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1. DESIGN GUIDELINES

RESEARCH TO DESIGN

After the research in this booklet, I am full of ideas and inspirations for the actual design. To put the focus now on the design, I formulated five design guidelines, which will direct my inclusive living environment. As the topic of Designing for elderly is incredibly complex, the design guidelines do not stand for themselves, but rather transition into and relate to each other.

These guidelines focus on the topics of private and shared spaces, encouraging interaction between the residents, creating a future proof living environment, mixing people of different generations and backgrounds and offering gradients and different options for all of that.

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1.1 FINDING THE BALANCE

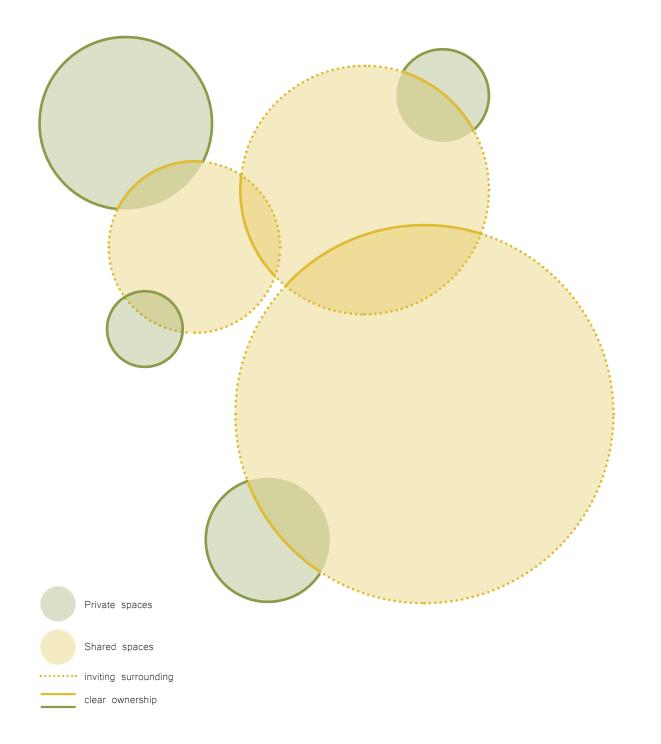
BETWEEN THE ME & THE US

I saw during the fieldwork and the further indepth research, that elderly value their privacy and their wish to be with others almost equally. As everyone is different, every individual will think a little different about that, why it is important for my design to provide both.

It is necessary to specify clear zones, so people will feel responsible of spaces and take care of them. Elderly are happier and healthier, when they spend time with others, why I want to emphasize on the shared spaces. Keeping the right balance will be the challenge for my design. Every resident will need a place to gather with small, moderate and large groups, as well have spaces to retreat from the liveliness of the neighbourhood.

The level of privacy will differ from the most private one in the apartments to the most public on a public square. To create a feeling of safety and comfort, I want to make sure, that every space has a clear zoning and ownership, so someone will be responsible.

- Provide private and shared spaces
 on every scale of the neighbourhood
- -> Ensure clear zones for feeling of comfort / belonging

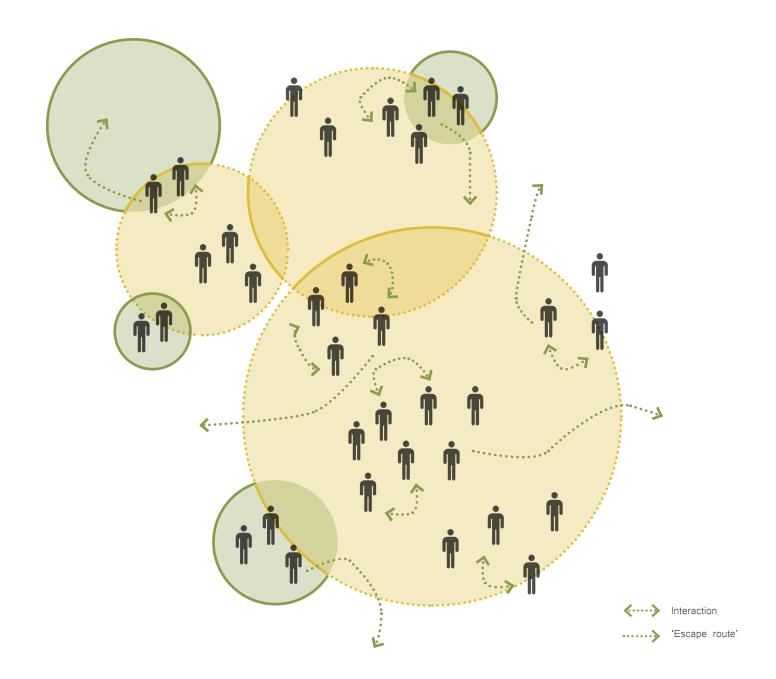


1.2 ENCOURAGING INTERACTION

BETWEEN THE ME & THE US

Elderly as well as anyone need social activities to stay happy, healthy and enjoy the environment they live in. Therefore it is important to provide places, where interaction can take place close to their living environment. This can be a very small situation like a bench close to the entrance door, this can be the implementation of shared flats, or the provision of public spaces, like gardens or playgrounds. The resident is supposed to be encouraged to take part in social interaction without being forced into it. The voluntary nature in this is very important!

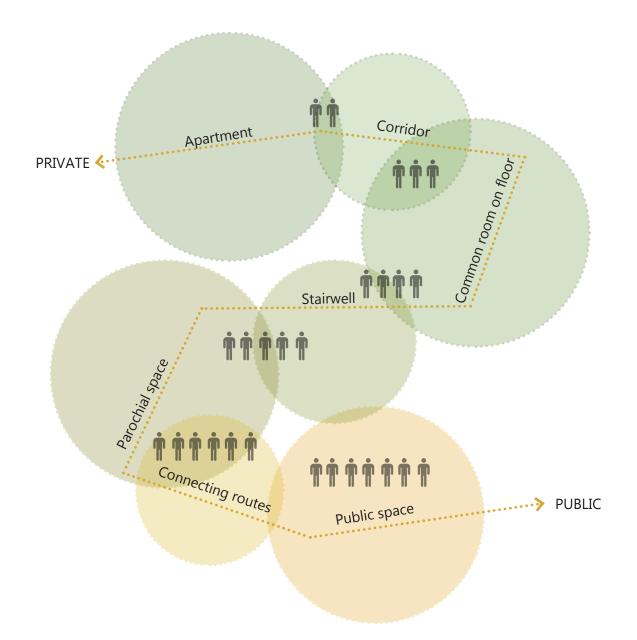
- Provide places for interaction
 on every scale of the neighbourhood
- -> Always leave choices, nothing will be forced



1.3 GRADUAL TRANSITION BETWEEN ZONES

During my research I could see, how spaces, where one zone meets the other have the potential to spark interaction between residents. The first step will be to distinguish between certain zones and define clear borders, but then afterwards blur these lines again to open up the space for interaction. This could be as simple as adding a bench to sit on and talk with each other or adding another function to it.

