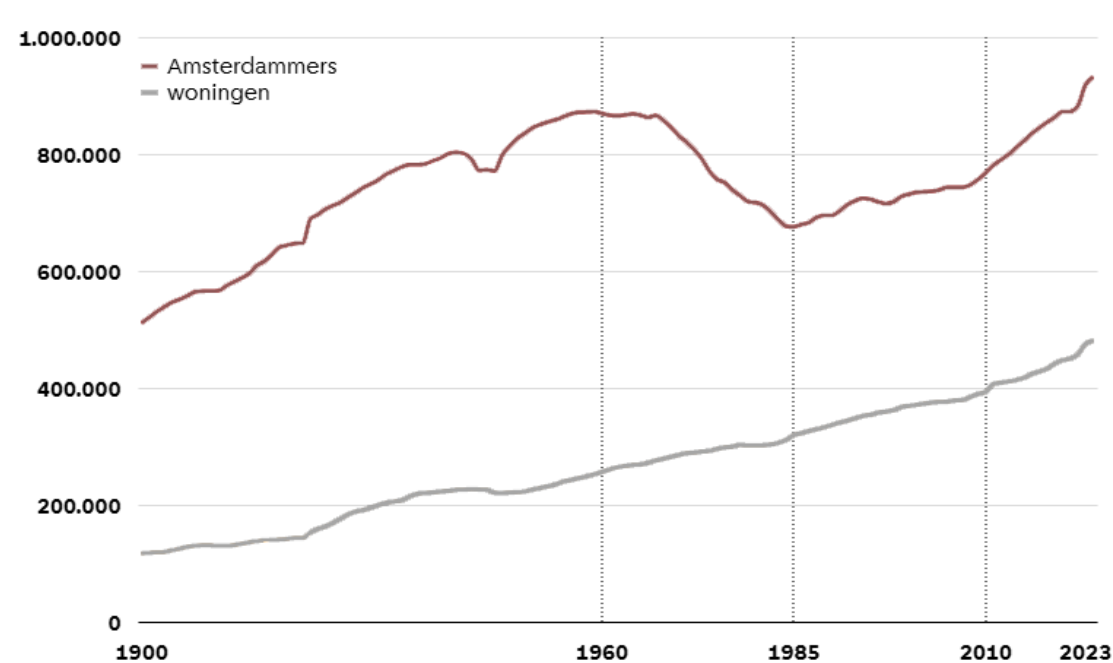If we look at figure 6 we can see the population pyramid of Amsterdam, showing that

there Amsterdam has a lot of residents between the ages of 20 to 40 years. This information is important to create persona's. Understanding the housing market and population of Amsterdam today will help in creating different profiles of people that form an overall image of their struggles and pains looking for a dwelling at this time.

Reasons for the popularity of Amsterdam amongst age categorie of 20 - 40 years to live in Amsterdam would mostly be school or career oriented, as Amsterdam is the capitalcity and financial centre of the Netherlands. The city holds many career opportunities. Commuting to work would be one of the main reasons for Amsterdam residents to live there. The remaining age groups are mostly elderly who have lived in Amsterdam since they were younger and decided not to migrate to another places within Netherlands or younger people who have come to Amsterdam for the career of their parents, their school choice or were born in Amsterdam as their parents were living there already.

The routine of people's daily tasks and the places they go to, relate strongly to where they choose to live. The location of the area and the distance to these places is extremely important.
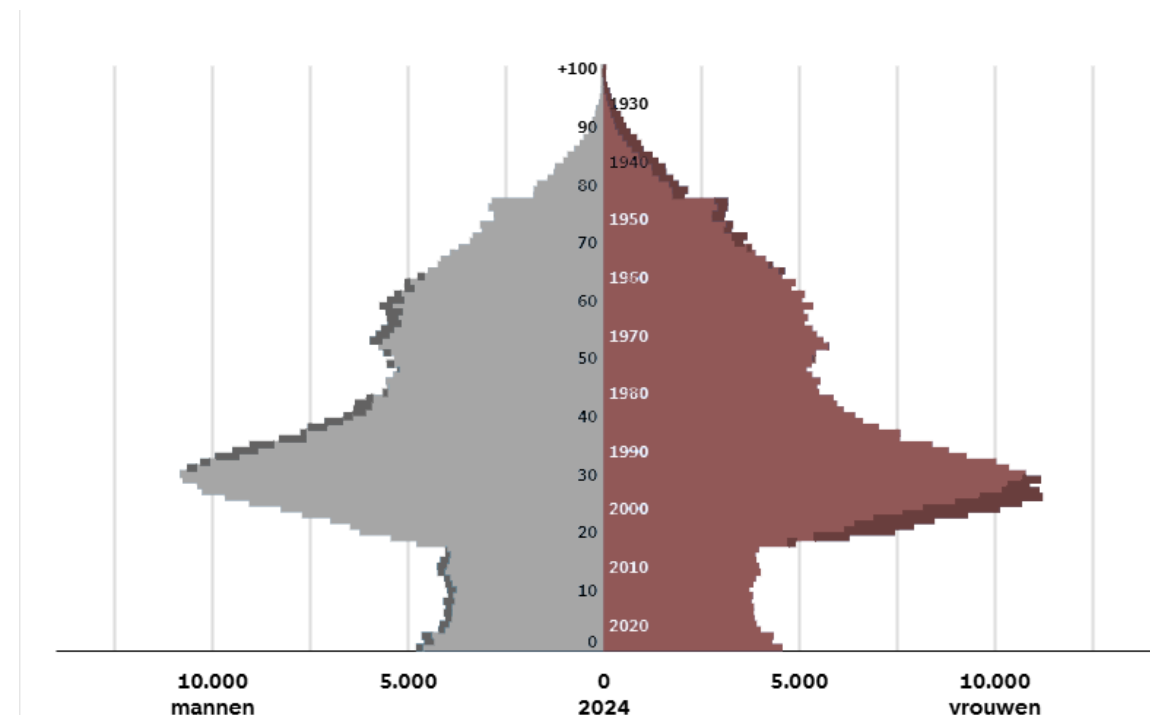

figure 5: Development number of residents in Amsterdam (Smits, 2024)

figure 6: Population pyramid (Smits, 2024)

2.2 Creating persona's

Though we prefer our dwelling places to work. There has been a shift in the routine of many residents in Amsterdam and globally as well. This shift relates to COVID-19. During this time many people were working from home obligatory in the comfort of their own home. Offices migrated to other places since the need of being in Amsterdam was no longer there and Amsterdam's rents were going up.

The result of this is that the people of Amsterdam are making more use of their own homes. Though the COVID-19 era has come to its end, offices have downsized their office spaces and are partly operating online, not all people have returned working from the office but partly work from home. Therefore dwellings have continued to be more important to its users and the wishes and desires might have changed as society changed in this time.

In figure 7 we can see the change of number of residents in Amsterdam over time. This graphic supports this thought process and shows that residents of Amsterdam are generally moving out of Amsterdam around this time. However the international migration rate shows that after COVID-19 there has been a high number of people coming into Amsterdam.

With this understanding of the general population figures, it is also important to mind which target groups could be interested living in a co-living situation. Not all household types would be intrested to share functions even if this means lower costs, because it also means having to take part in participation and responsibilities.

Generally speaking this type of co-living would mostly be compelling to starters, young or single parent households, young couples, people who mostly work from home, retired people, people in the creative sector and young entrepeneurs/ professionals, Any people that can see the benefit of creating a better living space even when this means that some functions are shared with others, these people can be from different walks of life and therefore create a diverse community.

To understand the user's wishes and needs this research will present different self created persona's. These different persona's represent future user's of this project and will help with design thinking.

"Persona's represent a "character" with which client and design teams can engage and use efficiently in the design process. Persona's can be used during the empathizing of defining phases of DT." (Chasanidou et al, 2015)

These persona's will then be used for the survey. This survey will explore the willingness to share different functions.

Loop van de bevolking: hoe verandert het aantal Amsterdammers?
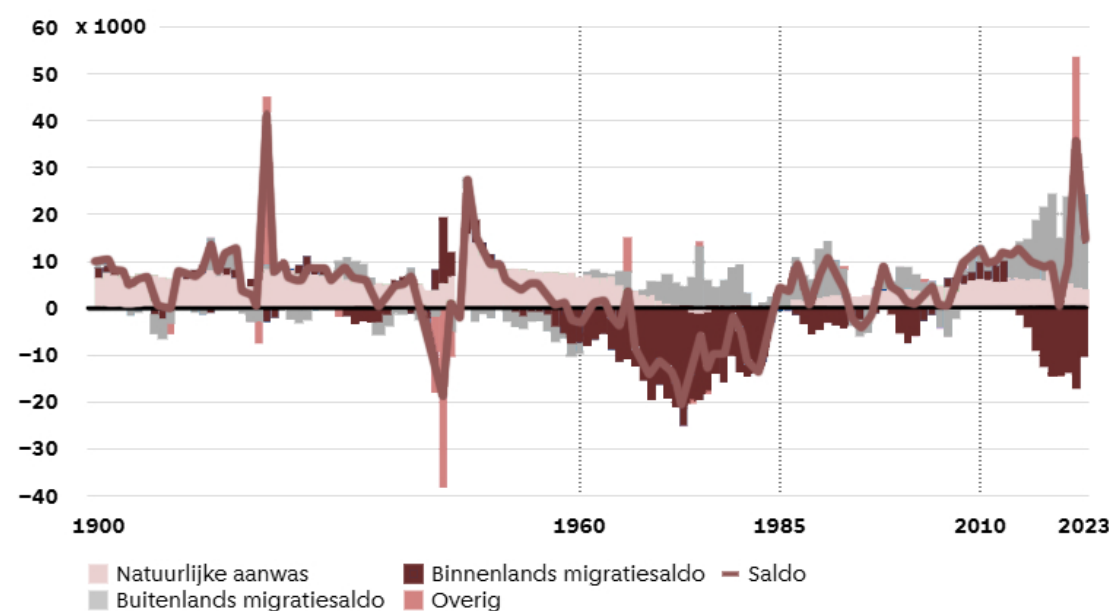
figure 7: Change of number of residents in Amsterdam (Smits, 2024)

SANDER & EVA JANSEN

Owners of online food platform

Sander is an ambitious and adventurous entrepreneur with a passion for food and travel. He exudes self-confidence and has sharp business ambition. At the age of 28, he decided to open his own online store, where he sells Dutch delicacies to customers all over the world. His love of food and ability to connect with people of different cultures have contributed to the success of his business.

Sander grew up in Amsterdam, where he was born and raised. He goes to primary school and secondary school there and also graduates from studying business administration at the VU. Where he meets his wife Eva.

Sander starts his own business, but works from home a lot because the company runs online. At first this was from his student room, but now that he has graduated and his business is going well, he hopes to find a home for his future family with Eva.

When looking for a house, he encounters a housing shortage; he is unable to find an affordable family home in good condition within a reasonable distance from Amsterdam. Especially because both Sander and Eva work from home, they are not looking at studio's. So far they have been forced to rent an apartment, but in the meantime they still scroll through Funda every day for a suitable home. Unfortunately, it has been 10 months without results.

PAINS

GAINS

– Privacy/ noise
– No seperate private working space within appartment

– Network opportunities
– Enough workspace for both of them and ability to invite people for business meetings
– Financially more interesting
– Additions to dwelling space

`CO-LIVING

ALEX CHAN

Expat engineer from Singapore

Alex Chan is 37 and grew up in Singapore, where he also graduated from the National University of Singapore in Mechanical Engineering. Alex has always been interested in traveling and when he has a holiday he certainly doesn't sit at home on the couch. His job allows him to travel all over the world. Because he is representative of his team, he travels to various branches around the world to talk about their product. When he ended up in Amsterdam, he was sold. He traveled to several European countries, but Amsterdam's charm and progressive mentality proved to be an ideal place for him to continue his career.

One of the biggest challenges for Alex was to find a suitable appartment to live in around Amsterdam. The housingmarket seems to be very competitive and over budget. Alex decided to procceed both online and real life realtors to help him on the journey of finding a suitable home, which has lead to no success yet.

He is looking for a place that is not only comfortable, but is also in close proximity to his job with car and public transport. The closeness of technology hubs, parks and sport facilities are also quite important to him as he is moving there all by himself and likes to spend his free time outdoors.

PAINS

– Privacy/ noise
– Less private functions, has to socially encounter to use collective spaces

GAINS

– Place for networking and building connections
– Location is close to city centre and easy accessable with public transport
– Engagement between residents, able to build relationships with others

`CO-LIVING

LESLEY PEETERS

Nurse and single mother

Lesley Peeters 42 years old was born in Rotterdam and grew up in a close family. From an early age, she had a caring nature and a strong interest in healthcare. After completing high school, Lesley went to Utrecht University of Applied Sciences, where she completed her nursing training. Her passion for helping others led her to a career in healthcare, where she built a reputation as a dedicated and knowledgeable nurse.

At her high school she met her high school sweetheart. They ended up marrying, but didn't last very long after having their first born child. After 5 years of marriage they decided to part ways and share custody of their child. She is now 13 years old and enrolling into highschool herself.

With Lesley being promoted she wants to move to Amsterdam.

However, the search for a suitable home in Amsterdam proves to be a challenge. The housing market is competitive and rents are high, especially for a single mother with an average income. Next to that she is looking for home in a safe enviroment where her daughter Emma can play outside without any worry, which is child-friendly and has a school in close proximity. In addition it is important that the house is close to public transport as this is the way Lesley prefers to go to work.

As she shares custody and is home alone half of the time, Lesley does seek interaction outside. She likes to go out and have dinner and drinks with friends. She fears living in an anonomous neigborhood.

PAINS

– Privacy/ noise

GAINS

– Collective places to keep her child entertained, such as: playground, playrooms, music room, reading stairs, shared balcony
– Financially more interesting
– Engagement between residents, able to build connections

'CO-LIVING

LARS & ESMEE DE JONG

Marketeer & psychologist

Lars (32) and Esmee (29) both grew up in different cities in the Netherlands. Lars was born in Rotterdam and Esmee in Utrecht. Both had happy childhoods and shared an interest in creativity and communication. Lars studied Business Administration at Erasmus University Rotterdam, while Esmee studied Psychology at the University of Amsterdam, where she specialized in child psychology. This is how they initially met.

After three years of dating, Lars proposed to Esmee during a romantic weekend in Paris. The couple married last summer in an intimate ceremony on the beach of Zandvoort, surrounded by family and friends. Their wedding marked the beginning of a new chapter in their lives, and they decided it was time to make their dream come true: moving to Amsterdam.

They are looking for a home that is spacious enough for their future plans, such as starting a family, and is well located in relation to their workplaces. The proximity to parks, cultural institutions and cozy neighborhoods is important to them, as they both enjoy an active and cultural lifestyle.

Lars and Esmee are looking forward to becoming part of the community in Amsterdam. They hope to make new friends, participate in community activities and explore the city. Both are sociable and enjoy attending cultural events, visiting art galleries and discovering new restaurants.

PAINS

– Privacy/ noise
– No seperate working space in dwelling itself
– Small surface for expanding family in same apartment

GAINS

– Place for networking and building relationships with other residents
– Enough workspace for both of them and ability to invite people for meetings
– Additions to dwelling space

`CO-LIVING

2.5 Survey

To understand the practicality of co-living, a survey has been made to understand and test the willingness to share certain functions.

The persona's Sander & Eva Jansen will be introduced to sketch a general image of the housing market in Amsterdam and the target group of this project.
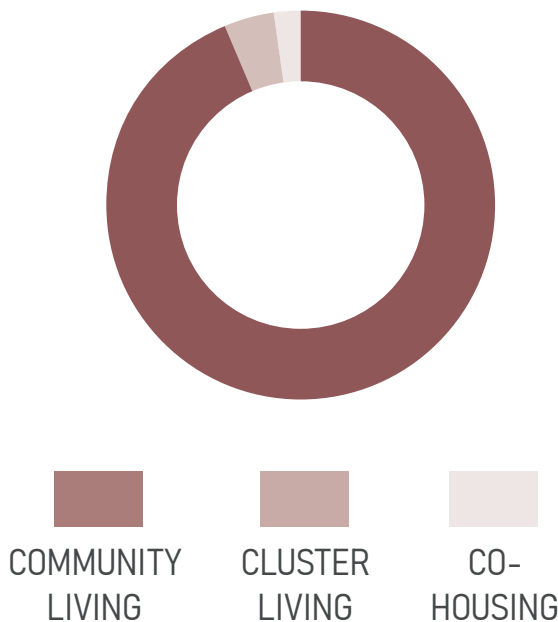
After introducing Sander & Eva the participants of the survey are asked several questions that relate to co-living. Such as what type of co-living is preffered in the case of Sander & Eva, why and how many people should be included in that community.

Secondly, the participants will be given different functions and asked how willing they would be in case of Sander & Eva to share these functions with other residents of the community they picked. These will go from urban scale to dwelling scale and from public to very private. With this information, I will be able to draw a understanding of what the residents of this building will actually need and what functions can be collectively shared with the community, keeping in mind that this should really add to their living quality rather than taking away from it.

WOULD YOU BE INTERESTED IN THE CONCEPT OF CO-LIVING?

YES   NO
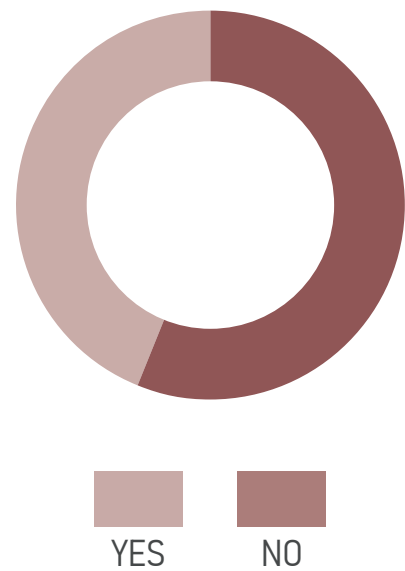
WHICH FORM OF LIVING SPEAKS TO YOU THE MOST?

COMMUNITY LIVING   CLUSTER LIVING   CO-HOUSING

WHO WOULD YOU BE MOST COMFORTABLE SHARING THESE COMMON SPACES WITH?

- 47,9 % People around the same age
- 20,8 % People with the same field of career
- 31,3 % Other starters
- 10,4 % Families
- 16,7 % Single person households
- 6,3 % Elderly
- 43,8 % A mix of all of the above
- 4,2 % For me it does not really matter

0   10   20   30   40   50
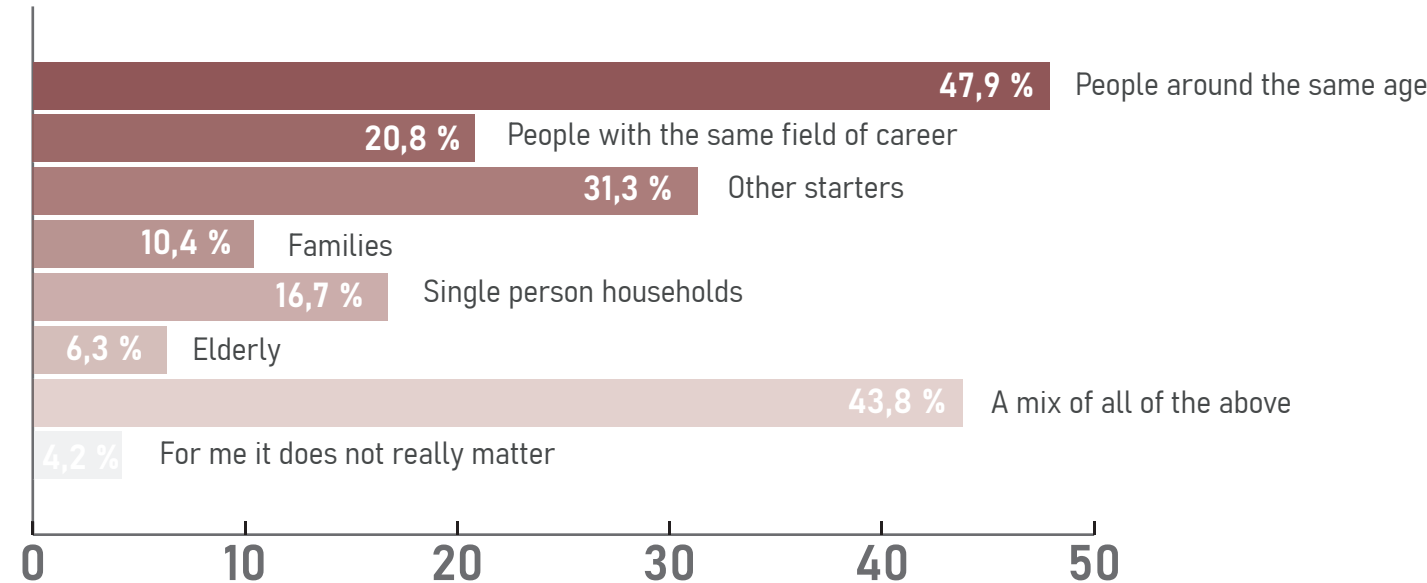
Figure 8: Survey results (Own work, 2024)

WHAT DO YOU THINK WILL BE THE BIGGEST CON OF CO-LIVING?

Not having full autonomy

Potentially not liking someone

Other's mess

Arguments when disagreeing

Lack of privacy
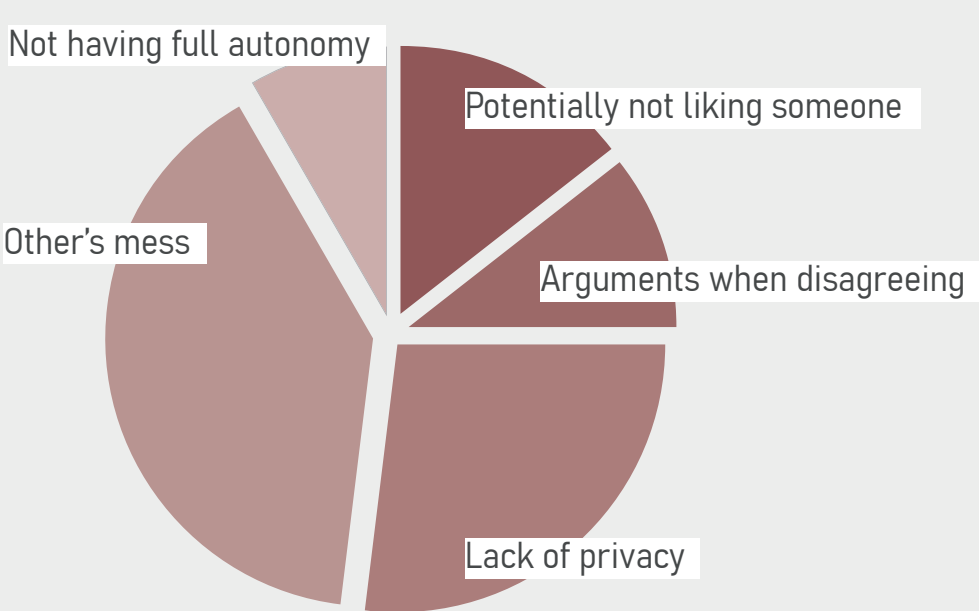
WHAT DO YOU THINK WILL BE THE BIGGEST PRO OF CO-LIVING?

Common area's

Additions, co-living perks

Help

More ways to socialize

More convienient

Splitting costs

better home & better area

Having a community

Lack of privacy
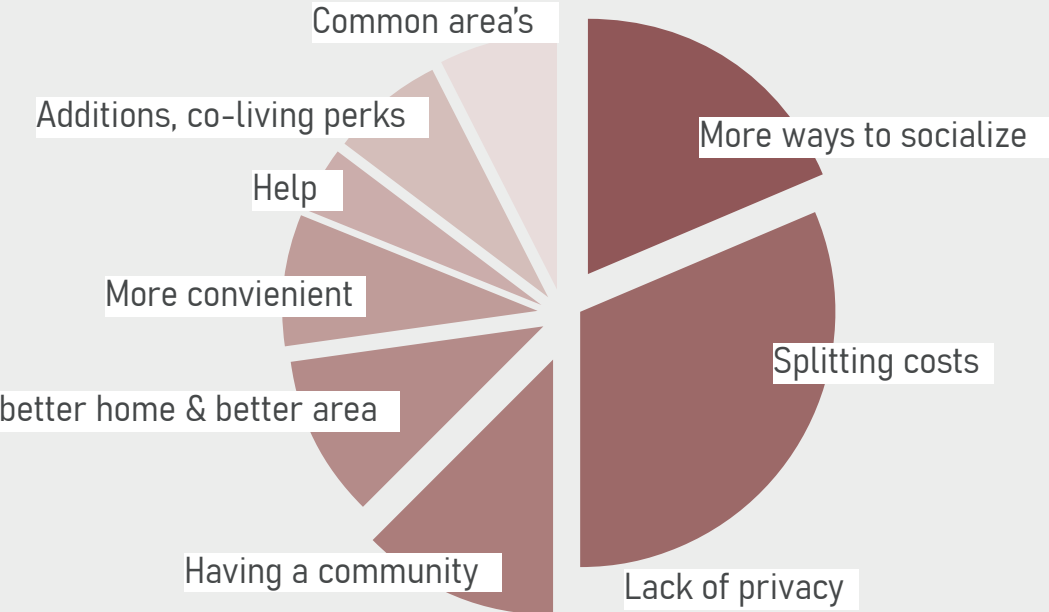
2.4 Survey outcome

Many of the Survey answers show concern for the privacy of Sander and Eva, which makes sense as they are wanting to start a family. It seems that people are willing to pay a high price for being in control of their own space.

Results show that most people seem to be more attracted to community living, where they have all comforts of living privately though smaller and sharing some more luxiourous and spacious collective spaces outside of their private space so they are able to look for interaction at the times they please, instead of having to bump into one another needingly. In addition, the participants like to be able to have their own say in how they utilize and furnish their own space, making it a home rather than just one of many houses.

It seems as most participants of the survey want a community shared with people that are around the same age as them (47,8%), though the second most voted anwser (41,3%) is that a mix of different age groups and stages of life should also make a comfortable community. Though later participants almost equally vote for wanting to live with people from different stages of life and wanting to live with people that have similarities to their own situation.

The industry that was voted the most suitable for the situation for Sander and Eva was business. And thinking about it, it does make a lot of sense to host entrepeneurs together in the same building as they can make networks and share common areas such as workplaces and ateliers, to share knowledge with one another.

Though many people had privacy concerns when starting the survey, 31,3% does believe that in the case of Sander and Eva, this living situation opportunity of co-living brings pro's, such as splitting costs and still being able to own their own private space, creating more ways to socialize in the case of Eva who works from home a lot and having a community outside work or school to interact with.

Though participants can imagine the Pro's of a co-living situation, other people's mess in communal area's and a lack of privacy is still feared to make the living arrangement slighly more uncomfortable than most are used to living in.

When comparing pro's and con's, 31 participants do outweigh the positives over the negatives. They feel it is a great opportunity in the face of the housing market of today where there is little space to build and there needs to be a serious growth in homes.

The 17 participants that feel co-living would mostly be a con, are showing their concerns of co-living through the insecurity of who you will live with and if you would really like to share these quite intimate spaces with other people that you might have a bad experience with. This concern is also very understandable as you never know what issues might occur before hand.

With this survey we still feel a sense of rather wanting to be safe than sorry, but as if the housing market today being safe means developing houses that do not fit the pricetag that starters can pay.

When it comes to ownership we are able to tell that most of the participants (45,8%) would like to share the equal ownership, on the contrary 27% believes it might be better to pay a certain monthly fee of rent to managment to maintain the communal ground. When it comes to the residents get to pick whoever gets to join the community the anwsers of the participants are equally split between yes and no. Elaborating that the residents should not have the power to seclude anyone from living in the community and making it work together, to the complete opposite that describes that residents should be able to handpick their co-living members because they do not feel like living with someone they do not know. It could potentially avoid future drama's between residents.

