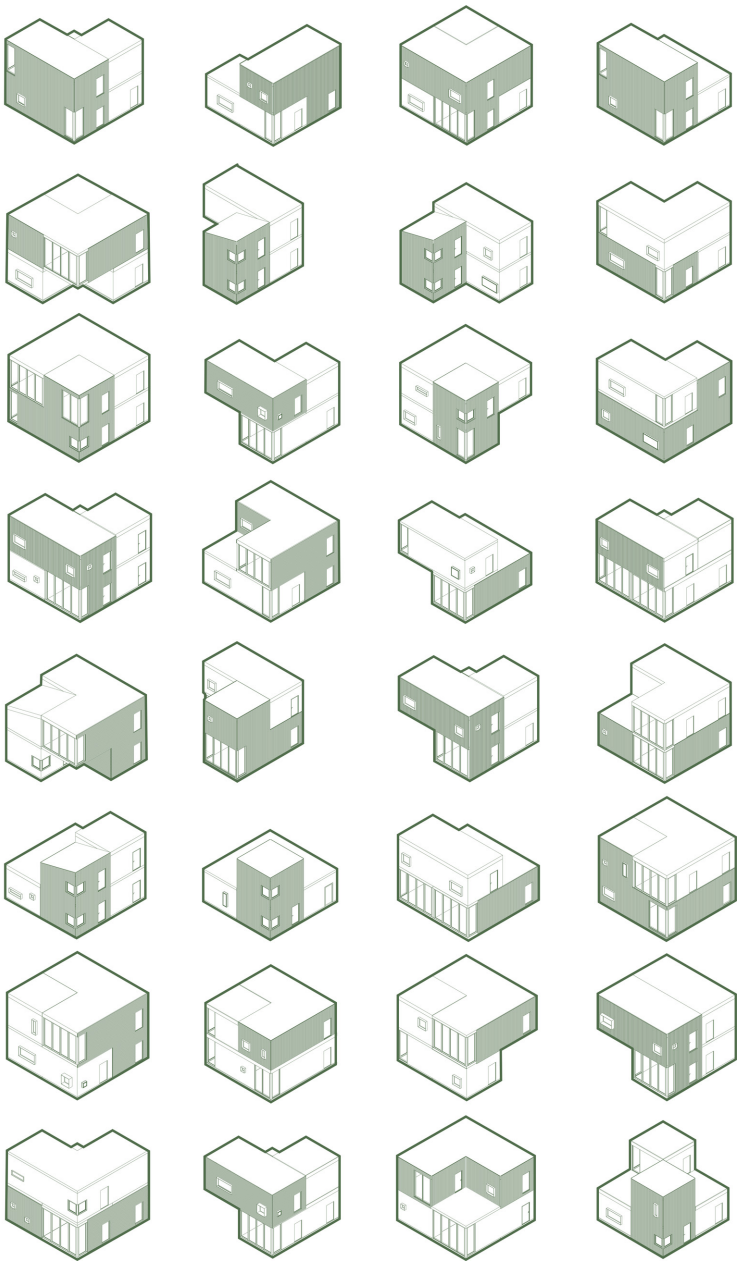
Modular Housing
Adaptable to social trends



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May 2023

LUND
UNIVERSITY

AAHM10 I Degree Project in Architecture
Lunds Tekniska Högskola I 2023

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Acknowledgments

I would like to express my gratitude to my supervisor, Andreea Marcu, Whose valuable guidance lighten my way through this project.
I am especially thankful to my supportive examiner, Jesper Magnusson, for his assistance and insightful feedbacks.
I extend my gratitude to dear Maria Rasmusson who was always responsible and incentive during my education.
I am also grateful to my dear family and friends who were always encouraging me through my studies.

Abstract

Considering the house as a product in the service of humans, it is essential to redefine this space based on the user's current needs. Following new social tendencies and trends, the traditional image of the family including parents and children is transforming into a new meaning, Considering the rapidly transforming social needs and the emergence of new ways of living, reviewing the different factors impacting people's lives and designing an adaptable house compatible with current requirements is a priority in residential design.

The crucial factors in housing design are social issues. The social aspect of living is a broad subject of research. Therefore, this report outlines only three popular and most demanded social transformations. The live-work residence is one of the necessities that should be considered in new housing, especially after the pandemic, the importance of telecommuting is more obvious. Moreover, the number of single, single-headed families and childless couples has increased which can affect the temporality of families. As temporality is inextricably intertwined with recent lifestyles, finding an efficient way to design a flexible space compatible with social needs is necessary. Last but not least is co-living. The main reason that most people find shared living attractive is that it creates new ways of socializing with others.

Designing a system of housing considering these three main aspects and taking account ability for these issues is the aim of this project.

Part I | Theory

Part II | process

Part III | Design

Part IIII | context

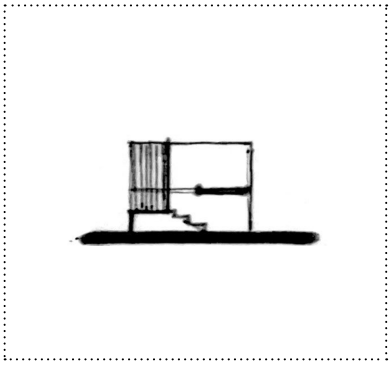
Part IIIII | Reflection

Contents

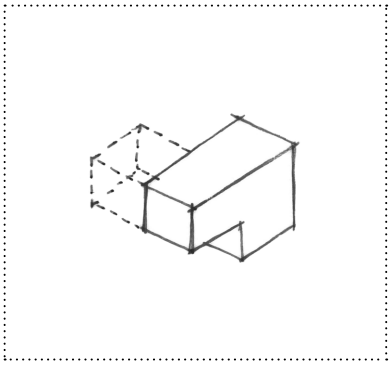
Part I | Background

The main feature of this thesis is finding the most important social trends and creating a system that offers inclusive solutions for all three trends. In this chapter, the emphasis is on the chosen social tendencies.
(Since this thesis is more focused on design, the background research is considered as an assist to the design process.)

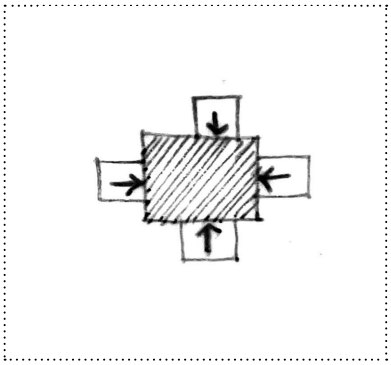
Main topics in part I



Live-work residence



Temoprality | Flexibility



Co-Living

Introduction

Rapid changes in lifestyles compared to past and most wanted recent demands, put emphasis on the importance of residential design. The definition of dwelling has also changed due to new social trends. People would like to live, work, share, and socialize in a different way
Throughout this project, I aim to create a modular system adaptable to current and future social trends by using Donna P Duerk's "Programming Method in Architecture" to simplify the designing process in the background section of the thesis. (In this method, the mission is the main issue, and then we set some goals that help us to orient ourselves in the design process; each goal will bring some performance requirements, and then we will design concepts for each requirement.)
Since we are looking to design a system to respond to three different issues, the flexibility, that the modular system gives us is very important. It is worth mentioning that modularity has different aspects to discuss like modular houses like containers or repetition or growth of a similar space vertical or horizontal, etc. We do not consider the module as a prefabricated and inflexible box, but we use its other feature. We consider the module as a network of similar spaces, which will help to design our system by growing them vertically and horizontally.

Social issues and people's wishes have one of the most important effects on home design. Referring to research and considering what we see in our daily lives, nowadays people are more interested in three important trends:

1. **Live-work residence** especially after the pandemic is one of the common trends.
2. **Co-living,** based on an online questionnaire done by Space 10, sharing at least one place with other people is one of the demands of people,
3. **Temporality** in the shape of families and lifestyles is one of the vital issues, therefore the flexibility of the system should be considered so that people can make changes and make better use of their residential space without being forced to leave or change their homes.

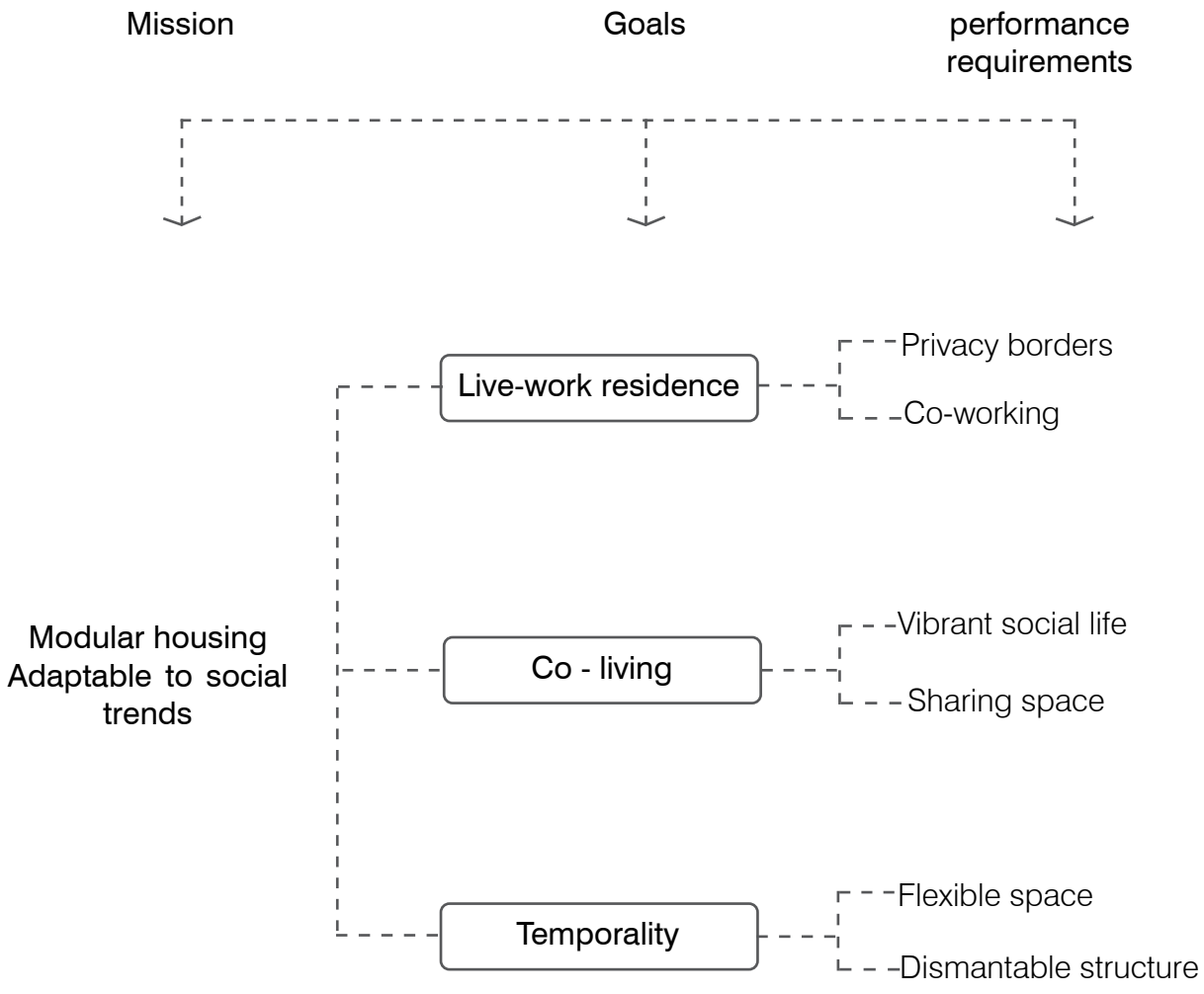
Goals & Questions

Three social trends are reviewed in this report and we need to create a housing system in which people can make the best use of their houses.

1. The main question for the first goal would be: how can we design a dwelling-office space that can respect private borders and improve work productivity?
2. How can we design a flexible space to adapt to new changes in the lifestyles of the residents?
3. Based on the attractiveness of co-living for residents, how to improve people´s social life without disturbing their private life?

Table of Programming

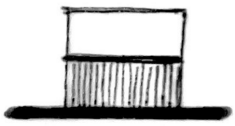
The main goal is finding the most demanding trends and achieving the proper solution for each goal,(In this method, the mission is the main issue, and then we set some goals that help us to orient ourselves in the design process; each goal will bring some performance requirements, and then in the next steps we will come with different concepts for each requirement.)
This table of programming is made with the aid of Donna P Duerk's "Programming Method in Architecture"

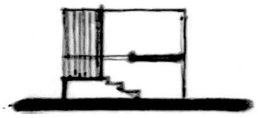


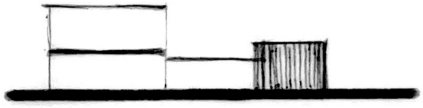
Live-work Residence

The trend toward working virtually and performing work duties from outside the traditional workplace has increased. The universal growth of the Internet and improvements in unified communications (UC), artificial intelligence, and robotics have accelerated more than ever to perform many work-related tasks outside of the normal workplace. (Yasar, n.d.)
By Telecommuting from home people would have flexible time management and freedom of working time. It also decreases the expenses, stress, and loss of time to allocate the preferable time to do leisure activities. (Yasar, n.d.)
While working from home can offer many advantages, it also has downsides.

- The social interactions would decrease which can affect work productivity and It can cause monotony and routine in people´s daily life.
- There are more distractions at home.
- Employers can not control how workers will make use of their time.
- The social interactions between colleagues would decrease.
- Since work and life are integrated, it implies serious impacts on private life by fading the border between working and dwelling time. (Yasar, n.d.)







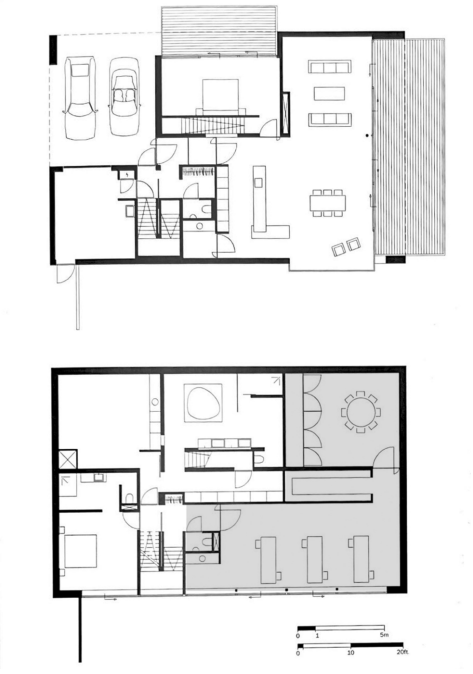
Live-work Residence

Privacy Borders

Combining the house and work space can cause some privacy issues. There are several ways to cope with this problem. One of the effective ways that are mostly used, is dividing these two sections, either in one or in separate levels. Based on the house size, the solution would differ. For smaller houses, splitting the level or using dividers offers more flexibility while in bigger houses working and living in two different levels would be more pleasant. (Friedman, 2013)

By dividing working from living space the perfect way is to have separate entrances. An independent entrance helps us to have the maximum separation. An important factor that architects should consider is that, if the working space is accessible to others without disturbing the privacy of the owner of the house, then the owner would be motivated to share or rent his workspace with others. (Same, 2013)

Intexture Live-work Studio
Intexture Studio



House S,
Grosfeld van der velde Architects

Live-work Residence

Co-working

Just as at home, factors can cause distraction and reduce efficiency, in the same way, being away from people and diverse spaces and not interacting with others can cause monotony and reduce productivity while Social interactions with colleagues or new people can boost our creativity. Some design considerations should be taken to have an Independent live-work environment, allowing different people with different jobs and duties to use the place. (Yasar, n.d.)
One of the main challenges in sharing a workplace between different types of careers is the flexibility and inclusivity of the place. light, noise, and circulation are some of the main factors that are defined by the number of users, type of job, and resident preferences. (Friedman, 2013)

Temporary life styles

Flexible space

Last decades, the amount of single residents has increased and children prefer to live individually as soon as they are economically independent, especially in northern Europe, most students can afford to live alone or with their partners since they enter university. Since children leave their family homes, some rooms get empty to be rented out to other (mostly international) students which may cause some privacy inconvenience.

By Modularity, using the dismantlable structure and standardizing the spaces, we have more freedom to change the space, both functionally and structurally.

In order to have a flexible architecture we consider modular architecture as an efficient solution.

Since modular building panels are designed and attached separately, they are highly flexible and can be removed and replaced over time, whether you want to change the arrangement of your house or need to replace a damaged part.

For instance, if you want to add a room for newborns or change the bedroom of a married child to a living room, playroom, or kitchen, you can do it easily if you have used modular architecture.

In addition to flexibility, modularity provides us with more advantages, such as fast construction, precise dimensions and joints, minimal disturbance, and Undoubtful durability.

This system also enables the lowest environmental footprint in two ways. Firstly, by using recyclable and ecological materials during construction time, secondly, prefabricated parts are energy efficient and fit together precisely, so we will have less trouble saving on heating and cooling. (Modular Architecture, Why Should It Be Chosen? n.d.)

Temporary life style

Dismantable structure

One way to have a flexible layout is to design a structure that requires little or no internal load-bearing support (Friedman 2002). This is a solution for having an adaptable design that has the possibility to be changed, removed, and replaced. A modular system always has been a solution to have a flexible structure system. (Gopinath, 2021)

Prefabrication and modularity are inextricably intertwined. Prefab provides us with some useful advantages in construction:

- High work speed,
- Protection,
- Lower labor costs,
- Sustainability and quality,
- High-energy performance,
- Construction possibility regardless of hard
- the weather conditions,
- Less Material waste,

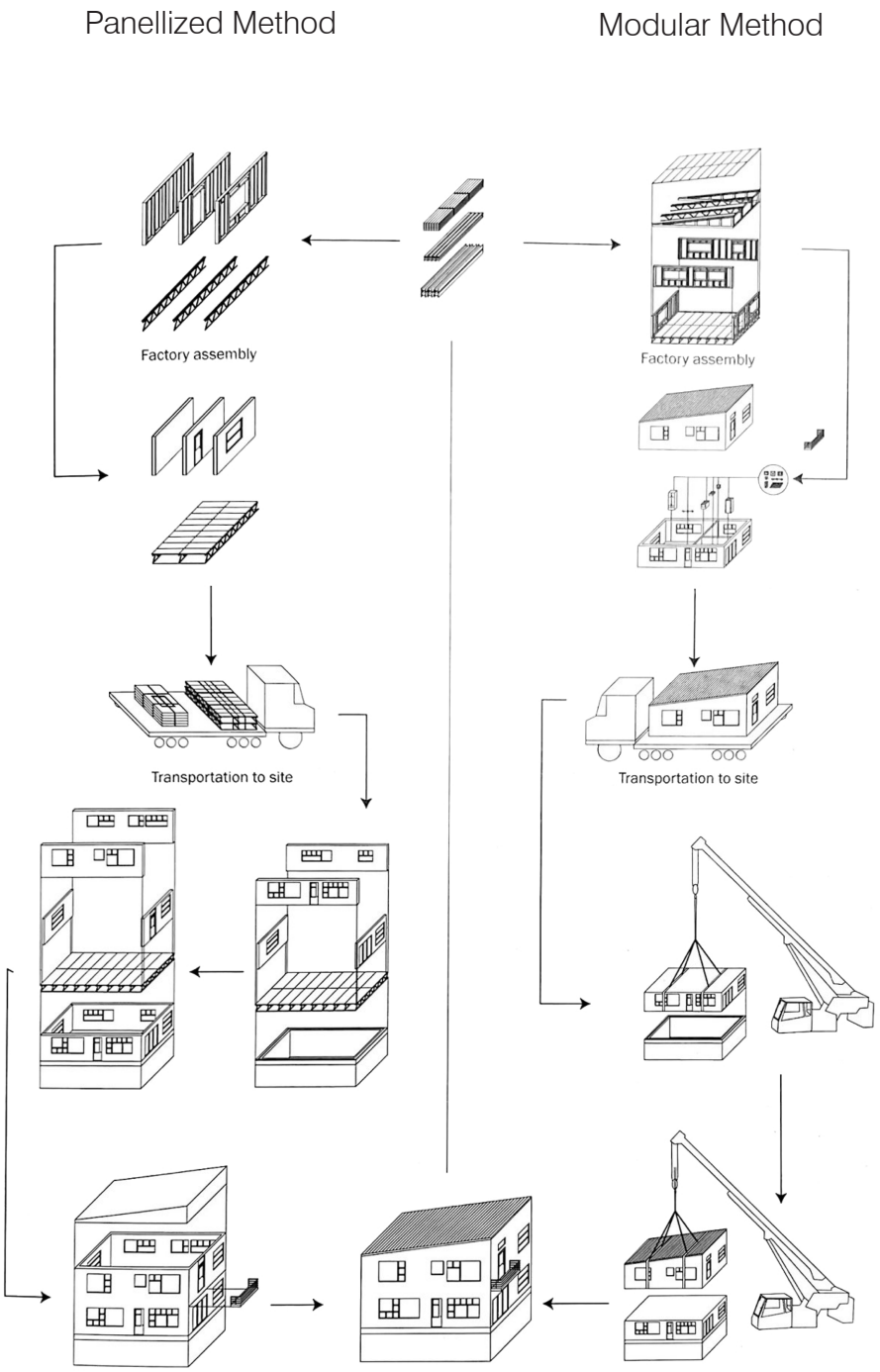
Prefabs have three main types:

1.Modular Housing,
A modular house is designed and built in a factory in a few main sections and then they are moved to the site. High speed of construction and consistent quality are the main prons. (Gopinath, 2021).