- -> Provide transition spaces for interaction
- -> Add different functions in transition spaces

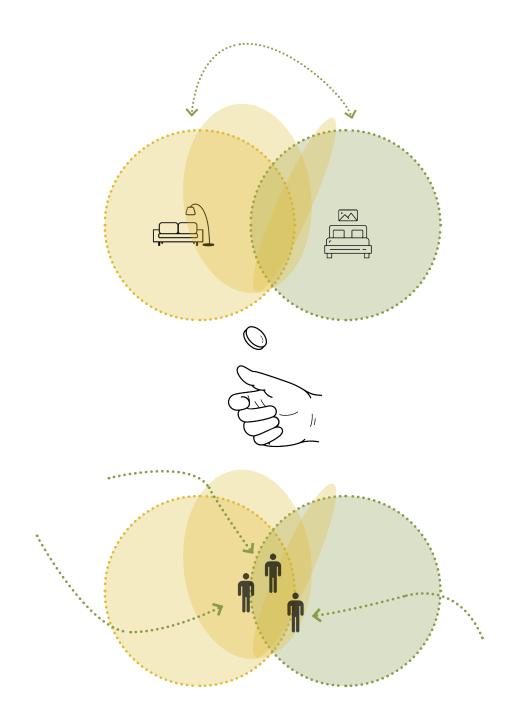


1.4 FUTUREPROOFING

THE NEIGHBOURHOOD

To make sure, the concept will be suitable for the coming generations, the neighbourhood needs to be flexible in use. The needs of the future generations might change drastically and the dwellings and the whole neighbourhood should be able to be as adaptive as possible. Adaptive apartments help to make a home for elderly future-proof as well, as they can easily adapt their apartments to their changing needs. By making apartments use-neutral, so they can be changed into different functions or leaving the possibility of an extension open, the building does not become a finished work after the construction is done, but rather leaves the opportunity to adapt than rebuild, why flexibility provides the longevity of a building. Creating not only private spaces, but also shared spaces in a adaptive way ensures the liveliness of the space, as people meet at the same place for different activities.

- -> Create flexible dwellings for longevity of the building
- -> Create flexible dwellings for long-time use for elderly
- -> Create flexible shared spaces for liveliness of the neighbourhood

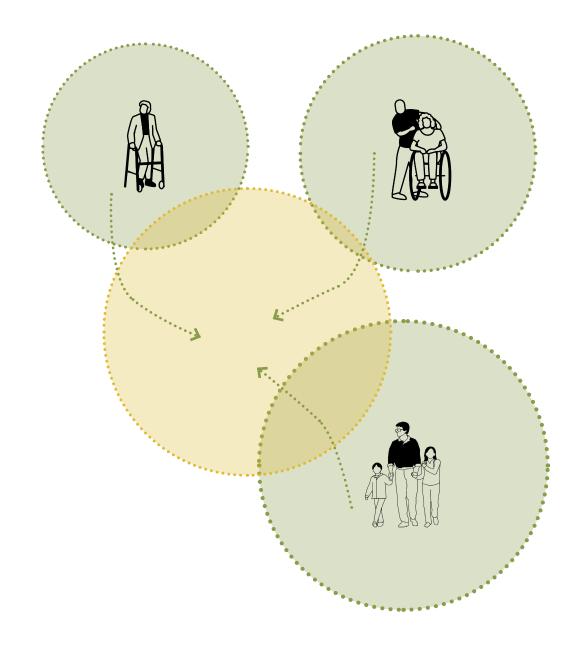


1.5 MIXING

DIFFERENT PEOPLE

To create an inclusive living environment, the elderly should be a normal part of the society, why creating neighbourhoods with different generations, different physical abilities and ages should come natural. Elderly should not be segregated from the rest of the society in Elderly homes, but rather be provided with an environment, were they can live happily and safely. Joining different generation together will have a positive outcome on their community, as both can benefit from the others' strengths. When I noticed during the fieldwork, that the elderly from neighbouring senior homes had somehow developed an aversion against each other because of Wealth differences and lack of familiarity, I could see that not only the mix of different generations is important, but also the mix of people with different wealth and background.

- -> Provide differently sized apartments next to each other
- -> Provide a mix of generations & backgrounds

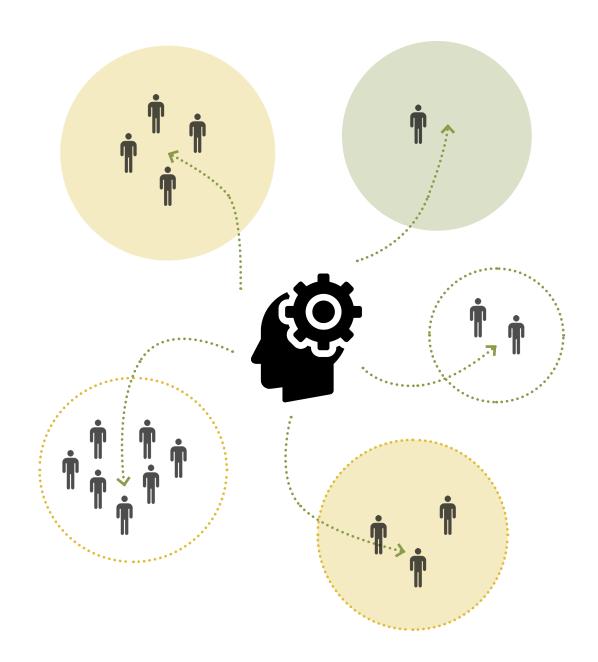


1.6 PROVIDING CHOICES

& DIFFERENT LEVELS OF INTENSITY

Nothing in this world is merely black and white, every need, character or wish rather takes place in gradients. I want to offer various options in all the guidelines mentioned above. It should be possible to chose between different intensities of privacy and togetherness. Whereas some people want to have interaction every day, others should be allowed to only meet others once a week. Whereas some want to change the layout of their apartment every once in a while, others might be happy with a standardized version of an apartment. Some residents enjoy the company of many children around them contrary to residents who want a quiet surrounding. Therefore the project should include not only two types of characters, but rather many different ones, where everyone can find the right place.

-> Provide many different combinations of qualities in the built environment



2. THE URBAN DESIGN

THE NEIGHBOURHOOD

After the phase of researching and developing design guidelines, I decided to choose Delft Tanthof East for my design for an inclusive living environment. Through many site visits, conversations with the municipality of Delft and interviews with residents, Tanthof East was analysed first with a group of students and later on by myself to emphasize on personal interests.

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2.1 ANALYSIS

THE SITE: DELFT TANTHOF

Tanthof is a suburban part in the South of Delft. It is framed by two highways in the North and East, by railway tracks in the West and Polders and greenery in the South.

The two parts of Tanthof are divided by a bus lane in the middle. Tanthof East is a mostly residential area with little public functions. The actual site sits in the middle of Tanthof East and is right now occupied by a school complex.



Delft's City centre

Delft Tanthof East

The Site



SITE CHOICE

I chose Tanthof East as my site, as it was important to me to be provided with a balance in scale. Working on the urban level, the neighbourhood, as well as on the apartment level helped me to create a coherent design on all levels. As my fieldwork as well as my research showed, how important the interaction and connection between residents is, the existing community and the neighbourhood-network in Tanthof have attracted me. Delft Tanthof East is part of the city Delft, but also further outside of the city center, therefore a more suburban area, which has the benefits of a green and quiet environment and also the close proximity to functions in the centre.



small enough to work on apartment scale

large enough to work on neighbourhood scale





DELFT TANTHOF



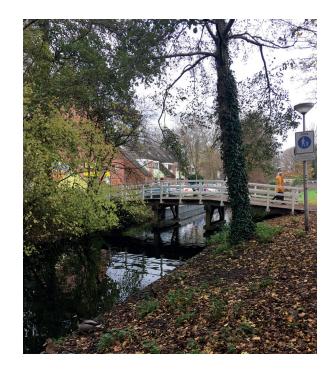
existing community or neighbourhood-network

urban or suburban environment



GREENERY

Tanthof consists of much greenery of which most is private gardens. The public green is mostly close to the small canals going through the neighbourhood. Whole Tanthof East is covered with dense deciduous trees, which also frame the site of the school.







PUBLIC FUNCTIONS

The site itself is occupied by a school complex at the moment surrounded by mostly residential buildings, which are mostly single family homes and apartments. North of the school is a public area with a supermarket and other small shops such as a bakery, a restaurant, a post office and more. The site is directly south of it, also accessible by a close bus stop. The distance to everyday amenities is therefore quite small and easily reachable for elderly within 5 to 10 minutes.



THE NEIGHBOURHOOD

The site is occupied by a school complex, which has been built in the 80ies. It consists of three different schools merged into one complex, which together with the outdoor area fill a surface of 1,2 hectares.