More of the participants (62,5%) believe that the current group should be in charge of filling the spot when a community member leaves. Which leaves us thinking if that is not also secluding people.

It seems that people don't want any vague thresholds that could confuse usage and ownership. A big percentage thinks it is better to set clear boundaries to eliminate any uncertainty and missuse of common area's.

2.5 Survey conclusion

To conclude, it does still seem like the participants are concerned about their privacy when agreeing with co-living. It seems as if the traditional feeling of home and their private space is still linked to the feeling of having all the comforts inside of their own home, while wanting to enjoy the luxury of having a communal area. Community living is preferred, because the threshold of having your own private space remains the same. Though there are some cons of co-living particapants do realize that we have come to a time where architecture needs to change in order to be able to create more affordable houses for people that are now having a hard time finding a proper house. Community living could solve the problem of social loneliness and create stronger connections between residents. Though that means that there have to be clear rules and regulations as to using the communal area's so there will be no confusion or territorialisation without consequenses. The participants that have elaborated on seeing more con's than pro's of living in a community, seem to be afraid of the unknown and losing control over their living situation. It is therefore important for us, as designers of not only the architecture, but also the cityscape, to keep in mind this sceptiscm. Truly trying to show that co-living does enrich the built enviroment and will be a suitable solution for the housing shortage of Amsterdam.

2.6 Targetgroup conclusion

The housing market today poses significant challenges for individuals and families seeking affordable, well-located homes, particularly in urban areas like Amsterdam. The traditional approach to homeownership often leaves many, including young entrepreneurs and growing families, struggling to find suitable living spaces. However, the concept of co-living presents a promising solution to these challenges by offering a balanced blend of privacy and community.

Co-living spaces are designed to combine private living quarters with luxurious communal areas, fostering a sense of community while preserving individual privacy. This innovative housing model addresses the need for affordability and space efficiency, making it an attractive option for many. The shared living environment not only reduces costs but also provides opportunities for social interaction and networking, particularly beneficial for remote workers and entrepreneurs.

Despite initial concerns about privacy, successful co-living arrangements demonstrate that clear boundaries and effective management can ensure a harmonious living experience. By establishing well-defined rules and maintenance structures, co-living spaces can alleviate fears of intrusion and misuse, providing residents with a secure and comfortable environment.

Diversity within these communities further enhances the living experience, as a mix of age groups and life stages fosters inclusivity and richer social interactions. This variety helps create a supportive and dynamic community where individuals can thrive both personally and professionally.

Ultimately, co-living offers a viable alternative to the traditional housing market, addressing the scarcity of affordable homes and the need for communal support. As more people recognize the benefits of co-living, including cost-sharing, enhanced social opportunities, and a balanced lifestyle, this model stands out as a forward-thinking solution to modern housing challenges. By embracing co-living, individuals and families can find a new way of living that meets their needs in today's competitive housing landscape.

Design strategy's to reach a comfortable form of co-living that come to mind when thinking of the outcome of the persona's & survey are:

BALANCING PRIVACY AND COMMUNITY
For individuals like Sander and Eva, designs need to balance privacy with community living benefits. Clear boundaries and well-defined communal areas can help alleviate privacy concerns.

DIVERSE AND INCLUSIVE COMMUNITIES
While age similarity is preferred, mixing different life stages can enhance community richness. Strategies should foster inclusivity and diverse interactions.

SUPPORT FOR REMOTE WORKERS
Creating co-living spaces with shared work areas can support entrepreneurs and remote workers, promoting productivity and networking.

MANAGING COMMUNAL SPACES
Effective management and clear rules for communal areas are essential to maintain harmony and satisfaction among residents.

This comprehensive approach addresses the diverse needs and preferences of individuals like Sander, Alex, Lesley, Lars, and Esmee, enhancing their living experience within a supportive community environment.

CHAPTER 3 THEORY

This chapter will summarize all theories used to come to the design principles stated in chapter 4. The theories used focus on the theory of non-space, transitional area's, community living, sharing spheres, social infrastructures and proximity. These theories combined are concluded in the conclusion. These theory's strengten the hypothesis made at the beginning of this research aiming to understand the more psyochological way of living together what is needed to make it work and why. What are things that need to be considered when combining functions together in a communal area.

3.1 The in-between 'lost' spaces

The notion of the hallway being a non-space stems from the saying that a non-space is just an 'intersection of moving bodies.' (Augé,1982) The corridor, hallway and gallery have a very clear function as passthrough, but the way they are designed leaves all to be desired. Long paths, surrounded by high white walls and ceilings, no connection to its surroundings and all same looking doors with apartment numbers. Apart from the number not any sense of belonging is attached to this in-between space.

"An urban setting or atmosphere can alienate and disconnect us from the cultural, social and human context, or it can enroot us, and make us feel grounded, accepted and supported." (Pallasma, 2021)

This in-between space is simultaneuosly disconnecting us from our surroundings even sometimes silent, dark and quiet. Pallasma (2021) states that atmospheres can either have a positive or negative effect on its users by the way they are designed. It is therefore very important to keep this in mind when wanting to design a certain atmosphere architects might find themselves struggling to get the right outcome. When designing this in-between space we ideally want users to feel safe, even so that they feel comfortable expressing themselves, feeling a certain sense of belonging to their direct surroundings and not only their private appartment. We can even discuss the notion of wanting to create the feeling of solitude amongst other residents. Solitude is the mode of being alone without feeling cut off, estranged, distanced oremotionally disconnected. This feeling of solitude is created when residents are no longer alienated from eachtother and interests and intentions are clear. When solitude finds it way, space can create a place where unforced engagement can take place.

"Being social is a fundamental component for feeling happy. Studies have shown that mental health is greatly affected by social and spatial surroundings. Taking action to relieve loneliness, can better the quality of life." (Wiese, 2023)

This space should be designed accurately and with notion to slow down the pace. As if now the transitional areas have no places of stasis they are purely used as passthrough by adding a function that slows down we might be able to evoke such place for unforced engagement.

The theory of "non-space," introduced by French anthropologist Marc Augé in his 1995 book Non-Places: Introduction to an Anthropology of Supermodernity, describes spaces that lack the traditional attributes of place. According to Augé, non-spaces are:

TRANSITORY AND FUNCTIONAL
These areas are designed for people to pass through or perform specific functions, such as airports, shopping malls, highways, and hotel rooms. They are characterized by their lack of permanence and individuality.

LACKING RELATIONAL, HISTORICAL, AND IDENTITY ELEMENTS
Unlike traditional places that have historical, cultural, and personal significance, non-spaces do not hold meaningful connections or memories for individuals. They are interchangeable and lack the unique qualities that define a sense of place.

ANONYMOUS AND HOMOGENEOUS
Non-spaces are often generic and impersonal, designed to be used by anyone without fostering personal or community identity. They are marked by uniformity and standardization, making them look and feel the same regardless of their geographic location.

ASSOCIATED WITH SUPERMODERNITY
Augé links the rise of non-spaces to the contemporary era of "supermodernity," characterized by excess and the acceleration of time, space, and individualism. This modern condition has led to an increase in the creation and use of non-spaces.

3.2 Transitional spaces in high-rise dwelling complexes

For a long while, it seemed that the introduction of multistory dwellings was directly tied to the urban isolation and homogeneity associated with modernism (Hitzler 2016). Residency in a high-rise building is associated with anonymity due to resident's lack of community feeling and care/ responsibility for common areas (Issues, 2014). In these high-rise apartment buildings, transitional spaces are essential, especially in the social domains (Yao 2020). Due to budgetary limitations and a tendency towards standardization, high-rise building transitional spaces; such as lobby areas, elevator cores intended leave as much private dwelling spaces and narrow apartment floor corridors often lack any type of other social function other than being a transitional space. This is due to the tendency of high-rise structures to be standardized (Gifford 2007).

Research has indicated that transitional areas' layouts can have a big impact on how they function socially. For example, social interactions are typically promoted by open layouts that allow for unobstructed lines of sight and informal meetings than by closed off layouts. In addition, transitional spaces can foster a feeling of coziness and relaxation that attracts people to hang out and engage by including daylight, plants, and comfortable seating.

The evaluation also emphasizes how crucial it is to design transitional spaces with the unique requirements and preferences of residents of high-rise buildings in mind. More light should be shed on the possibility of transitional spaces fostering social connectivity in high-rise structures and offer spatial design recommendations for creating efficient transitional areas that cater to the wishes and needs of future building users.

The five different transition space typologies we can distinguish are:

CORE
The core is a traditional transitional space in the middle of the building where the elevator and stairs are located in the middle of the building facing inside and the dwellings facing outside.

HALLWAY
The hallway is a traditional transitional space that is located in the middle and extends across the width of the entire building enclosing doors towards the elevator and stairs that are located at the side(s) of the building.

GALLERY
The gallery is a traditional space in the middle of the building that is attached to the outside of the building leading to a small portico at the side(s) of the building to go up or down.
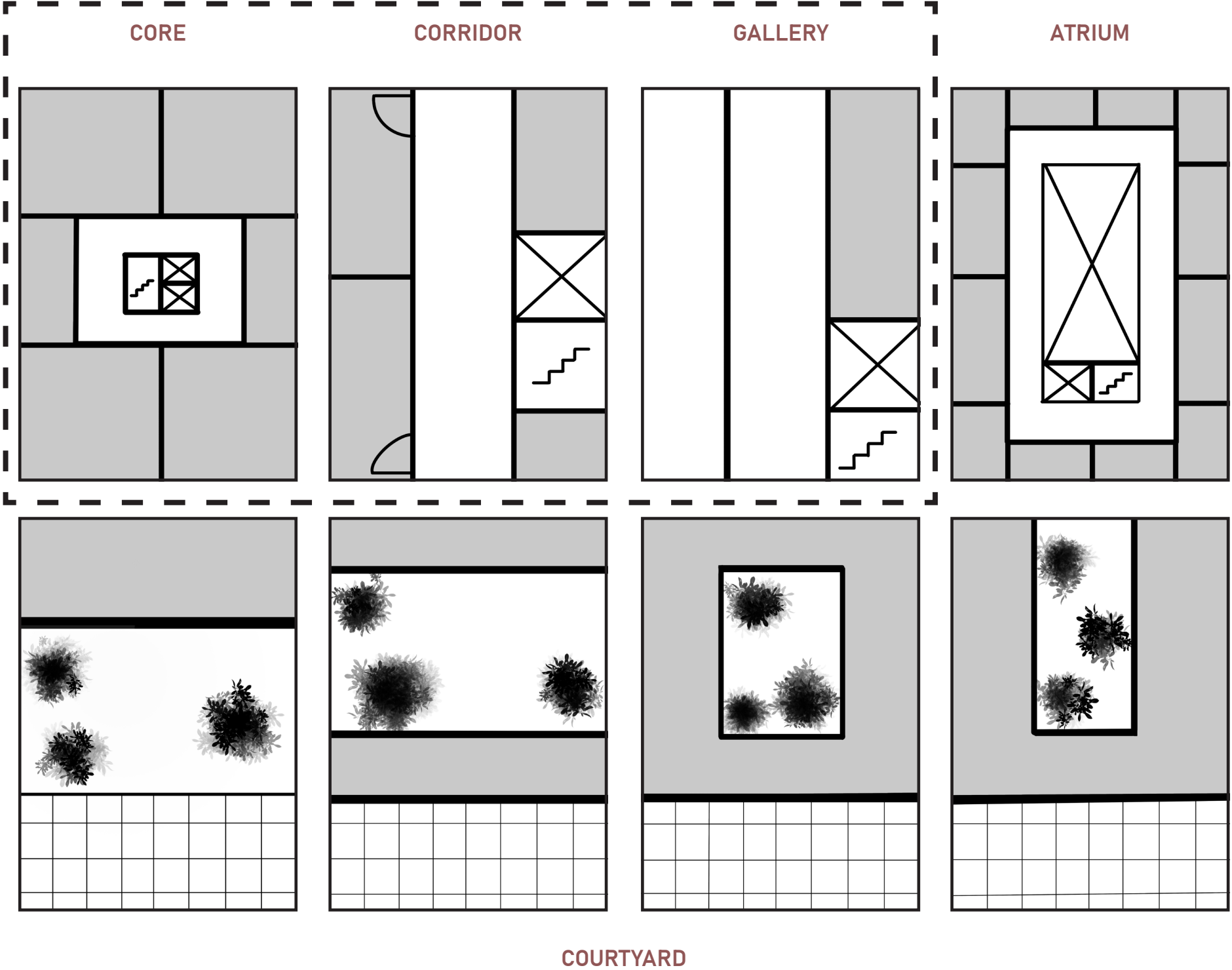
COURTYARD
The courtyard is a transitional space that encloses dwellings from a garden in the middle of the building. Different from the other forms typologies of transitional spaces the courtyard uses greenery is for place-making. Courtyards cause friction in movement the openness overlooking the space. Another reason to implement courtyards is because taking care of them promotes stay and participation from others, it creates trust which is essential in the operation of public and communal places (Amin, 1995).

ATRIUM
The atrium is a transitional space that encloses dwellings from an open space in the middle of the building, because of its playfulness and daylight admission the atrium is perceived differently than the more traditional transitional spaces such as core, hallway and gallery. These typologies are more standardized in high-rise structures.

The main design stategy that Wu & Ge (2020) suggest from their research is to implement several so called platform spaces, these spaces take place on different levels and are internally connected to form a small vertical neigbourhood community. Next to that, they describe a strategy to create communal that feel semi-private along the path of residents going to their dwelling, this will function as a buffer zone and create a natural spatial devision and a sense of belonging among the residents. In addition, the communal spaces of the high-rise building should be oriented towards its users, taking the different targetgroups and their wishes and needs into account. Therefore it is also important to

Transitory and functional: lack of historical and identity elements,
characterized by excess and acceleration of time, space and individualism.
(Augé, 1995)

Figure 9: transitional spaces (Own work, 2024)

COURTYARD

Greenery is used for place-making. Courtyards cause **friction** in movement the openness
overlooking the space. Another reason to implement courtyards is because taking care of them
promotes stay and **participation** from others, it creates **familiarity & trust** which is essential in the operation of
public and communal places.
(Amin, 1995)

197,2 m^2

99,3 m^2

48,5 m^2

BG

+1

+7

Figure 10: De Brouwerij floorplans (Own work, 2025)

As my fascination relates to my own building enviroment, I have drawn its transitional spaces that I believe to be lost space. By drawing the reoccuring floorplans I can conclude that from the overall surface of 3739,0 m^2, 742,2 m^2 is used for transitional purposes only. This means a gross ratio of 20 percent collective in-between space and 80 percent private dwelling space.

Though the functional layout of this floorplan utilizes almost minimal space according to building guidelines, it is still a lot of space that hosts nothing more than passing through. In regards of the rising loneliness in Amsterdam and housing scarcity it is therefore interesting to research the notion of community living. What if this space is used in a different configuration not like the corridor we see in this dwelling complex (figure 10), but any of the other configurations of figure 9. Will we then be able to redirect this lost space to a place of spontaneous encounters to create familiarity? Introducing a core like structure wrapping around a collective axis could be interesting to explore, in the core typology there is no need for long hallways as the dwelling entrances are all situated around the transitional centre. This centre like this hallway from figure 10 will anyway be used daily. It is about creating a larger probability of meeting someone in this space rather than forcing unwanted interaction and uncomfortable meetings. The notions of community living, social infrastructure, sharing sphere's and proximity will therefore be meaningful to study.

3.3 Community living

To develop a more functional transitional place, community living comes to mind. To resist the recently growing social loneliness and housing scarcity rate, sharing functions in the 'lost space' can be introduced. 'Lost space' marks the area's within the dwelling complex that is purely used for its transitory functionality. Though all people use this space regurarly, this is not perceived in such way. Due to the character of these long hallways without any type of sense of belonging, it does not foster for encounter other than quick run ins with neighbors.

To give this 'lost' space back to the residents of the building there should be room to commonly decide what to do with this space. Equal participation is the main key to make this decision. Like Kuenzli & Langekeek stated: "the available space is the canvas on which the processes of commoning can develop." (2022) Through leaving this space partially undecided we can create a community feeling by the togetherness of deciding what to do with it. This participation with different residents can create social interactions and a feeling of acknoledgement.

"Practices of commoning significantly create new relationships between people. They stimulate creative encounters and negotiations, through which all kinds of 'sharing' are organized and communal life is shaped."
(Kuenzli, & Langekeek, 2022)

In their research Kuenzli & Langekeek also describe design princples by Bossuyt, which they refer as the six rights of Bossuyt; the functioning of collective forms of living. The six rights he describes are:

1. **Accessabiltiy** the equal right of access to use all common areas and all places that are appropriated to be collective.

2. **To Dwell** the right to dwell in own private living area.

3. **To instruct** the right to participate in any decisions about spatial characteristics and qualities in and around the building.

4. **Manage and govern** the right to participate in decisions about the use and functioning of the building

5. **Admission** the right to decide who can use these spaces

6. **Revenue** the right to transfer any of the above tasks to others in exchange for money

"Smart sharing yields more" What you may not need every day in your own home, you can collectively organize outside.

Examples are: laundry, storage rooms, library, work spaces, communal canteens, saunas, etc. Depends on positioning compared to other functions in the building and degree of finish and comfort. When it is designed as a living space, it can encourage people to stay, which provides more opportunity for social encounter and engagement between residents.

The community benefits from sharing sphere's. Case studies show (Kuenzli & Langekeek, 2022) that a collective box has been allocated in the house plan where residents can enjoy one of the above functions together. When sharing objects and living space, it is important that there is mutual trust. With interaction and coordination, the function and use of the space can be accurately determined, so that most residents find it attractive to use.

The needs of residents can change over time, it is therefore important that the residents can review the function of the space after some time and are able to make adjustments to spatial configurations afterwards.

The chance of encounters in porches, stairwells, atriums and corridors increases as these spaces feel more pleasant to the user and invite them to linger around. Especially when the user itself has coorporated in designing this space.

Co-living is about the community; constant and consistent maintenance and users taking responsibility over this, coordination and negotiation if needed.

Ostroms design principles indicates that communal living asks for a constant and intense participation of all residents to be able to be succesfull.

8 design principles that have been proven by his research and are listed by Kuenzli & Langekeek (2022) are:

1. Clear boundaries of the community/households that are entitled to use and their boundaries are clearly defined so that no confusion can arise

2. Rules for use and contribution must be drawn up appropriately in the context, among other things to prevent spaces from being territorialized by a specific target group.

3. Participation right for those who feel the impact of change, so that eve-ryone who has the right to use it feels the same level of appropriation to this common space.

4. Monitoring that ensures that the common space is properly shared at all times and is not appropriated by a specific person or household.

5. A graduated system of sanctions that is agreed between all users to jointly and mutually provide the space or have it provided by a third party.

6. Conflict resolution in the event of unlawful use of space by a person or household, so that the conflict can be resolved between users at limited costs.

7. Self-organization law where users come together to establish rules for the common space that are then recognized by an external authority.

8. Nested enterprises where if there is a shared good that is part of a lar-ger system, these principles are nested organized into a larger agreement with yet others.

The condition that these design principles can be implemented is that; the scale of the co-living community is not too large the common area's are not territorialized, because constant contact and consultation is necessary to build mutual trust and willingness to share. It is equally as important that these assigned collective spaces do not feel territorialized, if so a uniform sense of belonging amongst residents can not be created in this space.

3.4 Sharing and evolving sphere's

All people share the need for private dwelling area and the size of it is subjective to each different individual. One might be happy with a studio sized private space, while another feels a need to have more space. Therefore the communal area in co-living buildings should be carefully curated, as its notion of sharing can take away from the feeling of solitude and privateness (Baas, 2021). The transition between the two is therefore meaningful to residents and should be well designed, this is where the theory of sharing sphere's will be introduced into the process of design thinking.

According to Ahn et al (2018) there are four different spheres, representing different levels of privacy within the dwelling complex. When designing a communal space the designer should understand the function of the space and which sphere it belongs to (Baas, 2021). Understanding the different sphere's will help to create seamless transitions from public to private (Baas, 2021) and help create invisible, but noticable thresholds.

3.5 Collective space's

Common areas should be designed to allow for flexibility and interaction, enabling them to be used either individually or collectively, and for either permanent or temporary purposes. The design of the space establishes varying levels of privacy and public access (Schmid, 2019). A common room is a living space used by all and not designated by one person. While communal spaces can serve residential functions, they are most often leisure or work areas that significantly enhance the value of a housing complex by promoting community interaction and coexistence (Schmid, 2019). To encourage interaction in entry areas, these spaces should be larger and feature distinct characteristics compared to standard access areas. (Baas, 2021)
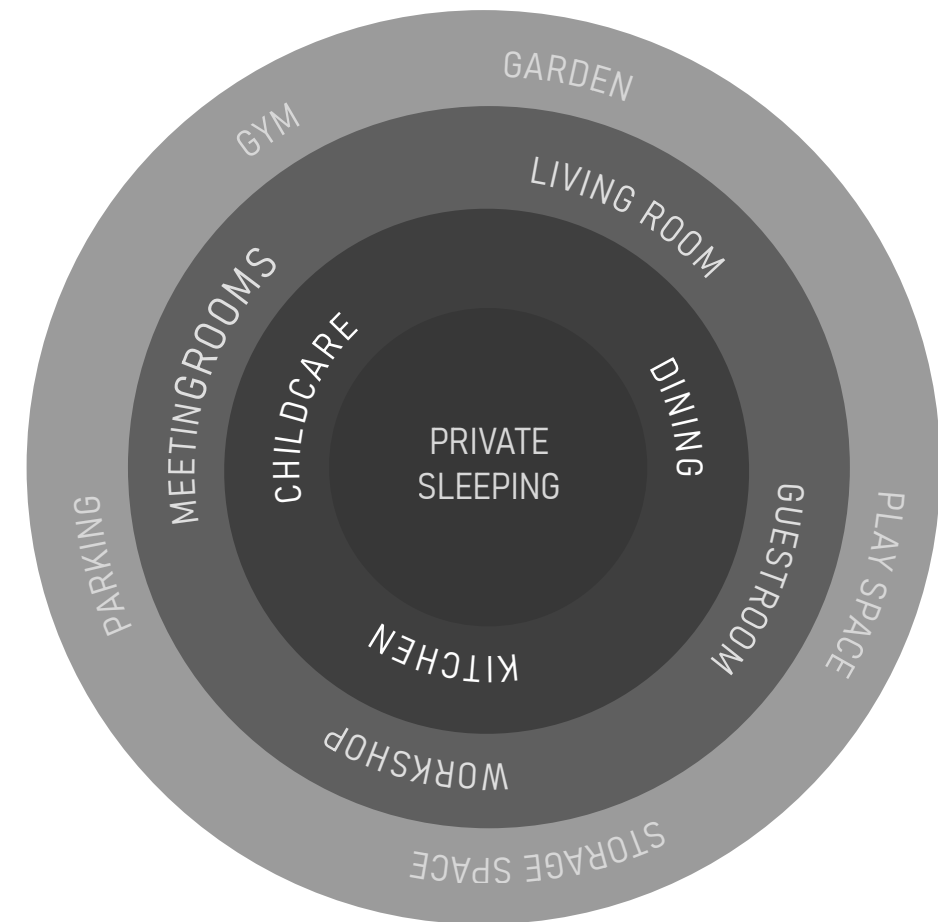
Figure 11: Sharing spheres (Ahn et al, 2018)

3.7 Social infrastructure

The notion of social infrastructure facilitates our understanding of the public aspects of urban life, mostly by directing our attention towards the specific locations and amenities where sociality intersects with publicness. Social infrastructure's encourage us to think about which facilities could come in place to create social spaces and therefore public life. These are spaces that are accessable by the public and where one can meet other users of this space. Some of these spaces could be purposely designed to aim for this type of connectivity between user's while other's unexpectedly become a social space (Latham & Layton, 2022).

In addition to concepts of encounter (Wilson, 2017), this publicness also focuses on the processes by which friendships, communities, trust, and cooperation are established. According to Amin (2008), the layout and choice of material components influence urban sociality. Amin's theory is helpful since it emphasizes how designing this space and trust, in the other as well as the designer and the people that maintain this space, is essential to the operation of public and communal places (Amin, 2006).

Klinenberg (2018)
"Public institutions, such as libraries, schools, playgrounds, parks, athletic fields, and swimming pools, are vital parts of the social infrastructure. So too are sidewalks, courtyards, community gardens, and other spaces that invite people into the public realm. Community organizations, including churches and civic associations, act as social infrastructures when they have an established physical space where people can assemble, as do regularly scheduled markets for food, furniture, clothing, art, and other consumer goods. Commercial establishments can also be important parts of the social infrastructure."

There is a division of spaces with arranged pretention, due to their functional character, and spaces that host unexpected social encounters. If studying both one is used for its association to activity and fun and the other type for practical purposes.

People need food and therefore require to go to a supermarket. Though the supermarket is not specifically designed to host encounter, people do engage with one another in this space. You run an errand and through your search for products you bump into different people, on your way out you pay for your products at the cashier. The supermarket might not identify as a social space, but it does stimulate encounter with the way it is designed to function.

Other spaces are social due to its association to activity or fun, sportfields, parks, restaurants, cafe's. People are drawn to this for the same reason and most times that requires human encounter between multiple people, it might be the people you came there with, but going to these places routine based can help create a bond of familiarity between people and their surrounding neighbors.

This bumping into other users of collective places that one regularly visits leads to pragmatism, it creates a collective sense of trust that extends further than just one on one interactions, but a sense of surrounding (Amin, 2008) By concentrating on the idea of a social infrastructure, consideration is brought to the opportunities that particular areas or amenities present for dwelling. It entails examining the networks and communities of connections that these kinds of spaces create.

Planning plays a crucial role in guaranteeing a high-quality and varied offering in this context. It also entails paying attention to the layout and design of specific facilities and how their material attributes influence the activities that occur within and around them (Languages, 2019). With shared sphere's the aspect temporality is also introduced. These spaces are utilized only certain times of the day. Introducing mixed use in these spaces can introduce an interesting dynamic and bridge the different time frames of utilisation, so that spaces are suitable for a larger portion of the day.

It is also to ensure that these spaces are adaptable to wishes and needs in the future as these might change over time and rely on the social shifts on a larger scale. These should be undertaken by giving residents equal opportunity to make decisions together as the social infrastructure of a building, benefits both community and individual living qualities.

3.8 Proximity

Proximity relates to social infrastructures in a way that it can either cause or deflect interaction between users of the building to happen. Proximity needs to be carefully considered within the design to create a feeling comfort for the users to utilize the building. The dynamics of human interaction rely on spatial decisions made by the designer of the building, reflecting on behavior patterns of users relationships can be made, improved and transformed to make for a brigther social sustainable future (Galluzzo & Zurlo, 2024).

As stated in the survey people feel more comfortable living in a smaller co-living community. Consequences of a larger diverse mix of residents can be more anonimity in the in-between space. To preserve a certain feeling of community it is meaningful to understand that with a group that is too large collective spaces might not even be used, the practicallity of having this additional space could then go to waste, because of spending it with too many people (own work, 2024). Another consequence could also be that a certain group within the community will territorialise this space, so that other residents can no longer make use of certain additional functions.

We can differentiate functional and physical proximity Functional distance has been examined by the University College of London with the concept of "space syntax." The concept of space syntax explores spatial patterns by using a mathematical formula to measure the ratio of relationships between spaces and data that describes how people use the space. Hillier and his colleagues believed that by observing movement of users, the interaction and the people they faced while moving and the frequency of this, you could create an understanding of the impact of the spatial configuration of spontaneous social experiences. This understanding could then help with designing buildings, public spaces and cities suiting the routine and behavior of its users.