2. Manufactured housing
Manufactured housing is compeletly constructed in the factory and the structures are not easy to distinquish from their site-built counterpart. Entire house is shipped to the site and placed on a permanent foundation. Manufactured housing is persistent, pleasant and a suitable form of affordable housing.(same, 2021)

3. Prefabricated components
House elements are designed and built individually and then they are attached on site, more flexibility in design, freedon to use different materials, affordability and energy efficiency are the positive aspects of using prefabricated components. (same, 2021)

Prefabricated dwellings



Prefabricated dwellings-Avi Friedman, Innovative Houses,2013

Co-Living

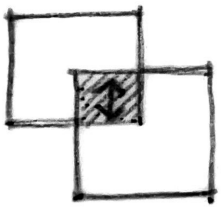
Sharing Space

Based on the research that was launched online by Space10, more than 14000 people from 147 countries have responded and, so far, every single person would like to share something with others. There are a couple of reasons that shared living attracts people:

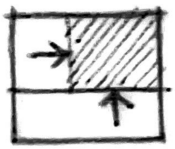
- Socializing is the biggest benefit of sharing spaces with neighbors.
- Since single occupancy is being more common in different countries, with different incomes, people have less sense of community.
- The majority prefer to live with people of different backgrounds and ages.
- The number of old generation has increased which needs the young generations support with respect to the privacy every one.

According to the survey most people prefer to be part of the smallest possible community between 4-10 occupants. As an exception, families with children prefer bigger communities of 10-25 residents. (Welcome to One Shared House 2030: This Is How You Designed It | SPACE10, 2018)

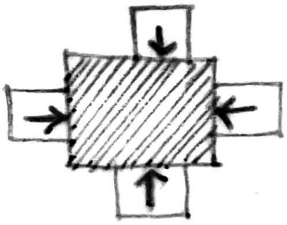
There are some concerns about shared living. Regarding the responses to the survey, the main concern is that shared living would cause a lack of privacy. The survey expresses that the majority prefer to have private and shared spaces with defined terms of use.
Lydia Choi-Johansson says that ‘people need a balance between ‘my space’, ‘your space’, and ‘our space’. Such findings indicate that we will always have a great desire for control over our space and things.



Sharing a space without borders



Sharing a separated space between neighbors



Connecting to a central shared space

Different ways of Sharing

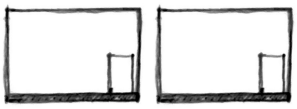
Co-Living

Multigenerational Living

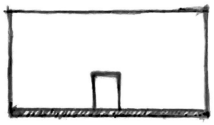
In the quest for housing innovation, looking back for inspiration is always valuable. The re-introduction of traditional living arrangements in response to current needs is a precise definition of multigenerational dwelling. (Friedman, 2013)

Based on the World health organization(WHO), Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%, while fertility rates have dropped. This large change place a burden on the younger generation who will have to support their older family members while taking care of their own children.

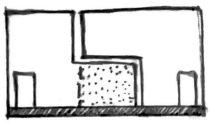
Multigenerational living has some precious impacts on both the young and old family members, On the one hand, the grandparents would be good assists in raising the children and parents are able to devote more time to their life and career. On the other hand, the Old generation would have a sense of responsibility and purpose. This kind of living has some downsides, the traditional ways of designing these houses would not fit current lifestyle demands and families feel a sense of lack of privacy.
The family units need separation to provide both side privacy. Independent units with separated entrances make future changes possible. Sharing the terrace or a living room will create a connection between houses without disturbing each personal space. (Friedman, 2013)



Young and old generations as neighbors without connection



Young and old generations living in a bigger house with no privacy borders



Young and old generations as neighbors sharing space

Design key moves

Concrete decisions:

After figuring out the most common social trends and classifying the imformation is time outline our approaches through the research and redefine the meaning of each topic in our point of view.

1-Live-work residence

The main issues about this trend are respecting privacy borders and co-working to increase work productivity. Therefore in this part, types of office dwellings were classified and some decisions are taken for the design.

decisions:

- Having separate spaces in two directions(upper or lower level or connected | attached to the living area) with separate entrances
- Possibility of sharing the office with a limited amount of people

2-Temporality

Rapid changes in shapes of living need a flexible housing design. In this project, by reading more about dismantlable structures and learning about different ways of prefabrication in addition to using the spatial feature of modularity we try to find a proper solution for temporality

decisions:

- Modularity is a good assist to design a flexible residential space
- Among different ways of prefabrication, prefabricated elements are the best choice for this project in order to increase flexibility, compared to prefabricated houses like containers.

3-Co-living

Co-living has several aspects to discuss, relying on the online research done by Space 10, sharing at least one space with others in a small community with respect to privacy is the main topic in this attractive tendency among people.

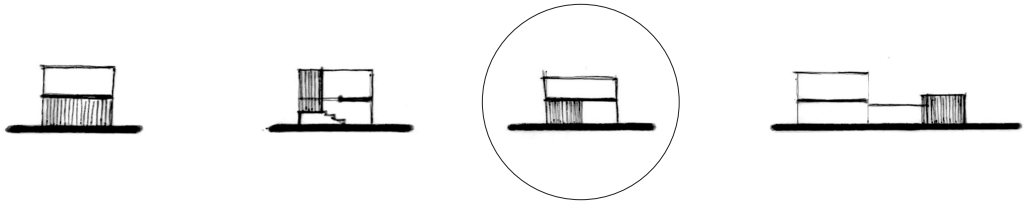
decisions:

- Making small neighborhoods inside a bigger community by adding extra spaces a least between two families to share like small gardens.
- Respecting privacy by designing the proper relations between private and shared spaces.

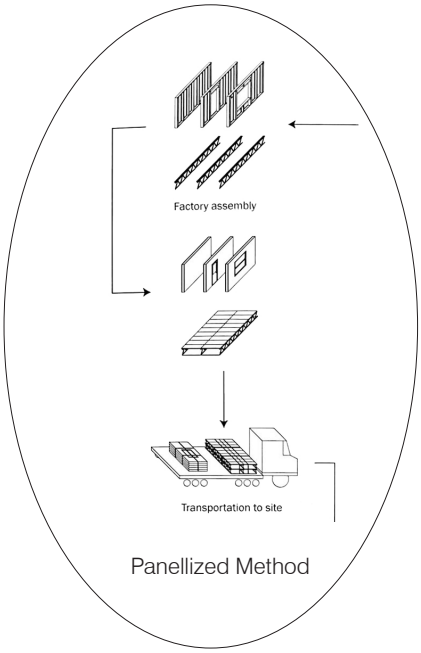
Design key moves

Summery:

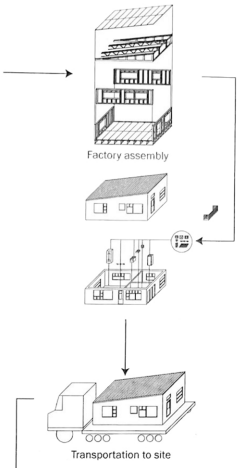
1-Live-work residence



2-Temporality

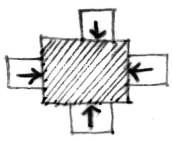


Panellized Method

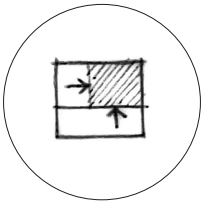


Modular Method

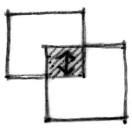
3-Co-living



Connecting to a central shared space



Sharing a separated space between neighbors



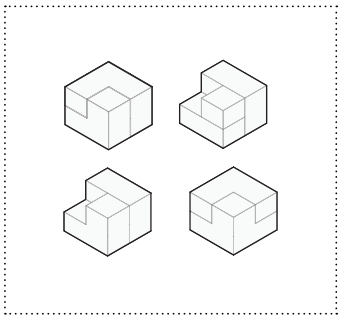
Sharing a space without borders

Part II | Process

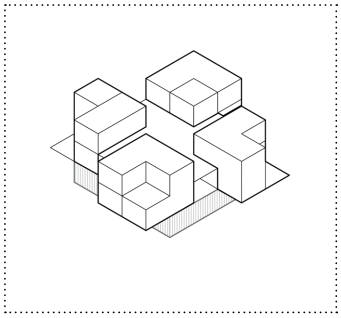
In this part, the Main focus is on creating a system following three main goals of the thesis, generating arrangments of houses, which are flexible, possible to work and dwell in without disturbing privacy, and sharing in clusters(neighborhoods) in different scales.
So the process line is:

- *Figuring out the house combinations and relations between spaces. (modular spaces)*
- *Categorizing houses into 4 different types*
- *Clustering house types in small neighborhoods and making alternative clusters.*
- *Programming the clusters and possible arrangements*
- *Finding out possible expansions*
- *Defining the adaptability of clusters in different neighborhoods*

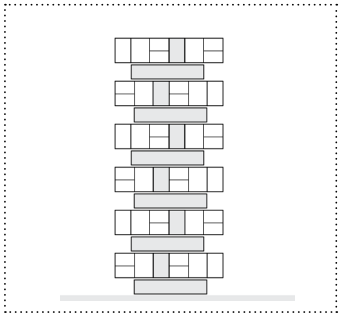
Main topics in part II



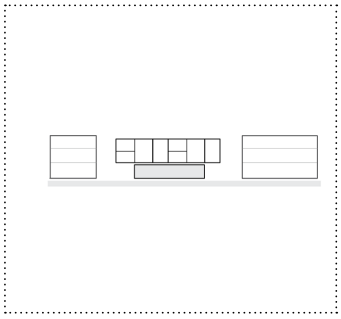
Combination of houses



Cluster arrangements



Expantion of clusters



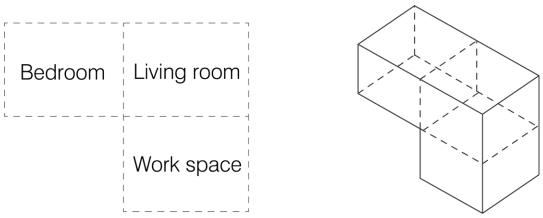
Adaptability

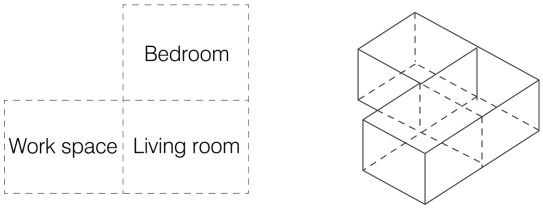
Basic Modules and features

Live-work residence

Important Considerations:
- Privacy Borders
- Co-working

Having adjasent modular spaces and having defferent entrances or seperating the spaces in two levels protect the privacy and allow the owner to rent or transfer the room to the house assosiation without disturbing the living space arrangments.

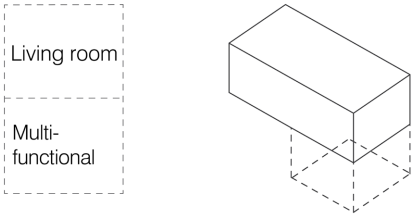


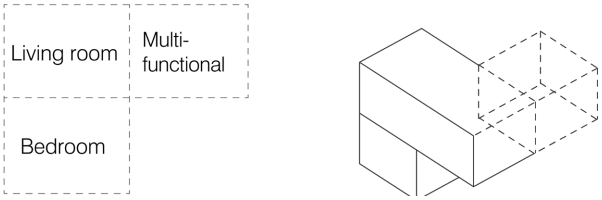


Temporality(flexibility)

Important Considerations:
- Dismantable structure
- Flexible spaces

This arrangment also let the people to use their spaces based on their current needs,like renting out or having a seperate work space and sharing it with others.

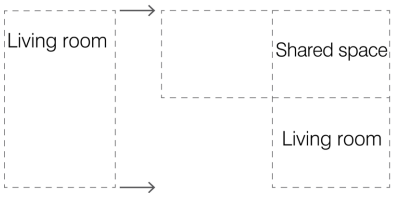


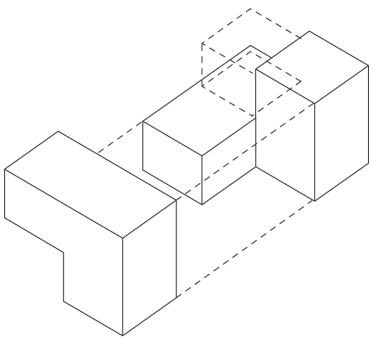


Co-living

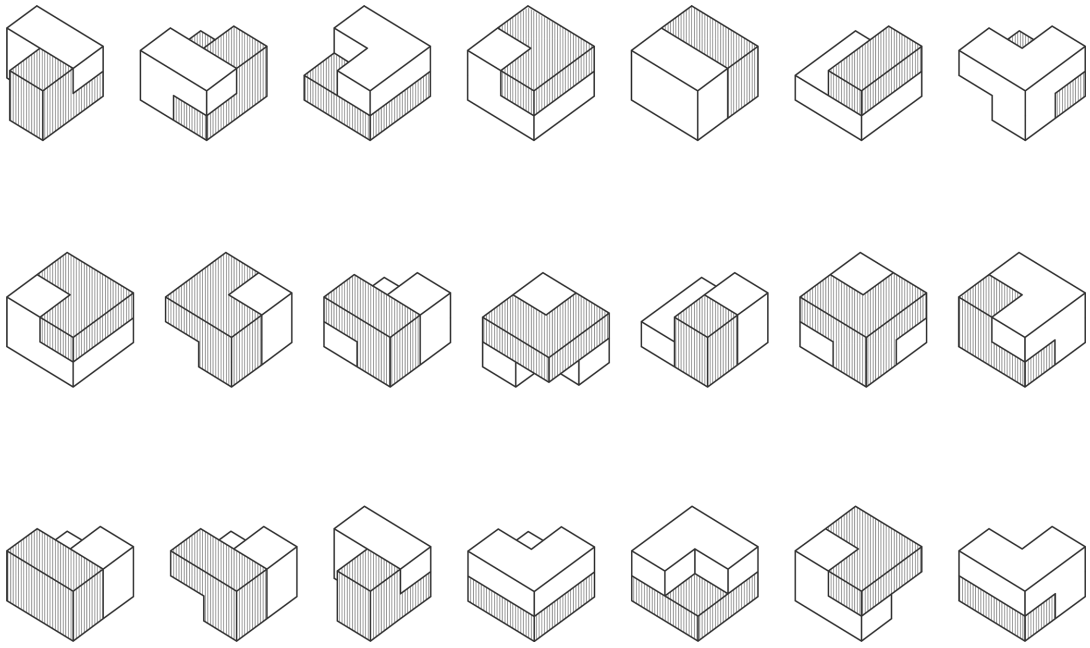
Important Considerations:
- Shared spaces
- Multi-generational living

In order to have small neighborhood combining the modules create some spaces with high quality like a yard or green house that people can share it with out any interfering their private life.

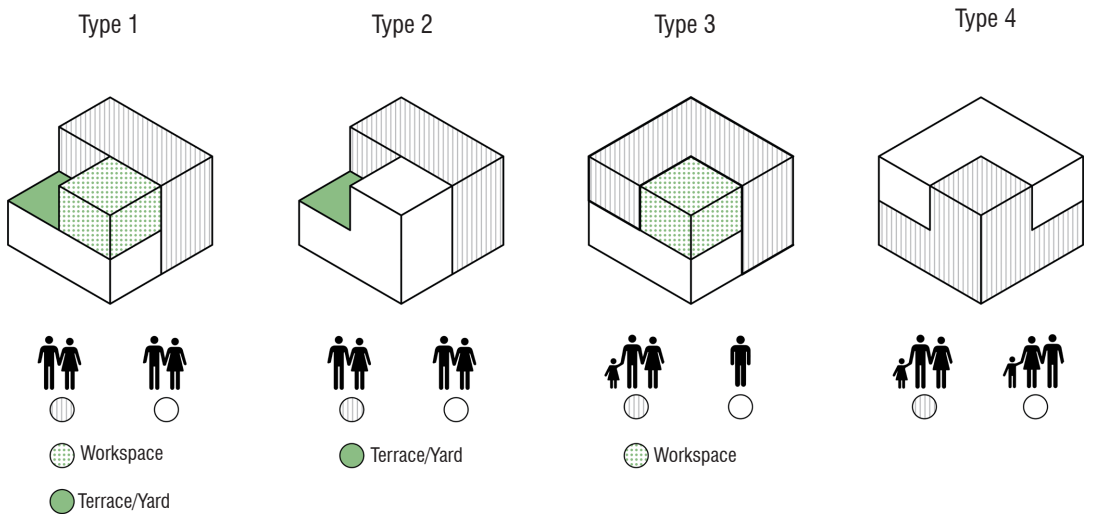




Possible Combinations



House Types



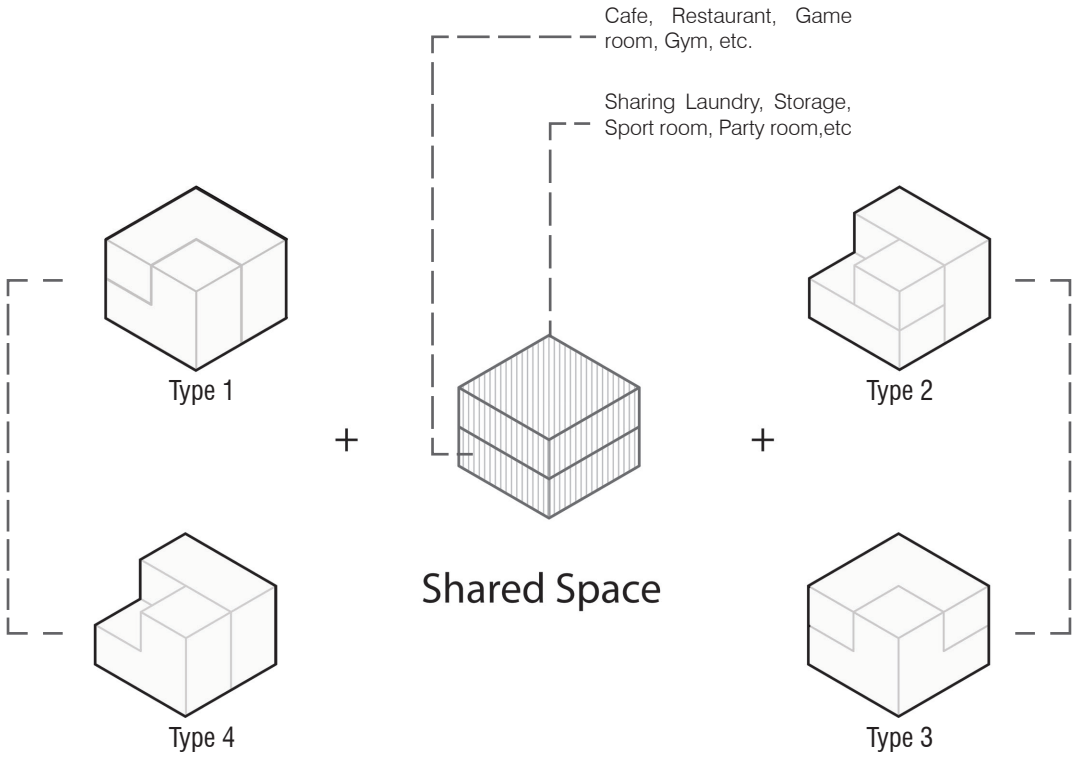
2 families - sharing a work space and a yard