Tanthof East itself was designed as a cauliflower neighbourhood with slow traffic, a tree-like road structure and the priority for pedestrians. This slow-pace and peaceful, green neighbourhood provides a suitable environment for elderly, who prefer to live in a calm environment.

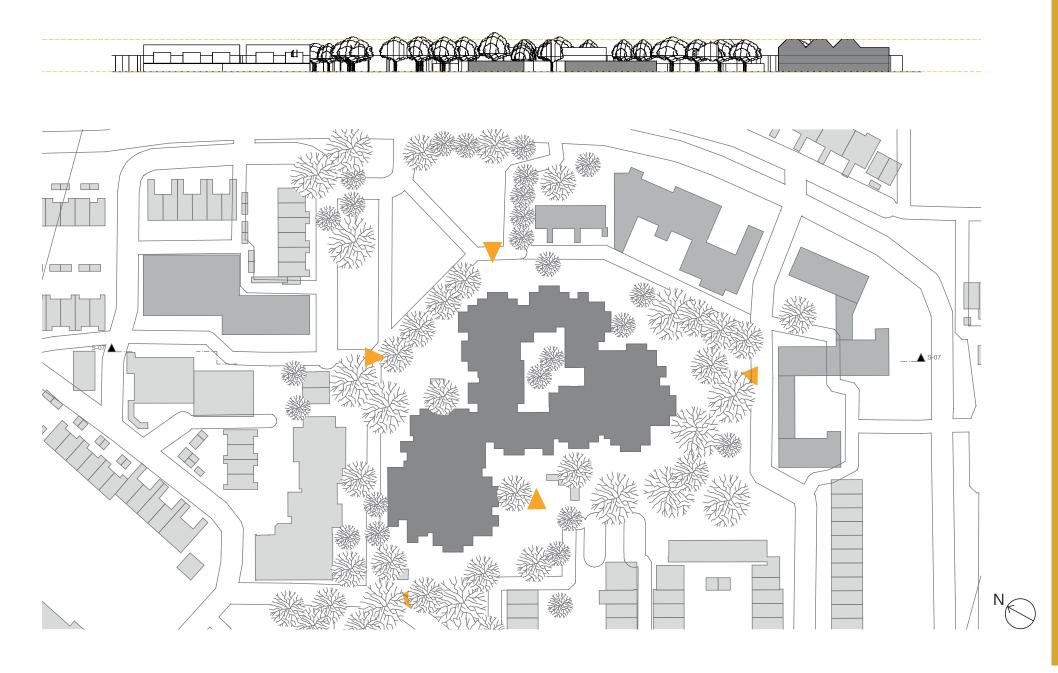






HEIGHTS

Looking into the building's heights in Tanthof East you could see, that most of the buildings are not higher than a maximum of 4 floors, where—as many are only 2 floors high. To adapt to the surrounding of Tanthof I will orientate my design to the heights of the surrounding, why the high—est amount of floors will also be restricted to four floors. This also enables all the floors to still be linked to the ground floor, where the new public functions will be mostly located.



RARE LIVELINESS

Walking around the site right after the end of a school day, I noticed how the area suddenly became lively. Parents, Grandparents, siblings started gathering around the school's entrances waiting for the children to exit school. While waiting there I noticed many casual encounters between them like greetings, small conversations or also longer talks. The public function of the school sparked interaction and liveliness in the neighbourhood, which was seldom seen in this neighbourhood. The lively shopping area North of the school showed a similar situation, as people were chatting while they were waiting in line for the shops or starting a chat at the post office etc..



- Parents & grandpararents picking up their children from school
- People of all ages meeting & talking during shopping
- Children meet with their friends after school

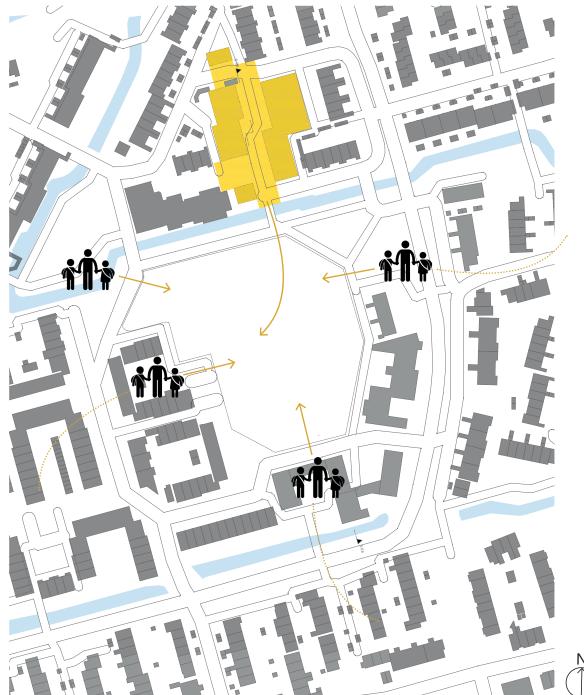


THE CONCEPT

The striking part around the site was the appearance of spontaneous encounters, which happened at the lively shopping area and the entrances of the school. Inspired by this I want to extend this liveliness on to the site to create a more vibrant complex, which will distinguish itself from the rest of Tanthof by implementing lively public functions and inviting others into it. The former entrances of the school will remain the entrances to the new complex to keep the memory of the school alive and fill the former school destination with a new public function, which can be accessed following the same routes.







2.2 ZONING

EXTENDING THE LIVELINESS

To attract the surrounding residents as well as making it an attractive site to live on, the public function should consist of various options, such as calmer environments, places to gather for different generations as well as functions attractive to elderly.



MASS STUDIES

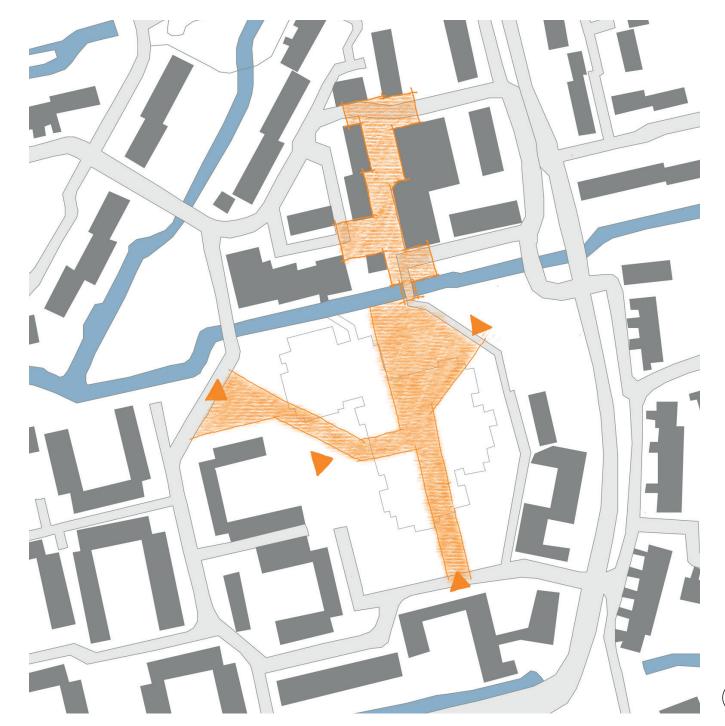
To adapt to the volumes of the neighbourhood concerning dimensions and shape, I tried out different options how to extend the lively areas on to the site.





LINKING THE ENTRANCES

As it is important to me to keep the original entrances of the school, these spaces should also provide public functions close to it to attract the residents of Tanthof and be easily linked with each other by an easily readable routing.





MORE PUBLIC ZONES

As zoning has been an important part of my research, I wanted to make sure to create distinct zones, which are dedicated to a public, a parochial, parking and transition spaces, so every zone has a distinct ownership and responsibility.