Every distance represents a different type of intimacy in connection between people. Proxemics can be devided into four seperate distances that relate to their own level of intimacy going from more private to public: intimate 0 - 0,5m, personal 0,5 - 1,5m, social 1,5 - 4m and public 4 - 8m (Hall, 1974). Further than 8m away its hard to recognize the other person. Implementing this type of distance within the building will create alienation as recognision creates familiarity.

When designing within different scale levels it will be essential to consider these comfortable distances in different surroundings. Designer's can impact the feeling of privacy and crowding stemming from the feeling of comfort from individuals (Hall, 1974),

this for example differs between introverts and extroverts.

A design principle for proximics can therefore embrace the wishes and needs of the targetgroups that will be living/using the building. When thinking of the in-between space and wanting to make this a comfortable space for users of different backgrounds and ages, it will be important to think of the social proxemics scale and design this space considering the 1,5 - 4m rule. In front of the dwelling the personal scale should be implemented as it should function as a bufferzone between the intimate and the social. We should also consider that some residents might not appreciate too intimate interactions right in front of their door. This could possibly cause fear to step outside or feel imprisoned.

Hall (1974) describes the personal bubble as:
"Here we lose the sense of body heat and all but the most powerful odors. Eyesight begins to focus, and vocalization comes into play. Although only ritualized touch is typical, the other person is still at arm's length, available to be grasped, held, or shoved away. Where a person stands within this range shows the closeness of the relationship."

In figure 12 you can see a illustration of three different scale levels of proximity.

THE SOCIAL
1,5 – 4 m
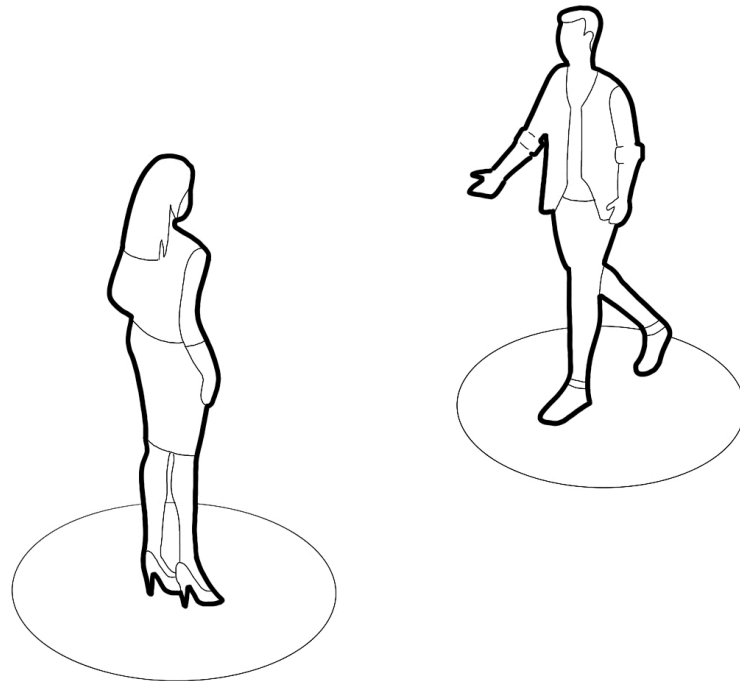
THE PERSONAL
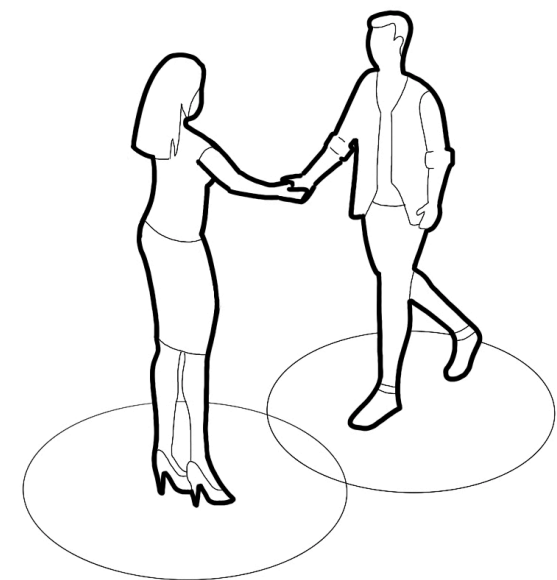0,5 – 1,5 m
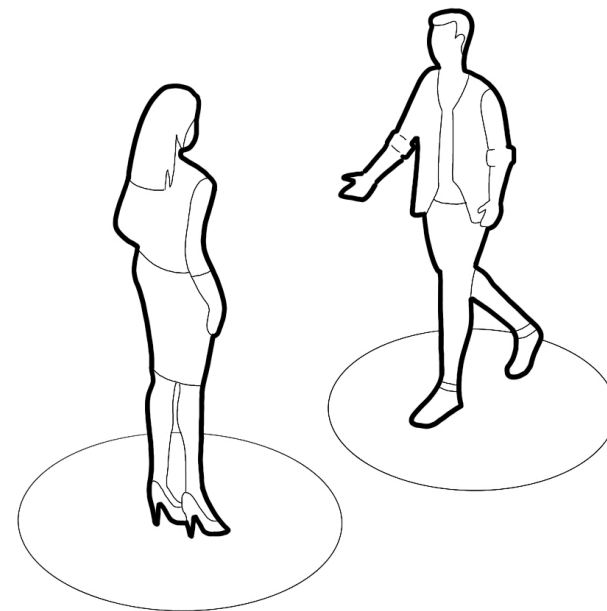
THE INTIMATE
0 – 0,5 m

Figure 12: Proxemics (Own work, 2025)

3.9 'Ontklontering' Frans Van Klingeren

The notion of 'hinder' and 'ontklontering' in Dutch, translates to 'nuisance' and 'de-clumping' in English. The concept of 'nuisance' relates to indirectly forcing users to discuss, which essential conditions are important to create a livable culture.

The concept of 'de-clumping' describes the idea of removing walls between spaces and mix different functions to expose the users to more collectivity and encounter. (Bergen & Vollaard, 2003) This is the main theme that reoccurs in Frans' designs.

His approach to doing so was to first reimagine the social infrastructure and afterwards invent how this social infrastructure could be realised through architecture and spatiallity, by construction.

Frans believed that the design of the building should not be finalized by the architect and ready by completion. (Muynck, 2003) However he proposed that the the building should be pliable to the changing societal wishes and needs. Therefore the users of the building should be able to permanently develop the building over time.

Frans believed that one should not want to anwser societal questions in their design, but rather try to invision the user's pains and relieve them with spatial solutions, while still
leaving room for the users to decide and continiously develop the building to meet the conditions they find important to happily use/ dwell in the building. (Bergen & Vollaard, 2003)

This approach is what Frans had calls 'reactieprestatie,' which aims to make users interact through architectural imperfection. (Bergen & Vollaard, 2003) It enables building and users to develop over time with the changing society. This relates back to an ideology that is characterised by the sense that the quality of life can be improved with the thought of 'less is more.' (Muynck, 2003) The imperfection of his architecture was contributing to that thought, because within the imperfection lies the opportunity to improve and unplanned actions to emerge. (Un)lucky coincidences are part of life and 'for a society to function, a structured form of disorder is necessary.' (Dubois, 2004)

"You can ask yourself who is more naïve: Van Klingeren who thought he could change society with his architecture or the current generation of architects for whom engagement has become a meaningless slogan from the past and who think they can do architecture without having to take into account the social consequences of their actions." (Muynck, 2003)

Looking at the dwelling complexes that are recently completed, we can sense a practical approach to space and place making. Therefore this comment in Muynck's article though written in 2003 is still relevant. I believe that designers should understand that spatial design solutions should correspond with societal wishes and concerns in order for users to feel comfortable in their surroundings and comforable enough to engage with others in their surrounding.

Augé's concept of non-space highlights the plain nature of functional transition area's. They typically serve as transitional spines, with long, featureless paths that disconnect residents from their direct surroundings including other residents. This disconnection can lead to feelings of alienation, as noted by Pallasma, who emphasizes the impact of design on users' sense of belonging and emotional well-being.

To counteract the alienating nature of non-spaces, it is crucial to design these areas to foster a positive atmosphere that is welcome to all users. This involves ensuring that they induce feelings of safety, comfort, and belonging. The aim is to create environments where residents can experience solitude, which defines a state of being alone without feeling isolated, by designing spaces for spontaneous encounters.

By designing transitional spaces that slow down the pace of movement and encourage lingering, these areas can become hubs of casual interaction. Incorporating features such as seating, greenery, artwork, and natural light can transform these spaces into inviting areas where residents naturally engage with one another.

Kuenzli and Langekeek (2022) suggest that involving residents in the decision-making process about how these spaces are used can foster a sense of community and ownership. This participatory approach alligns with Bossuyt's six rights of communal living, which emphasize accessibility, dwelling rights, participation in decision-making, and collective management.

Drawing on Amin's concept of social infrastructure, the design of these spaces should facilitate solutions to strengten trust and community building including all residents. This involves providing diverse facilities that cater to a variety of activities and interests, thereby promoting a sense of belonging to the common spaces of the dwelling complex.

By transforming the 'lost' transitional spaces in vertical dwelling complexes into multifunctional areas, we can foster unforced encounters and a sense of community among residents. This involves moving away from the concept of non-space to create area's that are relational, inclusive, and reflective of the diverse and changing needs of their users. Making residents participate in the design process and incorporating principles of social infrastructure will ensure these spaces are dynamic, adaptable, and integral to the well-being of the community.

With introducing community living and designing common area's one can address and try to find spatial solutions to user pains, but it is also important to realise that these solutions might be personal and needs and wishes might be different and change over time. Therefore Frans Van Klingeren believed that spaces should be flexible and not completed by the designer, but rather leave open space for residents to add to the imperfect structure. The notion of imperfect contributes to the resident's chance to improve. Kuenzli & Langekeek, seem to agree with this notion of leaving open space to enhance community feeling.

CHAPTER 4 DESIGN PRINCIPLES

Through creating persona's, the survey and the literature studies I have come up with several design principles. These design principles will help to design in order to create transitional spaces that prevent social isolation, alienation, enstrangement and social loneliness. These design princples will then be compared to other designs in the case study chapter to see if they contradict of agree with the design principles from literature research. From the learnings of literature several design strategy's were also noted, these will also be discussed and revisited.

DESIGN PRINCIPLES

WHY?

SOCIAL INFRASTRUCTURE

ADAPTING AND EVOLVING SPACES

PROXIMITY

SENSE OF BELONGING

MONITORING

DESIGN STRATEGY

HOW?

CLEAR BOUNDARIES

FLEXIBLE & ACCESSABLE COMMUNAL SPACES

CREATING OPPORTUNITIES FOR PARTICIPATION

BALANCING PUBLIC AND PRIVATE ACTIVITIES
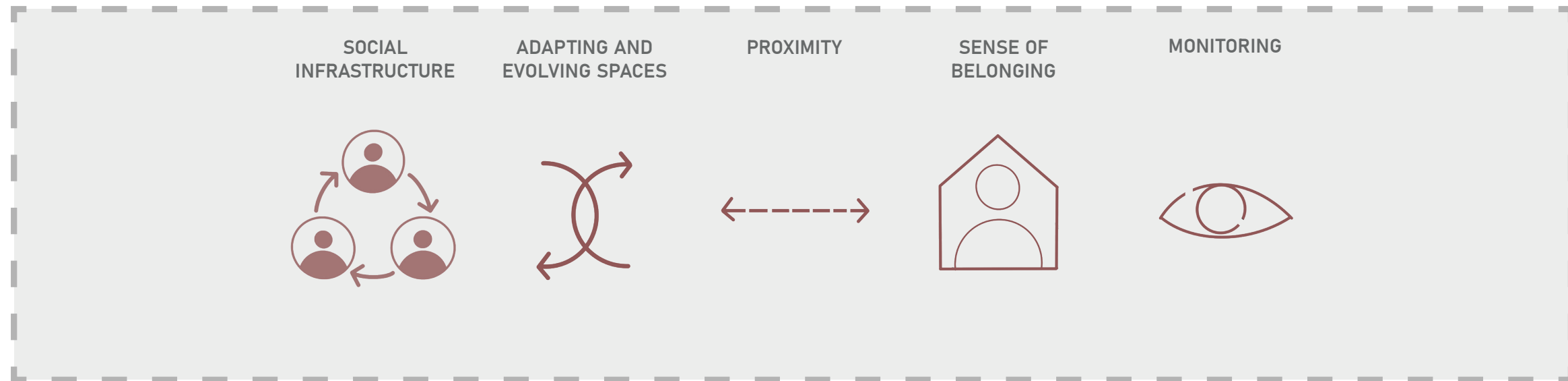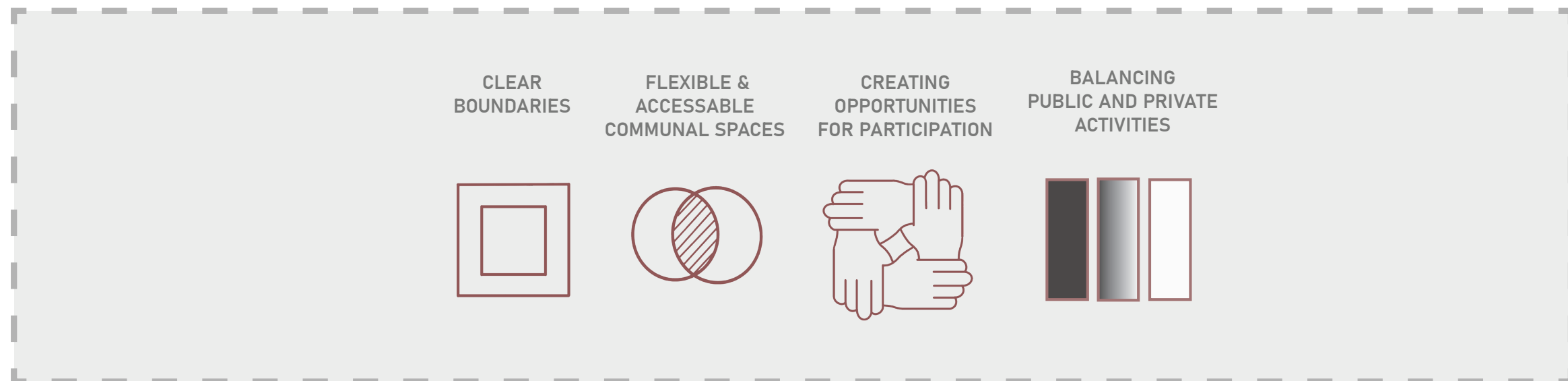
Figure 13: Design principles and strategies for co-living arrangements (Own work, 2025)

4.1 Design principles & strategies

The design hypothesis, survey and literature research, have brought me to the following conclusions summarized in figure X (Own work, 2025). When designing the in-between 'lost spaces' of the building and wanting to create familiarity by introducing community living we can ask ourselves the questions, why to create a co-living arrangement and how.

The process of design-by-research is not linear, the different notions of transitional spaces, co-living communities and participation have led to an understanding that we should seperate three different phases of designing. Defining design principles, strategies and solutions. The why, how and what. In this particular part of the research we will be discussing the why and the how, as they were mentioned in the literature readings.

The reasons of creating a co-living enviroment are to:

ESTABLISH A SOCIAL INFRASTRUCTURE
Social infrastructure's wish to facilitate and cater to unexpected spontaneous interactions between users, like a unescapable intersection, this is where familiarity and trust are created between users.

CREATE ADAPTING AND EVOLVING SPACES
Designing spaces with an understanding of "reactieprestatie" leaving a place for user's to implement their wishes and desires that might change over time, leaving spaces incomplete for its user's to complete themselves.

CREATE PROXIMITY
Arranging functions in communal area's towards the idea of Hall (1974) that ever distance represents a different type of intimacy and that when designing the in-between spaces one should recognize to design within the range of social to public scale from 1,5m to 8m distance. At this distance one feels comfortable to interact, create familiarity but guarded enough to dismiss any unwanted interactions.

CREATE A SENSE OF BELONGING
This design principle seems to be missing in a lot of new building blocks, corridors and core's are becoming generic, within this minimal required transitional space, there is no place yet for individualisation to emerge.

TO MONITOR
One of the ways of creating familiarity between the residents within the dwelling complex is to monitor, regulate, manage and take care of shared spaces as the ownership of them are split between all residents. It is to participate and take responsibility. Communal Spaces should be oriented towards dwellings of other residents, that way others can help in any case of missuse of the collective space.

Not only has the theory helped to formulate design principles, it has also presented us with different design strategies on how to accomplish the design principles and all in all to create a successfull co-living arrangement.

We can categorise these, as:

CREATING DIFFERENT DWELLING TYPOLOGIES
Our survey from the casestudy reasearch shows that people would be interested to live with people from different backgrounds, ages and careerpaths.

PROVIDING USERS WITH CLEAR BOUNDARIES
This describes a strategy to create communal spaces that feel semi-private along the path of residents going to their dwelling, this will function as a buffer zone and create a natural spatial division, no boundaries that harshly exclude residents from other levels, but create a sense that there is a subtle threshold.

FLEXIBLE & ACCESSABLE COMMUNAL SPACES
Adding communal areas for activities in every cluster of two floors and iternally connect them to form a vertical neigborhood.

CREATING OPPORTUNITIES FOR PARTICIPATION
Participation asks for users to interact, dicuss and work together. This is very valuable for co-living. It creates fiction and gives people an extra reason to interact unforcefully.

CHAPTER 5 CASE STUDIES

The following chapter will analyze three case studies that present different forms of co-living vertical dwelling complexes. From these case studies I like to withdraw knowledge about how architects are implementing co-living in their buildings today and what the design principles I came up with through literature studies and surveys, could mean spatially. These architects have carefully designed these and implemented spatial design solutions that I might be able to use in my own design to promote engagement between residents. The case studies will mostly be based on checking the boundary between public and private.

Figure 14: Render Quartiershaus (IBA Wien, n.d.)

Quatiershaus Vienna is a collective residential complex consisting of a public/ collective plinth with two building blocks on top. This is where the city balcony is located, where both collective functions and residential functions adjoin each other. The building is located in a young neighborhood and the floor plans are characterized by cluster homes that are served by a central core. These homes share a large living room and kitchen outside their private rooms. There are also residential group homes in the block.

The houses differ in size; different target groups share together. In their marketing video they try to explain that it is far too expensive to buy a city villa. With this way of living you have a home in a prime location close to Vienna's central station with generous facilities, without having to pay the high price because you share the facilities with other residents. The house itself is fully equipped, but the communal ones are slightly more spacious and equipped.

Figure 15: Axonometry floorplan Quatiershaus (IBA Wien, n.d.)

Quatiershaus Vienna is a collective residential complex consisting of two blocks on a public/collective plinth. This is where the city balcony is located, where both collective functions and residential functions adjoin each other. The building is located in a young neighborhood and the floor plans are characterized by cluster homes that are served by a central core. These homes share a large living room and kitchen outside their private rooms. There are also residential group homes in the block.

Spa wellness bath area

Private

Semi-private

Collective

Figure 16: Floorplan quatiershaus (Own work, 2024)
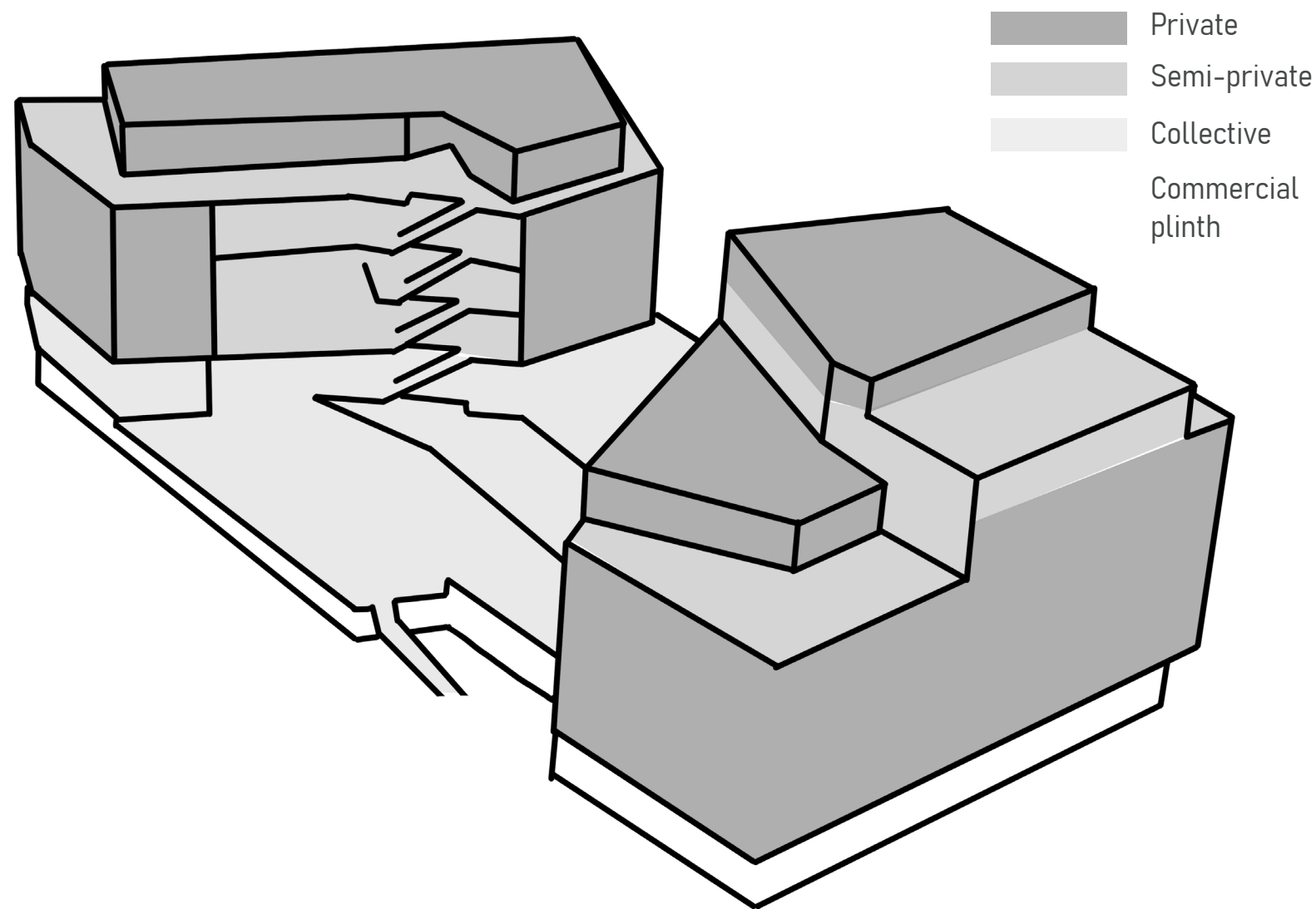
Figure 17: Quartiershaus, private, collective and public (Own work, 2024)

Private

Semi-private

Collective

Commercial plinth

In the design of this project many living typologies have been implemented to host a diversity of different users as well as a graduate transition from public to private. The plinth is mostly for the public eye welcoming any bypassers towards the building. From the commercial plinth on ground floor residents of the building can dwell on the green deck above the lively plinth. Here they can meet other residents and on this deck is also where the large workspace is facing which all residents share collectively. The two seperate blocks both host different types of living. Where one hosts cluster dwelling the other hosts co-housing apartments. The stairs outside of the block and the gallery facing the inner deck are accesible for all residents. Though when you want the enter any level you have to live there. As they all share a collective centre for each/ every two level(s). Every floor has about two living kitchens and a wellness spa centre where people can enjoy a more luxurious bathing experience than inside of their compact appartments. The collective space comes furnished. The routing from the commercial plinth, to the deck into the gallery/corridor entering the collective cluster hallways create a transition from public to private, which I think is a good balance from being able to look for interaction to having complete solitude inside once's (studio) apartment.

The rooftop terraces host fun summer activities for everyone to get together and enjoy. Though because the spaces come fully funished it seems as though the building lacks sense of belonging. It has no apparent identity when comparing it to surrounding buildings. To keep this community healthy and alive participation is needed at all times, though I wonder if this participation could not have been used in the designing process as well.

Public programme: commercial plinth with stores and offices

Collective dwelling programme: living kitchen, shared balconies, wellness area (with sauna), workshop, 2 roof terraces, laundry room, parking garage

Dwellings	51	collective area percentage	29%
Cluster dwellings 25m2	5	Gross floor area	8853 m2
Cluster duplex dwellings 37-48 m2	13	Useful total area	5380 m2
Coöp. dwellings 95-127 m2	8	Useful dwelling area	3155 m2
Coöp. duplex dwelling 210 m2	1	Useful collective area	1282 m2
2-room dwelling 55 m2	3	Ext. rentable space	943 m2
Atelier (duplex) 160 m2	1		
Elderlyculster dwellings 20 m2	20		
FSI:	2,4		
Circulation type:	corridor, gallery		

As far as the design principles and design strategy's that were stated from research there is several that are used within this project. The most prominent design principles being proximity and creating solitude within the communal. Within this building several forms of co-living emerge. Communal area's are being used as tools to reduce the rent prices and still live a 'royal' lifestyle within the city - centre as if one would live in a villa, this is the way Wogen, an Austrian housing corporation, is trying to sell this typology on to the market. While housing scarcity and loneliness are becoming problems in multiple different cities, it is both a practical way of sharing costs and keeping rent prices low, while offering a community of people to live with. With a community of people the fear and alienation of 'the other' can be lessened and with trust interaction can emerge.

Though spaces of sharing are carefully designed, there is a harsh threshold between collective and private, giving the residents a place of solitude to truly get away from the bussiness of the city in their private area. Though they all have the practical and basic facilitiet within their own apartment, the communal space should be seen as an add-on, as the private spaces are quite small and cramped. Whereas the collective spaces are spacious and more luxurious. By sharing these different functions, the residents are sharing sphere's. This sharing of sphere's is implemented on different scales and in forms as big as offering communal area's for community living for the whole dwelling complex to as small as sharing a cluster with six other households and co-housing five elders in a shared appartment.