2 families - sharing a yard

2 families - sharing a work space between them and other neighbors

2 families - no sharing

Social Clusters



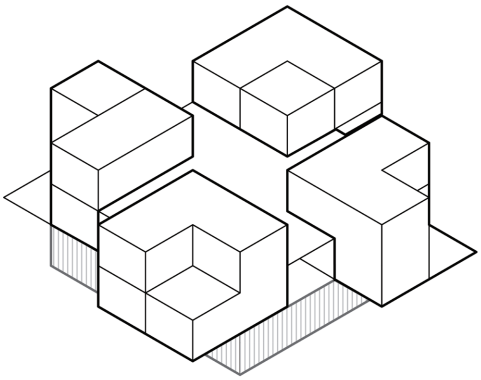
A cluster includes:

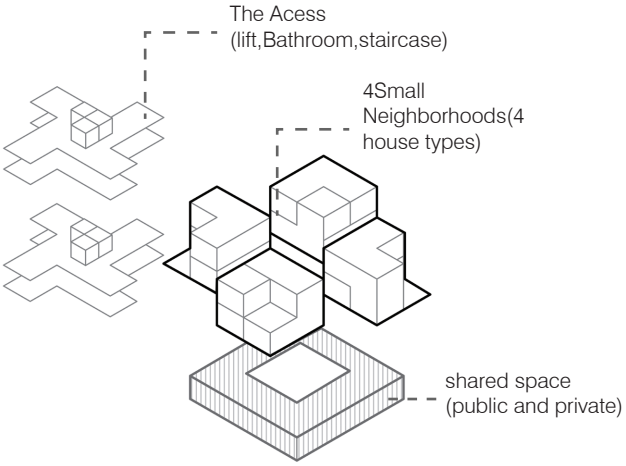
1. 4 small neighborhood|types (8 houses - 2 workspaces - 2 yards)
2. Shared space for residents
3. public area including other neighbors

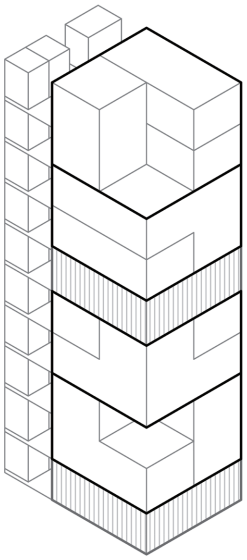
Each cluster has 3 parts including 4 small neighborhoods (Each small neighborhood includes 2 houses with around 16 people). Four small neighborhoods are sharing two workspaces and two yards between themselves. On a bigger scale, the cluster has 2 shared sections, one is more private and only for residents including laundry, sports room, etc, and the public section like cafe, gym, etc, which can add quality to its bigger neighborhood.
Categorizing houses into four different types provides us with high flexibility in arranging the clusters. Based on different requirements in one cluster, we can use different house types without following the default cluster set.

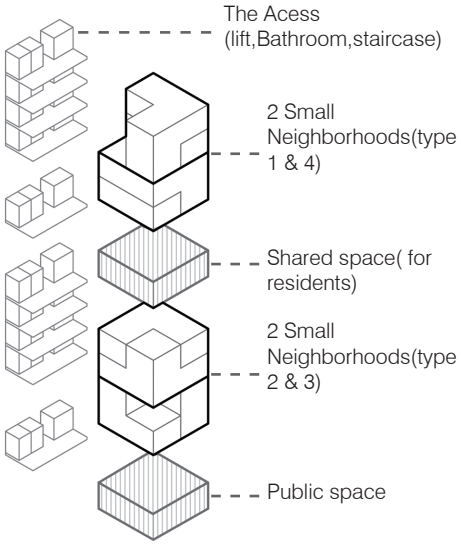
Social Clusters

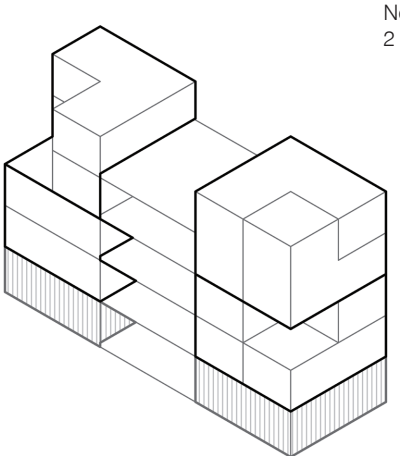
Possible Arrangments

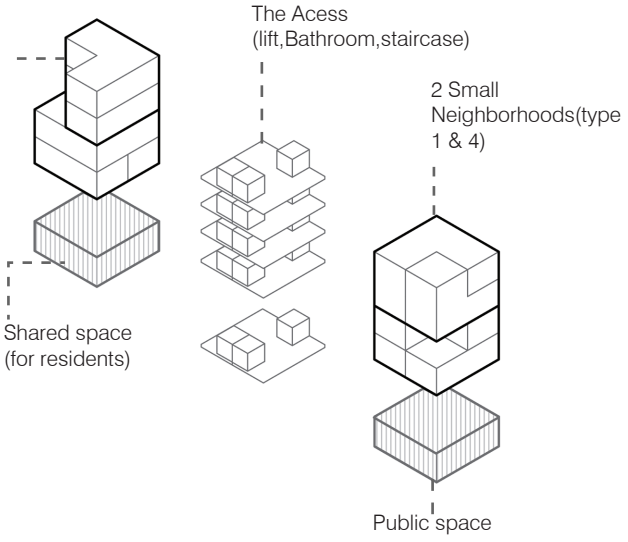




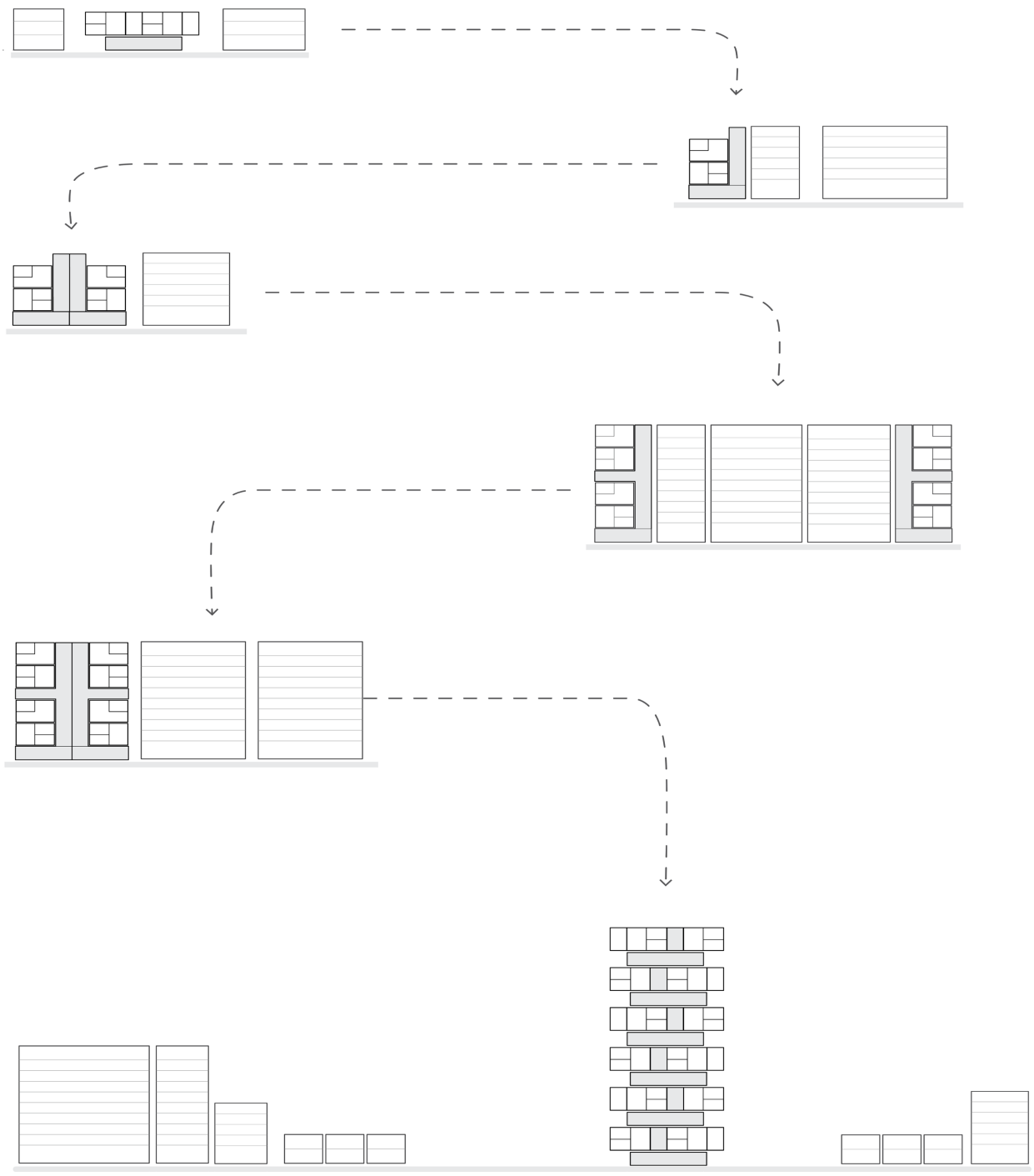








Expansion Possibility

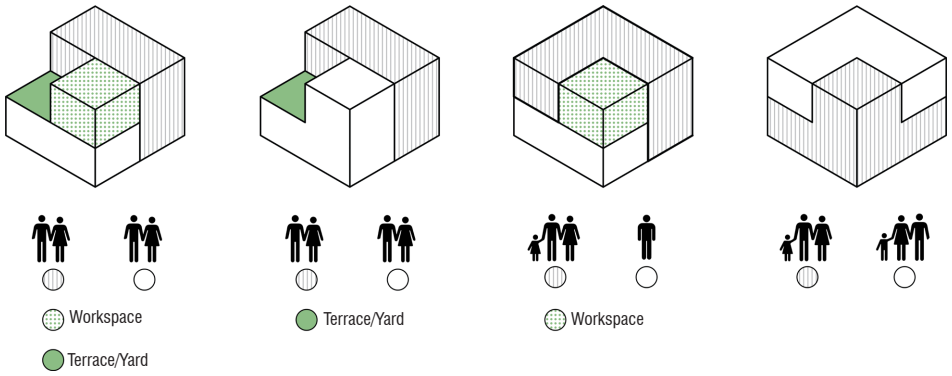


Flexibility in arranging the clusters and possible expansion vertically and horizontally make the residentioal building adaptable to its neighborhood with different skylines.
Various public spaces on ground floors can afford the social requirements of the context.

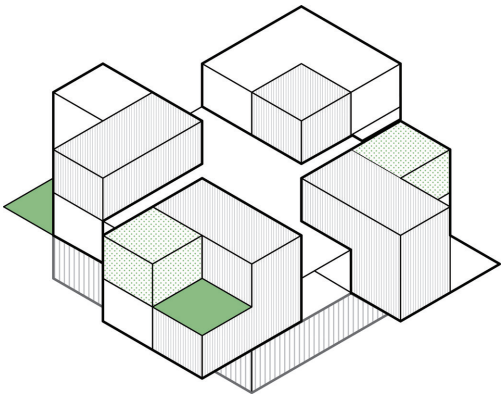
Design key moves

Summery:

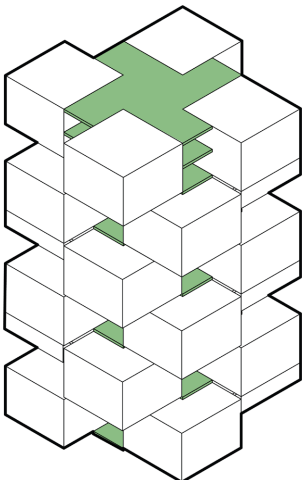
1-Four different house types



2-Social Clusters



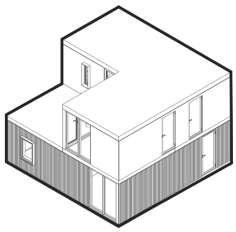
3-Vertical expansion



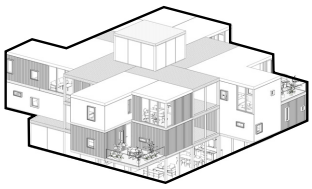
Part III | Design

In this part, the Main focus is to design four types of housing combinations and figure out different arrangements of clusters to see the relations between core, houses, and shared spaces, and choose one cluster to expand vertically.

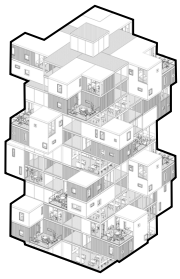
Housing Combinations



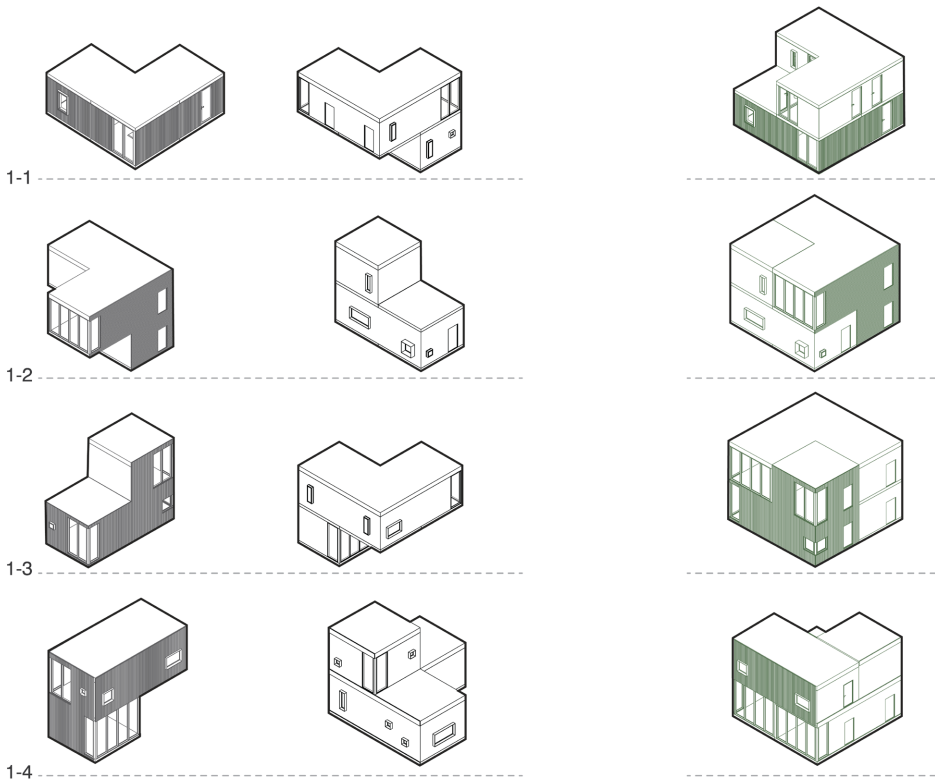
Clusters



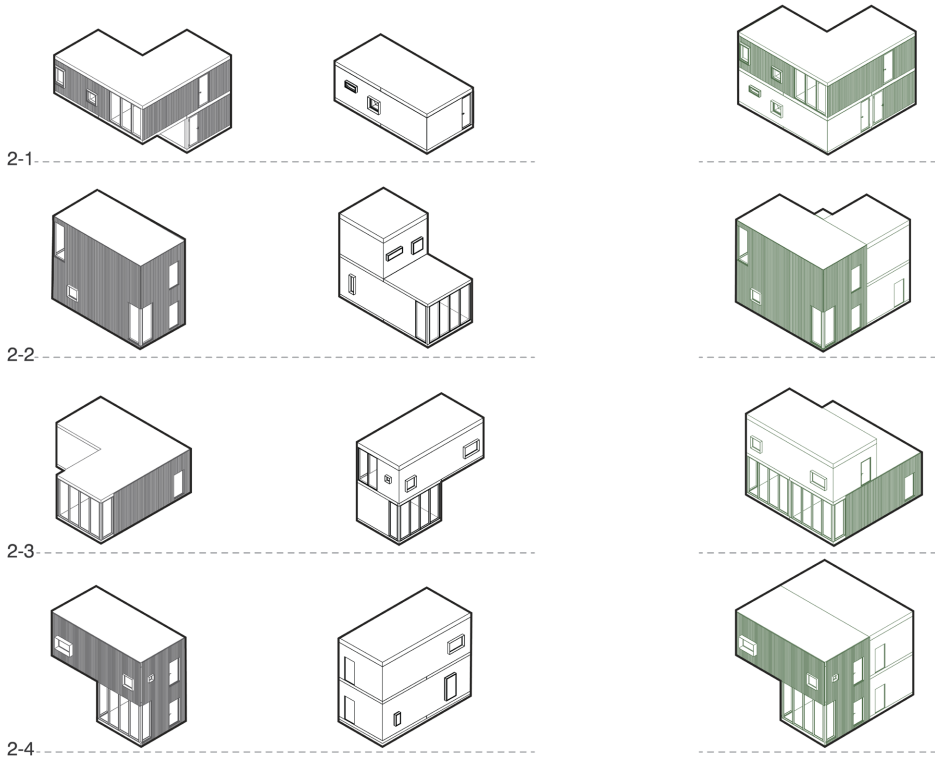
Highrise



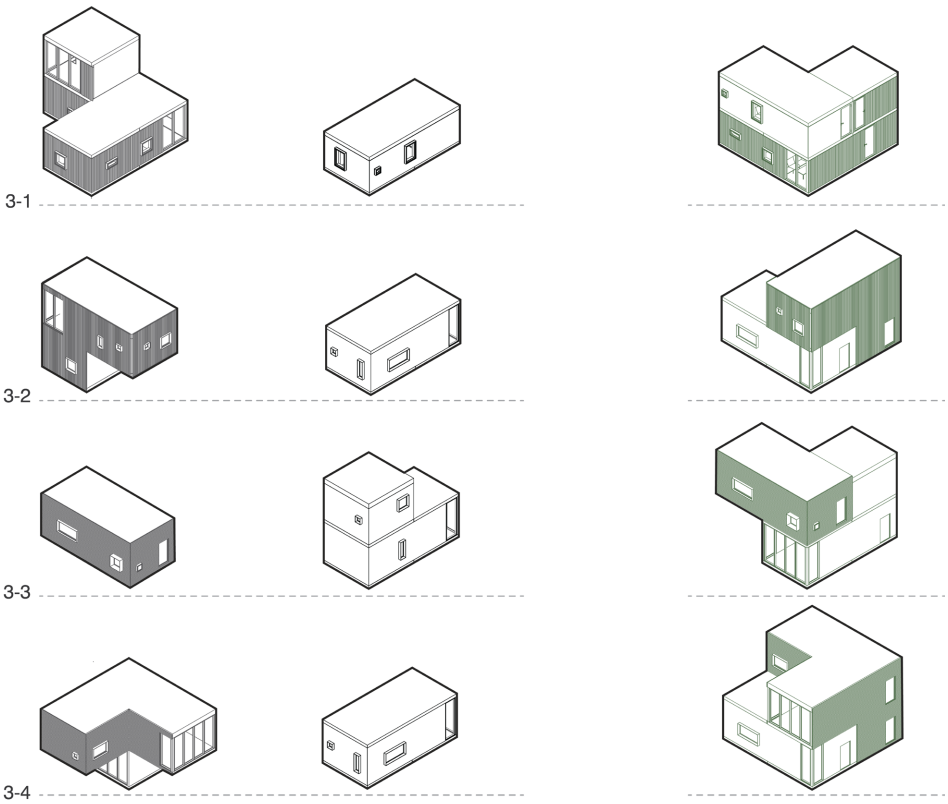
Type 1: Sharing Workspace and Yard/Terrace