MORE PRIVATE ZONES

The interior of the buildings will follow a similar zoning, where I will distinguish in the parochial space, which are gardens with different functions, shared spaces on the inside, which can be used at any weather and fully private spaces, which are the private apartments. The shared space inside will always be linked to the more public space, so not only the residents of the same block but also the neighbours are invited in to use them.



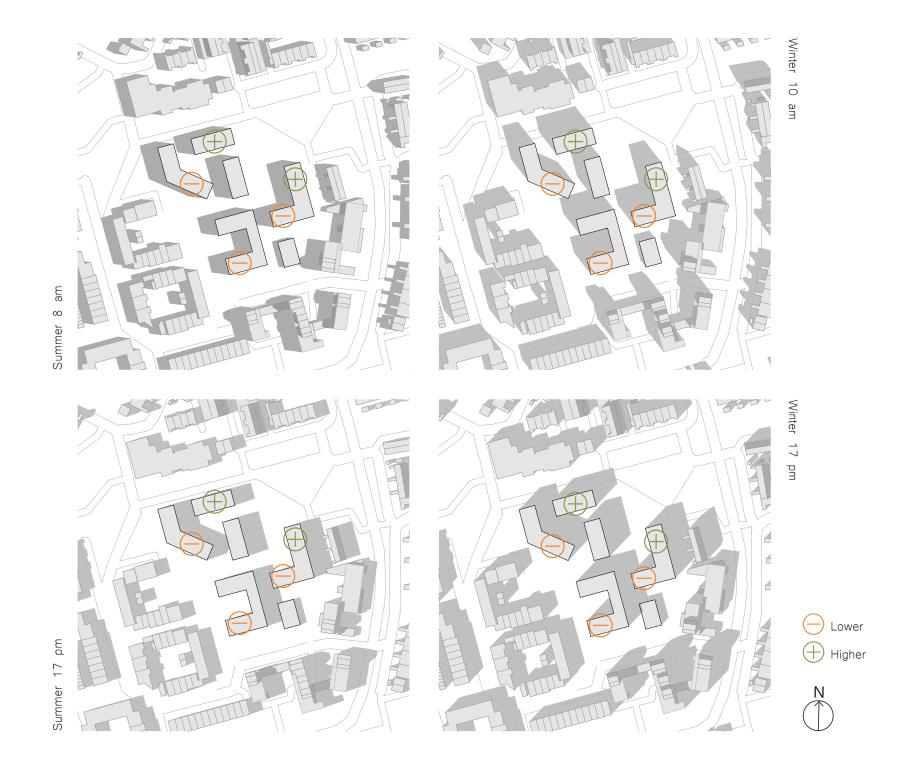
ORIENTATION

I wanted to make sure, that every apartment will have either a North-South or an East-West orientation, so that they will be provided with enough light over the day. After checking the original plan I adapted the orientation and shape of the Eastern block and increased the space between the other buildings.



SUN STUDIES

To check the courtyards inside the complexes concerning the sun I modelled all the buildings with the maximum of four floors to see which ones should be lowered, so the parochial gardens receive enough light.



ORIENTATION

Depending on the position of the ensemble and their façades, they will feel more active or more private. To create also something in between, there are also intermediate busy façades, where the activity does not always happen. The resident will be able to choose on their preference where to move in.



ENTRANCES + CIRCULATION

By placing the circulation on the façades, therefore balcony access, it opens up the visual link between the buildings and the public / parochial spaces. The circulation space becomes more than only that, but rather a communication space between public and private. Depending on which side the circulation space is located it becomes more public or more private.



2.3 HEIGHTS & SECTIONS

ADAPTING TO SURROUNDING

Looking into the neighbourhood of Tanthof East I noticed, that a common roof shape was a combination of a flat and sloped roof, which I wanted to pick up to adapt to the volumes in the neighbourhood.









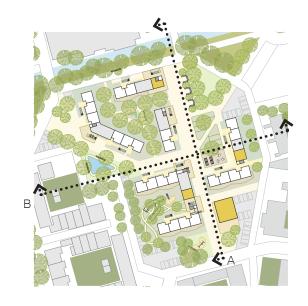




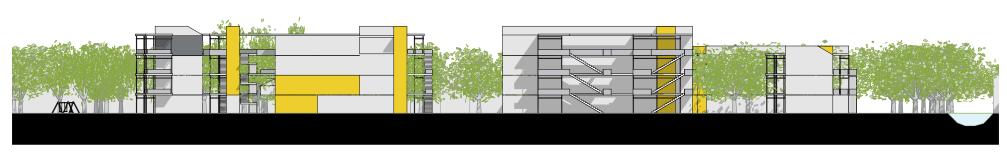


PLAYFUL VOLUMES

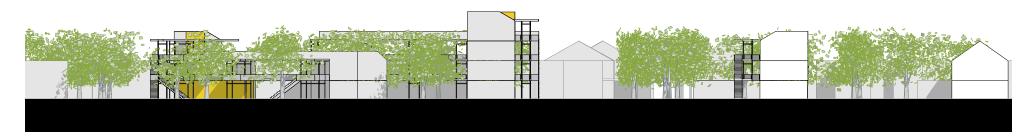
As the heights of the buildings in Tanthof vary around 1 to four floors, my complex should also vary in heights. Picking of the common roof shape together with different heights, balcony access and the green surrounding, it creates playful volumes.



Α



В

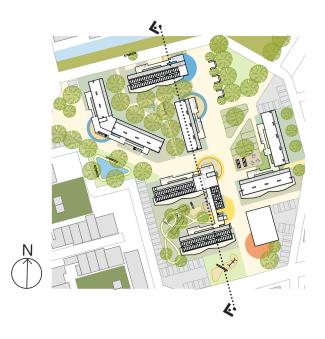


FINAL SECTION

The section shows how I picked up the roof shape as well as the different height levels of the buildings. The circulation as well as the balconies deepen the usable surface of the building and create a link between inside and outside, private and public.









2.4 THREE ENSEMBLES

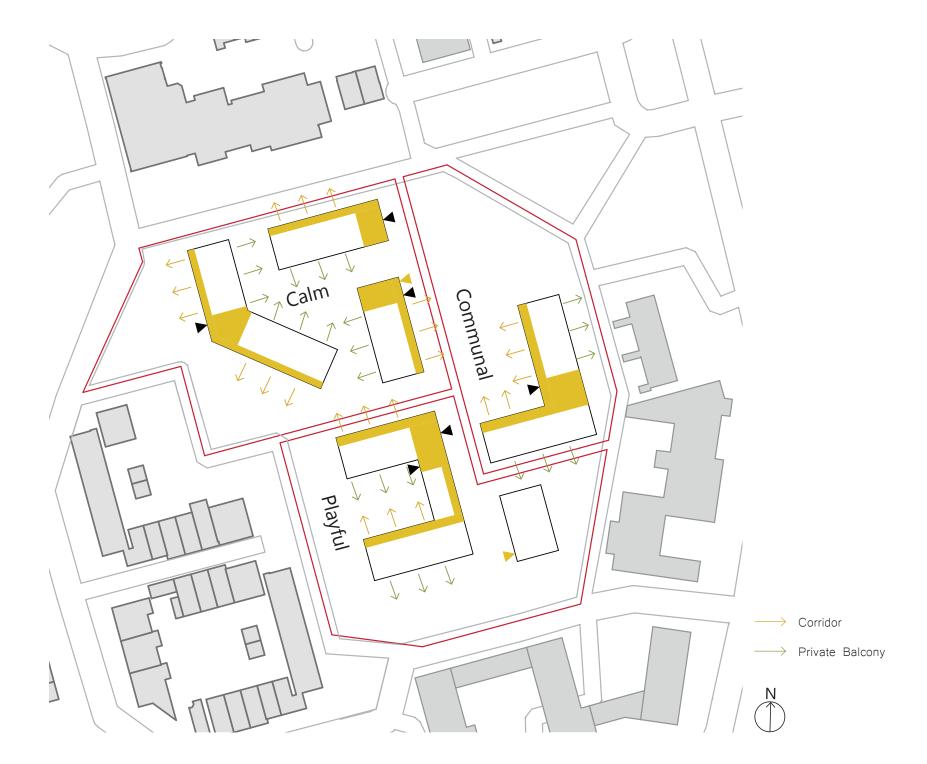
DIFFERENT ZONES

My new inclusive living environment is going to offer three different ensembles, which will attract people of all interests and preferences for view, activity and family.