The design of Quatiershaus offers different living typologies resulting in dwellings that can accomodate a diversity of people that are in different walks of life.

design principles

design strategies

SOLITUDE

DIFFERENT DWELLING TYPOLOGIES

ADDITION TO LIVING QUALITY

+
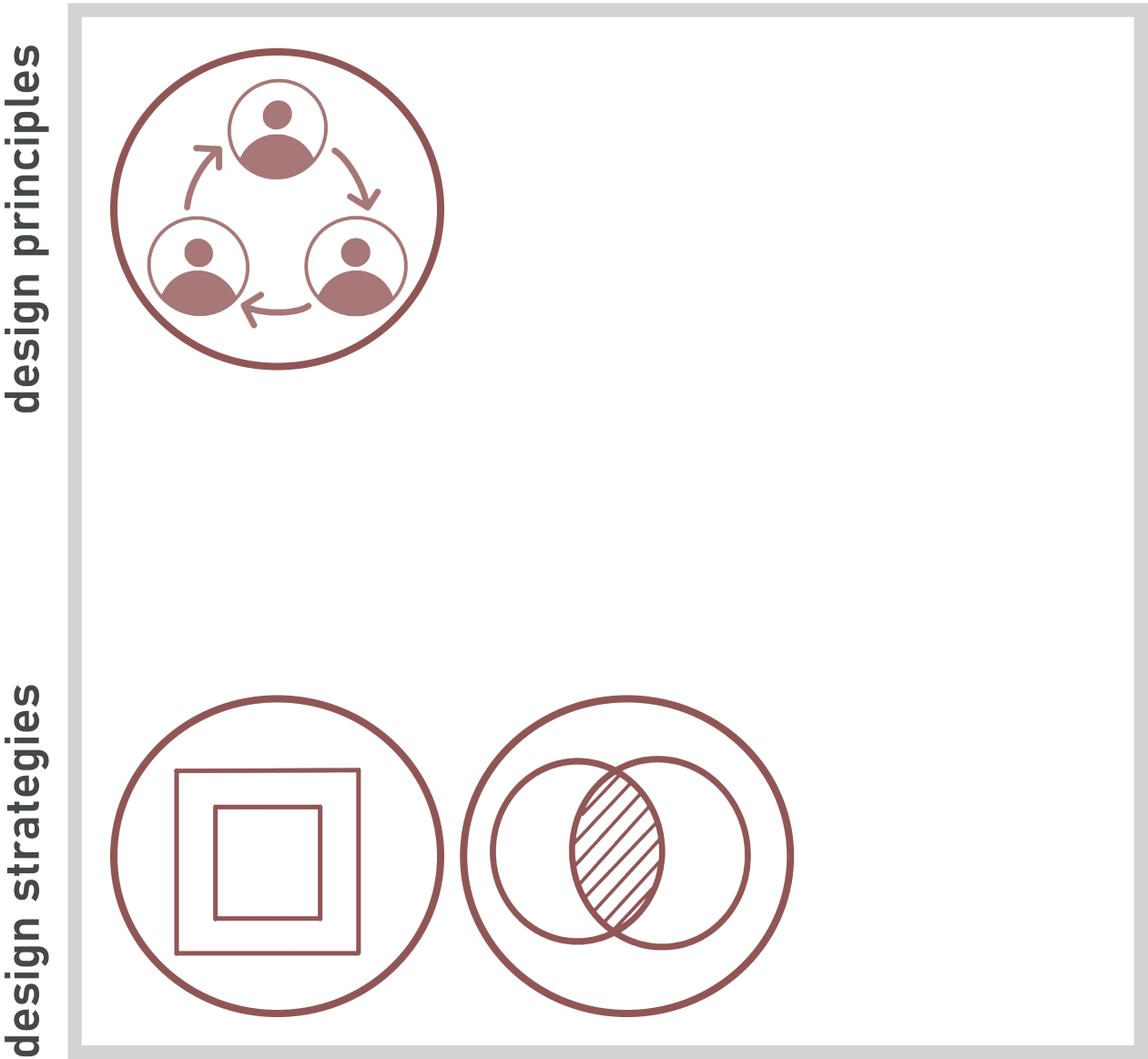
Next to the design princps noted in the last chapter there are spatial qualties that have come to attention while researching this dwelling complex, which are:

Mixing different living typologies within clusters creating a diversity of different walks of life in a smaller cluster. Which can create interesting co-living dynamics as long as they can withdraw themselves into their own private space.

Solitude places in collective spaces creating a wellness centre in the communal area that really adds on to the quality of living. Being able to have that though it is shared still creates an external quality to a bathroom that people usually do not like sharing.
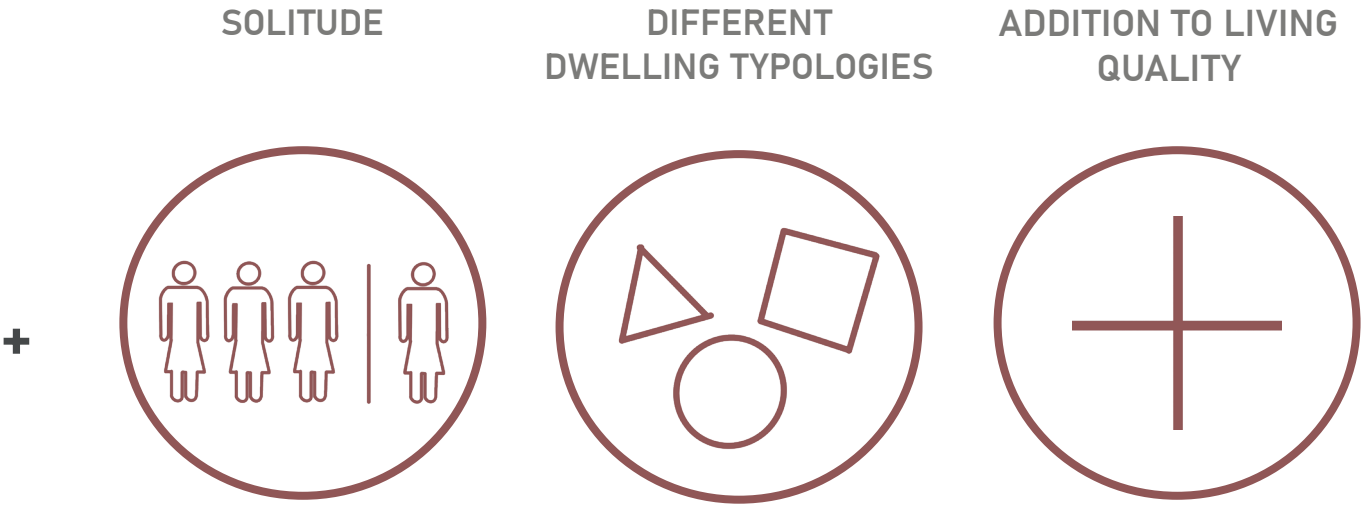
5.2 Casestudy 2: De Nieuwe Meent, Amsterdam

Figure 18: De Nieuwe Meent (De Nieuwe Meent, n.d.)

de Nieuwe Meent (dNM) consists of a combination of independent social housing and shared apartments for residential groups. Residents share communal facilities (such as laundry rooms and terraces) and various areas within the building are also accessible to the neighborhood. It will be realized by the future residents themselves and in close collaboration with the architects.

Thanks to the co-design process, homes can be tailor-made to the needs and wishes of the members. This gives future residents as much control as possible over their own living environment and leads to innovative designs for communal areas and homes.

Private

Collective

Public
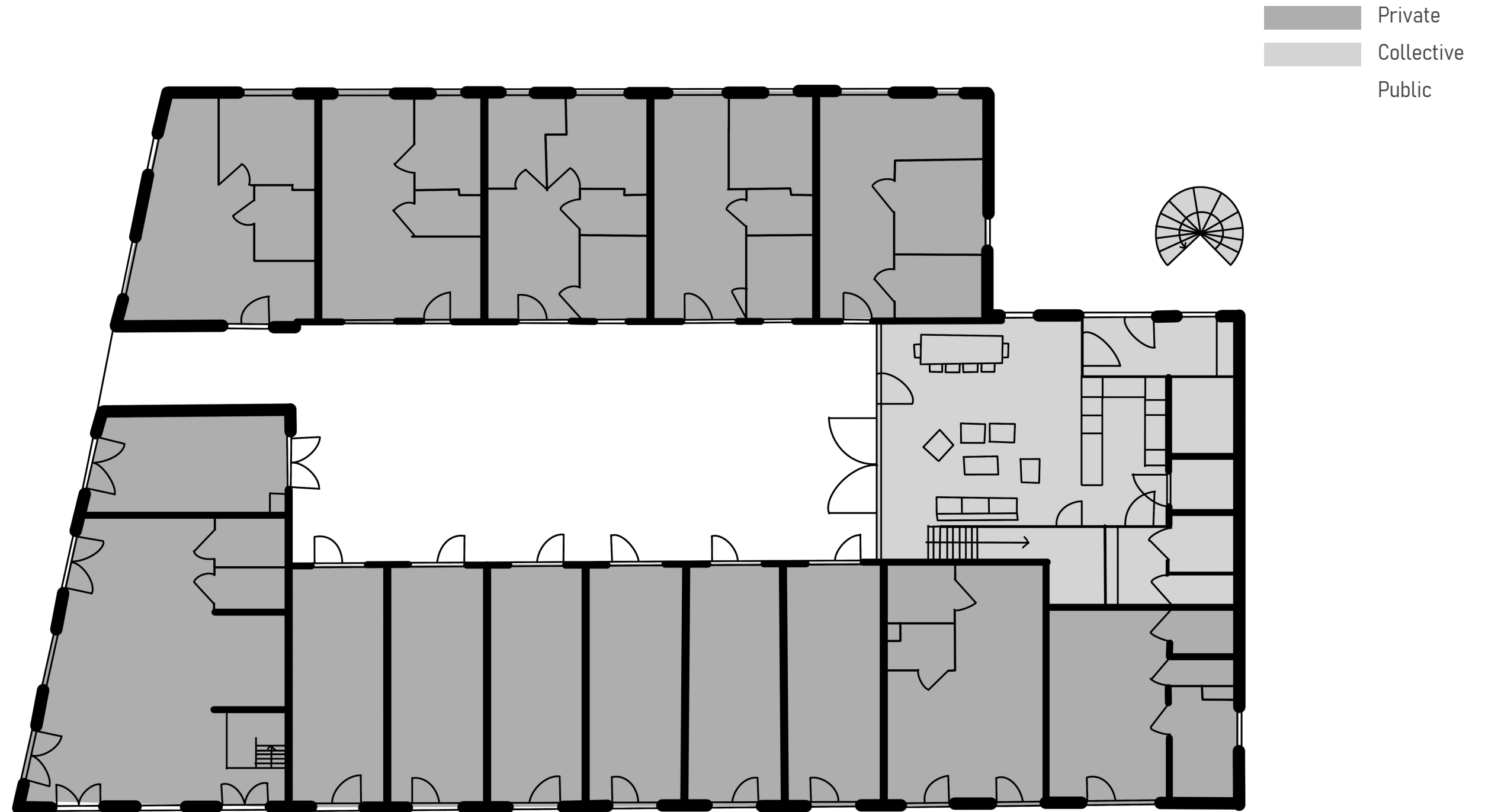
Figure 19: Floorplan De Nieuwe Meent (Own work, 2024)

The ground floor of the building (the plinth) has a sunny courtyard, which will be the main communal outdoor space. The roof of the plinth provides a second communal garden and is freely accessible to all residents. The backyard on the northwest side contains a bicycle shed and a recycling station. The plinth offers fifteen independent social rental homes of an average of 45 m2 with direct entrance to and from the courtyard or the street. They are divided into two types: single-storey and double-storey houses.

The five floors of the tower offer space for 25 residential units, spread over five residential groups. The houses have large windows and shared green balconies facing south. The north facade is closed. On each floor there is a living group consisting of five personal spaces and one large shared space. Thanks to the flexible design, each living group can decide for itself what the floor will look like.

Private

Collective
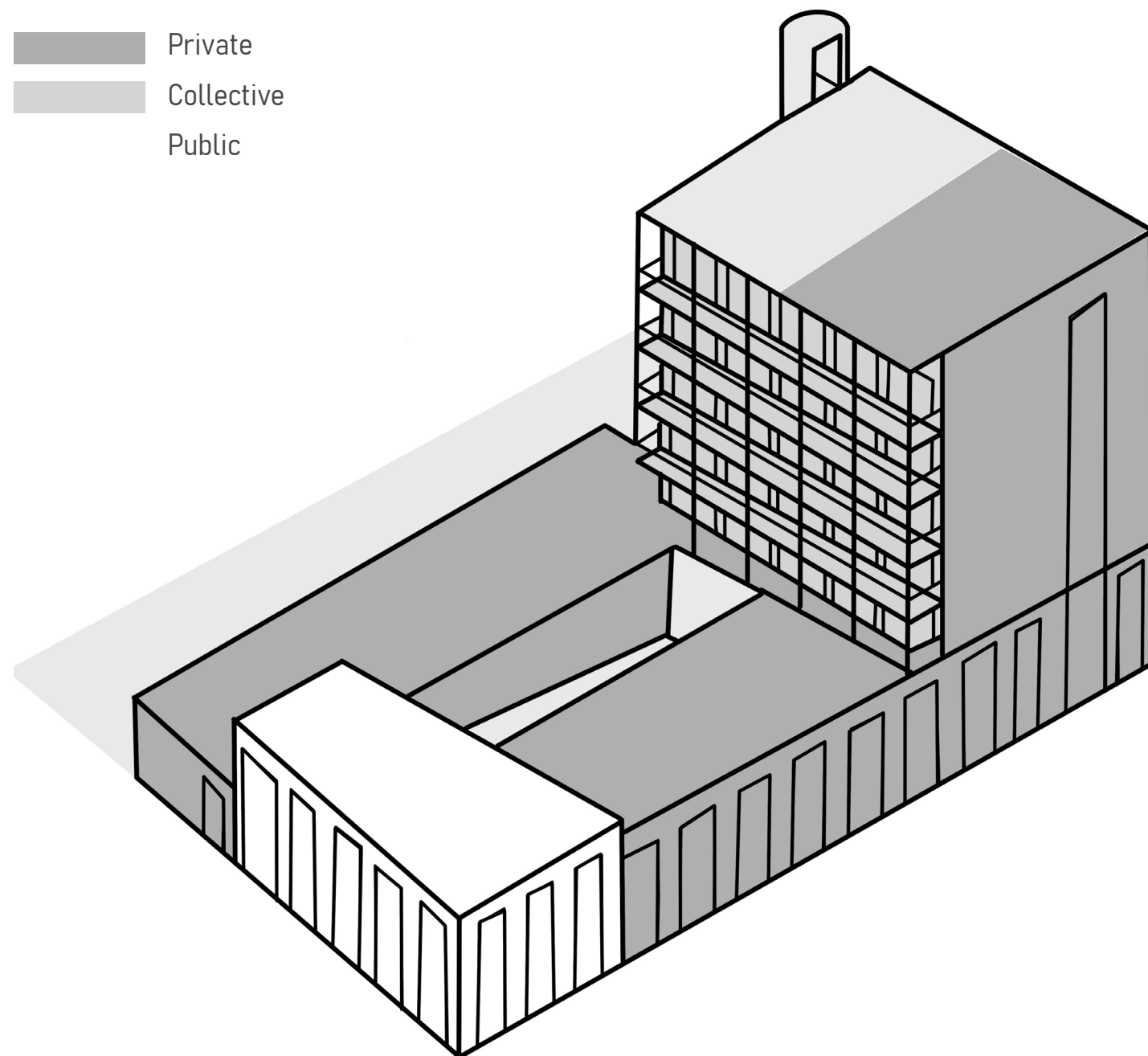
Public

In the design of this not so many living typologies have been implemented to host a diversity of different users. The transition from public to private is not as strict though the boundaries are very clear. This building does not really have a commercial plinth, but moreso a commercial corner.

The ground attached dwellings surround a beautiful community garden that residents will take care of collectively. This building hosts two different living typologies, community living, sharing a community garden and an extra short-stay apartment and co-housing units on the upper floors.

One floor is equal to one big apartment where five private rooms are located. they are clustered within a collective space where they share a living room, kitchen, dining place and a balcony. There is also an accessible rooftop for recreation. I can imagine that the co-housing residents would enjoy the community garden on a summer's day, but not that the residents from downstairs will come to enjoy the rooftop. It is unclear if they are also allowed to use the outside elevator/staircase.

Figure 20: De Nieuwe Meent, private, collective and public building division (De Nieuwe Meent, n.d.)

Dwellings	40	percentage collective	29%
15 single social rentdwellings	15	Gross floor area	2300 m2
dwelling group five per floor	25		
FSI	2,3		
Circulation type	corridor, garden		

As far as the design principles and design strategies we stated from research there is several that are used within this project. One of the most important once's being the use of clear boundaries. Both outside and inside the building we can perceive that thresholds are used to shield what is private and collective. For the ground floor homes this is the strict boundary of walls and doors and in the tower this also translates into height, because bypassers can not just go up and use the communal co-living spaces. The community garden is open to public, but still monitored by the way it is situated in the middle of the of the building block. Communal area's are kept by thresholds, which will give its residents solitude.

This project sets itself apart by the fact that future residents were able to participate in the designing process to create a building that suits their wishes and needs. This resulted in household dwellings on ground floor, which have two levels and co-housing in the tower. Though there is not a very diverse amount of dwelling typologies it should be noted that these homes would suit a lot of different users.

design principles

design strategies

ADDITION TO LIVING QUALITY

BALANCING PUBLIC AND PRIVATE ACTIVITIES
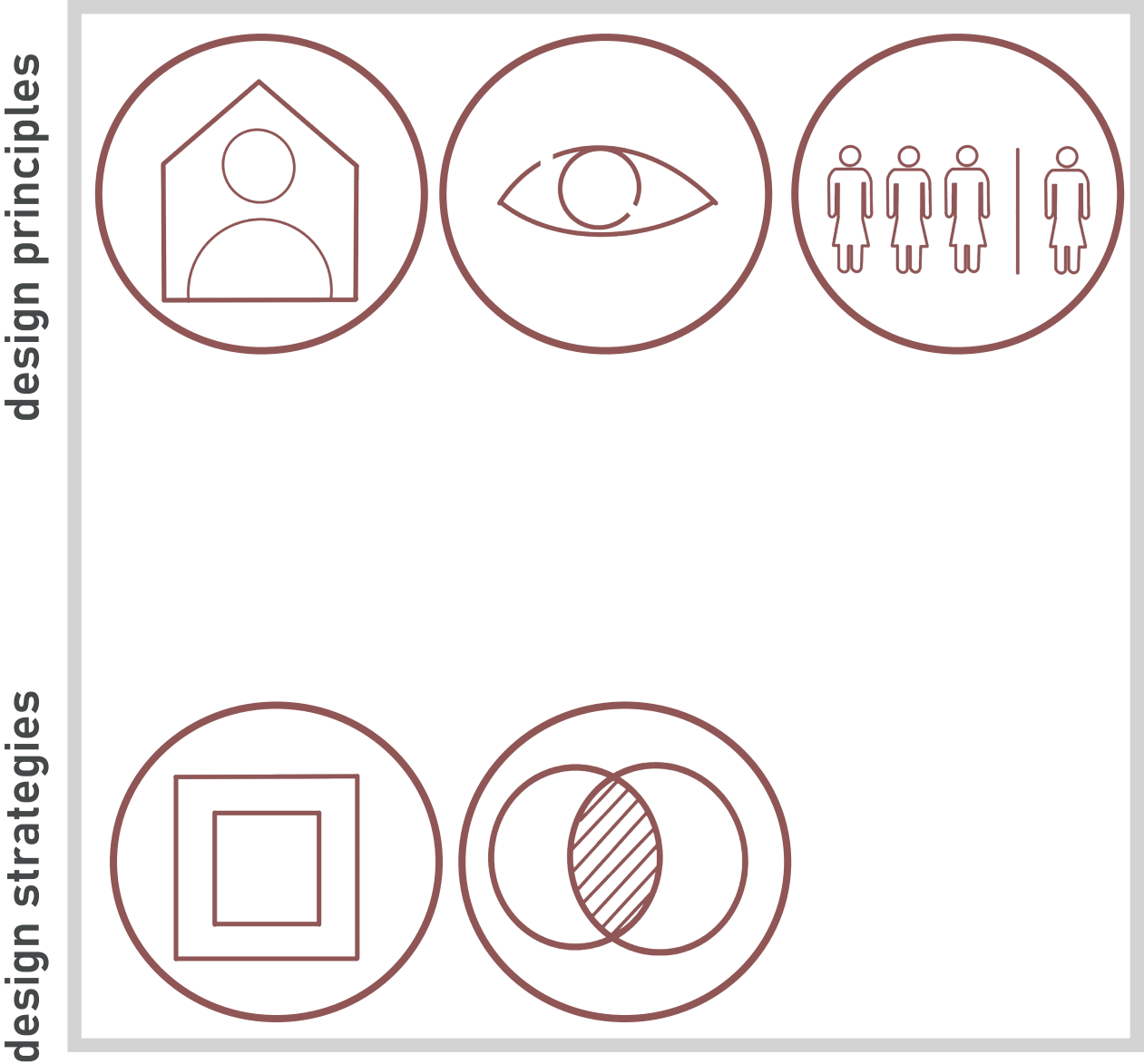
Next to the design strategies noted there are spatial qualties that have come to attention while researching this dwelling complex, which are:

Keeping a seperate apartment/dwelling for recreation having an extra appartment means that people can utilize these in several different ways, opening up to to collective garden it gives opportunity to host activities for its residents.

Balancing public and private activities what feels very comfortable about this project is its approach to the division of dwelling typologies and that private dwellings and co-living are structurally seperated between the once's the houses on ground floor and the tower cluster/ co-housing dwellings. Though it is not a very big range of different dwellings it does give a clear overview of what is where and does not leave any confusion to residents or visitors.
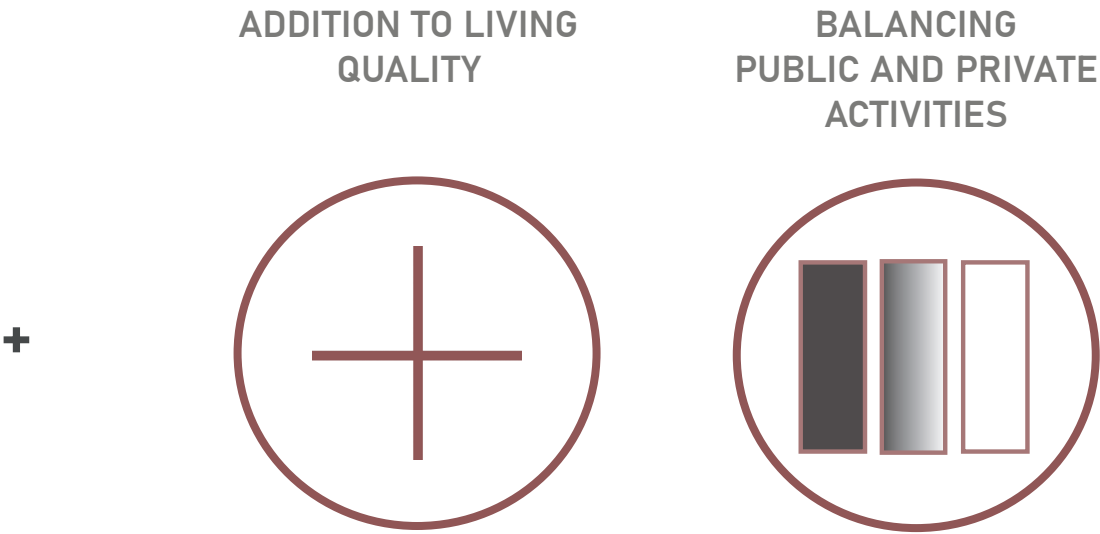
5.3 Casestudy 3: De Warren, Amsterdam

Figure 21: De Warren (Archdaily, n.d.)

De Warren is a cooperative housing project on Centrum Island in Amsterdam with 36 apartments for social and affordable rental housing. (Archdaily, n.d.) It is the first self-build housing cooperative in Amsterdam. Collectivity as the core value of this design. De Warren's core idea is collective living. With the help of a series of workshops with the future residents, it was decided that 30% of the whole building surface should consist of collective spaces.

This building facilitates approximately 800 m2 of communal functions, including a large auditorium, a multifunctional space, a children's playroom, a music studio, various co-working spaces, a meditation room, a greenhouse, a roof terrace and several communal living rooms and kitchens (Archdaily, n.d.). The collective spaces are arranged along the so-called 'Machu Picchu' staircase that connects all floors. By placing the collective spaces centrally, they become part of everyone's daily route and contact between residents is maximized.

Figure 22: De Warren, levels of privacy within dwelling complex (Own work, 2024)

The collective space is created to host flexibility and changes of wishes and needs of (future) residents. The load-bearing structure consists of a wooden column and beam construction. If a different layout is desired in the future, the light wooden interior walls can be removed. This flexibility also related back to the collective space, shafts are placed strategically.

Private
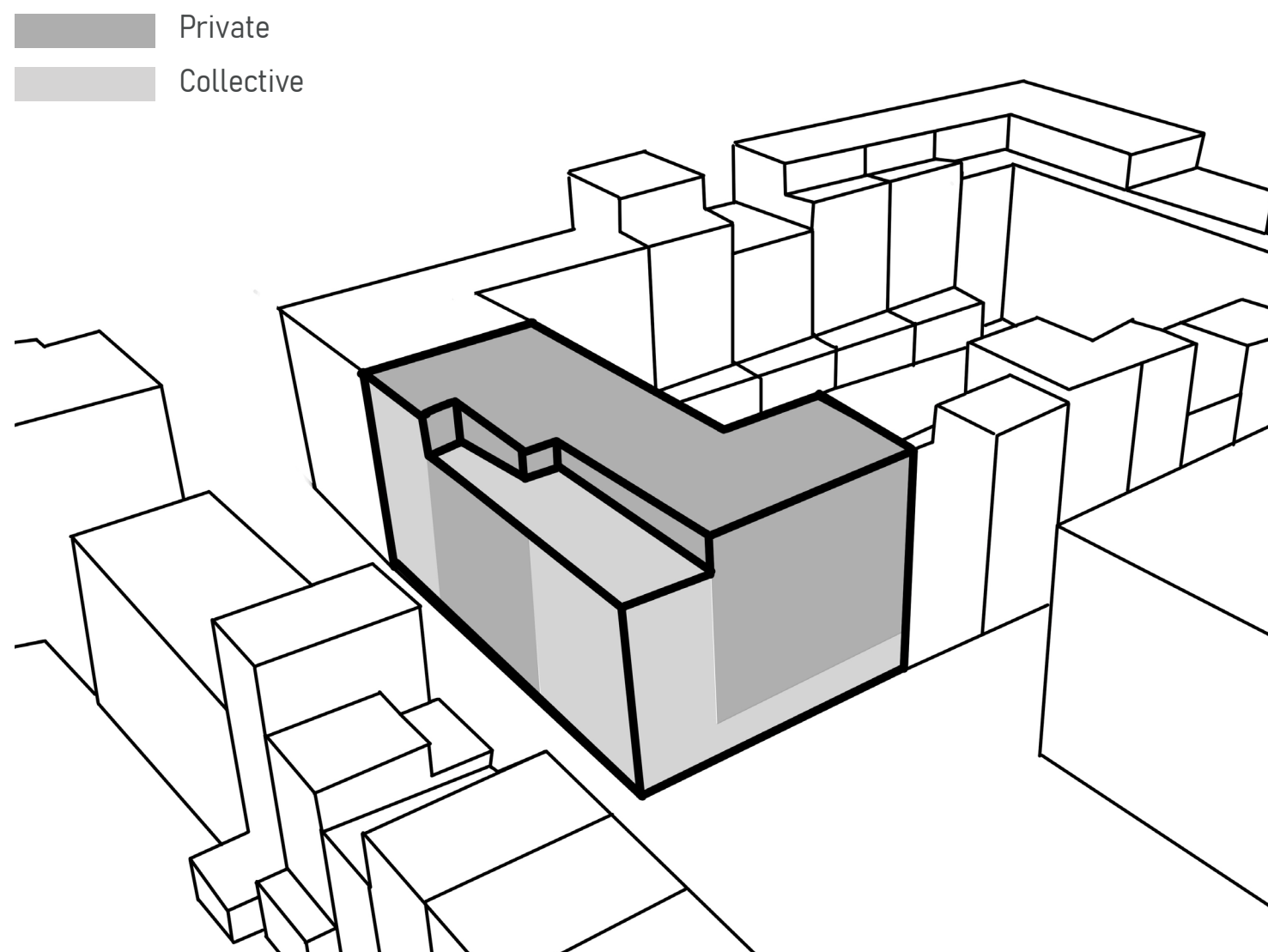
Collective

Figure 23: De Warren, private, collective and public (Own work, 2024)

In the design of this project many opinions were involved, as the future residents initiated the designing of this complex. Therefore it was possible to implement all their wishes and needs. What is noticable is that though they were in charge themselves to choose what to share and what might not to share, almost all functions are shared in a cluster that is shared with the whole level or communal spaces that are shared with the whole community.

Diverse living typologies have been implemented to host a diversity of different users as well as a graduate transition from public to private, due to the transition zone and the way the communal space are positioned. From the mainhall you can walk up/down the stairs and straight walk into the communal area, after walking through the communal area you will reach the collective space of the level, which is a space that is not so much seperated by a clear boundary, but more so as a bufferzone before entering your private space.