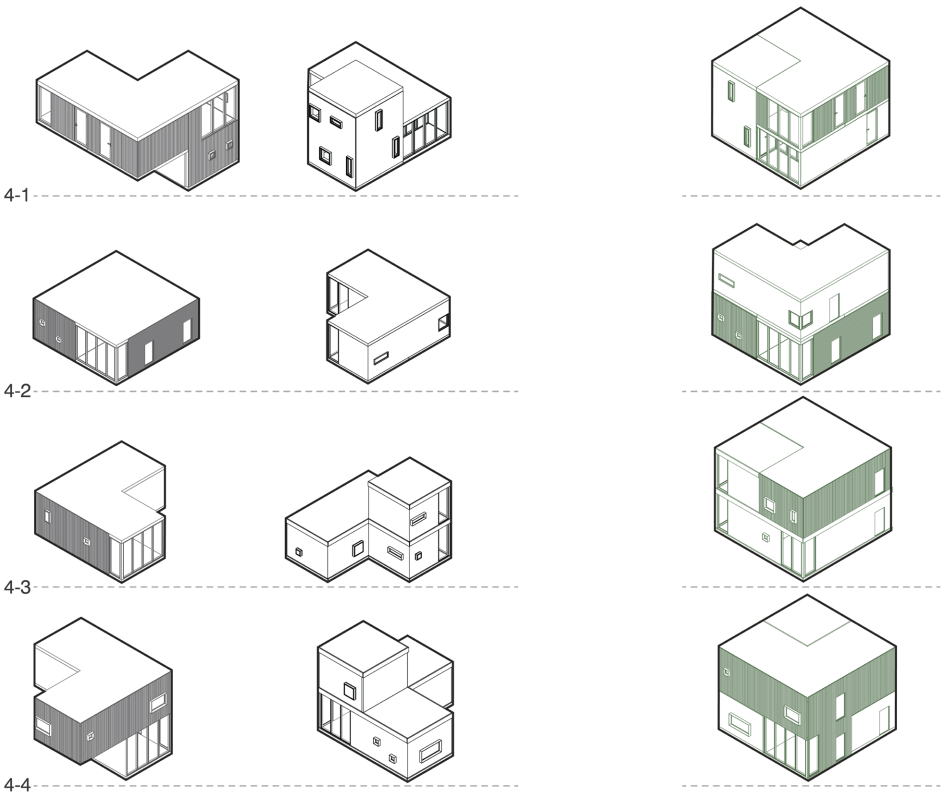
Type 2: Sharing Yard/Terrace



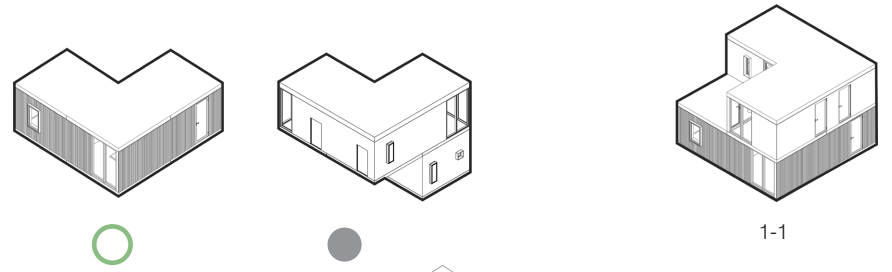
Type 3: Sharing Workspace



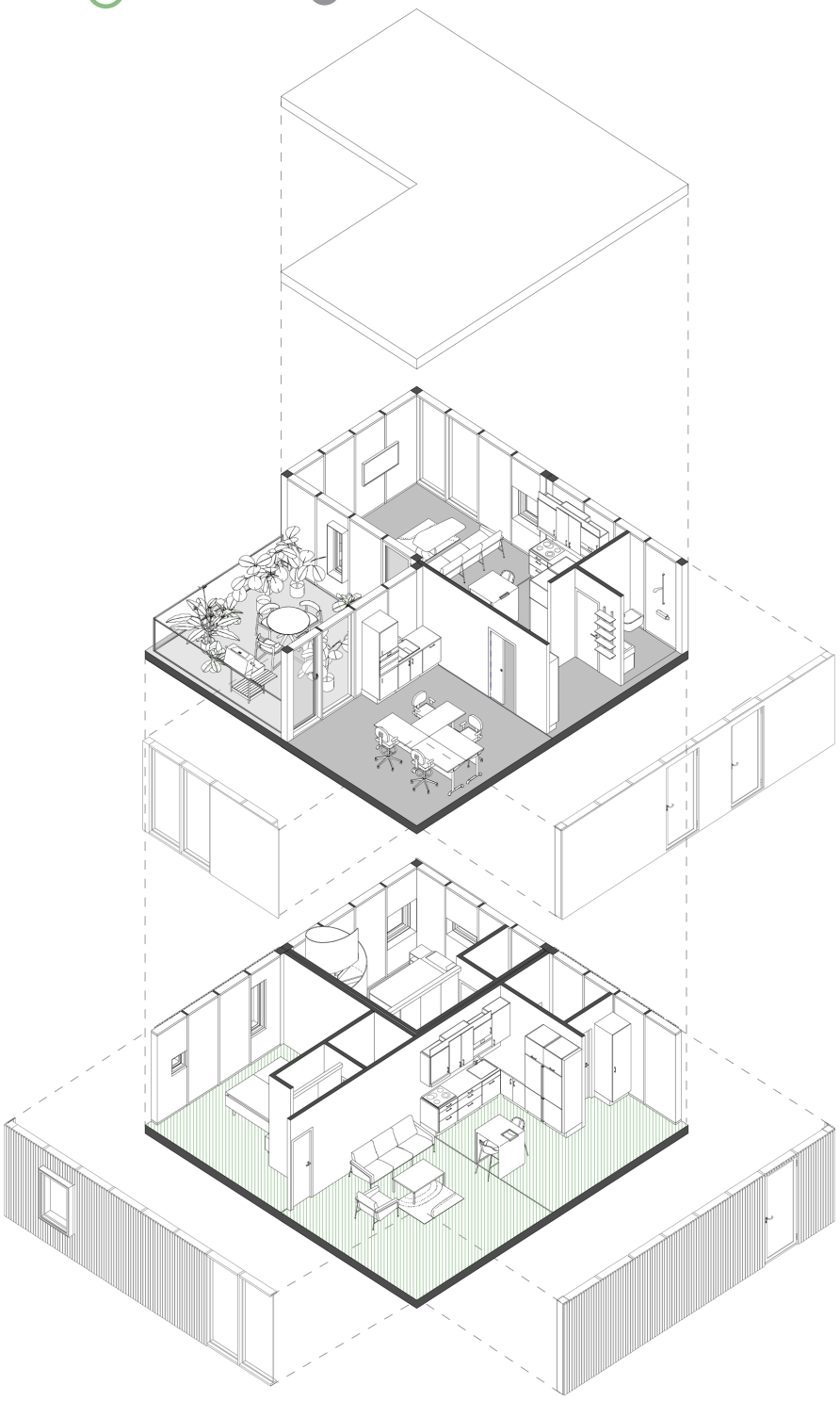
Type 4: No sharing



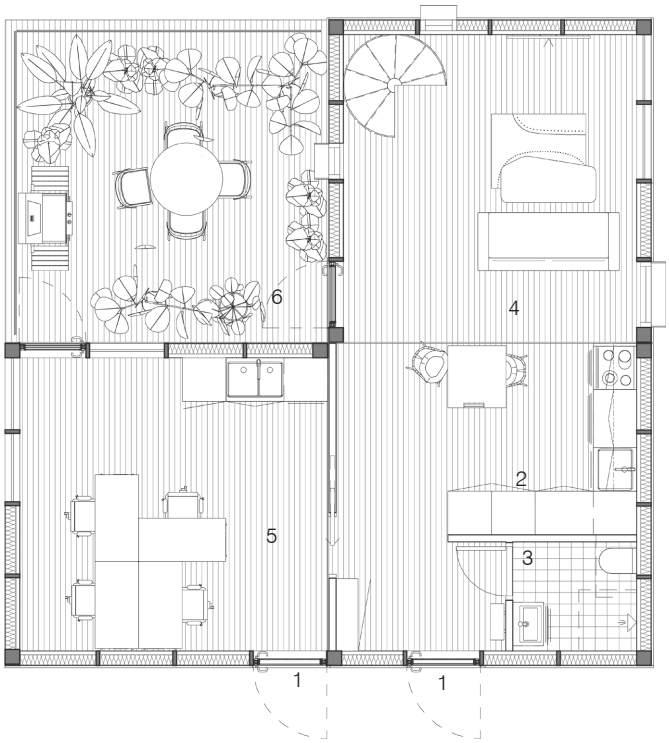
Example of House Type 1: Sharing work space and yard| Terrace



1-1



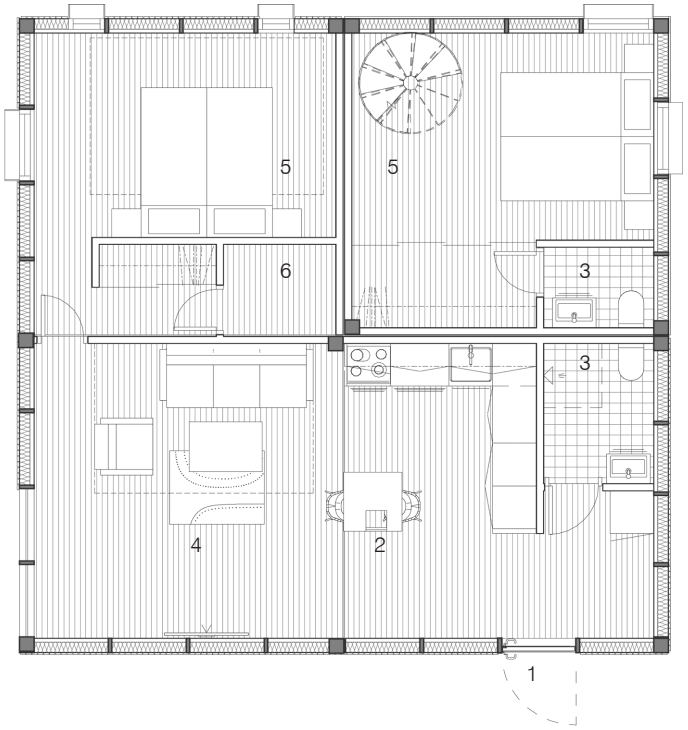
Example of House Type 1: Plans



1. Entrance
2. Kitchen
3. WC
4. Living room
5. Work space
6. Yard

Considerations:

Work space has a separate entrance as well as having access from inside, so the owner can share it with others with respect to his privacy. This Space can also change to the owner's current needs.
Access thorough the yard does not disturb anyone´s privacy.



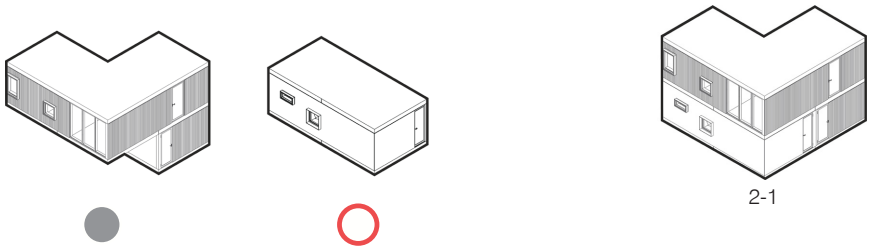
1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Storage

Considerations:

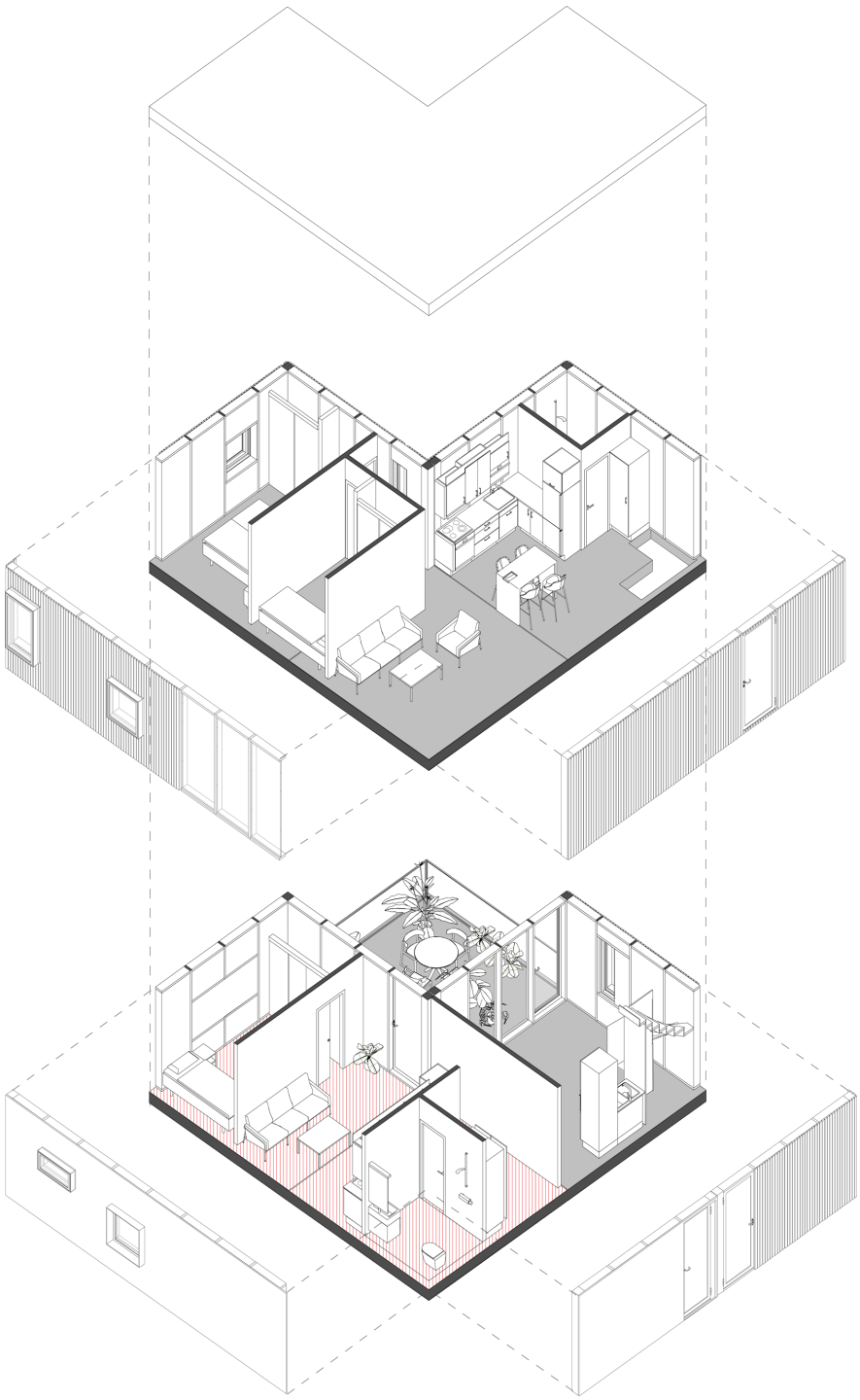
Since these two families are sharing a workspace and yard, privacy is an important issue, so there is no access to private spaces for each family by locating bedrooms as far as possible from shared spaces.

Sc:1:100

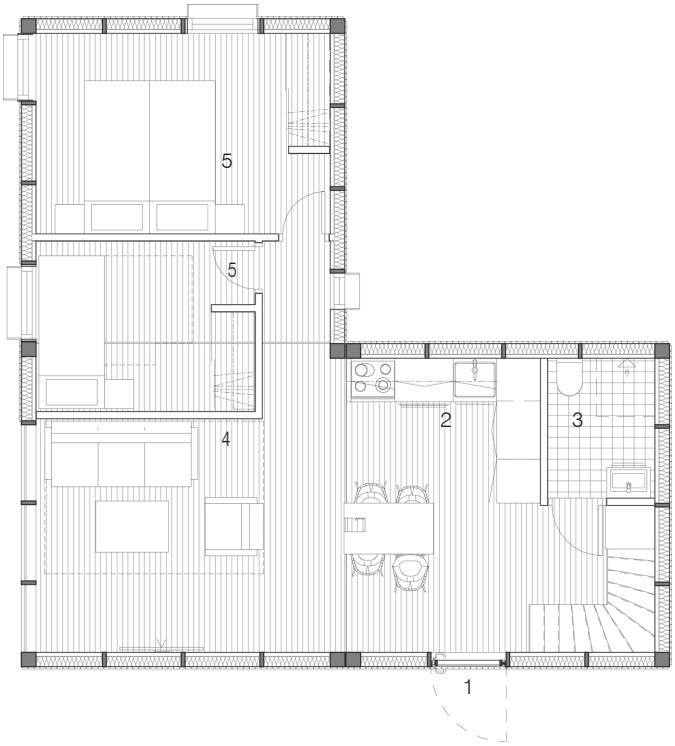
Example of House Type 2: Sharing yard | Terrace



2-1



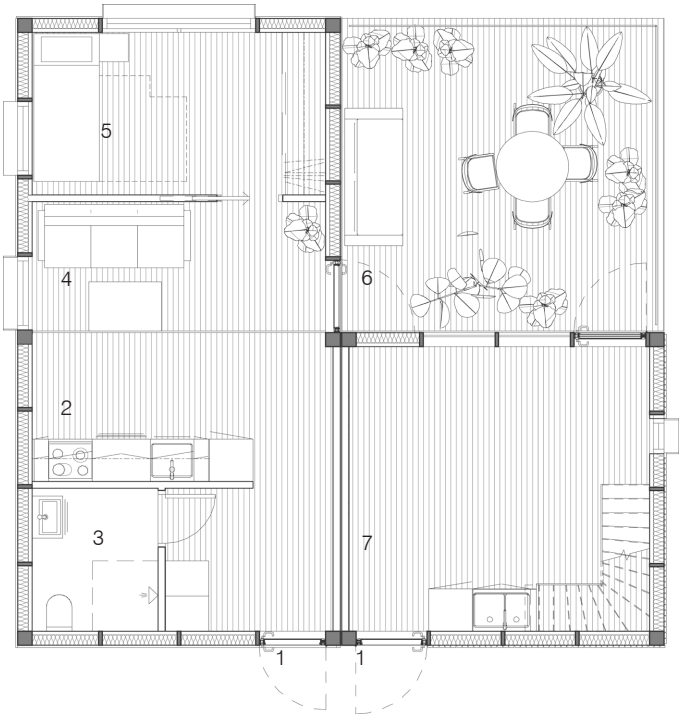
Example of House Type 2: Sharing yard|Terrace



1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom

Considerations:

The essential living spaces are located on one level and shared spaces and multi-functional rooms are located on the lower level.