ORIENTATION OF CIRCULATION

The placement of the balcony accesses corresponds to the atmosphere of the three ensembles. The calm ensemble, which is the most private, keeps the courtyard private by placing the circulation on the outside of the façades, whereas the lively& communal ensemble has the circulation orientated towards the parochial space to keep the ensemble communicative. The playful ensemble is of moderate privacy and togetherness, why the circulation varies in it. Depending on the location of your apartment, you can have a higher or lower level of privacy.

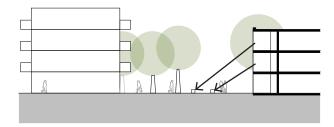


BENEFITS OF BALCONY ACCESS

The balcony access can be more than only the circulation space, where you walk towards your apartment. As it is located on the outside of the complexes, it can work as a communication zone, as you have the visual connection to the outside as well as a bright and open space, where you like to spend your time at. As the balcony access circulation links as the apartments together, it provides the opportunity of differently sized communities. You can only be familiar with your direct neighbours on the same floor, but also create one large one over the hole height of the building. By placing communally usable spaces close to the circulation space as well as places to rest I can activate the circulation space to become an interactive one.

Different sizes of community possible

Connection to the outside / bright & open



Balcony as communication zone

OFFERING VARIETY

One of my design guidelines was to offer a variety of possibilities for the future resident of this inclusive living environment. As I noticed, that everyone has different needs, different preferences in activities and busyness, I created three ensembles, which range from most private, to semi-private to most communal-orientated. Each ensemble will offer a residence for different people, who might prefer to live in a quiet ensemble or in a playful ensemble surrounded by many children. The Openness of the courtyard will represent, whether other residents will be invited in or not. The communal, most public ensemble will invite everyone in, whereas the semi-private playful ensemble will have a moderate openness. The functions in the parochial spaces will also correspond to it.

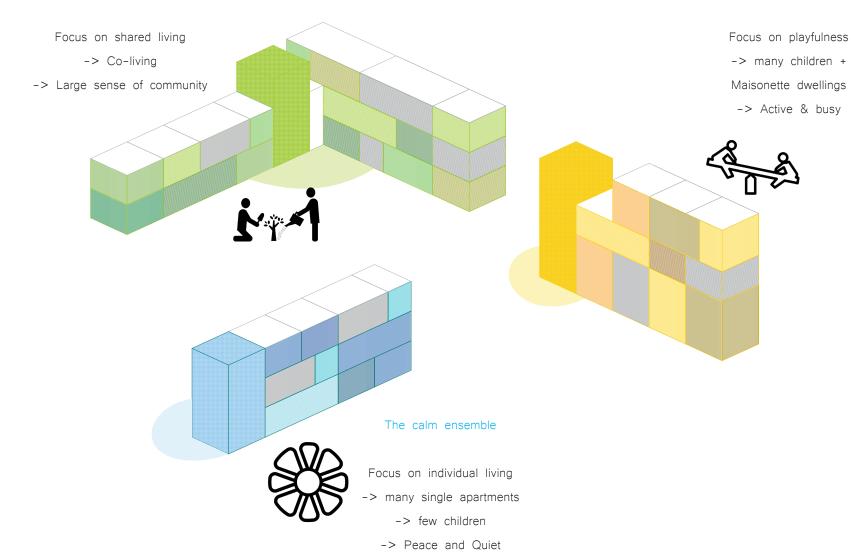
Most private Semi-private Most public Where? Who? What? Flowers / Trees Playground Communal garden How? enclosed / calm playful / active open / lively

DIFFERENT EMPHASIS

The different atmospheres of the three ensembles will also attract different people in. The calm garden will offer mostly apartments for singles or couples without children. Elderly who like it peacefully and quiet would enjoy this the most. The playful ensemble will have an emphasis on families with children, why elderly who want an active surrounding would enjoy it. The communal ensemble will offer mostly Co-Living to emphasize on the togetherness of the residents.

The playful ensemble

The communal ensemble



RECOGNITION OF ENSEMBLES

Corresponding to the three atmospheres, each ensemble will be assigned a colour for the façades. To mark the public function and the other entrances of the buildings I will create a circle in that colour around it to make it clearly visible and recognisable as one ensemble.



BUILDING NECESSITIES

Each ensemble will offer a communal room with the theme of the ensemble, whereas every single building needs a bike & scooter storage as well as a guest apartment or more common rooms. Every floor of the buildings should offer enough benches to rest and interact with each other as well as interactive entrance and other transition zones.

To offer a space for the whole complex and the neighbourhood, one building will be used as a flexible space for various activities.



Every floor:

- > Entrance corners + benches / chairs
- > Resting chairs close to stairs

Every building:

- > Bike / Scooter storage
- > Guest apartment =/& Common room

Every Ensemble:

> Communal room with the theme of the ensemble

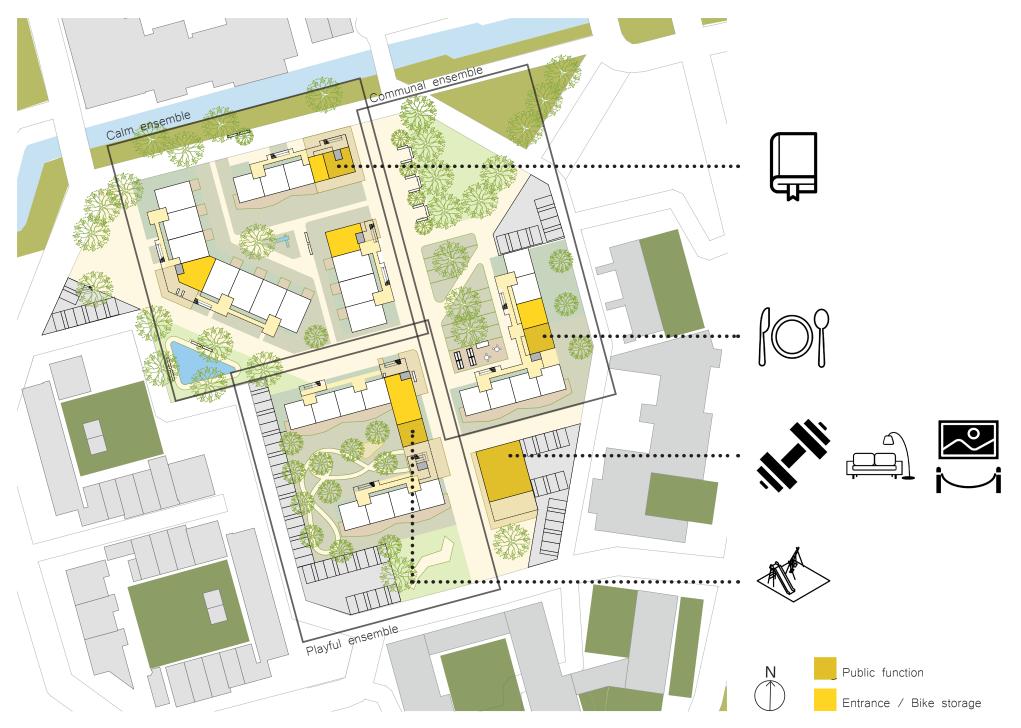
The neighbourhood:

> flexible space for various activities

NEW PUBLIC FUNCTIONS

The calm ensemble offers a small library as a transition between the public space to the East and the calm garden to the West. The communal ensemble offers an open kitchen, which draws in residents using the communal garden next to it. The playful ensemble offers a small childcare, which can be used by the children of the whole new complex.