Though the communal space hosts all necessities needed, the private appartments still have their own small bathrooms next to the sleeping arrangements. Therefore the residents can choose when they seek interaction with others.

Collective programme: living kitchen, co-working spaces, music-studio, quiet room, roofgarden, multifunctional room/ living hall, multiple guestrooms, parking garage, creator space, kidsroom, laundry room, greenhouse, meditiation room, 'Machu Picchu' staircase.

Dwellings	36	collective area percentage	30%
Social rent dwellings	16	Gross floor area	3070 m2
Mid-rent dwellings	20	Useful dwelling area	2270 m2
FSI	3,7	Useful collective area	800 m2
Circulation type	corridor		

As far as the design principles we stated from research there is several that are used within this project. One of the most important once's being the project that acquires the most participation as almost all functions secondary to sleeping are kept outside of the private space. De Warren sets itself apart as one of the projects that is realized by its future residents. They currated everything together to come to this design. Though most of the practicalities are shared amongst others, there is a slight difference between the collective spaces that are shared with all other residents and the once's that are mostly just shared with the other residents of your floor, your cluster.

Another point why De Warren sets itself apart from other projects is that there was clearly thought about the future and that wishes and needs might shift as residents come and go. Therefore it is possible to use the demountable walls, to add or lessen rooms in the private area. Not only can these be used for the private area, but also the communal spaces, as interests might shift and another space takes the spot of another one thats not used as much anymore. The openness of the building structure gives people another reason to keep in touch, as it is flexible and could be changed in the future participation and good connection is needed to keep the community alive and its residents happy. This right of decision this allows for more sense of belonging.
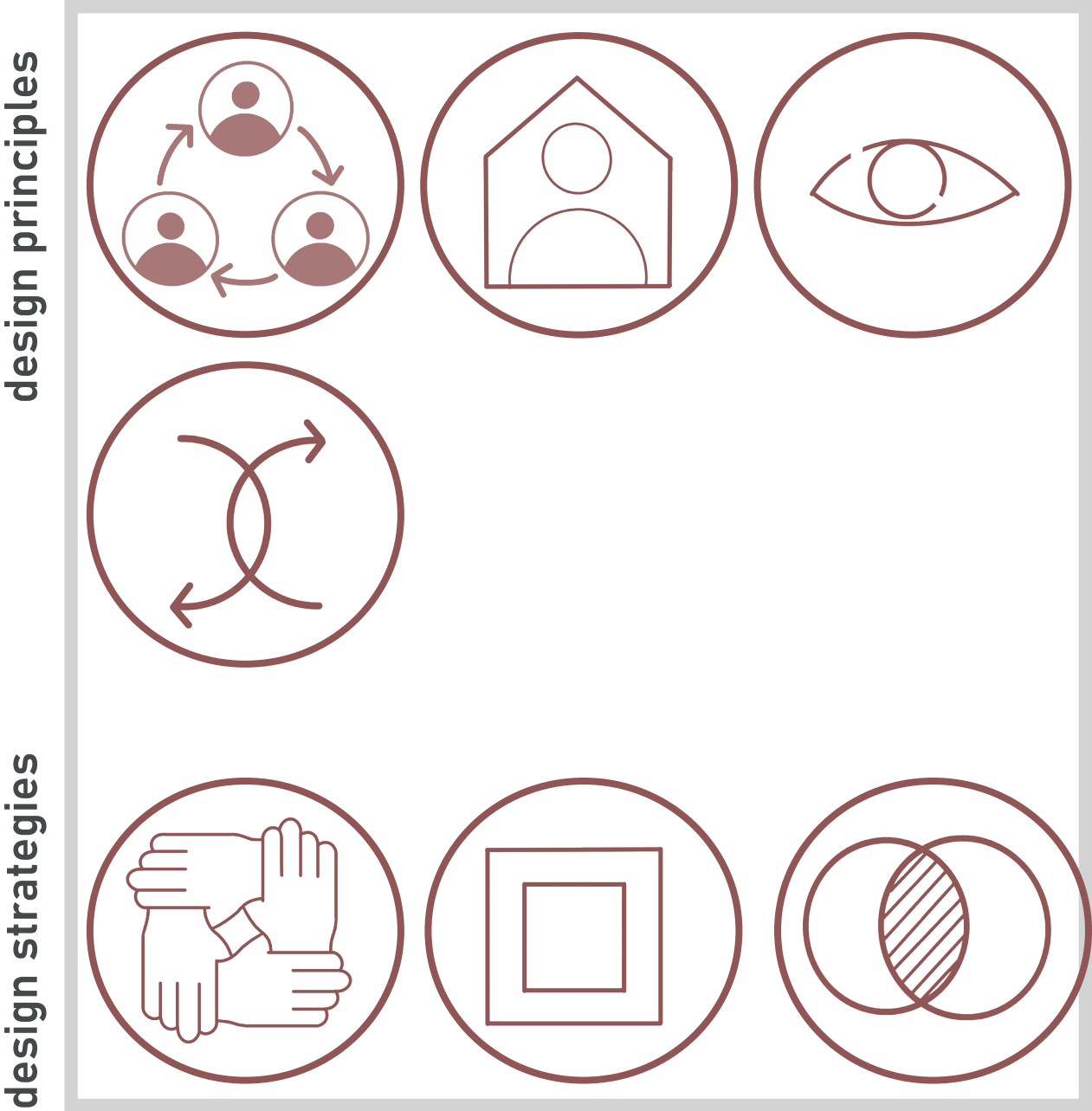
design principles

design strategies
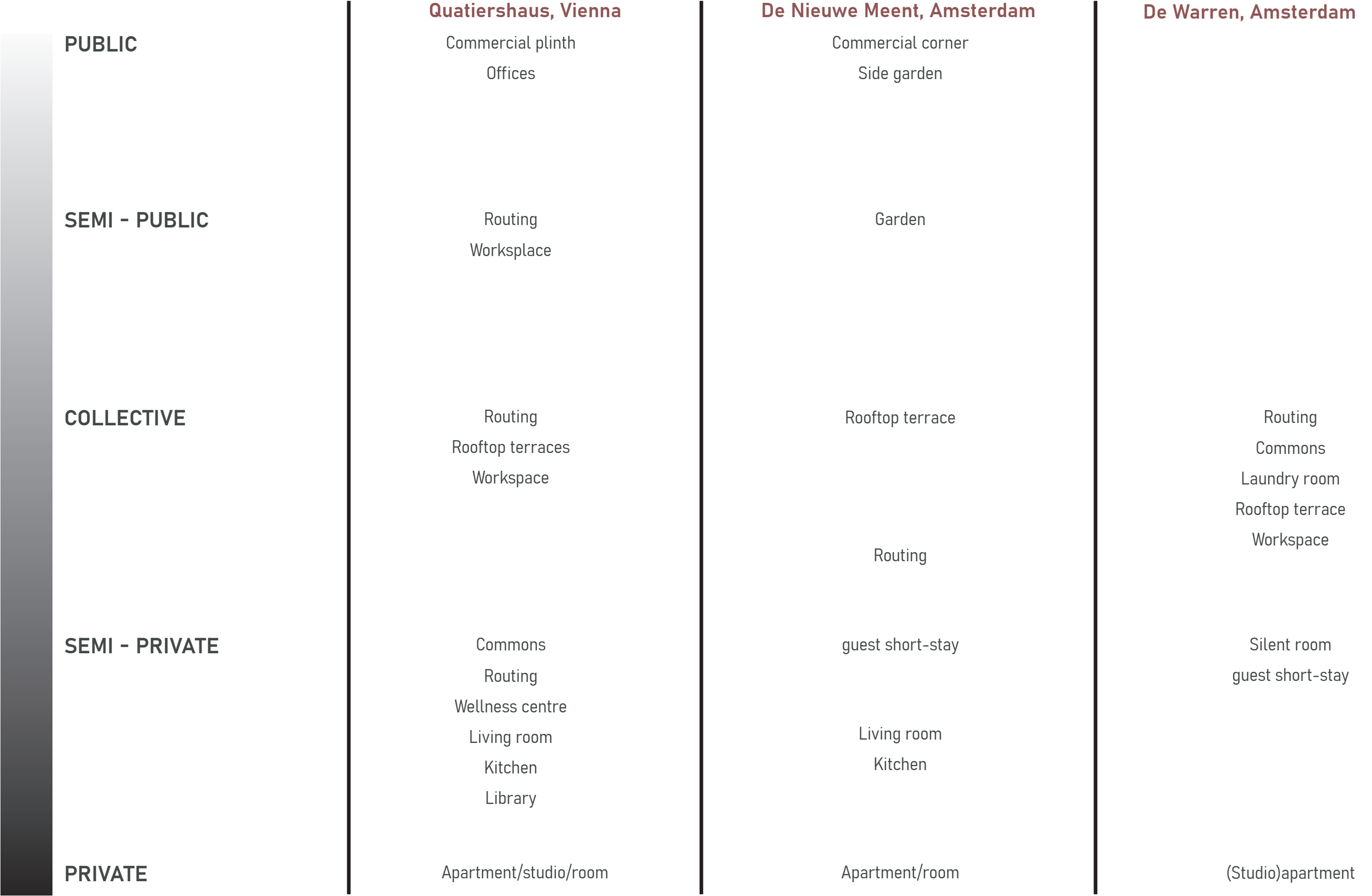
Next to the design princples noted there are spatial qualties that have come to attention while researching this dwelling complex, which are:

Location of communal spaces in dwelling complex De Warren has a variety of different communal area's and as important they are in itself their location is also important. Locating the communal area's right next to places of elevation seems to work in this case.

Routing in the case of De Warren the "Machu Picchu" stairs seem to be a place where most interaction between residents happens. This is because next to this main routing we can find the communal area's and after entering the communal area cluster's we come to the front doors of the private spaces.

+

ADDITIONS TO LIVING QUALITY

ACCESABLE COMMUNAL AREA

CREATIVE ROUTING
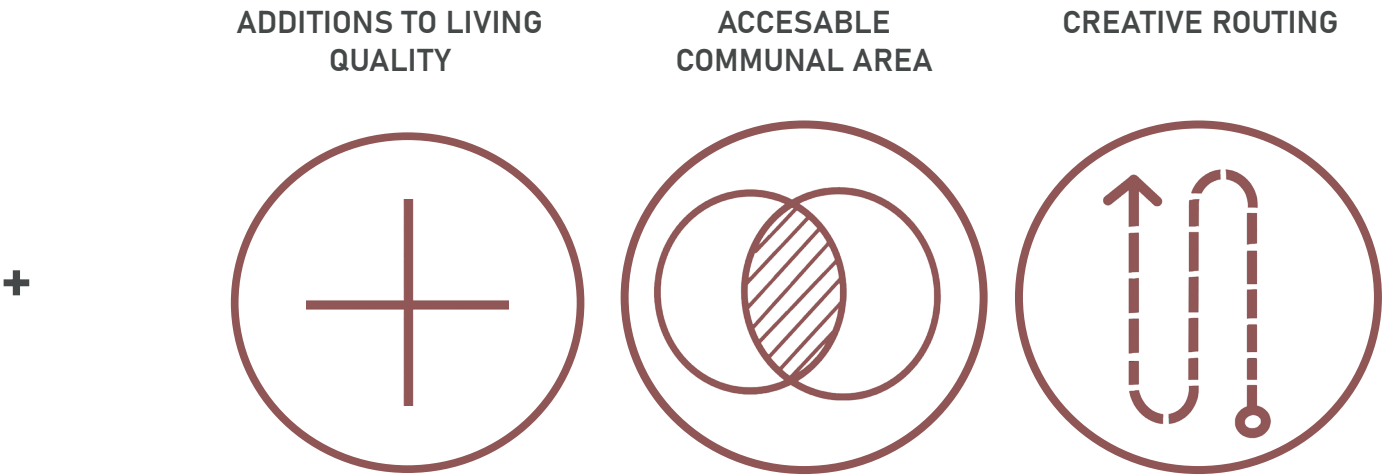
5.4 Casestudy comparison

Quatiershaus, Vienna

De Nieuwe Meent, Amsterdam

De Warren, Amsterdam

The three case studies are different from eachother in the following aspects, Quatiershaus in Vienna seems to offer a different type of solitude in form of a wellness centre within the dwelling complex clusters. As well as offering french balconies that are private over only having collective balconies or overlooking the collective garden/deck. De Nieuwe Meent sets itself apart from the two other case studies by how its co-housing princples as well as the way future residents where involved in the design process of their future homes.

De Warren sets itself apart by being flexible for future changes of use of the dwelling complex and having more 'open' common areas of which use can change over time. As well as how the ownership works and how the dwelling complex was set up by a group of people forming a tight community, by managing the building and using it together. Though Quatiershaus and De Warren both have a collective percentage around 30% of the usable floor area De Nieuwe Meent still seems to be a bit conservative around sharing spaces apart from the co-housing. De Warren seems to share most functions with one another.

ADDITIONS TO LIVING QUALITY	DIVERSITY IN DWELLINGTYPOLOGIES
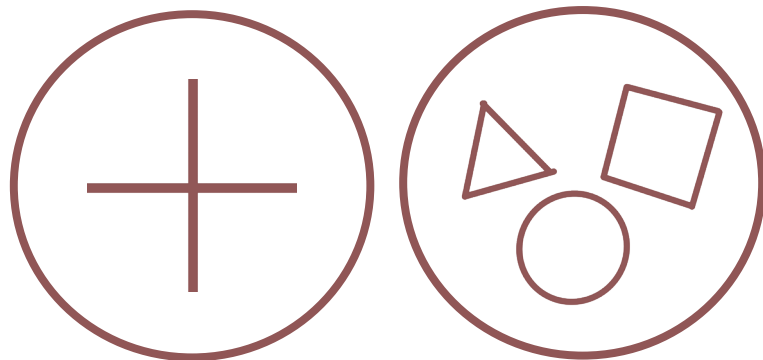
ADDITIONS TO LIVING QUALITY	BALANCING PRIVATE VS PUBLIC
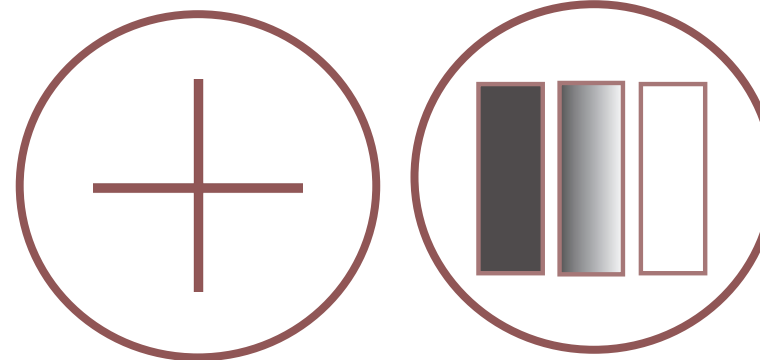
ADDITIONS TO LIVING QUALITY	ACCESABLE COMMUNAL AREA
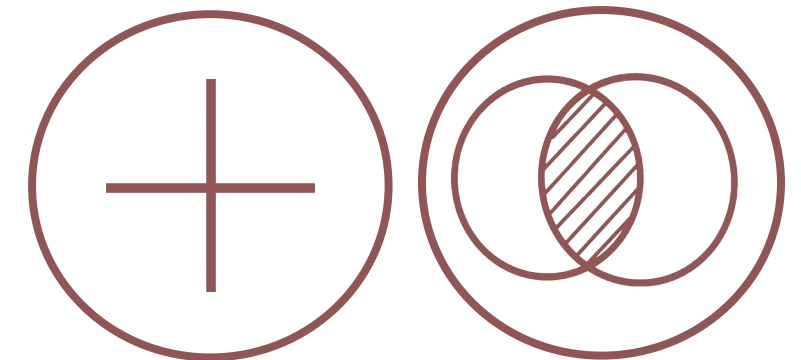
Next to the design princples noted there are spatial qualties that have come to attention while researching this dwelling complex, these design principles that were showed through the case studies are also noted to be implemented in the designing process. They sum up the strenghts of the designs, that contribute to the feeling of community and sharing. Recognizing these qualities and their importance to be present will hopefully result in a more inclusive design that can host a diversity of collectives while maintaining a happy and hopeful community. From the different casestudies we learn that multifunctional spaces and sharing does not have to neccessarily mean anything

negative, but rather offers a creative way of being able to still host more spacious rooms while maintaining clear boundaries. In order to create more engaging spheres, this can be enhanced by creative routing. an important take away should be that the collective space should one and for most be an addition/ comfort to the lifestyle. Rather than taking away privacy it should feel like you are gaining something by it. In the casestudies we have seen examples of this, such as the wellness bathrooms replacing big bathrooms within the apartments and guest short-stay apartments so an extra room in the apartment is no longer needed.

5.5 Casestudy public - private spaces

|	Quatiershaus, Vienna	De Nieuwe Meent, Amsterdam	De Warren, Amsterdam
PUBLIC	Commercial plinth Offices	Commercial corner Side garden	
SEMI - PUBLIC	Routing Worksplace	Garden	
COLLECTIVE	Routing Rooftop terraces Workspace	Rooftop terrace Routing	Routing Commons Laundry room Rooftop terrace Workspace
SEMI - PRIVATE	Commons Routing Wellness centre Living room Kitchen Library	guest short-stay Living room Kitchen	Silent room guest short-stay
PRIVATE	Apartment/studio/room	Apartment/room	(Studio)apartment

Quatiershaus, Wenen

In terms of sharing spheres Quatiershaus has two typologies collectively sharing the deck and rooftop terraces and a big workplace, from there two towers devide two types of building typologies. One being cluster co-living sharing spacious living kitchen's and bathroom's, but having their own private space that also offer a kitchen and sleeping space. Next to that the other tower offers co-housing were different people share an appartment, just having a sleeping space as their private area.

De Nieuwe Meent, Amsterdam
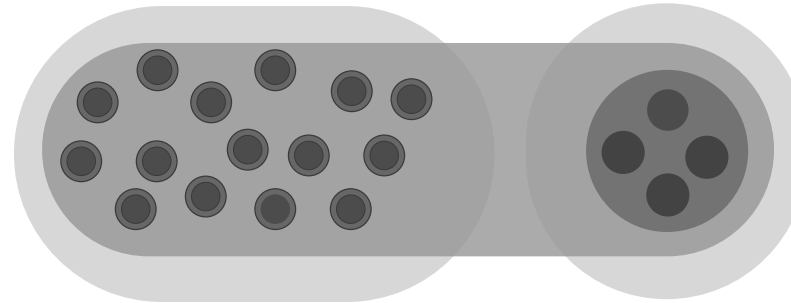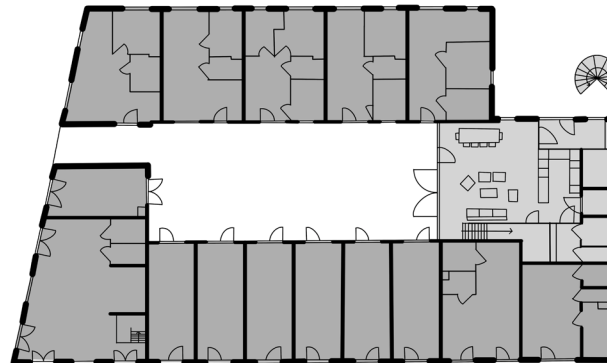
In terms of sharing spheres De Nieuwe Meent seems to have two different typologies. One being the groundfloor attached houses that only only share a community garden and a appartment to host workshops and guests, which the residents in the tower can also use. Whereas the tower offers co-housing where 5 levels offer 5 rooms that share functions together such as a kitchen, living room and bathroom and all togheter also a staircase and rooftop.

De Warren, Amsterdam
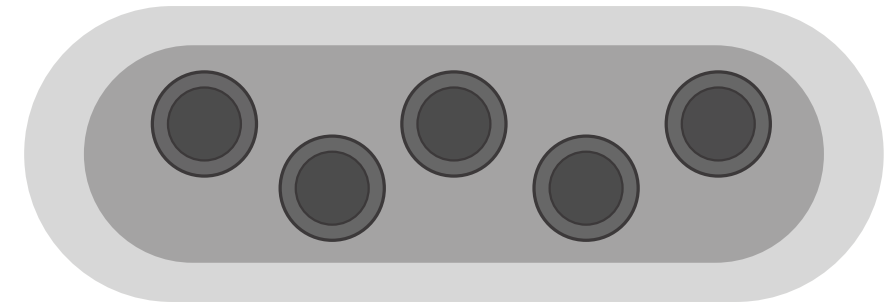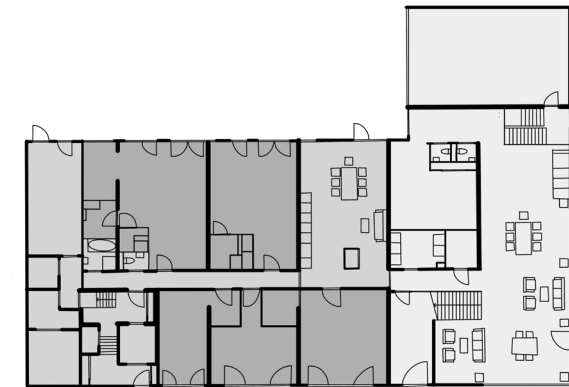
In terms of sharing spheres De Warren is quite evenly coördinated throughout the building every floor shares functions while also having a kitchen and sleeping arrangement within their own private area. Throughout the building all floors also share some overall collective area's, these are attached to the access spine, the staircase in the middle of the hall. From there you connect to the collective area's and eventually to the private spaces.

DESIGN PRINCIPLES

WHY?

SOCIAL INFRASTRUCTURE	ADAPTING AND EVOLVING SPACES	PROXIMITY	SENSE OF BELONGING	SOLITUDE	MONITORING

DESIGN STRATEGY

HOW?

DIFFERENT BUILDING TYPOLOGIES	CLEAR BOUNDARIES	FLEXIBEL & ACCESSABLE COMMUNAL SPACES	CREATING OPPORTUNITIES FOR PARTICIPATION	BALANCING PUBLIC AND PRIVATE ACTIVITIES
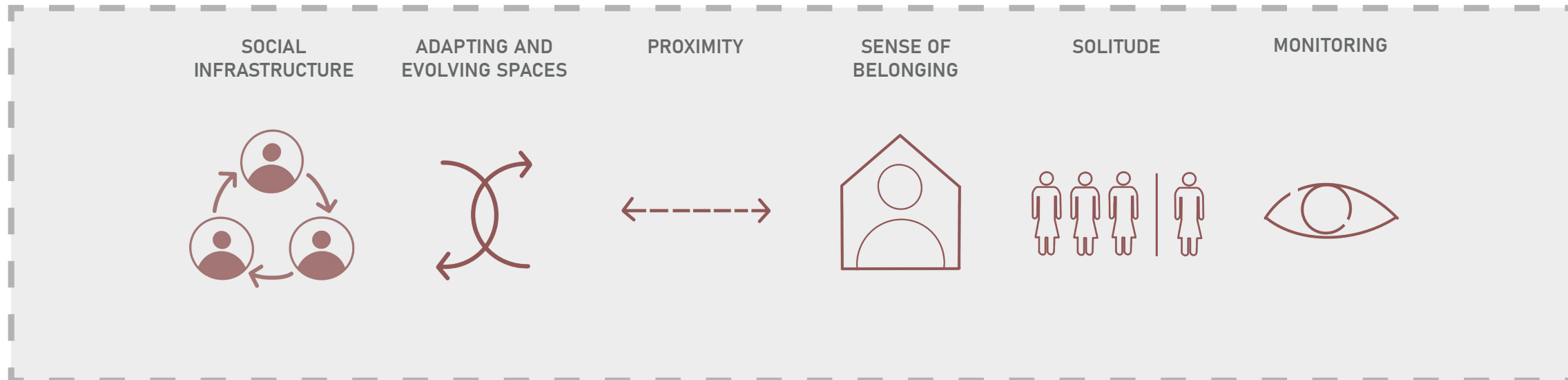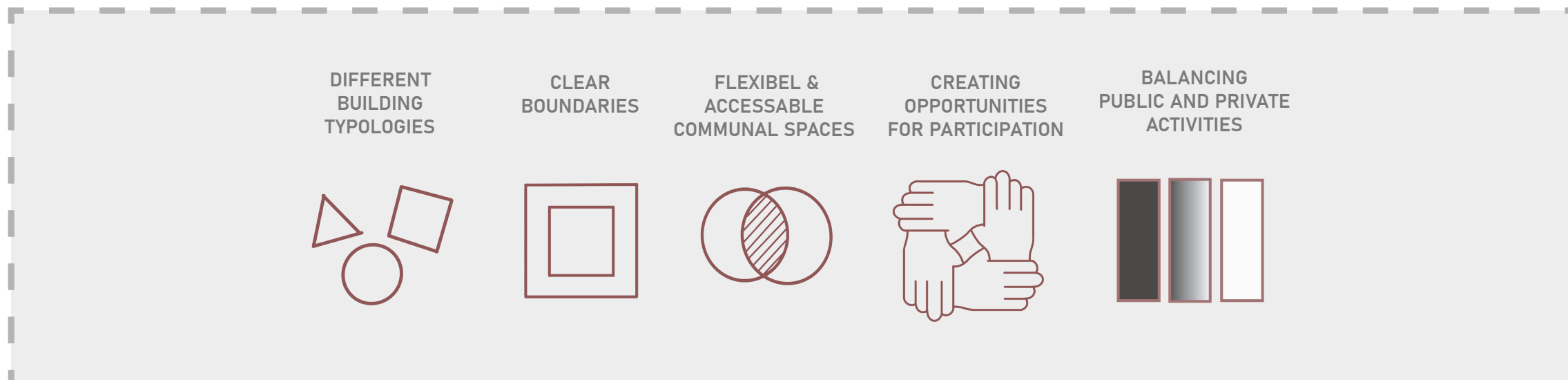
Figure 24: Revisited design principles and strategies for co-living arrangements (Own work, 2025)

CHAPTER 6 DESIGN TOOLS

This chapter will be a recap of the initial design principles that are important to design this collective space within the transitional spaces in the building. After analyzing some case studies, we might feel like they need updating and there are more design principles that are important to implement. These design princples will then be analyzed themselves and made into a spatial design solutions that can be implemented into the design of the advanced housing complex.

Figure 25: Mehr als Wohnen, floorplan (Duplex architekten, n.d.)

Figure 26: Mehr als Wohnen, social interior (Duplex architekten, n.d.)
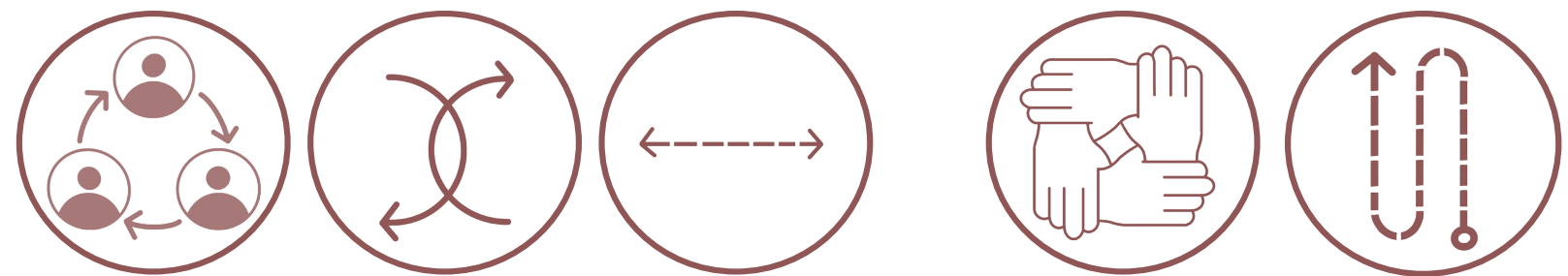
design principles

design strategies

This project Mehr als Wohnen, Zurich is a good example of a community dwelling complex. The building has a central staircase, that is the spine of the building. Living areas emerge in the transitional corridor space. While people can still dwell in the comfort of their own private space. This private space exists of a pantry and has its own bathroom next to having a bedroom. The levels share a storage together for jackets, bags and any other essentials that can not be stored in the private space. Next to the staircase we can find a laundry area. As well as sanitairy functions such as bathrooms and toilets that can be used by visitors.