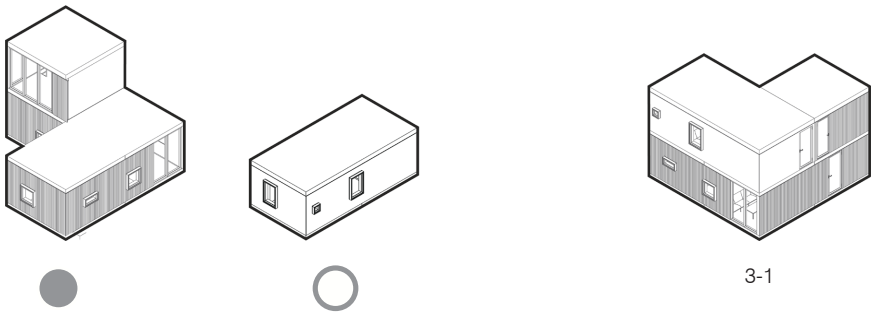
1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Yard
7. Multi functional room

Considerations:

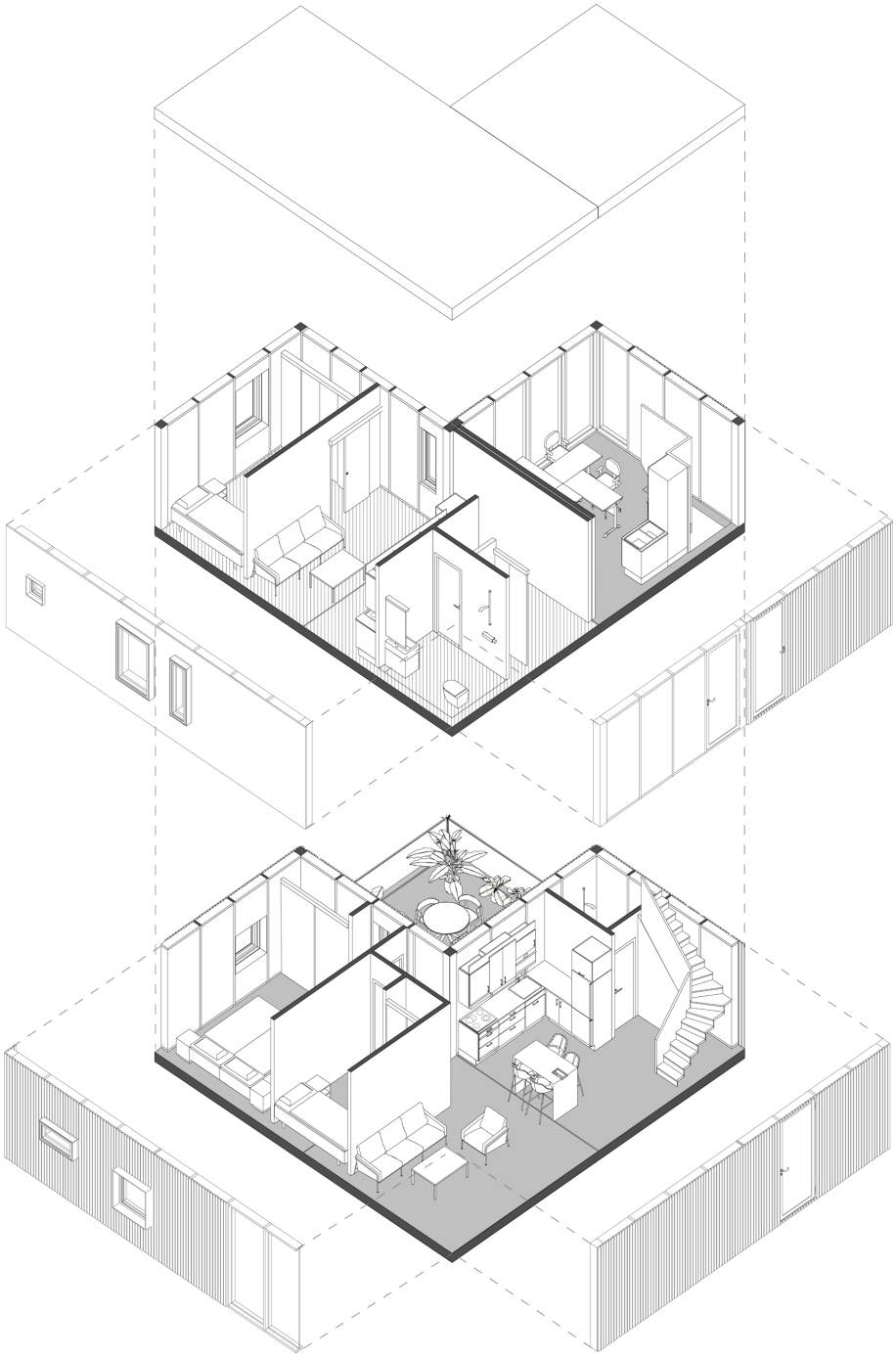
Two houses are sharing a yard and this yard is adjacent to the living room and multi-room. This type of housing would respond to multi-generational living. Grandparents and the children live together while they have their own privacy.

Sc:1:100

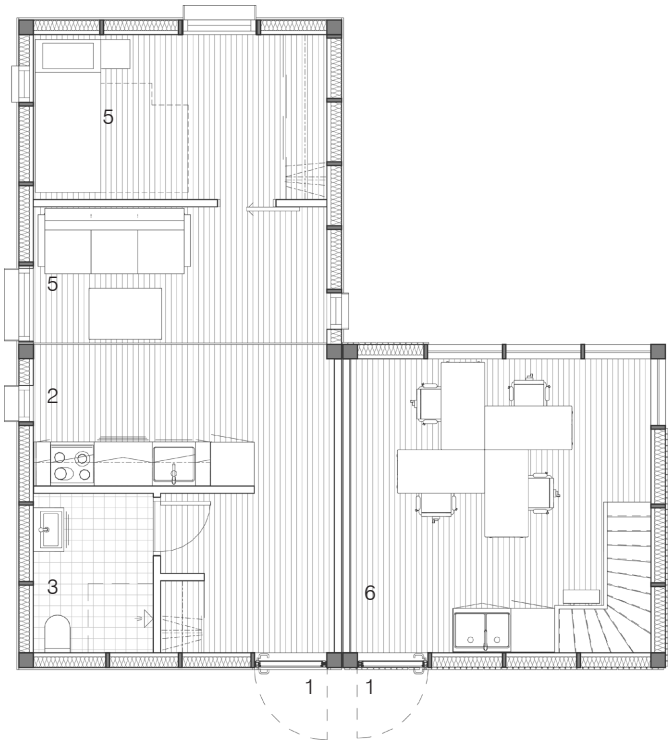
Example of House Type 3: Sharing Workspace



3-1



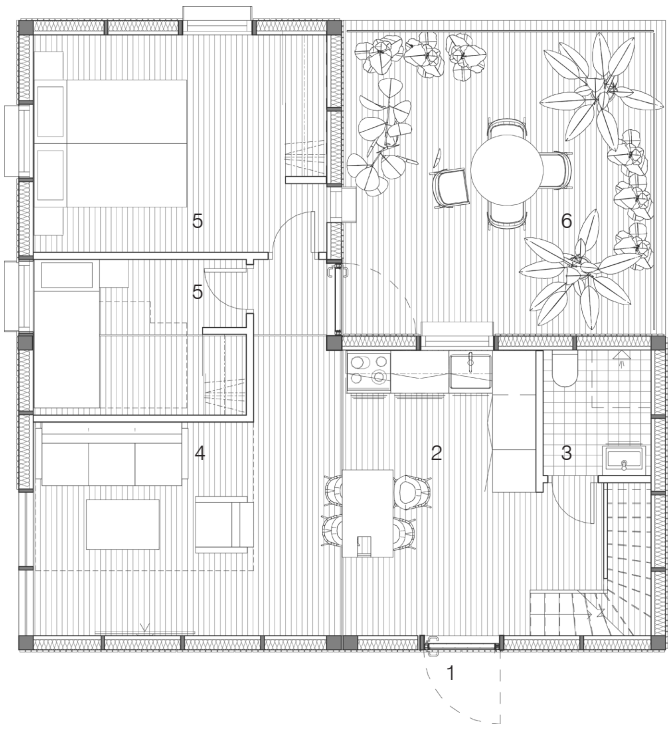
Example of House Type 3: Plans



1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Work space

Considerations:

Work space is located on a separate level so the owner can share or rent it without disturbing his own privacy.



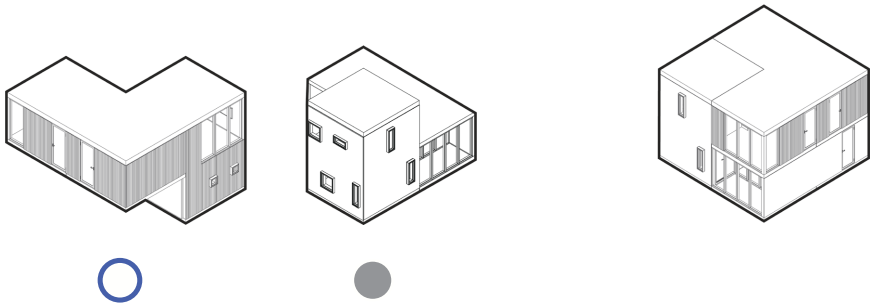
1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Yard

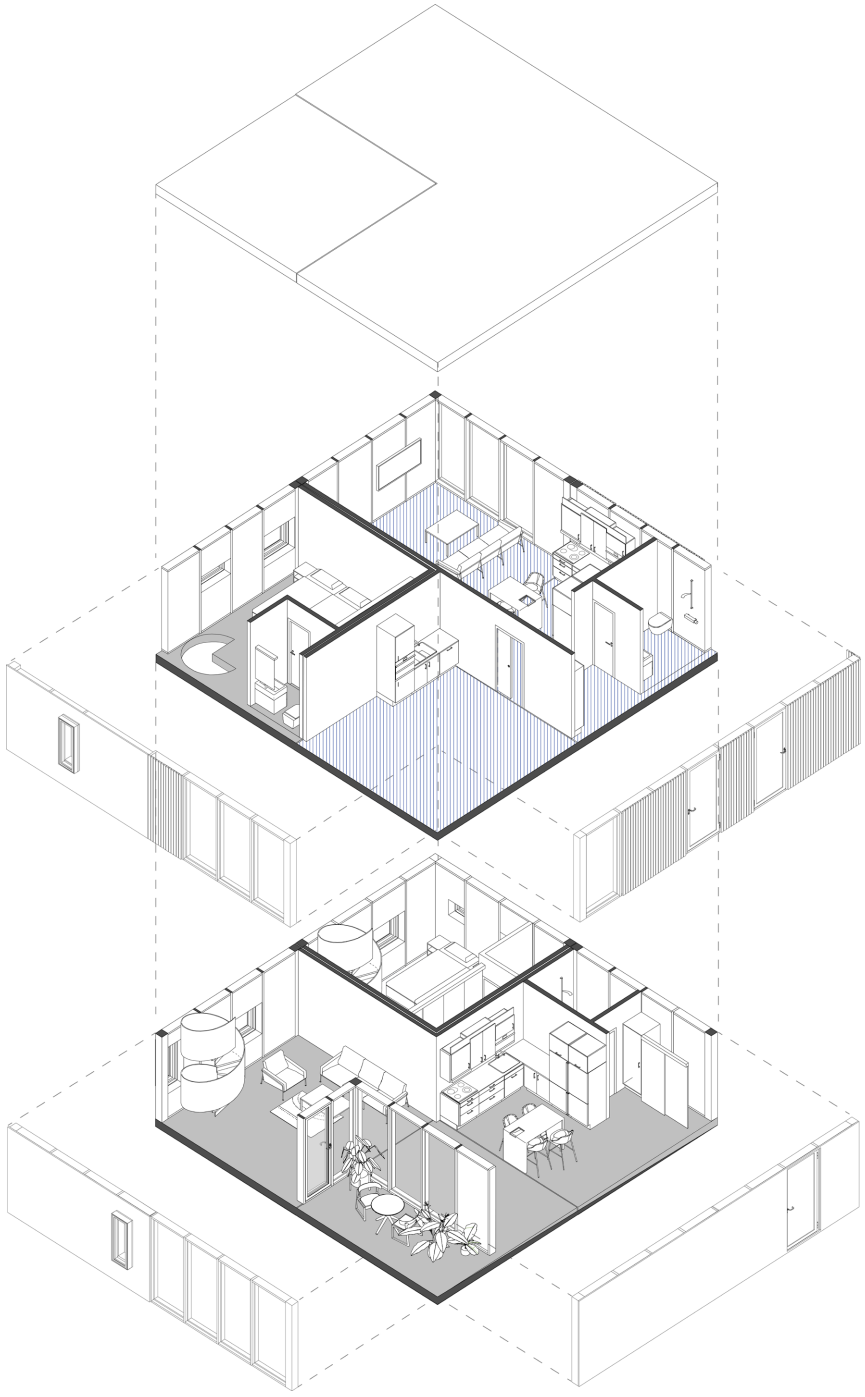
Considerations:

Access to workspace is by stairs which create a proper separation between life and work.

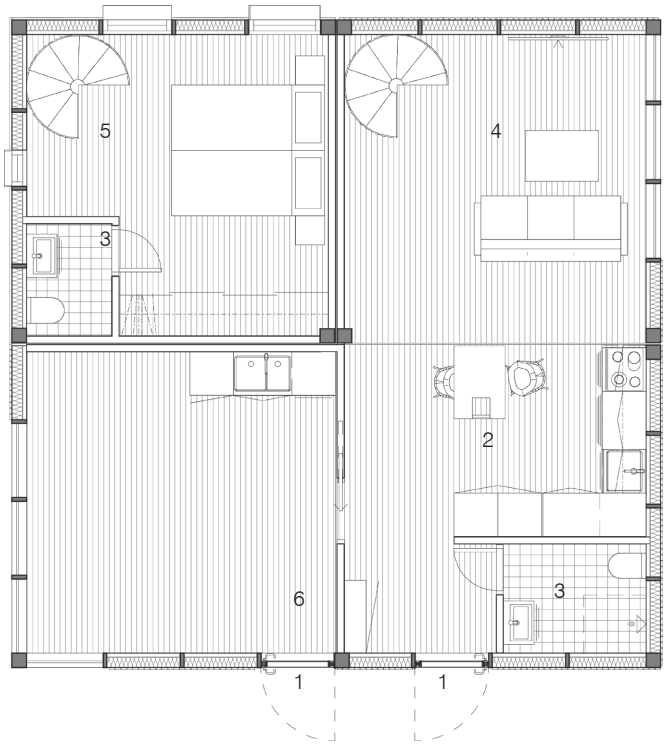
Sc:1:100

Example of House Type 4: No shared space





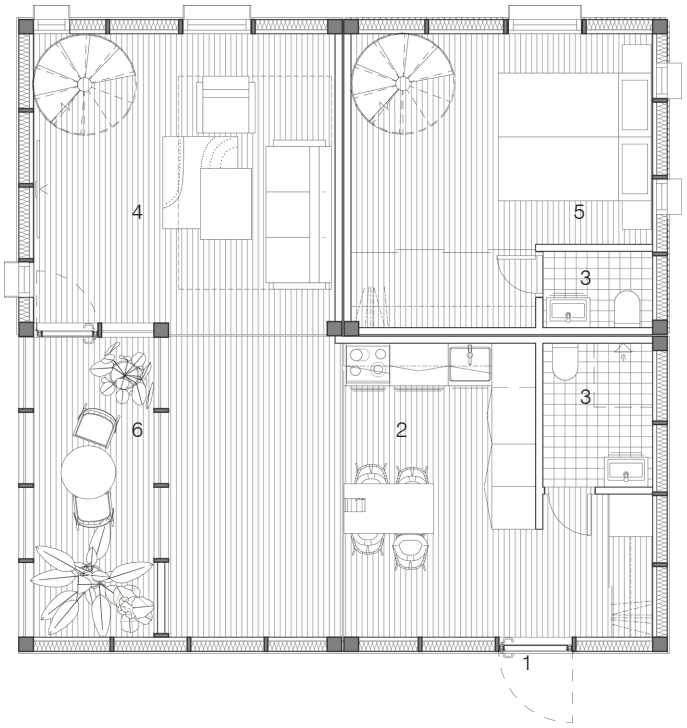
Example of House Type 4: Plans



1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Multi functional room

Considerations:

The multi-functional room has a separate access from outside(core), making it more flexible, This space can be rented out, can be used for grandparents,
These spaces have a kitchenette and they have easy access to the core of the building.



1. Entrance
2. Kitchen
3. WC
4. Living room
5. Bedroom
6. Terrace

Considerations:

The bedroom is located on a different level to have more privacy, Bedrooms located on the upper or lower level have separate WC.

Sc:1:100

Isometric View

Example of House Type 1:
Sharing work space and yard | Terrace

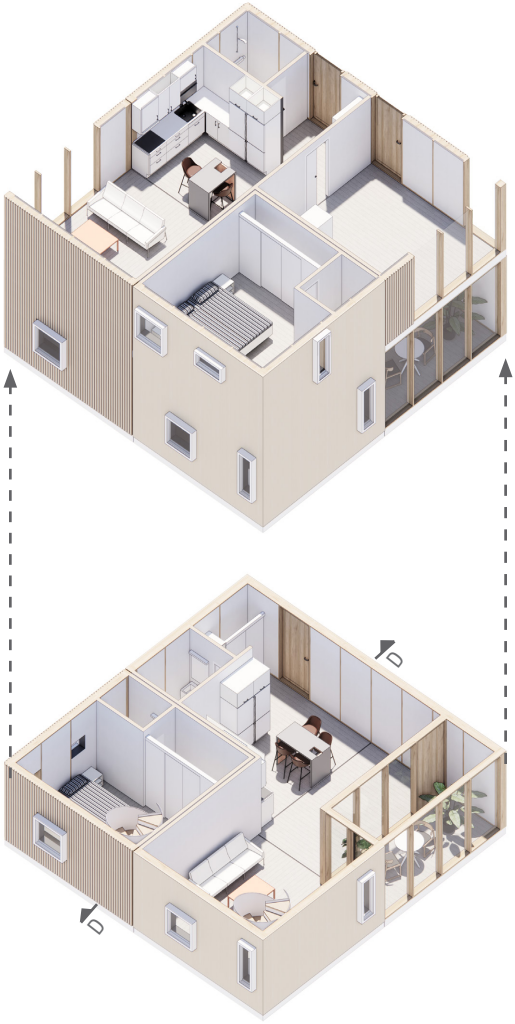
Example of House Type 2:
Sharing yard | Terrace

Sec A-A

Sec B-B

Example of House Type 3: Sharing Workspace

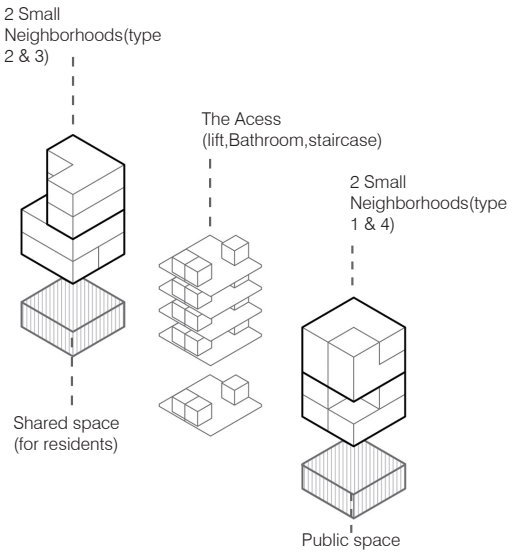
Example of House Type 4: No shared space