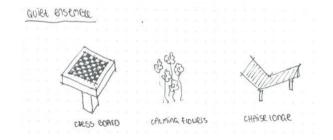
The public centre in the South offers flexible spaces, which can be used for sport activities, extended living room, exhibition spaces and much more.

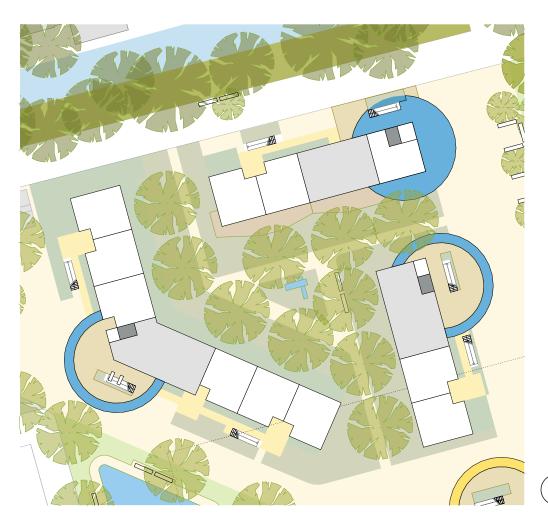


2.5 CALM ENSEMBLE

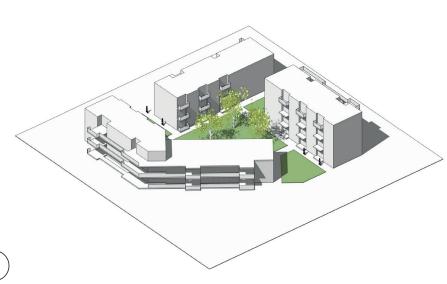
EMPHASIS ON PEACE & QUIET

The calm ensemble provides a mostly enclosed garden, where Calmness and relaxing is the most important. The open balcony access circulation is located on the outside of the ensemble, so it does not interfere with the quiet atmosphere. To create a peaceful atmosphere it will offer calming flowers and a fountain for the residents.





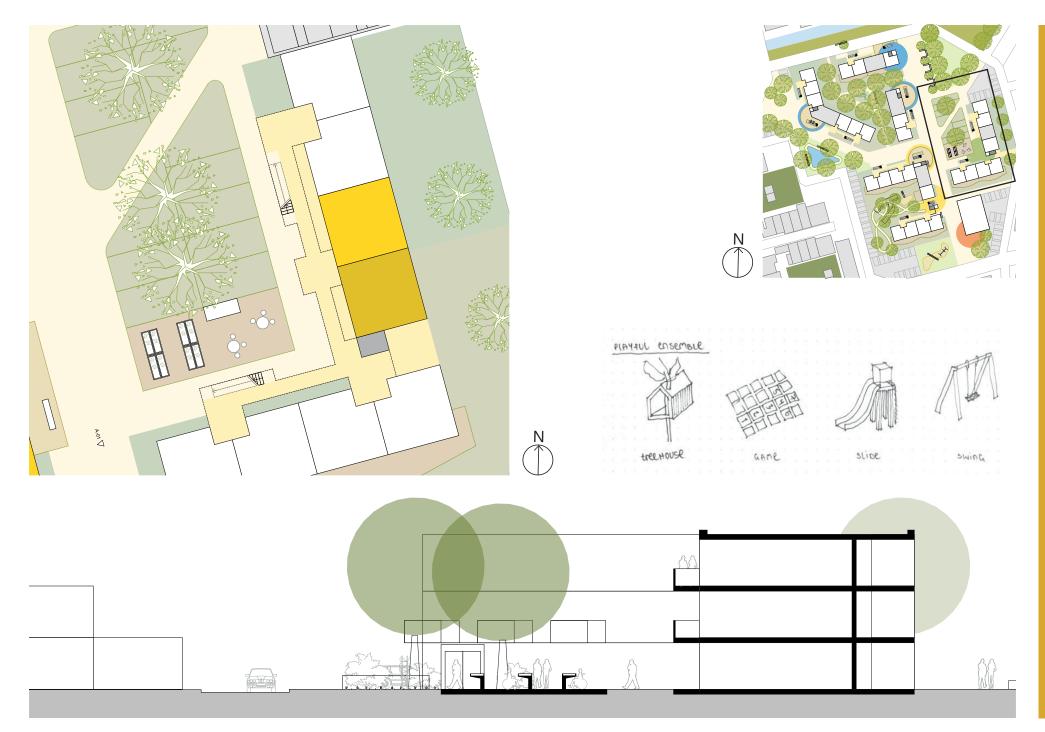






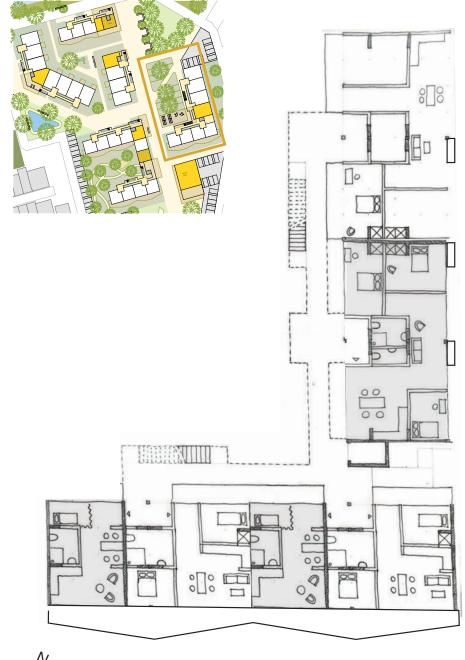
2.6 COMMUNAL ENSEMBLE COMMUNAL GARDEN

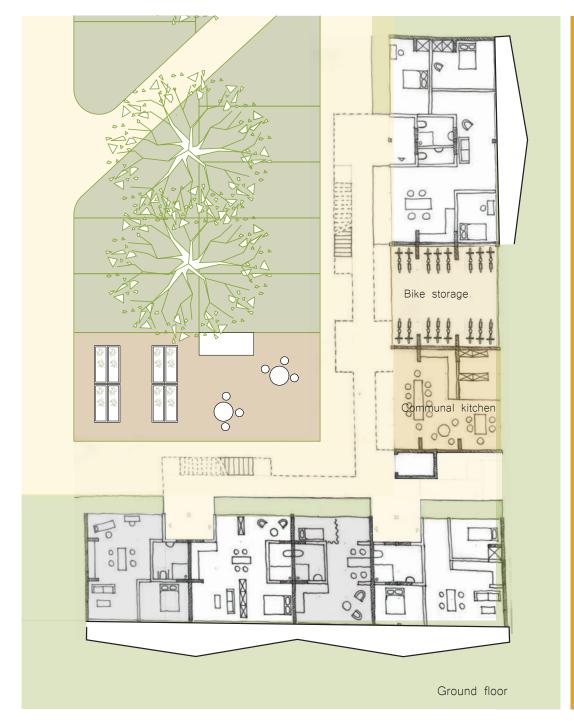
The communal ensemble will offer a communal garden which is inviting other people in. It will offer elevated flower beds and smaller spaces to gather. To attract other residents there will also be rent-able gardens.



FLOOR PLANS - SPECIFIC

As the communal ensemble will have an emphasis on communal living, it will offer a communal kitchen next to the communal garden and many Co-living apartments.