Together the residents share a spacious balcony. Spatially this project is interesting especially how the dwellings are not just simply next to eachother, but scattered and grouped in a more random manner. This gives a spatial quality of having the feeling of different spaces though it is all connected, it is more so about sharing spheres and evoke encounter and community living as the unexpected corners create eye height friction that cause residents and visitors to 'slow down.' Residents have the possibility to add any interior to this space, giving it a certain sense of belonging, as everyone belongs to it equally.

ground floor plan

shared space

room1

kitchen

lavatory

dining

a

room2

entrance

a'

room3 room4

living1

room5

3640   3640   3640   3640

14560

1st floor plan

room6

room12

a

a'

living2

room11

lighting space

WC3
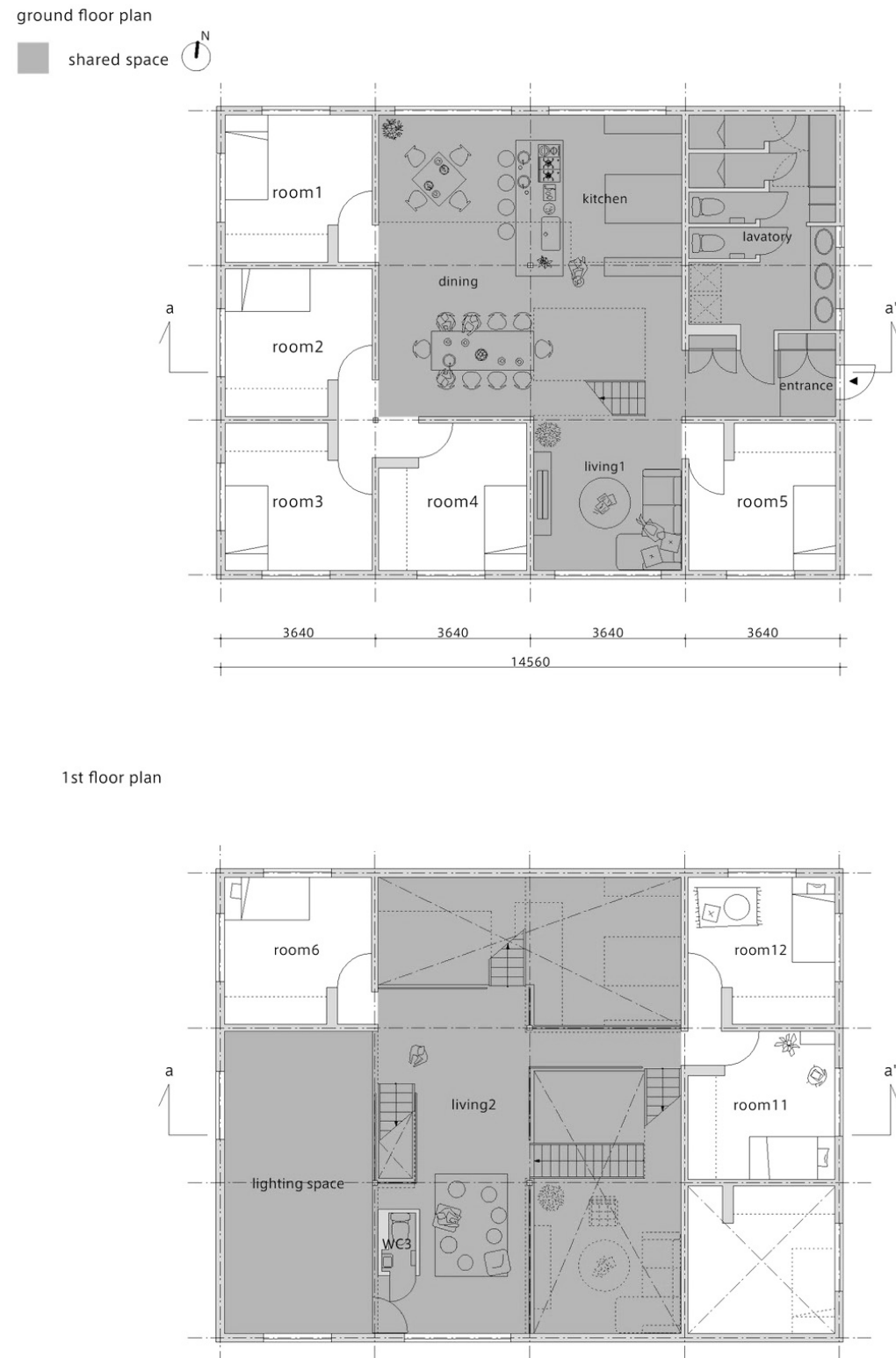
Figure 27: Floorplans LT Josai house, floorplans (Archdaily, n.d.)

Private space   Integration   Common space
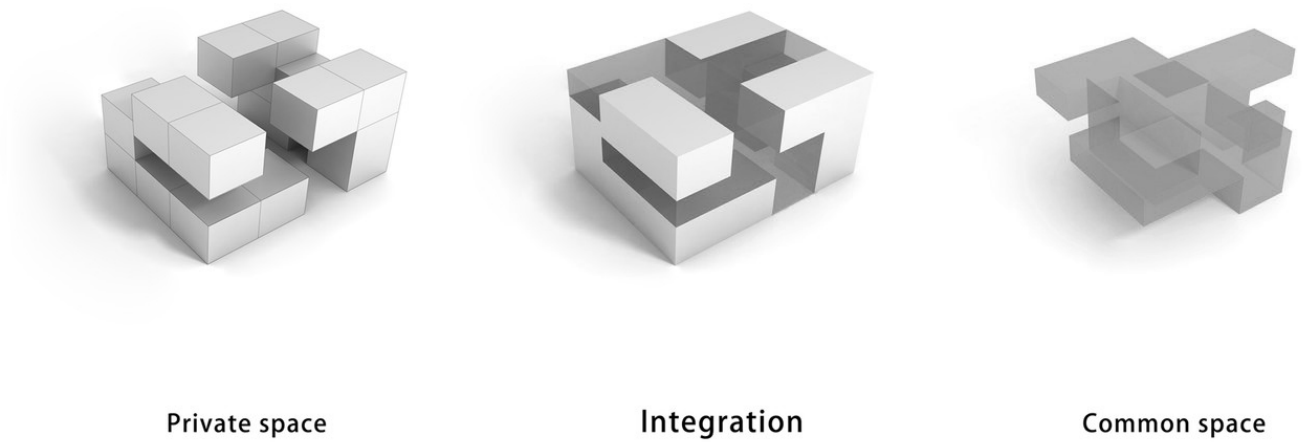
Figure 28: CONCEPT LT Josai house, section (Archdaily, n.d.)

roof2

1800

room7

room11

living2

2800

7400

lighting area

room2

dining

entrance

2800

3640   3640   3640   3640

14560
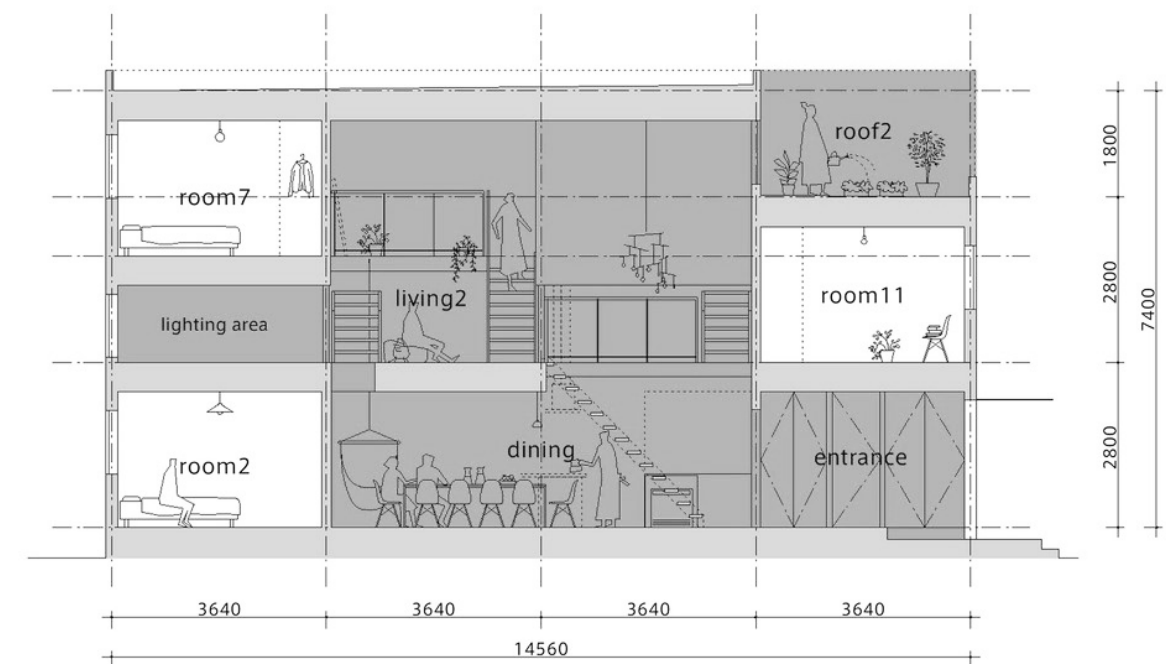
Figure 29: Section A-A' LT Josai house, section (Archdaily, n.d.)

LT Josai Shared House is an interesting example of different collective design solutions coming together. The residents of LT Josai Shared house share a common centre in the middle that goes up through the building. The private rooms are facing the common area. Integrating voids in the design to create multiple routes and half levels going up and down, creating different corners, which host different communal functions effortlesly.

DESIGN STRATEGY

HOW?

DIFFERENT BUILDING TYPOLOGIES

CLEAR BOUNDARIES

FLEXIBEL & ACCESSABLE COMMUNAL SPACES

CREATING OPPORTUNITIES FOR PARTICIPATION

BALANCING PUBLIC AND PRIVATE ACTIVITIES

DESIGN TOOLS

WHAT?

CLEAR GRID STRUCTURE

GREENERY

PLACE-MAKING

CREATIVE ROUTING

CREATING POCKETS

SHARING SPHERE'S

VILLAGE HOUSE TYPOLOGY
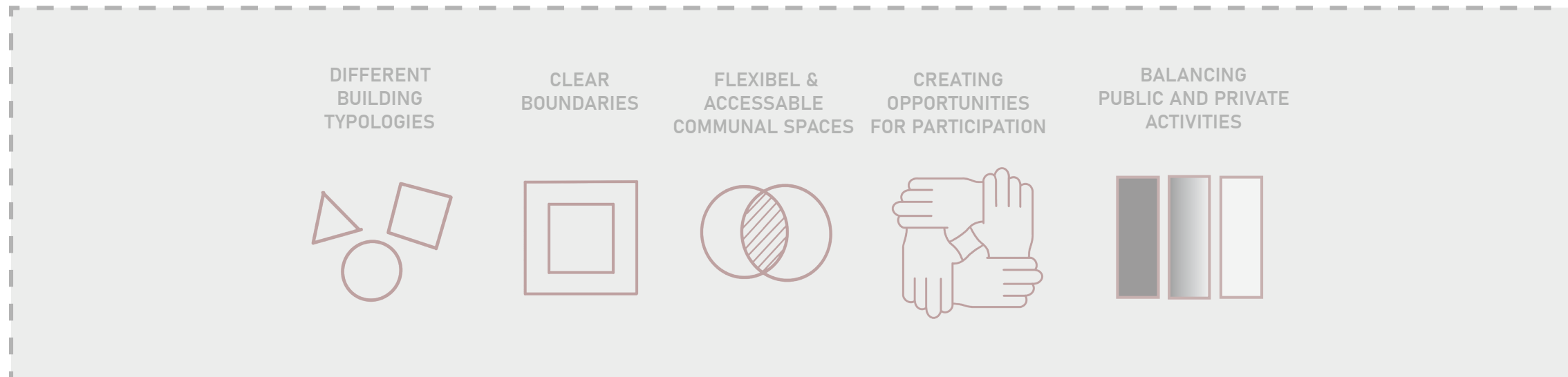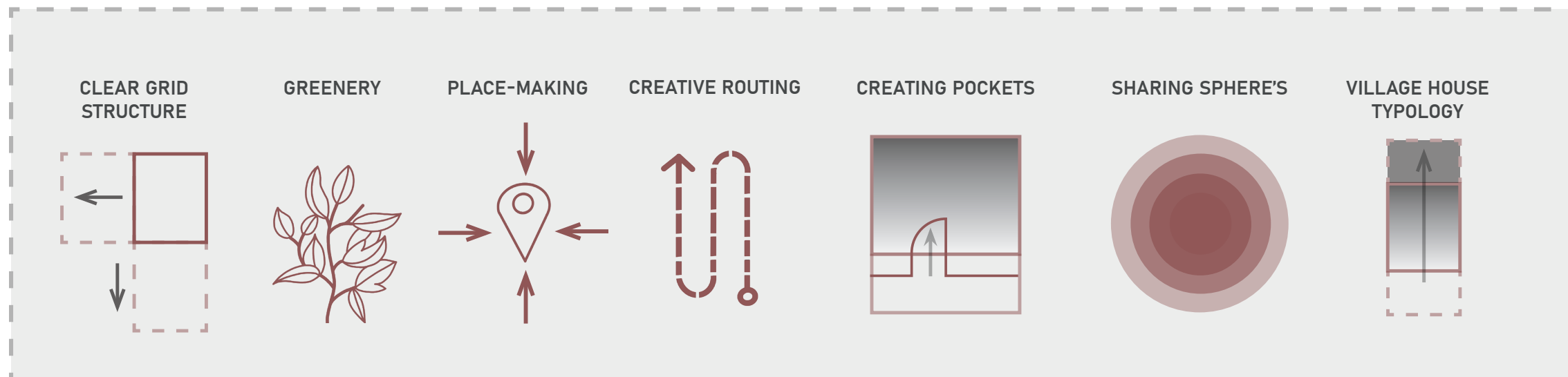
**Figure 30: Revisited design strategies and design tools for co-living arrangements
(Own work, 2025)**

6.2 Design tools for co-living

The spatial translation of the design principles and design strategies are formed through the literature studies, case studies, outcome of survey and references. The following list is a guide on what spatial tools one can use to succesfully design the in-between space for a co-living arrangement.

1. PLACE MAKING
Place making is one of the most important design tools when it comes to making the in-between space a place of dwelling for a diversity of users. Through research there has been an understanding on the relevance of creating a sense of belonging.
Following spatial solutions aim to create a mutual sense of belonging.

Personalization of transitional spaces
When a space is personally tailored, residents experience a greater sense of belonging. One can add personal touches to a space by using easy methods like adding or moving around furniture or painting walls in once's desired colour. These methods can be added in order to achieve this. All residents with ownership of this designated area should participate in the decision making of these design elements.

Enhance the function
By utilizing textures and colors, the places used for interaction, circulation and solitude can be distinguished from one another. For example gardens and a range of colors with calming tones can improve the space's quality and foster a more calm ambiance.

Enhance entry area's
Encouraging users to unforcefully engage should already start at the entry of the building according to research the entrances should be more spacious and feature distinct and welcoming characteristics like plants, an open character, lighting and daylight exposure.

Decorating and enhancing transitional spaces
The layout of the transitional area should be improved by including cultural design elements, which strengthen the sense of community there. The design of the common areas should be visually appealing, and the various recreational uses could be distinguished by using distinct colors to emphasize them. During the decorating phase, changes to the ceiling height, acoustics, lighting, and materials may be made to enhance the space's appearance and draw more residents to the communal.

2. SHARING SPHERE'S
Bufferzone's
Implementing a bufferzone between public an private will help create a more seamless threshold between the two opposite without looking or feeling harsh. The designer should understand the concept of Sharing sphere's, be able to place the different functions within their designated space of importantce in the sharing sphere circle and understanding which functions will be suitable to cluster without getting overly crowded.

Collective spaces
The collective spaces that people are willen to share are the living room, a spacious kitchen, workspace, workplace, atelier, gym, library, plaes to eat, laundry rooms, parking, bike parking & garden rooftop.

Clustering common spaces together
A big reason to cluster common spaces is the convienience of monitoring it being in the same space. Clustering also makes sense when thinking of someone inhabiting this space.

3. CLEAR GRID STRUCTURE
Ensuring a certain degree of openness
Through designing a clear grid structure one can generally feel more at ease when able to understand the space and see others from a small distance. A certain amount of openness is required in the transitional area so that either the residents can see who is passing by or the people who are just passing through can see the interactions happening and decide to join in.

Integrating uncompleted flexible open spaces
From research we can understand the notion of "reactieprestatie" by Van Klingeren and understand that a group of people could feel the same sense of belonging if the space is currated within a clear structure. This enable's residents to perceive the same type of sense of belonging to this place which makes a good base point to start participation on designing this space together with other residents. This space should not be bothered by too many distracting elements that can make one feel like they own this particular space.

4. CREATIVE ROUTING
Increase the variety of circulation routes
By designing the building so that a person can take multiple routes to get from their apartment to the outside of the building, you can increase the chance that residents will encounter different people, this creates a sense of familiarity.

5. GREENERY
Transitional space landscaping
By planting or maintaining communal gardens, community members will be motivated to interact with one another and grow a familiarity if not a bond. In this sense, space for planters or vertical greeneries with vegetation that suits the surroundings can be provided.

Integration of plants and green
The best places to promote a sense of community among residents are courtyards. From research we can understand that green asks for residents to share responsibilities, this asks for participation it forcefully asks for residents to come together.
The community garden should be oriented towards dwellings of other residents, that way others can help in any case of missuse of the collective space.

6. CREATING POCKETS
Proximity
Creating pockets stems from the idea of place making, but differs from it because utilizing a strong grid and varying in width and depth can create unexpected movement and therefore encounter. We should therefore operate within the scale of social and personal as Hall has stated. If one needs to pass someone through a smaller space they will first make eye contact to understand who will be using the pathway first. Varying widths of the collective transitional spaces can therefore open possibilities to spontaneous encounters between residents.

7. VILLAGE HOUSE TYPOLOGY
Clear seperation with walls and doors, materials and textures
making sure people can only access where they are supposed to dwell without creating a sense of exlusiveness. With the 'village house' typology I am trying to refer to the front garden, private space, backgarden idea of living. The front garden is inviting but holds a sense of belonging to the owner of the house. It creates a bufferzone between

what is public and what is private, so the private truly feel private. The backgarden is used for solitude, escaping the business that the side walk at the front might give, but still feeling a sense of familiarity of surrounding neighbors while hearing their voices and activities in the background.

This chapter will elaborate on the vision of future living in Amsterdam and on the design project of the studio, where the location and mass study will also be revealed and spoken about. After there will be an explaination based on the sharing spheres theory and a list of collective spaces that will be hosted in the transitional spaces of the building and why.

7.1 Vision on living in future Amsterdam

When I think of how we will be living in the future I think of my own neighborhood. I think of our society, what needs and wishes we might have in the future, but also about climate regulations, the housing scarcity, the dwelling prices. When I think of Amsterdam I think of the charm of the canals and the beautiful centuries old houses that stand right beside it. I think of the beautiful parks where people sit and picknick on a hot summers' day and I think of the amount of bikes I pass while walking to the tram.

All in all, I think the identity of Amsterdam and its beauty should definitly be reflected in the architecture of the future. It should reflect the quality of life that we are used to, but still address the problems we are facing nowadays. The housing scarcity in Amsterdam seems to be growing every year. With a lot of single households living in Amsterdam a lot of dwellings are not maximing its capacity. Next to the fact that there is a lot of investors buying the still somewhat affordable houses and renting them out to make profits.

It leaves the young generation no other option to migrate back to the countryside and find places that are easy accessible from there to the city where they might still find themselves having their job.

Therefore I forsee a future where the superblocks emerge. Everything that is needed to live life is hosted in this small piece of the city, but seamlessly integrates itself in the urban fabric. With its high density it can host a lot of households. Creating co-living clusters we can maximize living spaces and evoke natural engagements between residents and users of the building, trying to better the social loneliness a lot of Amsterdam residents have been facing even more after covid.

Trying to break the trend of anonymity and the fear for 'the other.' But rather than that understanding the underlying quality that community living has, as it has had centuries long in villages. Trying to understand the princples that can create such an enviroment and design a building having the intention to 'slow down,' maybe even create a certain unbothering friction, that can cause users to naturally engage even if its only in the slightest. It will hopefully take away the alieanation some might feel when dwelling in one of the apartment complexes build nowadays.

Not only do we need to rethink the social structure of buildings, but also the manmade infrastructures and their priorities. Should one still prioritize car mobility if all we need is reachable in a 10-min walking distance, or do we might need to rethink the car and its priority in our infrastructure system of today.

We might personally strive for comfort and convenience, but if all that we need is closeby and just a handful of functions are out of reach, why would we still need to own our own car? Should we not give this space to slower traffic such as bikers and pedestrians and make it a safer place for people to dwell.

When we start to prioritize slower traffic streams we might find ourselves having more space for nature, where in an ideal world we can once again return back to living in a green zone, a healthier enviroment where qualitative green is no longer just a backyard or an in-between space, green as a part of the building, but the building a part of the greenstructure.

In that case we would be able to embed buildings into other greenstructure's as well, without taking away from it.

Living in Amsterdam means a variety of different cityscapes all spread over the different parts of the city. Though I start this vision romanticizing over the Amsterdam canals and its pittoresque old houses, it is not so much about the facade or its colour, but rather the feeling it imprints on its bypassers soaking up the atmosphere of the place. When designing a new part of the city I want to keep that thought in mind and design places of moments and memories.
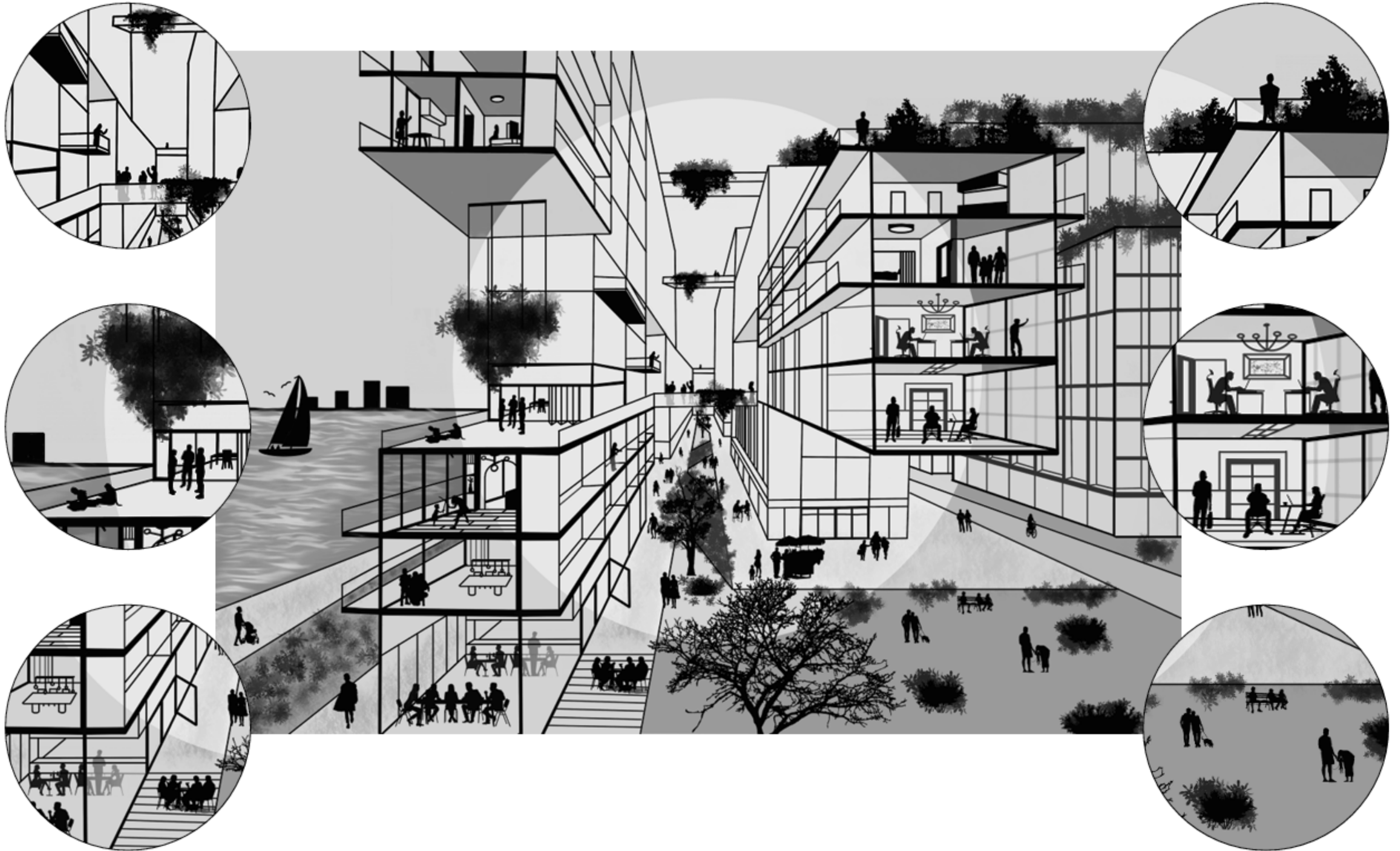
Figure 28: Future living in Amsterdam (Own work, 2024)

7.2 Design location

The location chosen is Oostpunt Zeeburgereiland. This is a location without any plans for building apart from a tram storage. The location is a secluded area due to the A10 and next to that an industrial strip on the West side of the property and the other sides being surrounded by water from the IJ. The qualities of this location are close proximity to the high way, public transport on route and beautiful views over the water.

Though this location also comes with its downsides; as much as the views are beautiful the blocks have to be carefully currated against wind tunnels. Next to that, being secluded there has to be an ambition to rethink and arrange non-existing city scape structures as it is now an empty land with only one café on it: Kaap. This café would have to be repositioned, but can most possibly find a new place in the building's plinth.

The municipality of Amsterdam has their own plans for Zeeburgereiland and in their plans they describe that Oostpunt will become a citypark, without any buildings. Though I understand their perspective I am willing to rethink that decision and create a building that incorporates qualitative green structures, so this part of Zeeburgereiland can still be a city park.

Today's situation of the plot is a large sandy surface that in itself kind of functions as an island apart from it already being part of an island. The municipality has decided for this plot of land to partially become a tram storage space and the other half to become a city park. I would propose to design buildings that can enhance the feeling of a green space and still creating density to form both an urban landscape and a city park.