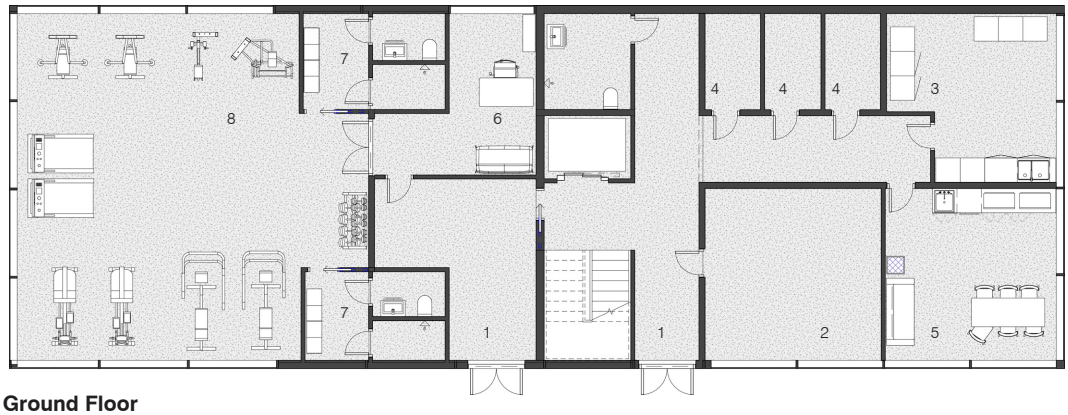


Sec C-C

Sec D-D

Cluster, Alternative 1





Ground Floor

Second Floor (one example of housing plan)

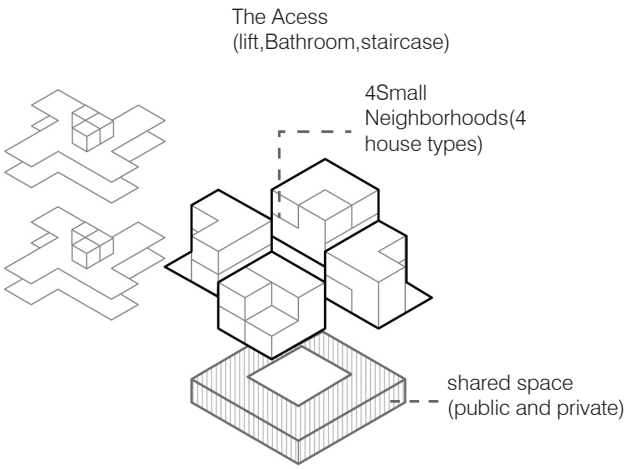
0 1 5

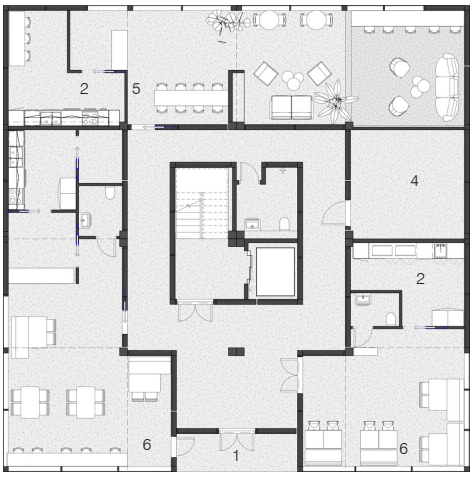
1. Entrance
2. Multi-functional room
3. Laundry
4. Storage
5. Dinning area
6. Reception
7. Bath
8. Gym

Considerations:

The Ground floor includes both public spaces like a gym and shared spaces for residents like laundry and storage.
There is a separate access for residents on the ground floor.

Cluster, Alternative 2





Ground Floor

1. Entrance
2. Kitchen
3. WC
4. Laundry
5. Cafe
6. Restaurant
7. Dinning area

Considerations:

The Ground floor includes both public space and shared space for residents like laundry and dining area.

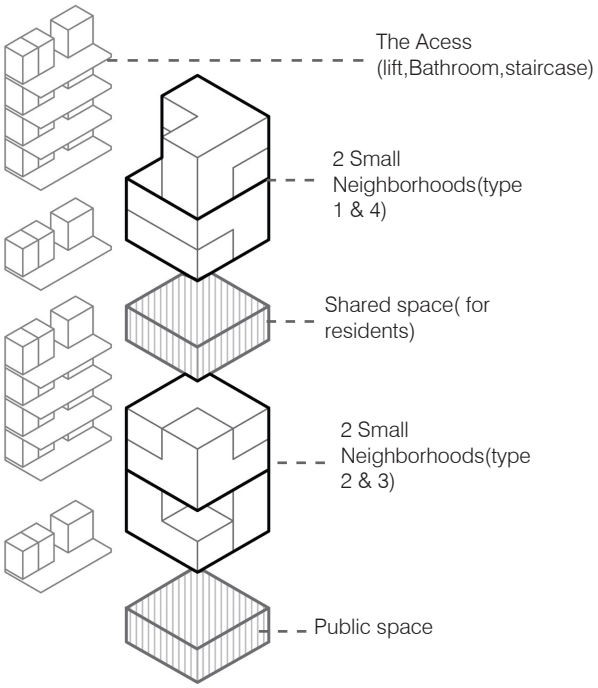
Second Floor

1. House Type 1
2. House Type 2
3. House Type 3
4. House Type 4

Considerations:

The bedroom is located on a different level to have more privacy, Bedrooms located on upper or lower levels have separate wc.

Cluster, Alternative 3

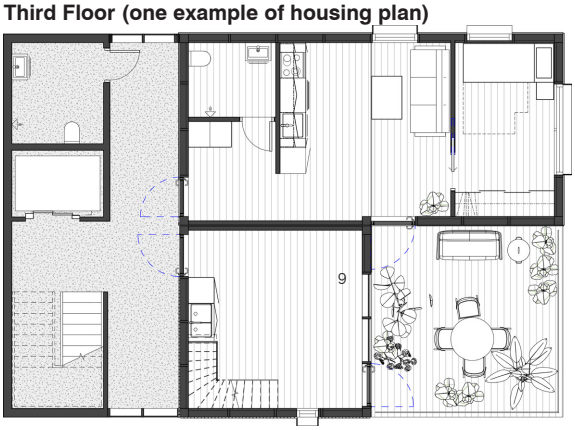


Ground Floor (Public Space)

Fourth Floor (Shared space)

Second Floor (one example of housing plan)

Third Floor (one example of housing plan)



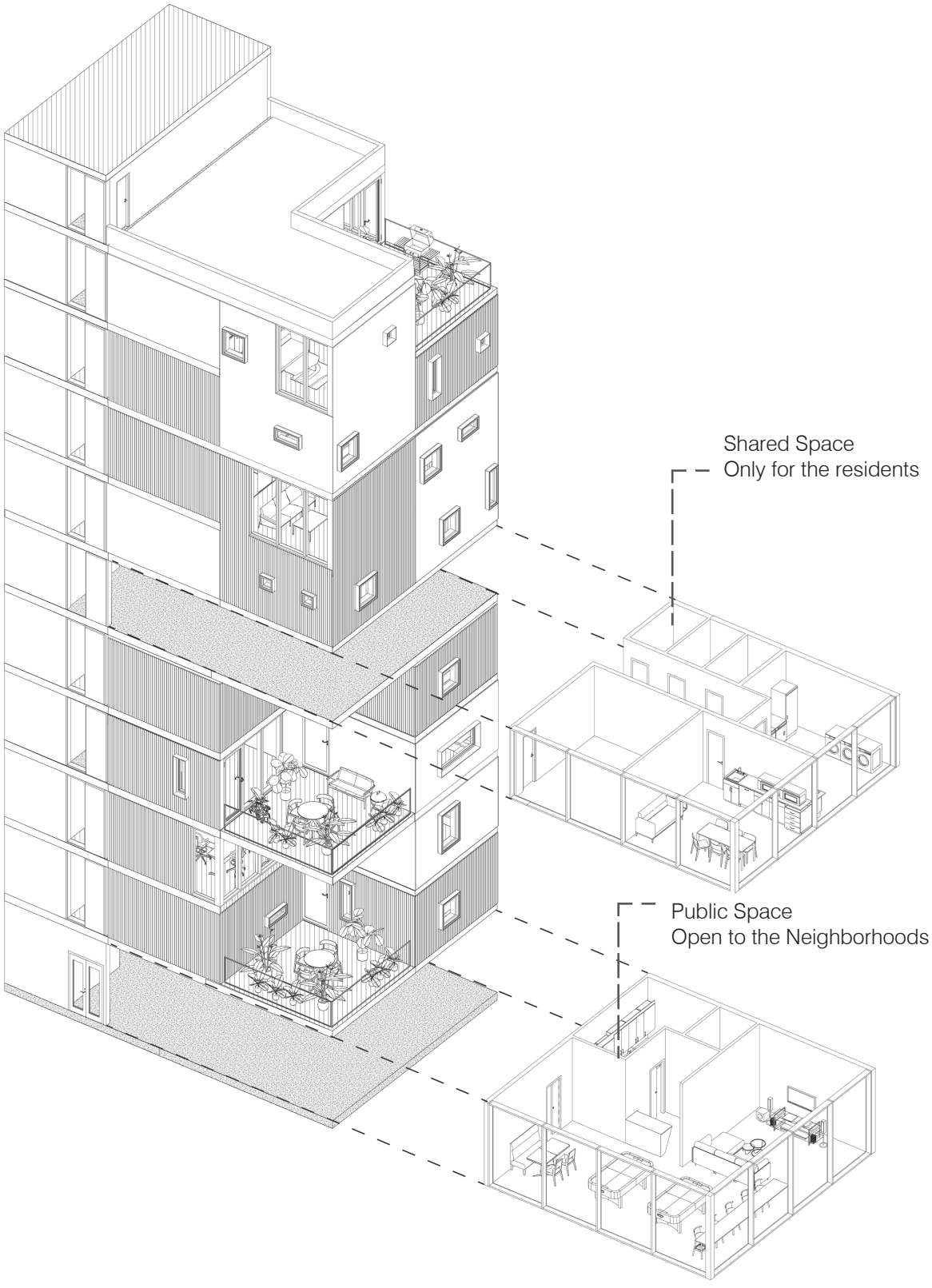
1. Entrance
2. Multi-functional room
3. Laundry
4. Storage
5. Dinning area
6. Reception
7. Kitchen
8. Gaming room
9. House Type 2
10. House type 1

Considerations:

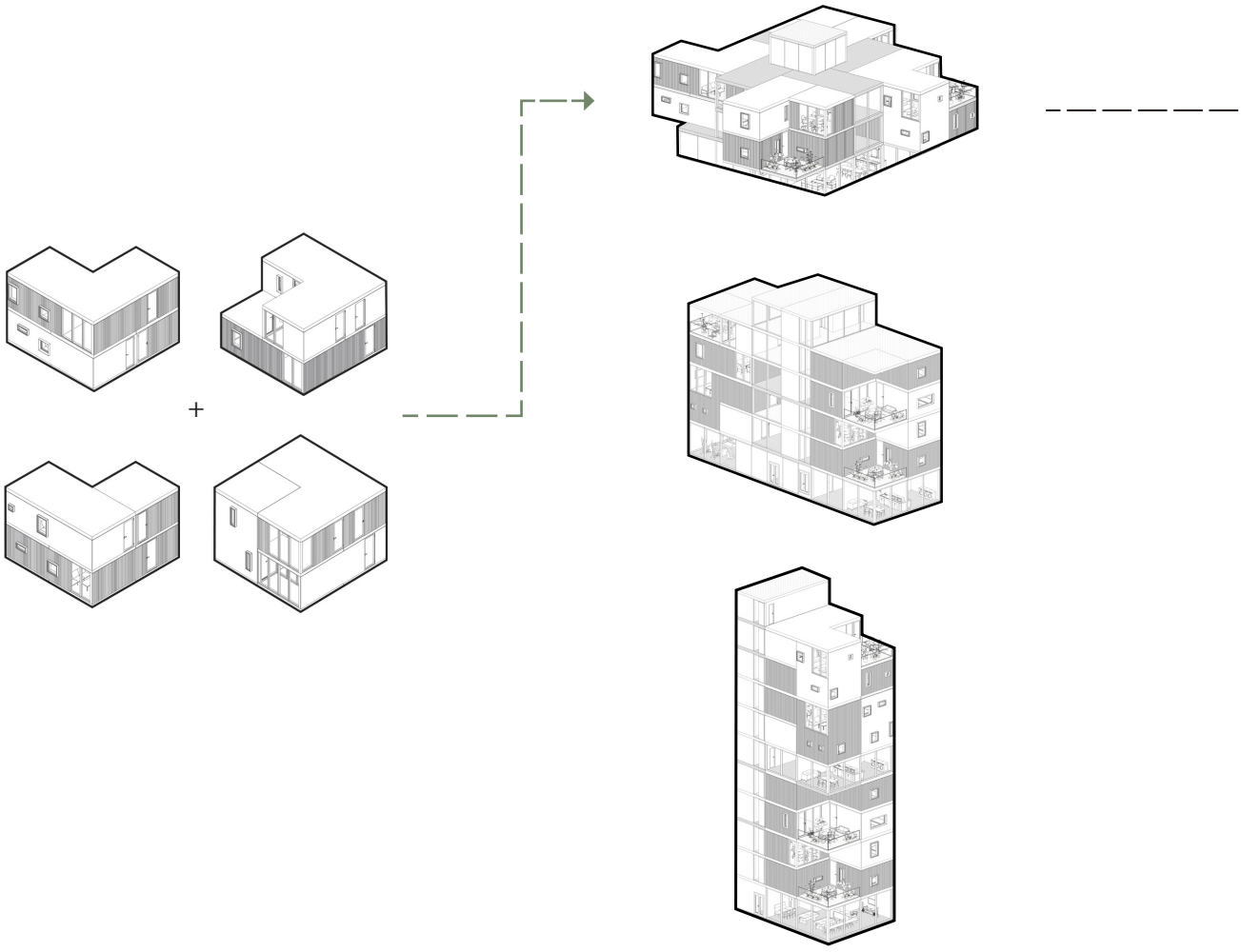
The public space and shared space are divided into two different levels. The ground floor is public and residential shared spaces are between houses level.