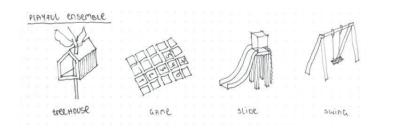


First floor

2.7 PLAYFUL ENSEMBLE

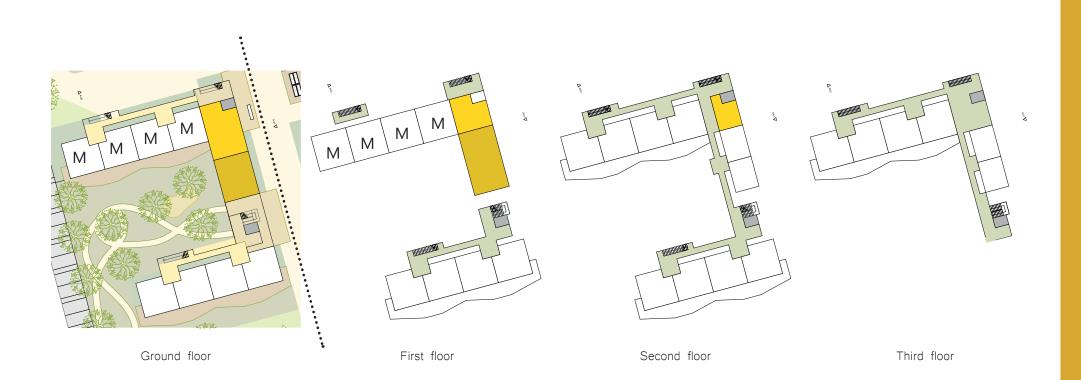
EMPHASIS ON CHILDREN

To make sure, the playful ensemble will always have a certain amount of children living there, I will implement some Maisonette dwellings (M), which will house families. The garden offers a tree-house & a playground, where the children can play.



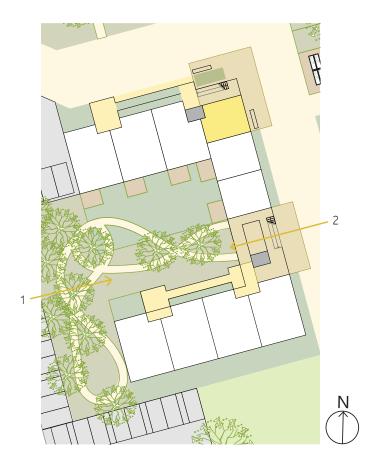


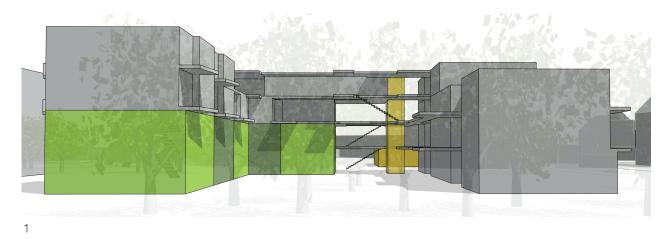


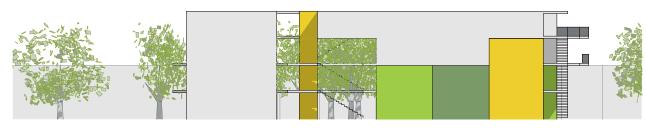


PLAYFUL SHAPE

The shape and the routing of the building was also designed to be playful, why the shape of the building has a passage to enter the parochial space on the inside.







2

RESEARCHING PASSAGES

To understand how large the passage should be to create the right atmosphere, I walked around in Delft to find similar situations.

+-







1 floor passage

- not visible for everyone
 - too narrow & low
 - + intimate feeling

2 floor passage

- no intimacy
- + bright & open
- + visible from every side & inviting

seperating bridges

- closed ground floor -> not inviting
 - + feeling of a "closed" block without walls

2.7 FINAL MASTERPLAN





3. ARCHITECTURE

PRIVATE & SHARED

The following chapter will look into the scale of the private apartments and the adjacent shared spaces. It will look into the topic of flexibility concerning the adaptability of shared spaces.

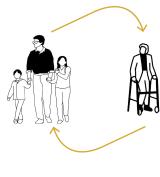
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3.1 CONCEPT

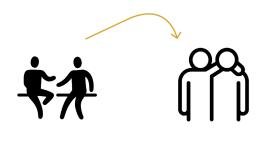
FOR THE DWELLINGS

Coming from my research about elderly, I want to make sure that my inclusive living environment provides an informal care system by implementing different generations in the neighbourhood as well as to create a community by adding spaces to meet and familiarize. To make sure, that the neighbourhood is open to anyone independent of their income, background or age I will offer different apartment sizes.

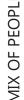
To enable the neighbourhood to become future-proof I will offer flexible structures both on the apartment and public scale of the design.

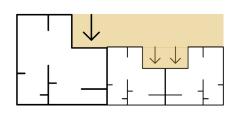


-> mix of generations

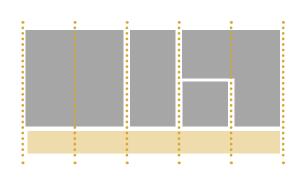


-> space to meet and familiarize





-> different apartment-sizes



-> flexible architecture

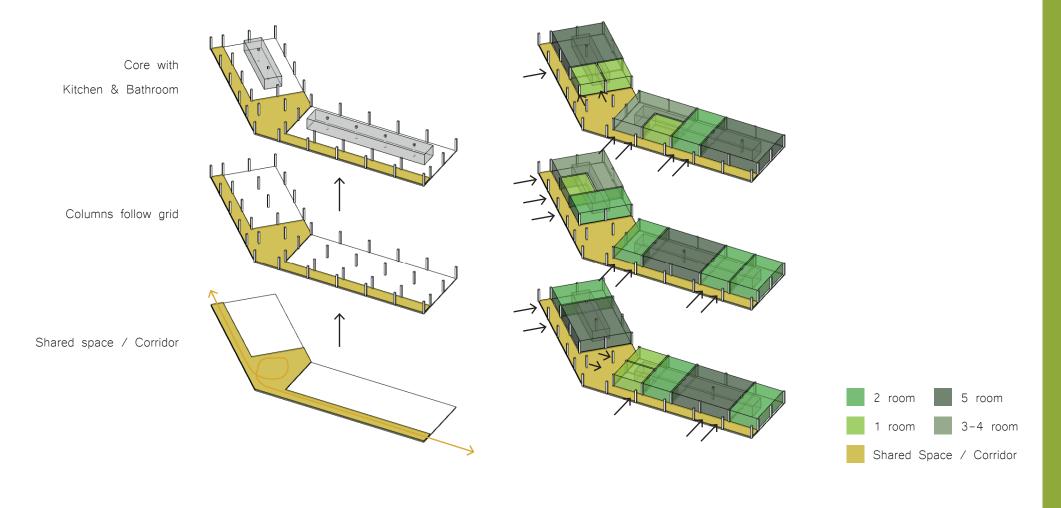
COMMUNITY

3.2 FLEXIBLE DWELLINGS

FLEXIBLE DWELLINGS

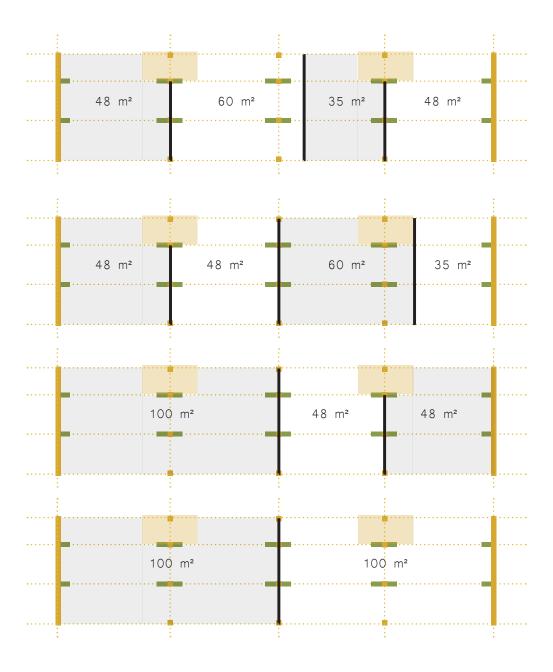
To create a flexible structure for the buildings a grid was developed, which can fit differently sized apartments. By implementing a grid of columns, the apartments can be variously placed along the circulation space. A core on the inside with the kitchen and bathroom appliances will be the only fixed elements. The circulation space with the attached shared space will link all the apartments together.