This development has been planned to start from 2032. I think it will be interesting to understand how this tram storage can be implemented into the project design or else whether it might be possible to repurpose this space by moving the plan of this tram storage. Both options ask for a creative solution. How large this storage will be exactly is unknown. Just the place it will be happening is decided for now, therefore I feel there still is a chance to explore this location taking in account its interesting proximity to public transport, the A10 and the city of Amsterdam. This could be the perfect location to host a community style living arrangement and bring a solution to the housing scarcity in Amsterdam.
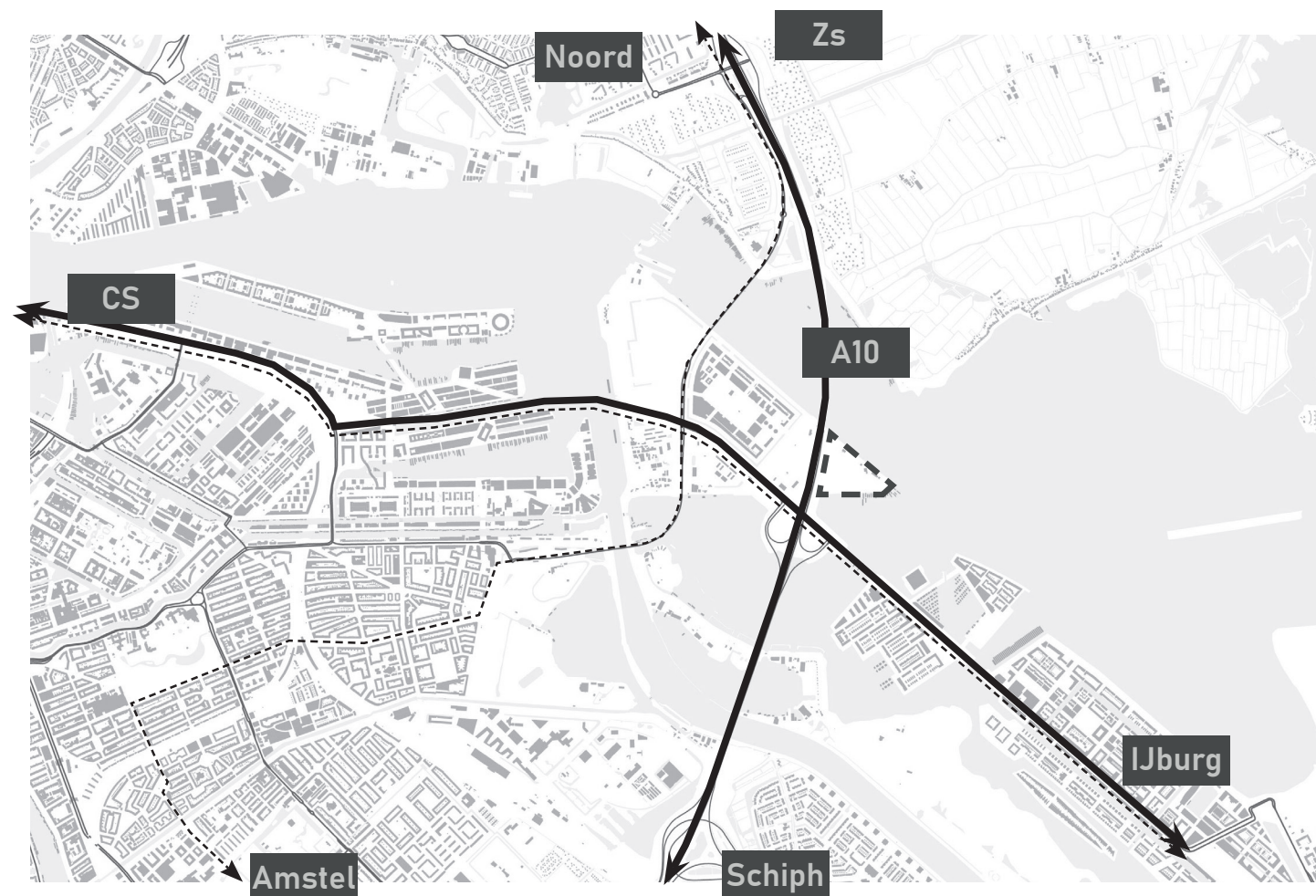
Through literature research, the survey and multiple case studies it has been brought to light, what design princples, design strategies and design tools can be used to create a community through re-designing the 'lost' spaces of vertical dwelling complexes, by difusing any dwelling anonimty in the collectively shared spaces. Difusing the dwelling anonimity will open residents up to the idea of co-excisting and dissolve the fear of 'the unknown' and 'the other.' Carefully designing the in-between space, can attract engagement between residents by slowing down the pace. Next to the social attraction co-living might have trying to lessen the social loneliness numbers, it is also a solution to the housing scarcity we are facing in the city of Amsterdam.

Due to the jobs the Amsterdam the capital of the Netherlands has to offer, migration from the countryside to the city is constantly happening. These people need places to live, but due to the spatial scarcity and unaffordability of dwellings today, it is neccessary for architects to rethink building/dwelling typologies. During the pandemic people started to become more isolated in their surroundings, which resulted in social changes on a large scale. Though people are becoming more independent due to new technologies, we seek encounters and engagement with others even more so we need interaction with other people to feel happy and healthy. The new completed dwellings complexes that are now on the market are not reflecting these social and finanancial needs, so in order to design these this research has noted a number of important aspects and design solutions to implement to create community living.

These transitional zones can be divided into three categories and vary in how they function and are perceived by residents. The most important conclusion to withdraw are to add elements to make this so called 'non-space' a place, by adding elements as simple as; daylight, greenery and enhancing the space with a pop of colour, residents will already feel more of a sense of belonging to this place. By adding these elements residents will start to feel more of a sense of responsibility over this place, because it needs to be maintained to look nice. Maintanance comes with participation, which needs social interaction to communicate once's task.

Where participation emerges, relationships between residents can be build. Sharing common interests or sharing the same walk of life, etc. The idea of sharing certain functions can maximize the use of transitional spaces and therefore also lower rent costs, because the sellable/ rentable square metres of the dwelling can be lowered.
From literature several important design principles arised. There seems to

be an emphazis on keeping clear boundaries between private and collective. While people might like to socialize they more so seek calmness and solitude to comfortably dwell. To share spaces and get more sense of community it is very important that there is a constant participation of all residents sharing the same ownership, to maintain the commons.

Through literature it was brought to attention that there is several typologies of co-living, going from community living and only sharing outside area's, to cluster living and even co-housing. To be able to host a diversity of different people in different walks of life, the demographic of Amsterdam right now. It seems mandatory to create a well balanced mix between all of them. Operating on different scales and levels of the Ahn circle.

From case study it was perceived that several dwellingcomplex share this mix of living typologies. The most valuable lesson that was learned through studying the casestudies was the approach of adding onto the quality of life, instead of taking away from it. From the survey it was very clear that people are still taken back from living too closely with other people. Mostly because they seem to be scared of the unknown and living with a stranger, especially having to share some functions that we regularly use. A lot of participants of the survey do not feel ready to give up this privacy. Though the bathroom is not considered the most private layer of privacy, it is most certainly the space that most people are hesitant sharing. Though in case studies we see that bathrooms are collectively shared. This comes back to adding onto the quality of life. While studio apartments can only keep a small bathroom, the collective space offers a bathtub and sauna. It gives a luxurious feeling, like staying in a hotel. The detail in which it is designed matters a lot in this specific context.

Though many participants do not seem to be to keen on sharing, they also acknowledge that looking at the housing market today, this option of co-living can offer a unique, but positive living experience within the city.

With the founded design principles, design strategies and design toold further research will be done exploring spaces by design.

RESEARCH-BY-DESIGN JOURNAL
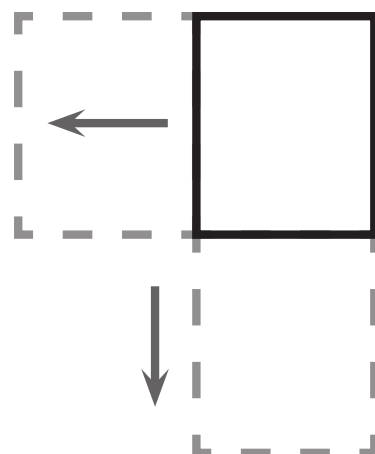
**GRIDWONINGEN
VOOR WONING STAPELEN**
Door middel van gebruik van het grid kunnen de verschillende woningen makelijk geschakeld worden boven en naast elkaar.
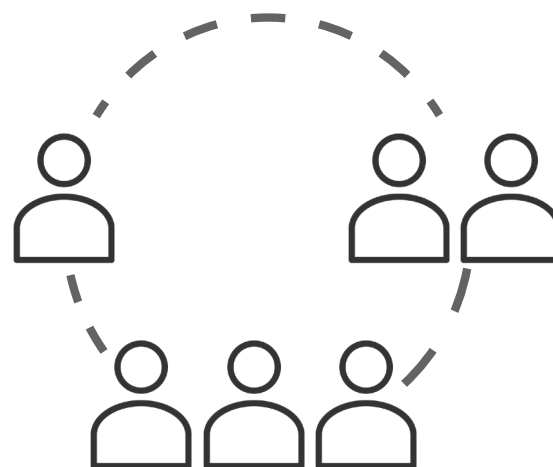

**DOORGROEI WONINGEN VOOR
VERSCHILLENDE GEZINSSITUATIES**
Het ontwerpen van een woningblok waarin mensen kunnen doorgroeien in hun eigen leefomgeving, hierdoor ontstaat een behoud van community.
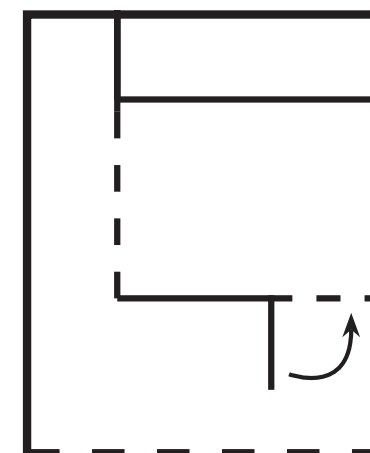

**FLEXIBELE
WONINGPLATTEGRONDEN**
Een plattegrond die aanpasbaar is tot de mate van willen socialiseren met andere buurt bewoners en in hoeverre de woning aanpasbaar is voor de verandering van een gezinssituatie en overgang privaat–openbaar
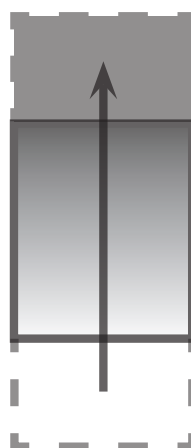
**DORPWONING TYPOLOGIE IN HOGE
VERDICHTING**
Het dorpswonen wordt gekenmerkt door het pad langs de voortuintjes die als buffer functioneert van openbaar naar privé. Dit is doorgaans een plek waar mensen elkaar groeten en een praatje maken. Als je doorloopt door de woonkamer kom je aan bij de achtertuin/balkon.
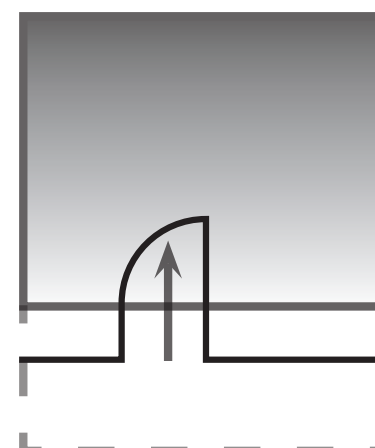
**HERKENNING
EIGEN WONING**
Hoe hoger het gebouw des te minder de herkenning van de woning aan de galerij. Door een kleine bufferzone te creëren die functioneert als voortuin, de bewoners een identiteit aan hun woning kunnen geven.
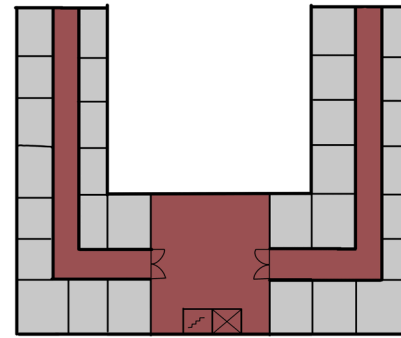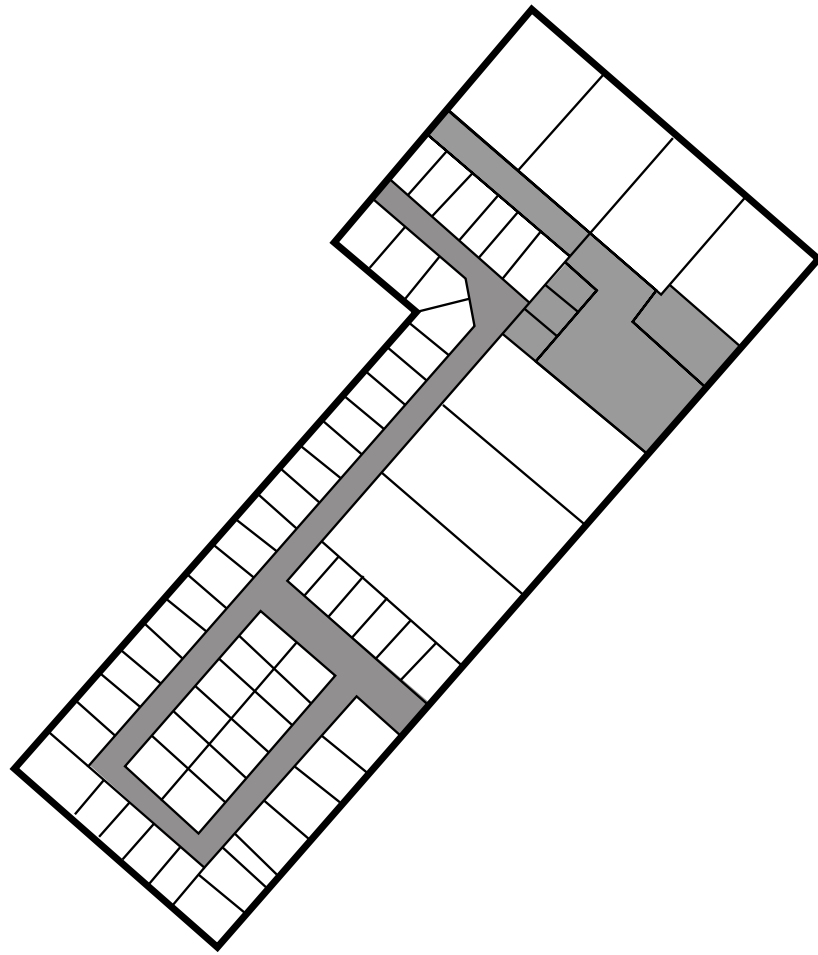
CLEAR STRUCTURE
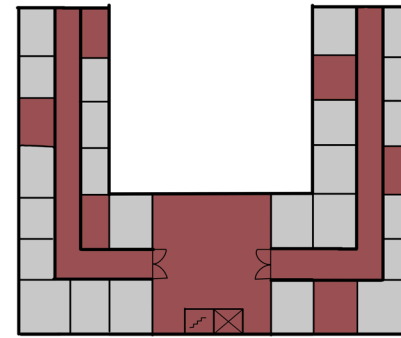
COMMUNAL SPACES
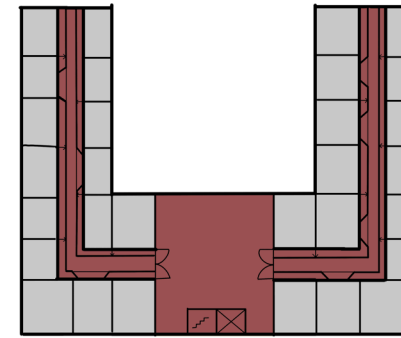
WITDH VARIATIONS
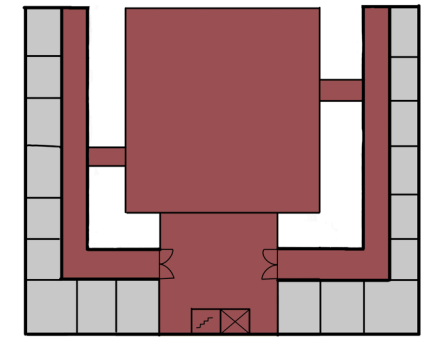
BRIDGES
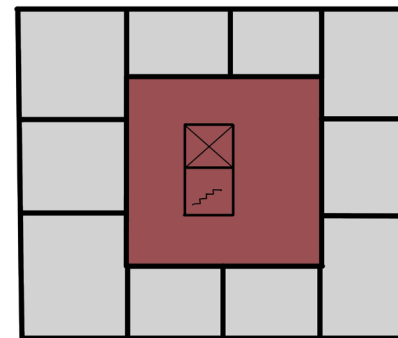
STRUCTURE
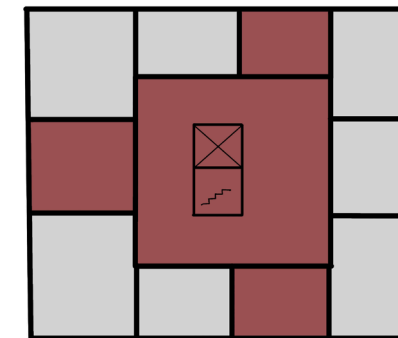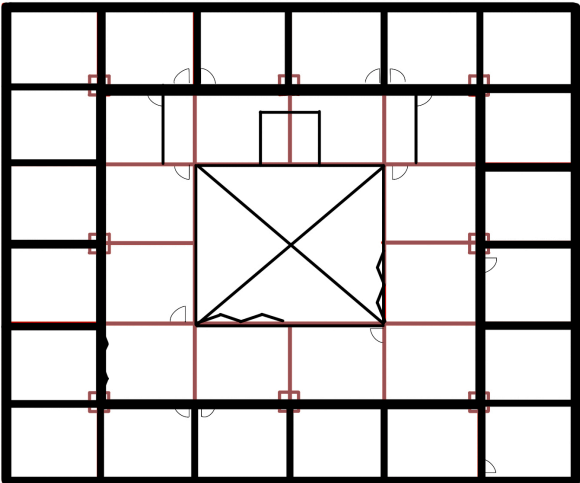
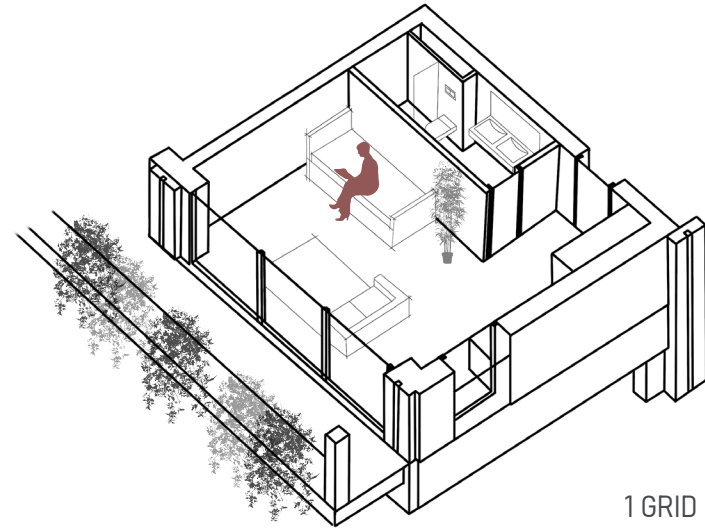COMMUNAL SPACES
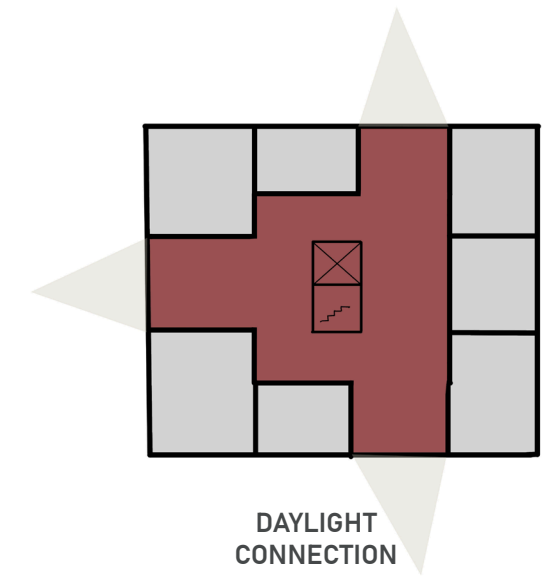
DAYLIGHT
CONNECTION

CLEAR STRUCTURE
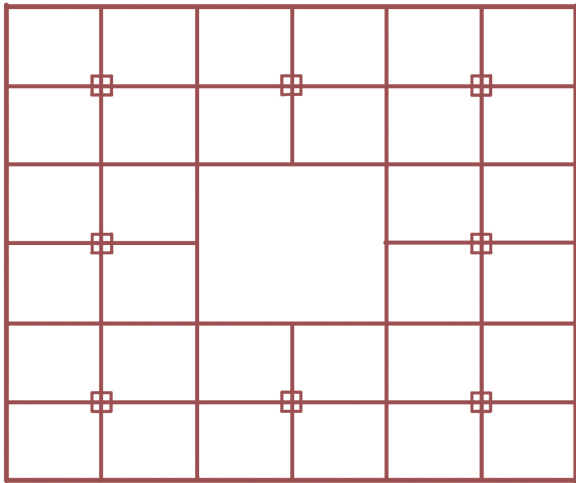
DWELLINGS VS COMMUNAL
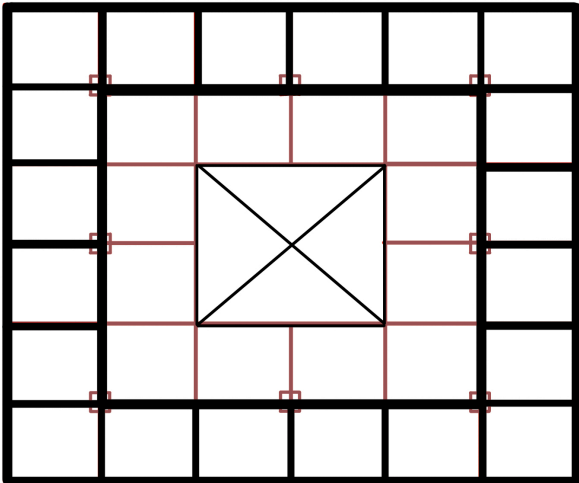
WITDH VARIATIONS
THROUGH PLACE MAKING
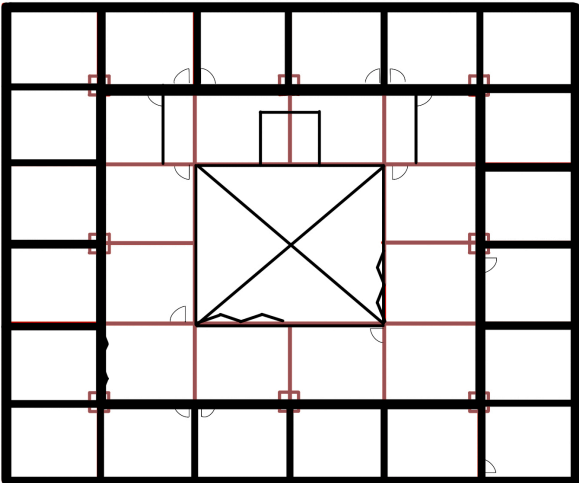
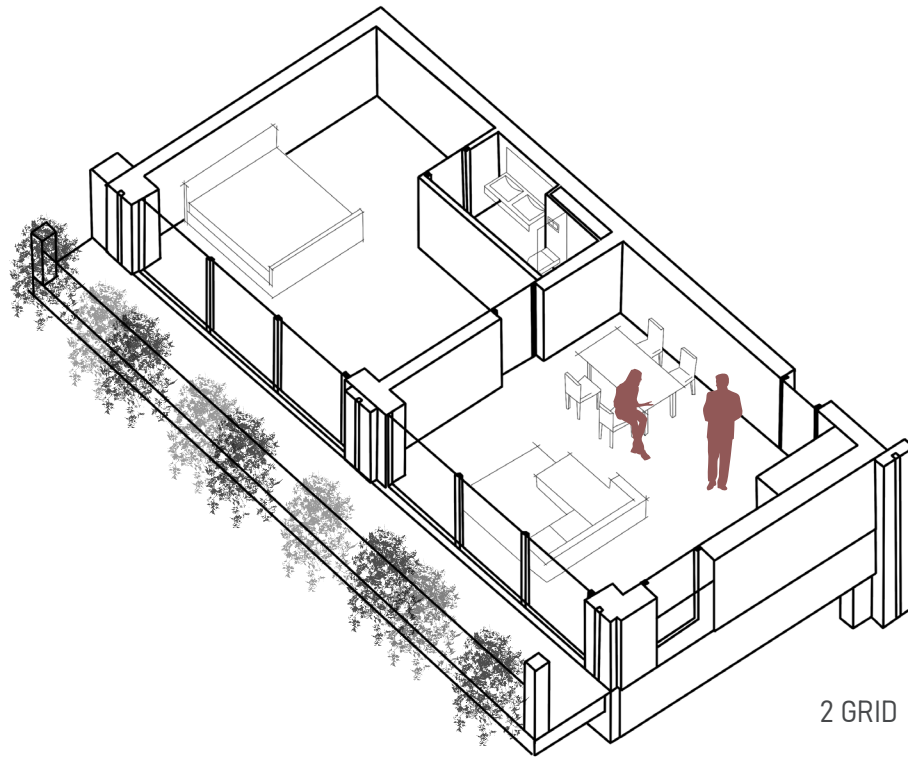INNER CONNECTIONS