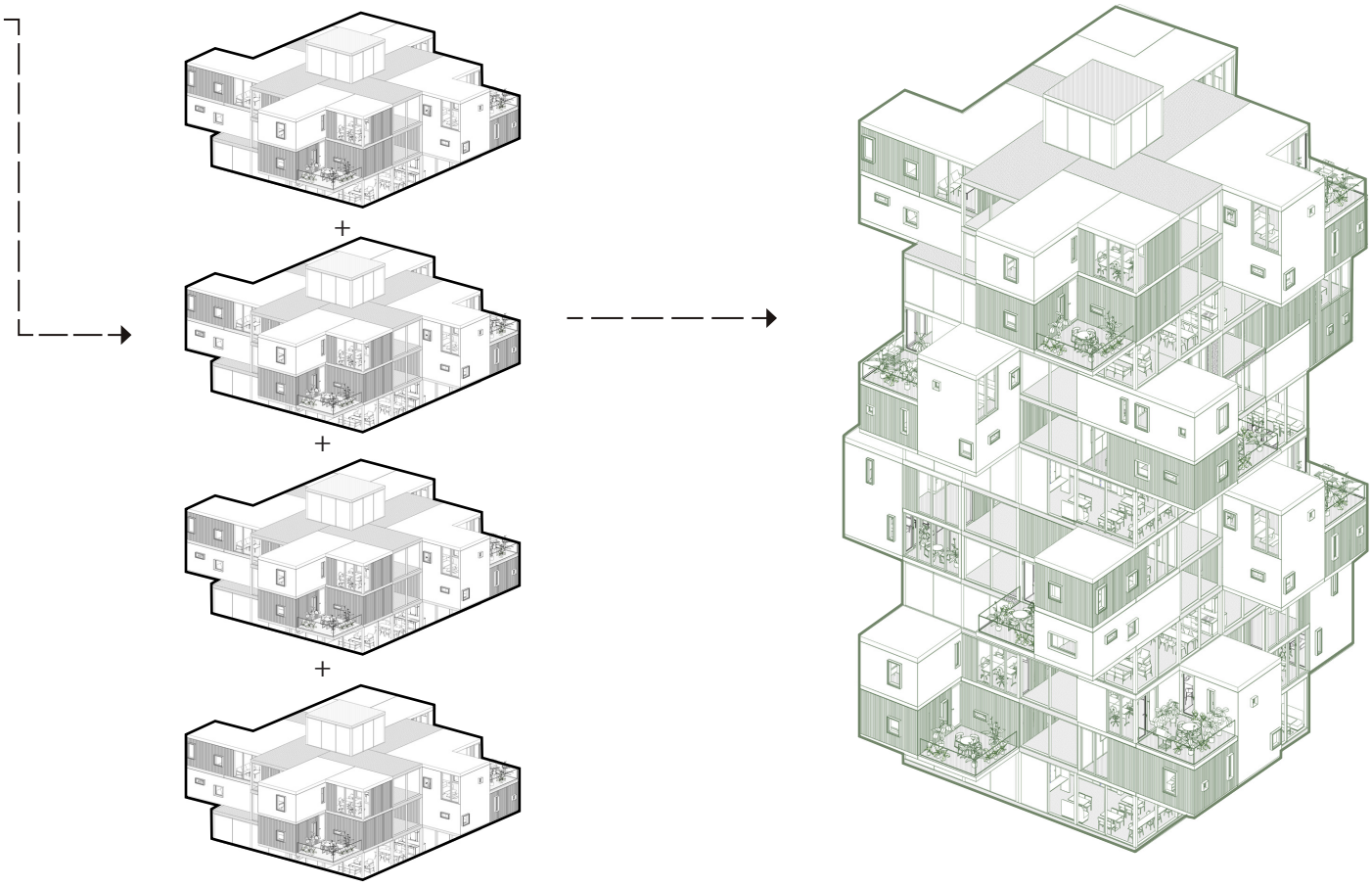
Cluster, Alternative 3

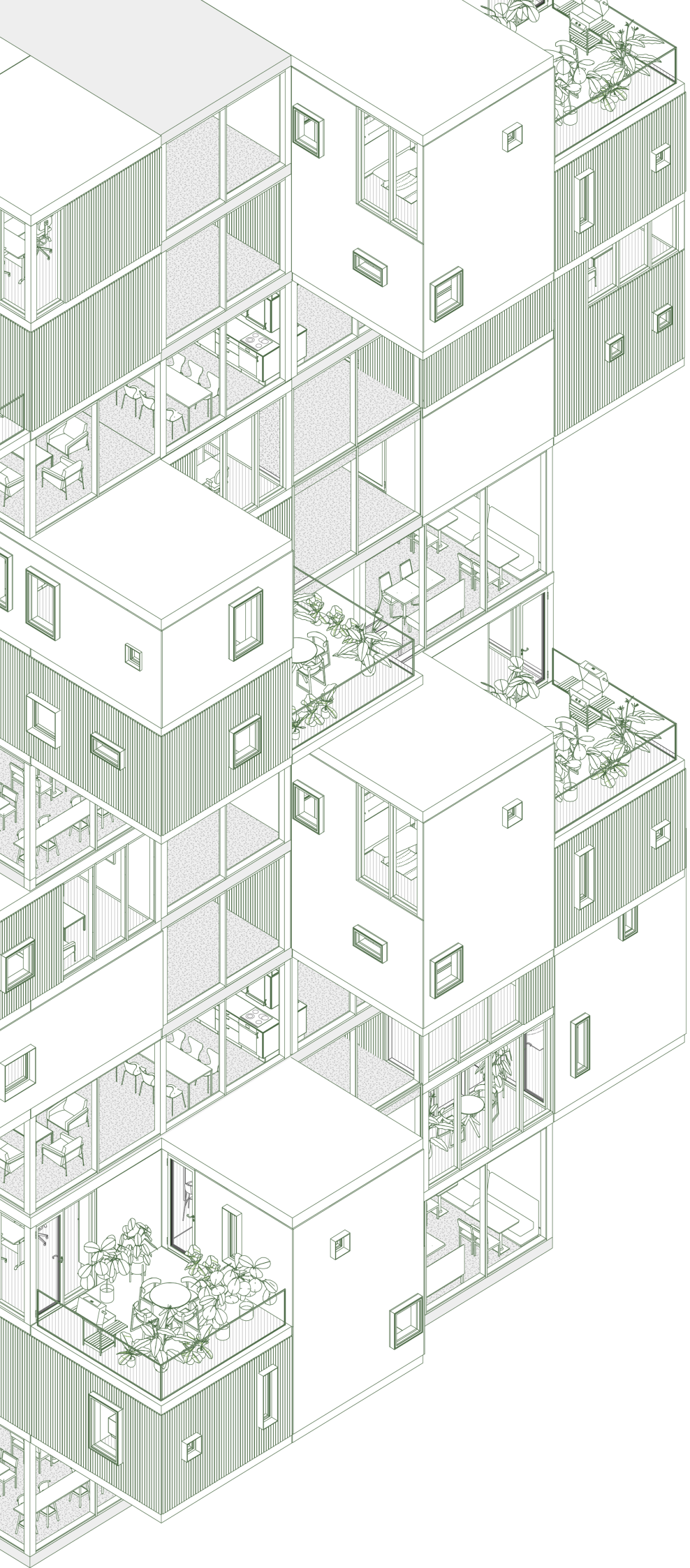
Isometric view



One example of Expansion

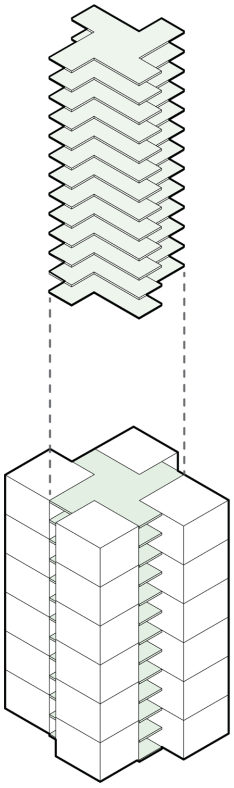




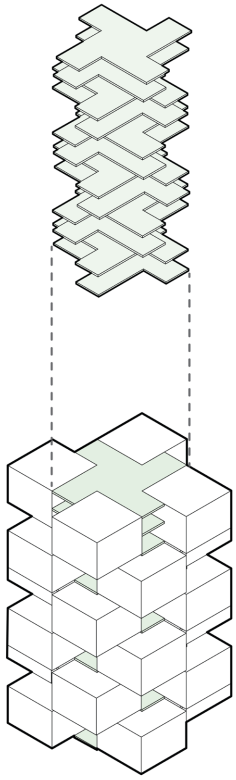


Expansion

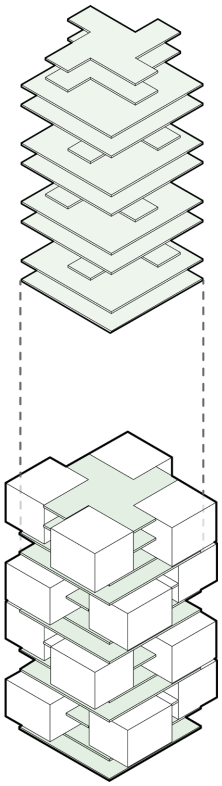
Core Layout



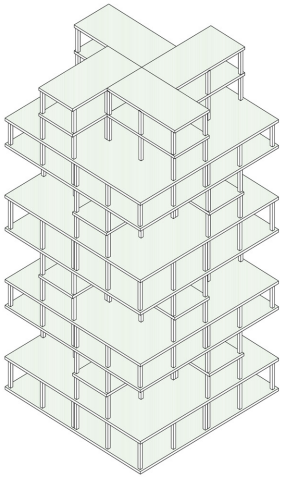
Vertical expansion of Third cluster alternative



Mirroring every two levels for better lighting

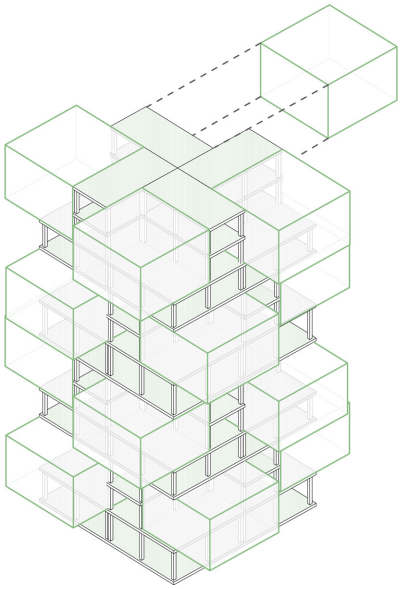


Creating space between Clusters (Shared space)



Core Structure

(All houses floors would be part of the structure and the walls & interior elements are possible to change or replaced)



Housing arrangment

(Houses are not solid modules,This diagram shows the arrangements of the houses)

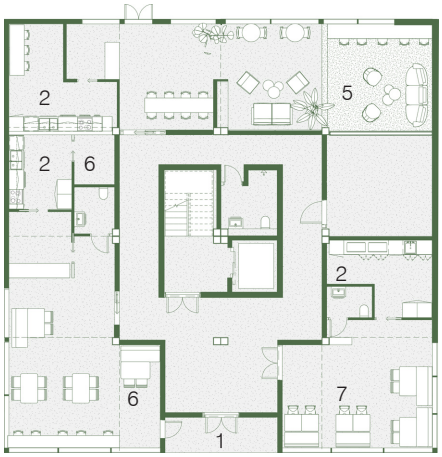
Plans

Fourth Floor

1. Multi-functional room
2. Laundry
3. Sport room
4. Dining area
5. Social space
6. Storage
7. Bedroom

Second Floor

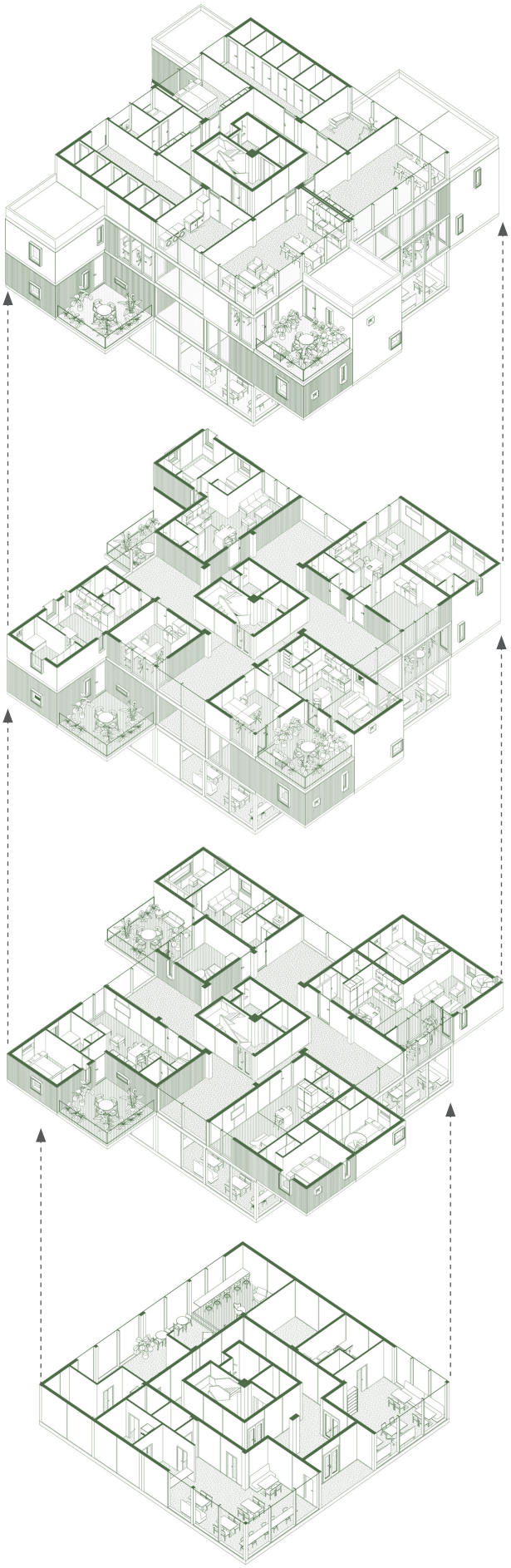
1. House Type 1
2. House type 2
3. House type 3
4. House type 4



Ground Floor

1. Entrance
2. Kitchen
3. Cafe
4. Restaurant
5. Dining area
6. Storage

Isometric Plans



Fourth Floor

Considerations:

This floor is open for everyone in order to add quality to its neighborhood. As the spaces can be open and multi-functional, their function can change based on the context requirements, Like recreational, shopping, gym, cafe, and among others. In this example, we have a cafe and a restaurant.

Third Floor

Considerations:

This floor is the second floor of housing (four types)
There are possibilities of using empty modules in the core for the future needs and space expansions.

Second Floor

Considerations:

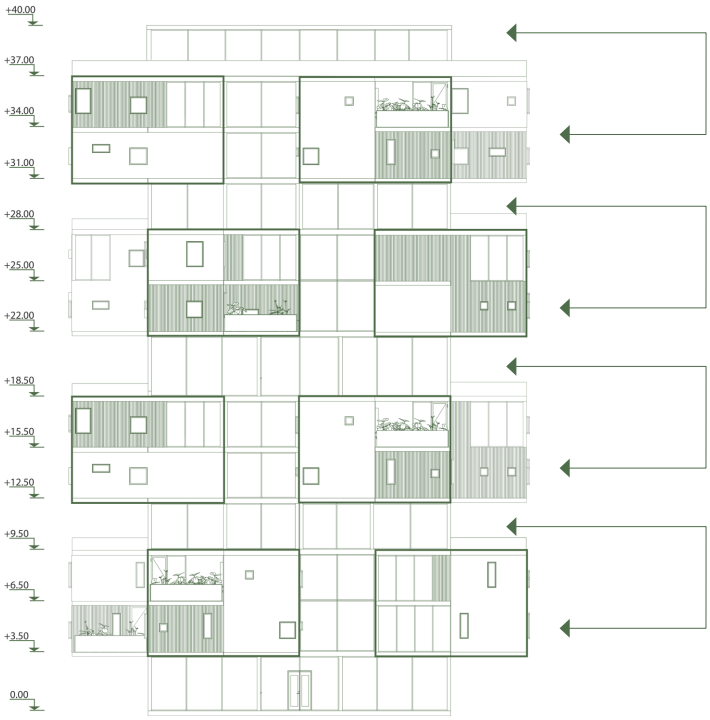
This floor is the first floor of housing (four types)
The rooms of houses that have separate access can use the core bath, In this regard they can work independently.

Ground Floor

Considerations:

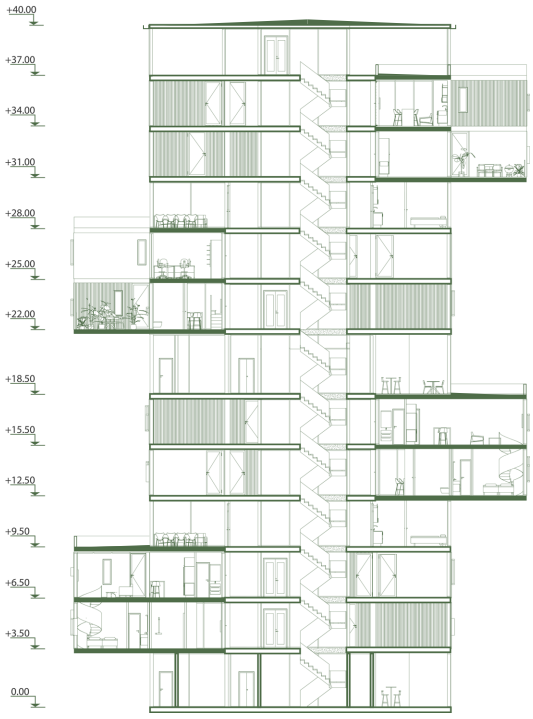
This floor is open for everyone in order to add quality to its neighborhood. As the spaces can be open and multi-functional, their function can change based on the context requirements, Like recreational, shopping, gym, cafe, and among others.In this example, we have cafe and restaurant

Section and elevation

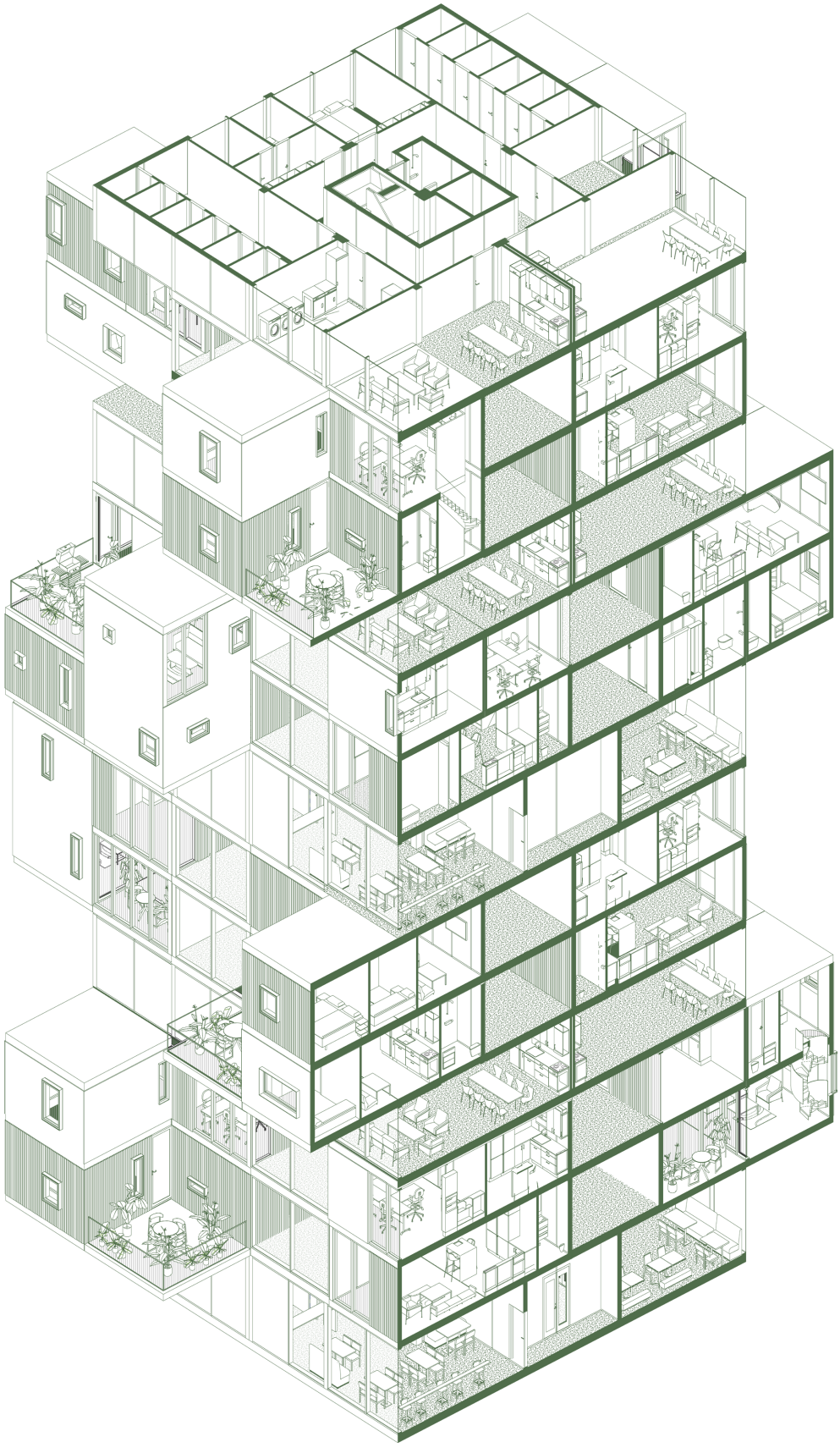


As it can be observed in elevation between each cluster there is one level of shared space.

The ground floor is partly used for public space which is open to everyone



3D Section



Part IIII | Context

Since the project is context free, Malmö is choosed as a test bed. In this part we figure out Malmö´s different typologies and locate the clusters in different context to see how the buildings adapt itself with the neighborhoods.

Malmö

Malmö is seleted as a test bed,

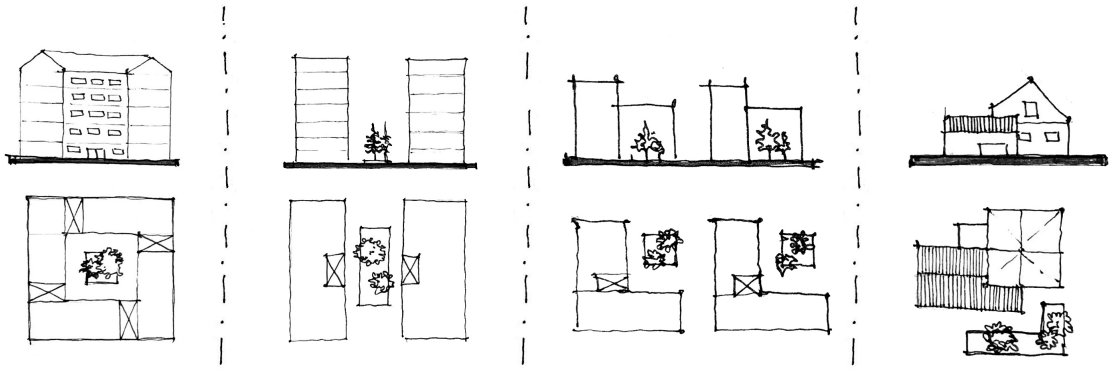
Culturally and geographically Malmö has a high potential to accommodate immigrants from inside and outside of Sweden,

Main reasons:
- Lack of housing
- High range of renting room in apartments
- Diversity in culture
- Various Typologies

Malmö Is also the fast-growing city in Sweden and is in a dire need of accomodations (Malmö Is Sweden's Fastest Growing Large City, 2021)

- Second best city to live in sweden
- Internal migration
- Lower mortality
- More newborns

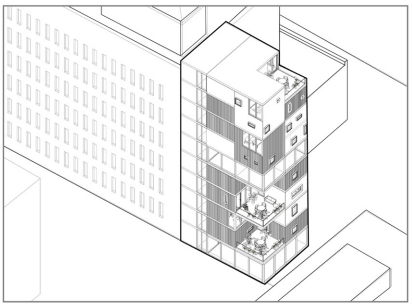
It is worth mentioning that there are so many families renting one or two rooms in their own apartment to international students or recent immigrants, So our project with its flexible system could be a good assist in this city.