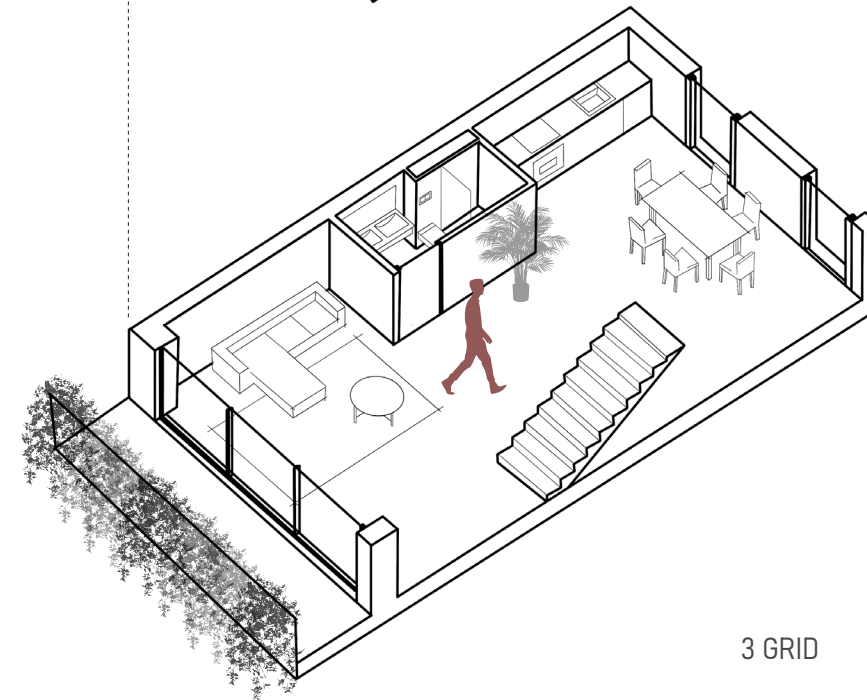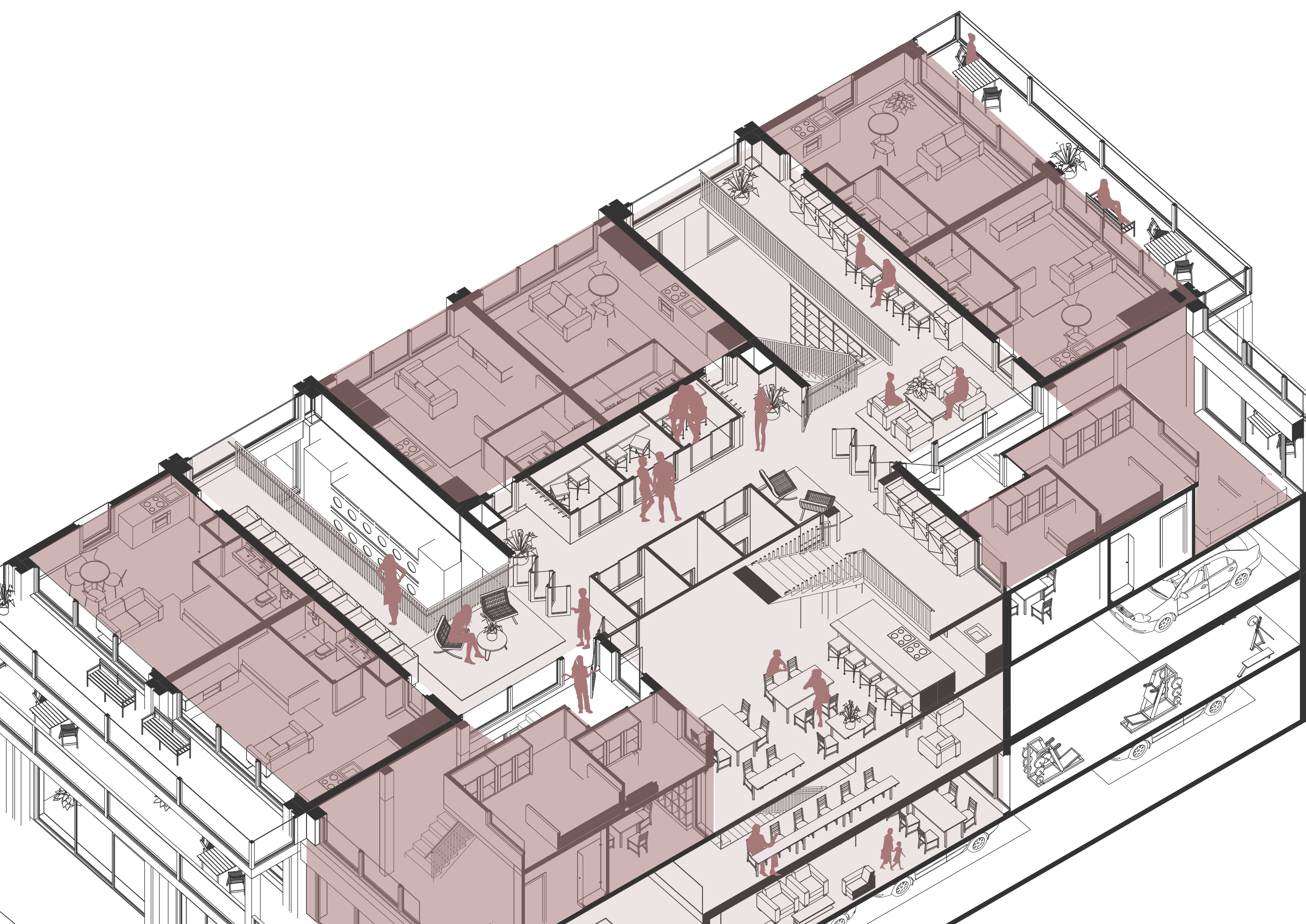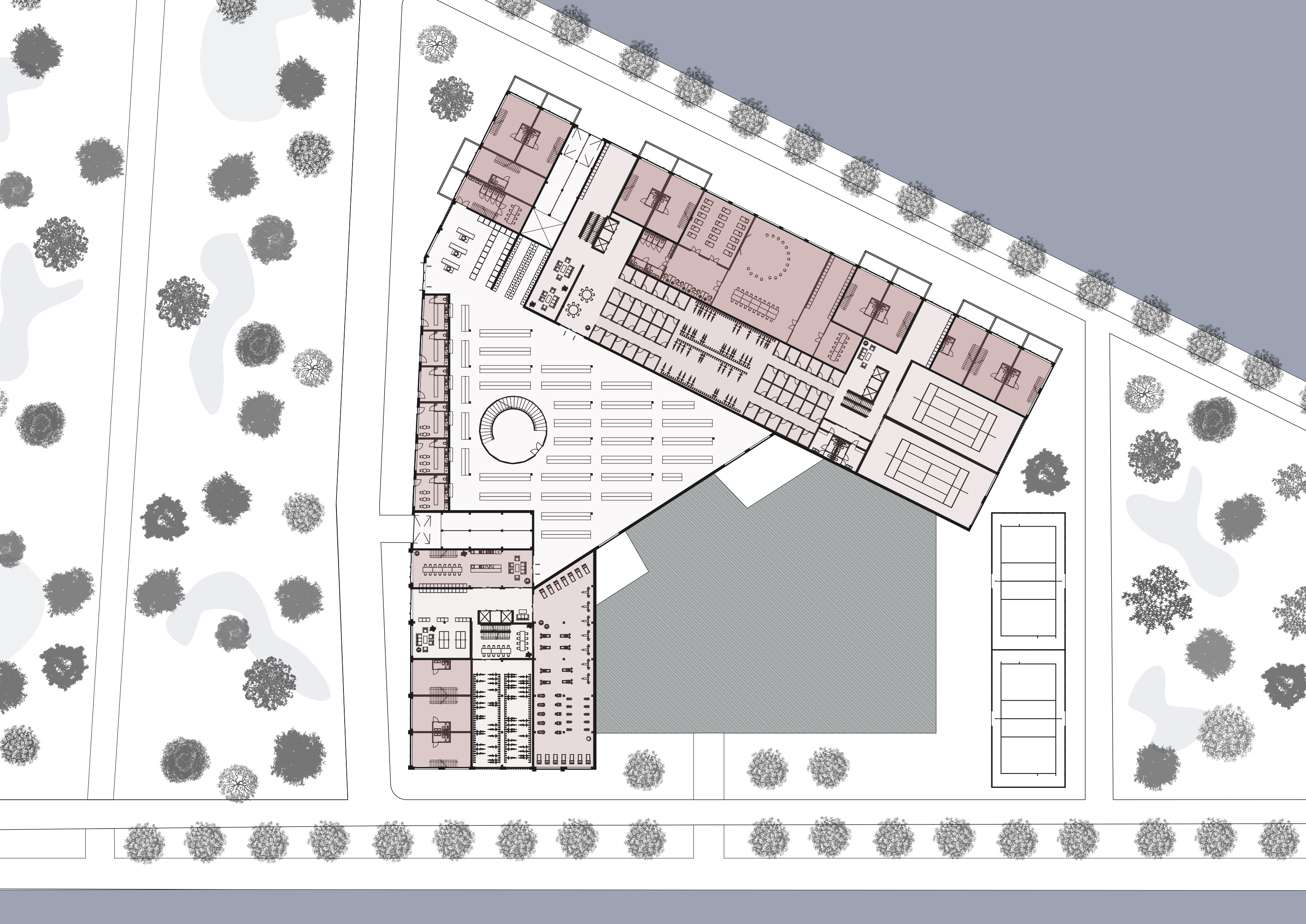6 x 5 GRID
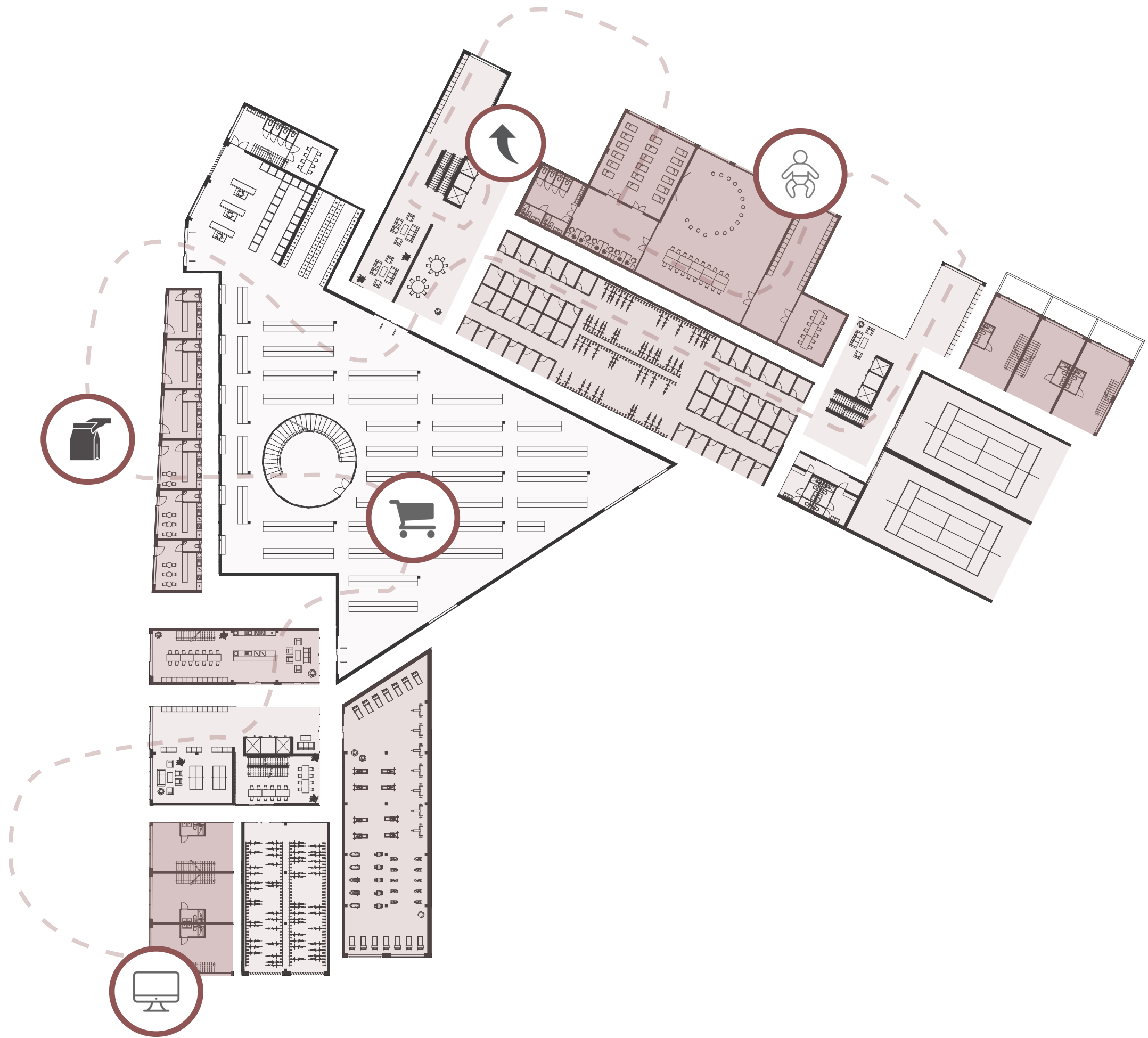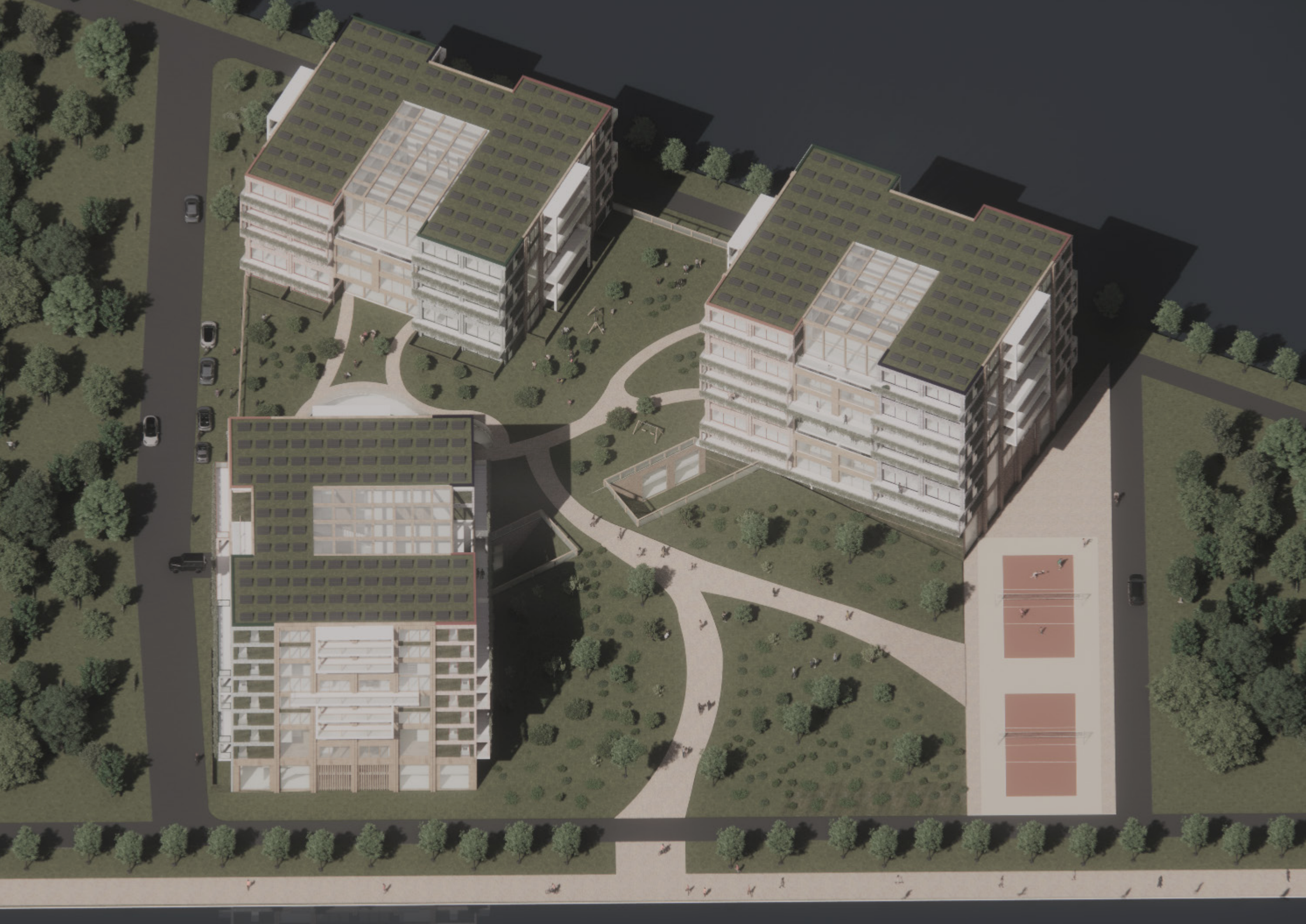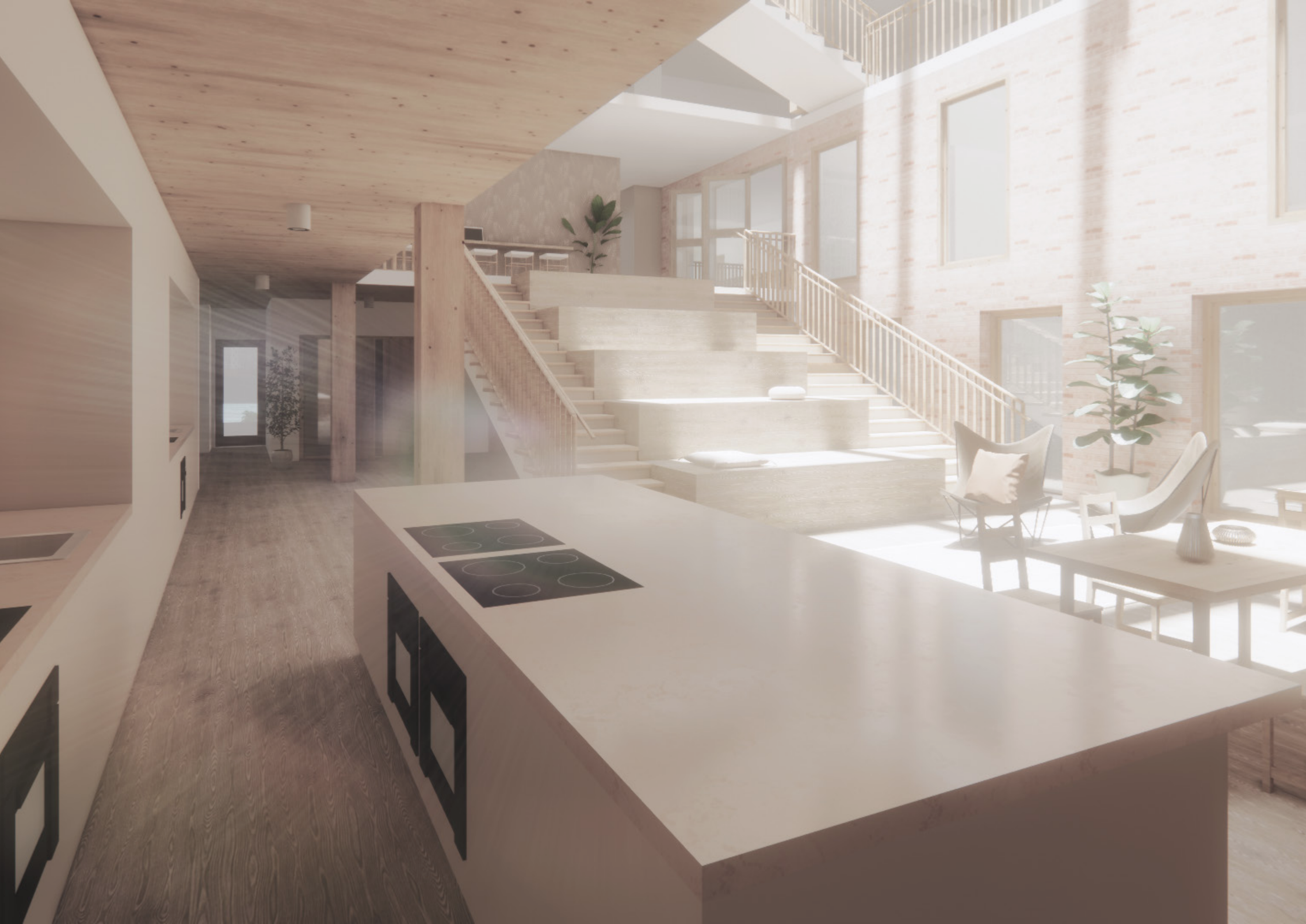
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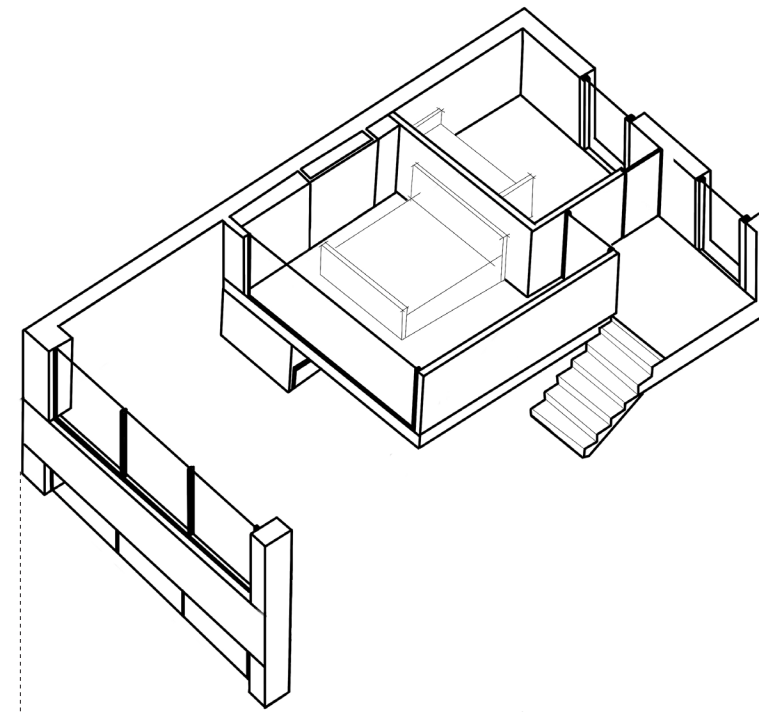
2 GRID

3 GRID

+ 2 DECK
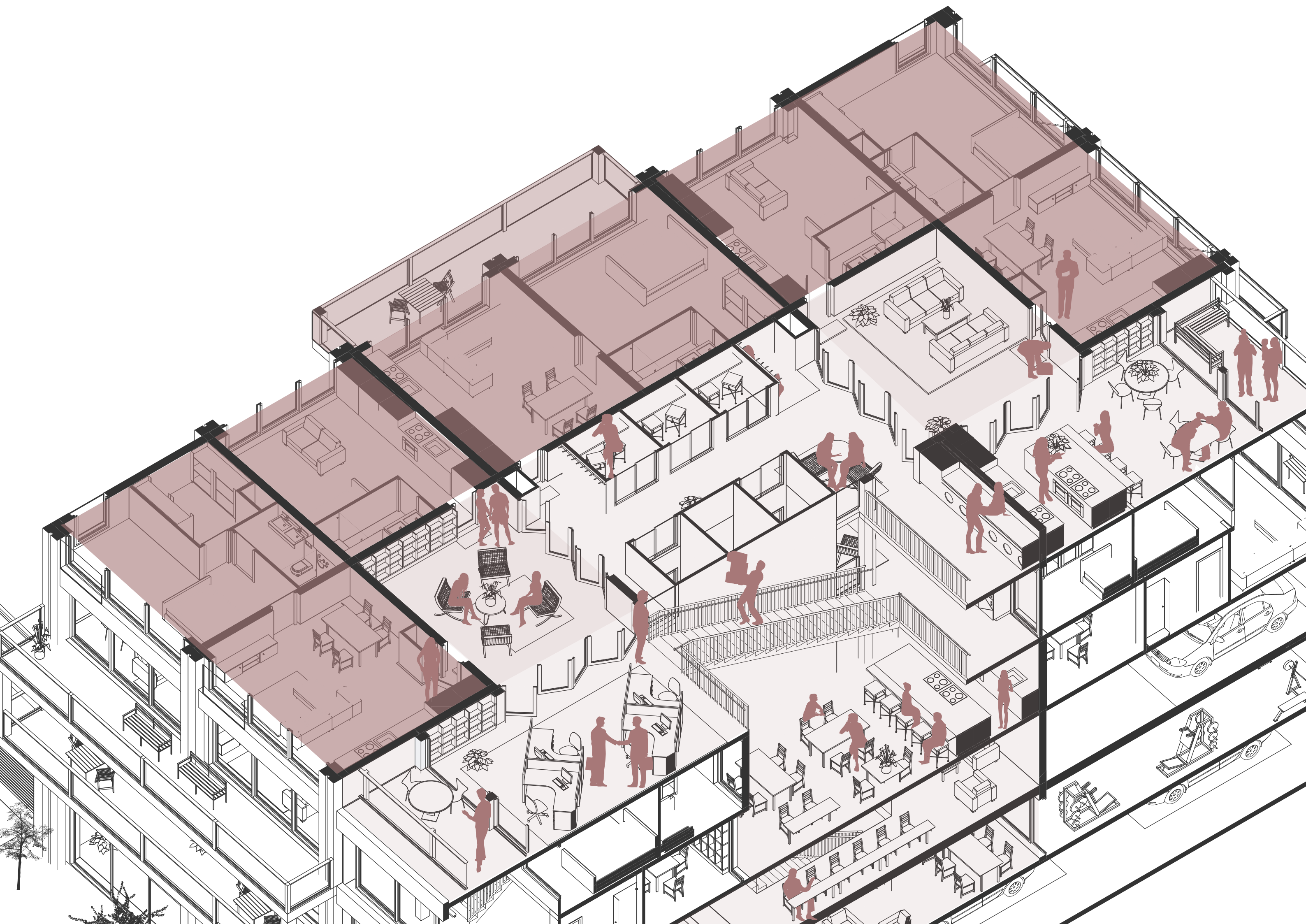
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Reflection

In this reflection the design process of my graduation project will be discussed as well as the different phases and the influence that the feedback had on the final design. In this reflection the motivation behind the topic of my research and the importance of this subject in the built enviroment now will also be included in this reflection, in addition to the selection of case studies and applying research through design. This short reflection will critically look at the methodologies used, the outcomes of research on the design.

RELEVANCE

My design addresses some of the problems that citizens are facing in the housing market of Amsterdam. As an attempt to solve the wellknown issue of the housing crises, we find denser apartment complexes arising, that lack identity and do not bring solution to one other big problem we are facing in Amsterdam which is the risen loneliness rate. Research has proven that citizens of Amsterdam lack sense of their neighbors, which can make them feel alone. I feel that as designers, should think of ways to improve not only the practicality of buildings, but also how they can help socially.

RESEARCH INFLUENCE ON DESIGN

Through research I have learned that there is several tools that can help to help users of the building to engage. The verb engage is significant, as I am not trying to force people to socialize with one another. To engage and to interact will give the user a sense of familiarity with 'the other user / resident,' this feeling of familiarty is then supposed to help the user / resident of the building to feel more comfortable (and at home.) Large, high and dense structures leave less to no room for individualisation in the transitional spaces, this is a result of wanting to build as cheap and fast as possible.

My project explores what happens if we let go of this thought of transitional spaces just as a passthrough, but as a place of stasis and community. The idea of community living and sharing different functions with one another as a spatial solution fits perfectly within the Advanced Housing studio, as it explores to densify

Amsterdam reconsidering excisting designs and emphasizing on innovative solutions for housing problems, not only technical building sustainability but aswell as social sustainabilty and offering a place to live for different walks of life.

Research helped me understand that if friction is caused on eye level it can lead to wanting to engage naturally. This friction should not be proposed as too much of a threshold or barrier, but cause the user to slow down. When researching different tools to create friction, we can devide these different principles into three main categories which relate to where it would be appropriate to use. These three categories are the urban scale, building scale, and dwelling scale. All principles are tools that can be used, but if not implemented in the right category they can cause annoyment and irritation over positive engagement between users/residents. The proximity of these spaces and the relationship between certain functions and its collective or private quality is very important in this design. The questionnaire was therefore very helpful to understand what different people value most in their homes and what they might not mind to share with others.

METHODOLOGY

With the help of literature, casestudies and the questionnaire I have found the key principles and tools to design this project. Emphasizing and making sure to enhance the quality of residents with these solutions instead of making them feel like they are comprimising too much of their privacy and space. This thought was a direct outcome of the several casestudies.

Through research by design this project has come together and is thought through to be applicable in different locations and settings. In this the accessability, proximity and inclusivity should be emphasized and can differ from any urban area where this project may be located.

The dwelling towers arise from an open plinth while keeping the inward structure of the core very open and airy, almost as though the different appartments are enclosed by a mall like structure, where we can find broader and slightly less broad walks in a very clear 5 by 6 meter structure. Different routes to the residents' dwelling, that make interactions more spontaneous and unexpected.

PROCESS REFLECTION
Reflecting back on my designing process and the outcome of my graduation project I am pleased to see where it has taken the project. Though it has had its challenges, thinking of a suitable and relevant subject, the research and making of this project has teached me to be more aware of designing towards the social needs of users of the buildings and that connectivity between people can be stimulated with design. I have struggled with time managment and going back and forth between research and design and not get lost in the generous amount of information I could find about this topic. That was also noticable when I had my P2 presentation and presented more than 20 different design principles that I wanted to implement in my design, not being aware yet of which principle to implement on which scale of the design. Which bring me to the next challenge that I have faced during my project which has to be understanding the impact of the principles on different scales and to balance user wishes with needs and what to prioritise. This applies back to the community clusters that I have assigned in the building and the size and structure of them.

The feedback of my teachers has helped me a lot in structuring the different principles and picking the key principles that should be implemented to reach a suitable solution for my graduation project.

The extra time I have taken for my P4 has helped me to strengthen my ideas and be able to go into more detail, it gave me time to build stronger arguments to some of the design solutions I have decided on and that makes me to believe I have created an integral project, that is both responsive to technical and social needs.

This process has taught me more about the complexity of designing a high density dwelling structure that has a relation with its built enviroment and corresponds with the changing society.