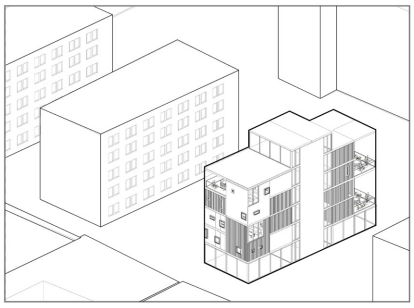


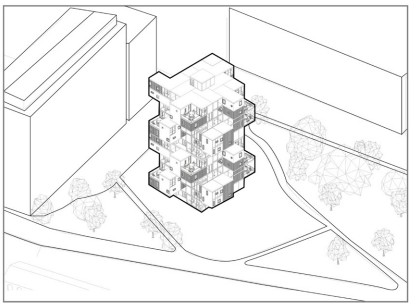
Various Typologies

Context

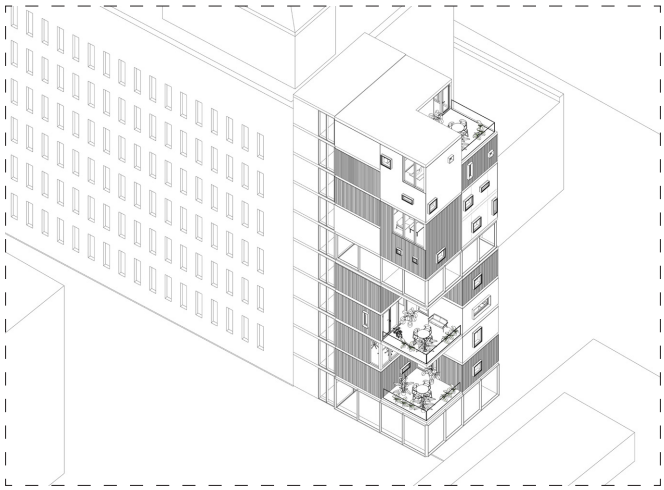
Malmö as a testbed



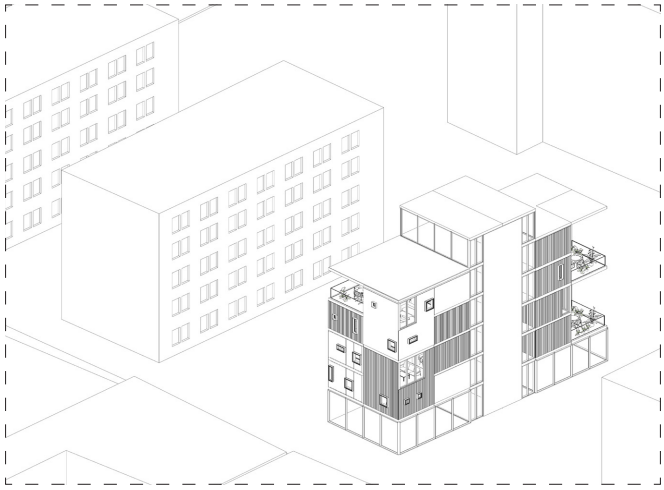




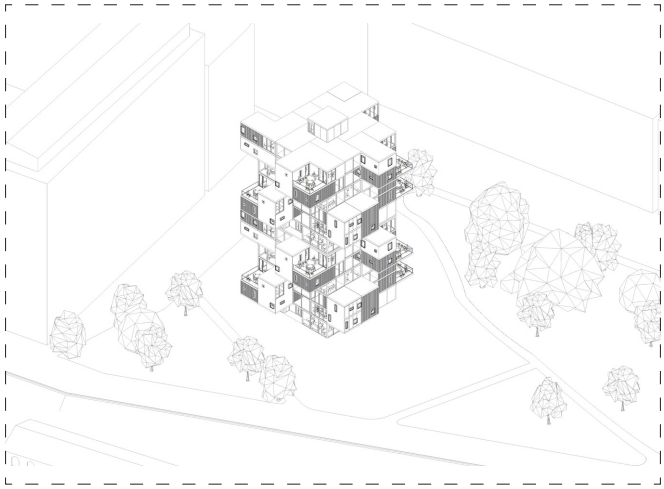
Adaptability to different contexts



Adjasent to neighborhood buildings.

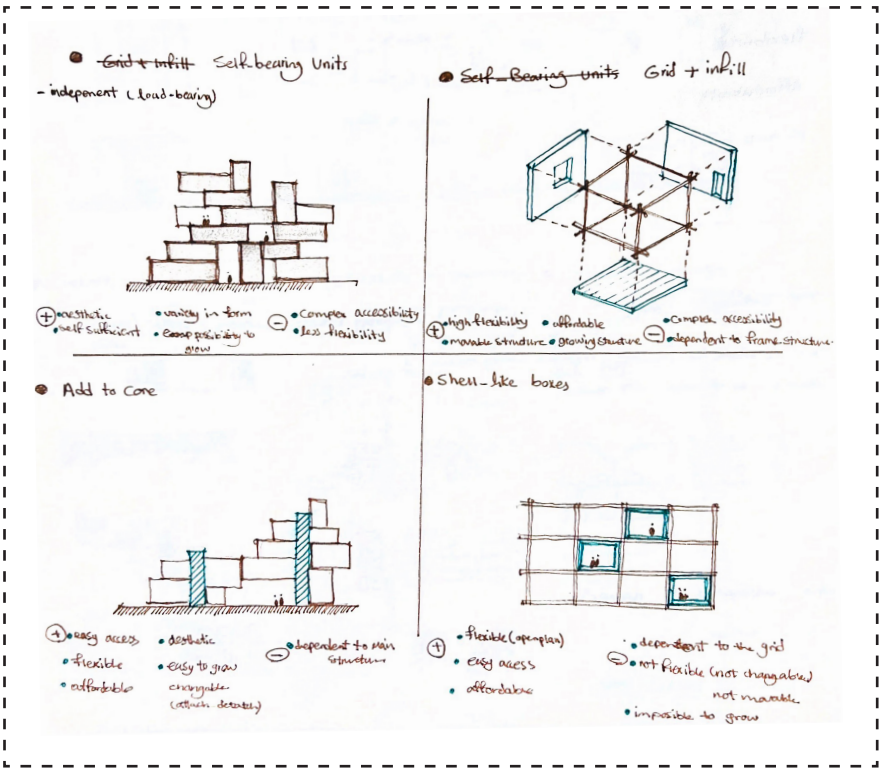


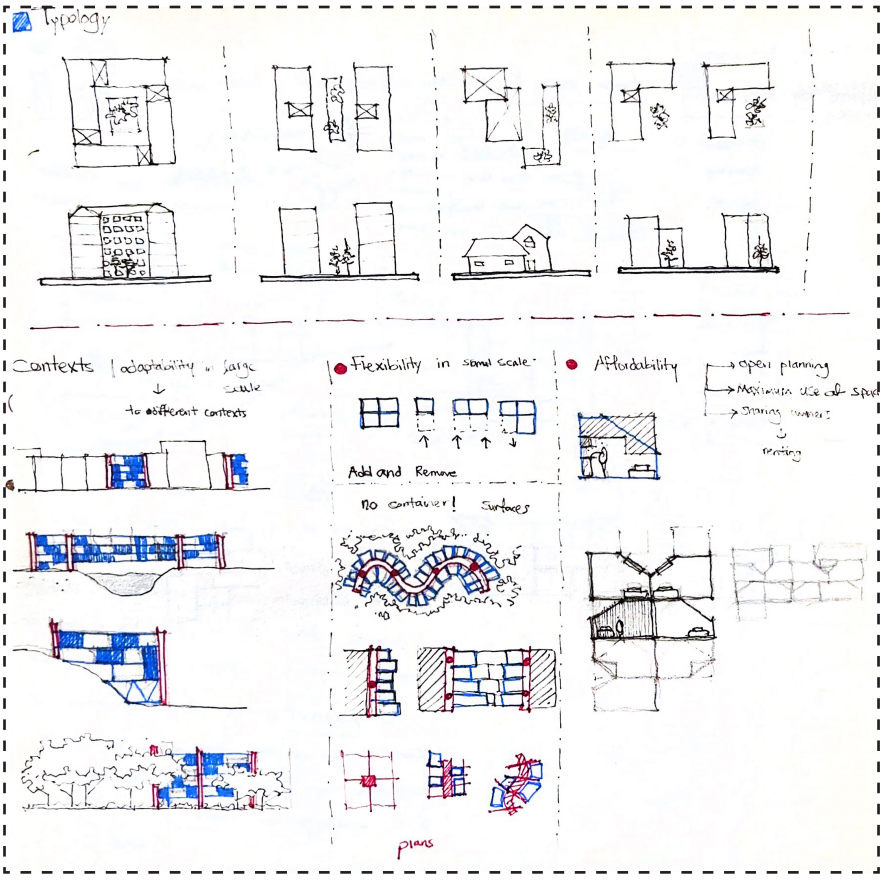
Typical typology of housing in Malmö with green and open space between apartments.



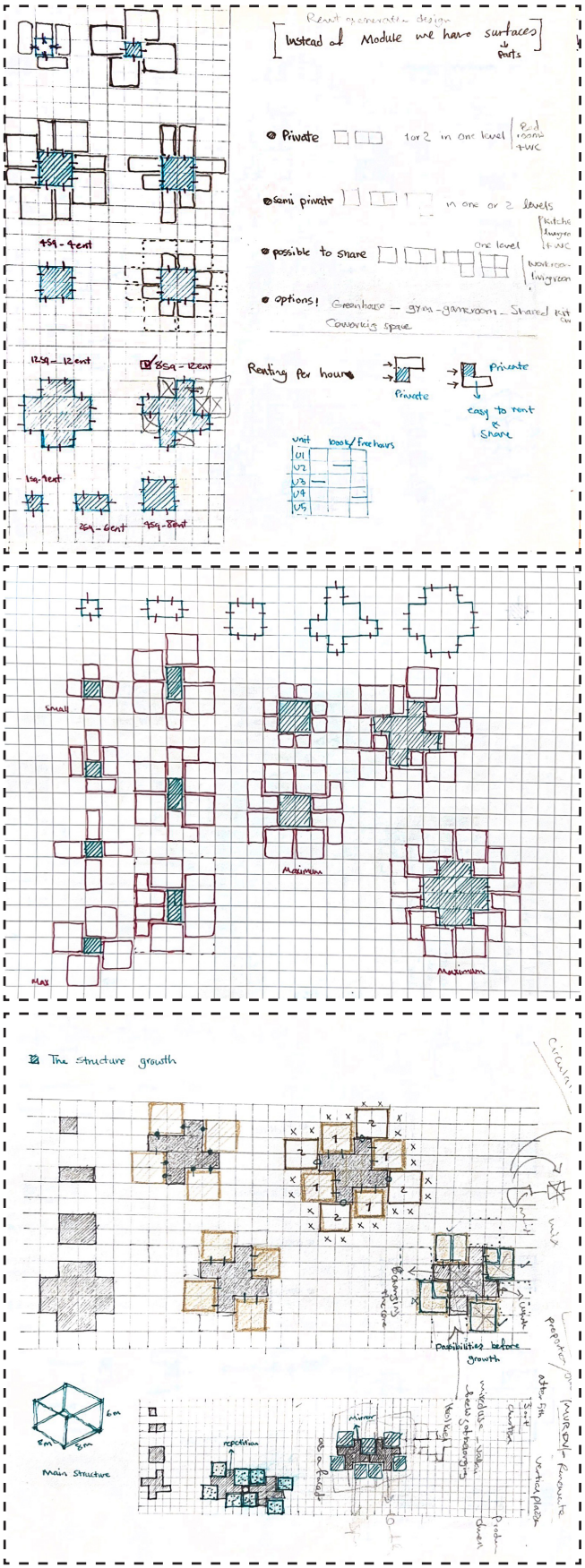
Potential to have highrise in a neighborhood with high skyline and open spaces in the western part of Malmö.

Part of Sketches

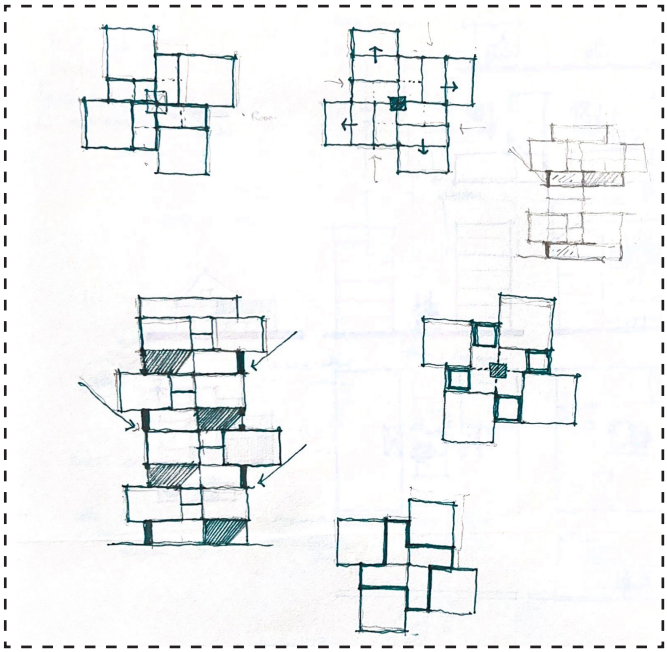


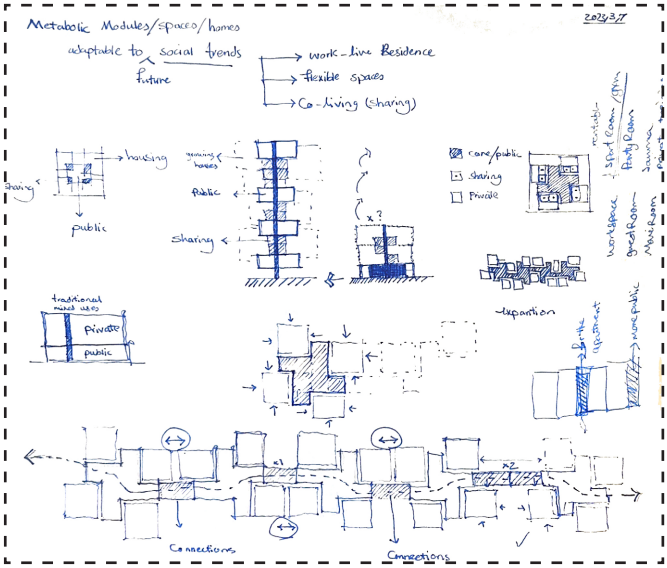


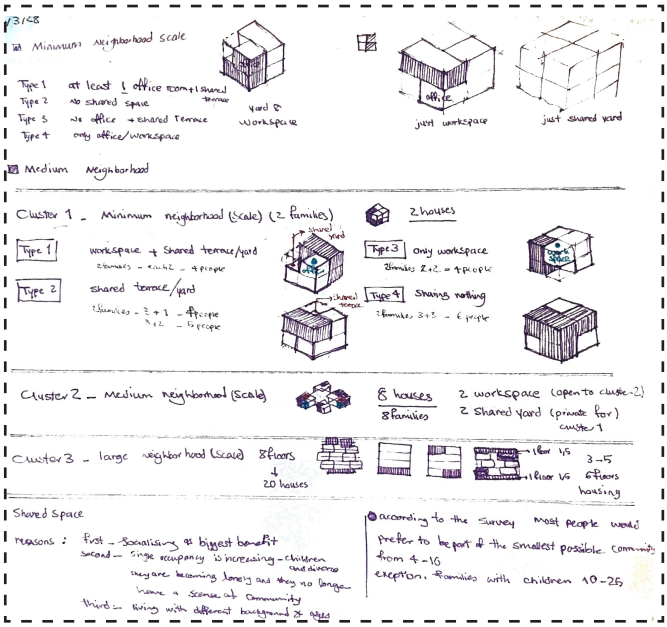
Part of Sketches



Part of Sketches

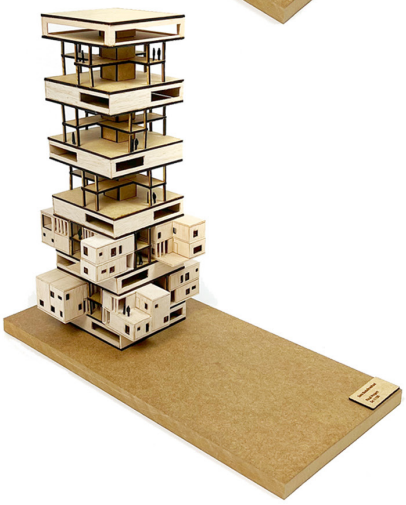






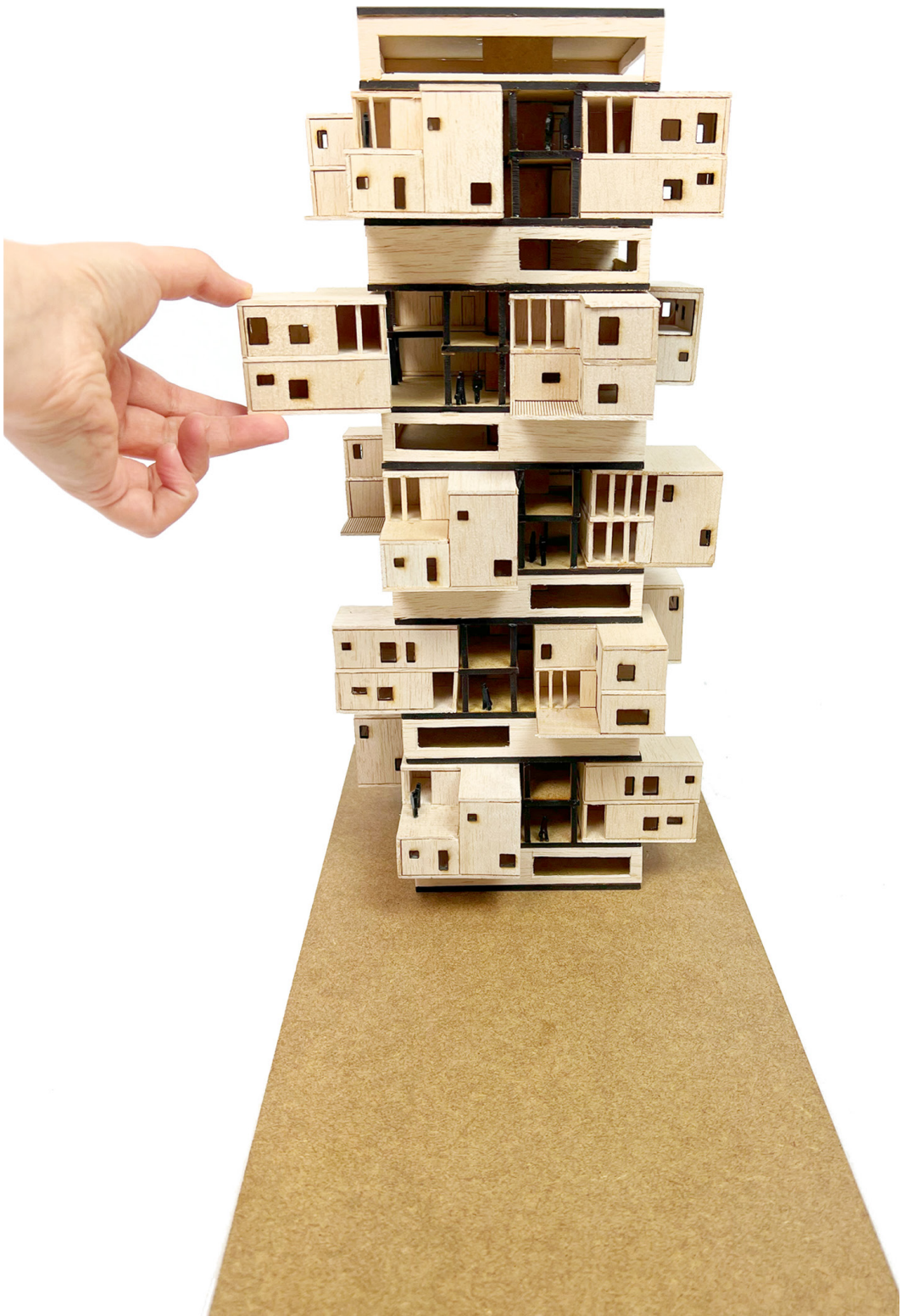
Model

SC:1:150



Model

SC:1:150



Model

SC:1:150

Reflection

In this project, my aim is to design a flexible system that can consider and respond to several social issues with the help of modularity, It can be challenging to consider multiple factors in a design, but at the same time, examining these factors and finding design solutions that can be responsible in different aspects, is one of the strengths of the design.

During the design process, I learned more about modularity and how we can use it in different beneficial ways. The spatial view of the modular system is one of the topics that can open a new discussion in the design of modular houses.

The complexity of the system created for including different aspects of social interactions could cause some problems in a better understanding of the design, while the system is flexible and can afford different unpredictable future needs.

Expansion of the system has both benefits and some downsides, Economically, going high would be problematic, while prefabrication elements ease the maintenance and increase the durability of the building. In addition, it is socially sustainable to respect and include different types of people and include all generations by providing diversity in design.

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