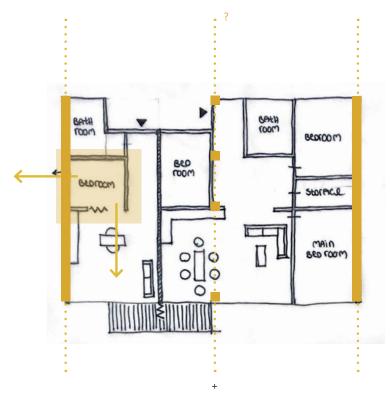
COMBINATION OF DWELLINGS

The grid makes possible to place larger apartments next to smaller ones to enable the mix of people on the same floor.



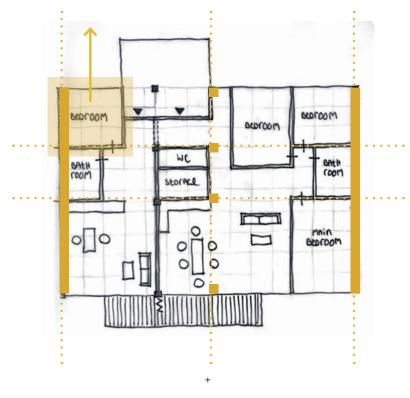
FLOOR PLAN TEST

The floor plans show different ideas about the orientation of the bedroom and its benefits and disadvantages.



Bedroom directly open-able to living room

Apartment needs to be at the buildings' corner



Position of apartment irrelevant

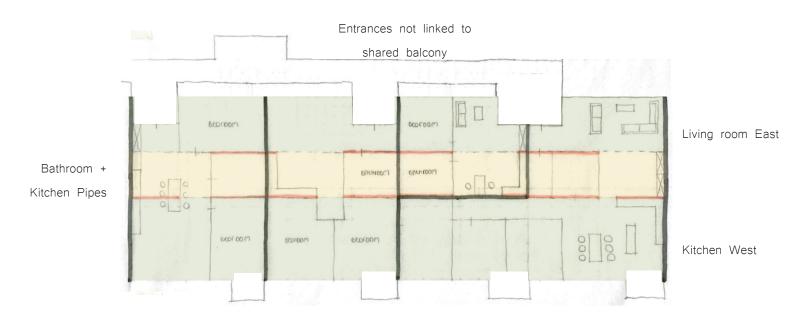
Bedroom strictly separated from living room

ZONING

By placing the installation core in the centre of the apartments, the position of the kitchen can be decided by the first time resident. People, who prefer to have morning sun in the kitchen can place the kitchen in the East and the living room facing the evening sun or the other way around.

These floor plans also show the benefit of the entrance corner, which will be shared by two households, as this already opens up the possibility of a casual encounter entering or exiting the apartment.





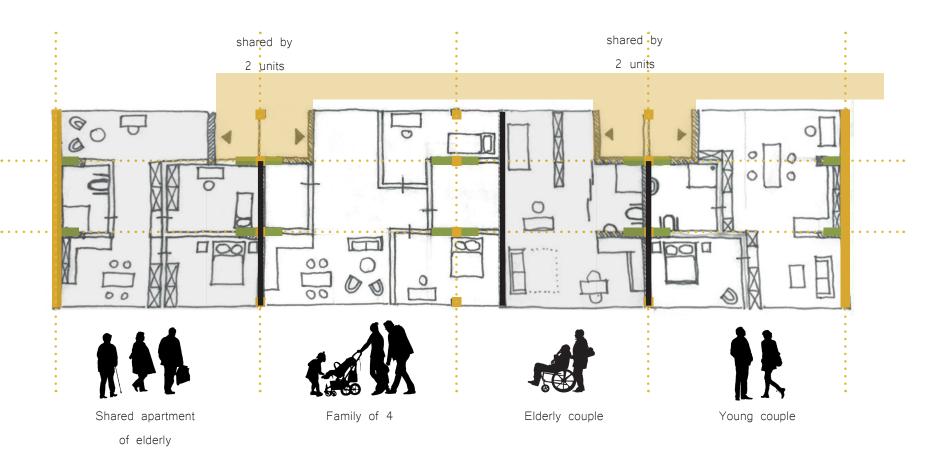
ZONING

The flexible grid of the apartment lets the resident choose the general layout and orientation of the functions. It is possible to create one large open living room with an included kitchen or rather have smaller separated rooms.



MIX OF HOUSEHOLDS

These floor plans show, how differently sized households can live directly next to each other in differently sized apartments.



VARIOUS LAYOUTS

After the different layout attempts, I developed four different apartment sizes, which range from a studio of around $35~\text{m}^2$ up until a 4-bedroom apartment around $90~\text{m}^2$.

I developed five different versions of the apartments, which enable any person independent of their physical limitations such as a dependency on a wheelchair to choose a fitting layout.



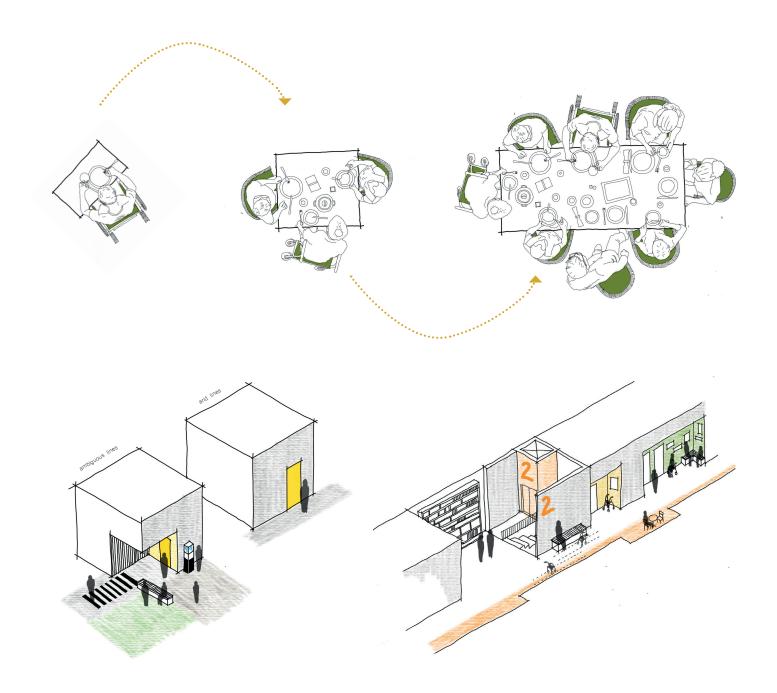
3.3 INTERACTIVE ZONES

LEAVING CHOICES

After the research, it became clear, that the clear definition of zones is important as well as creating transition spaces in between, which can spark interaction between the residents. As privacy is also important, it was essential to always leave the choice between using something alone or together with others. Offering ambiguous zones, which offer benches, a roof, additional functions or a change in surface material, the residents become more likely to spend their time with others.

The next pages will show, how different transition

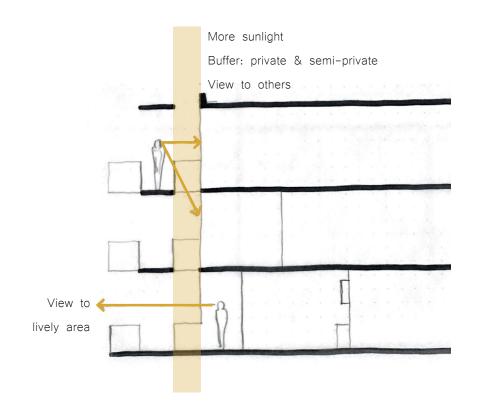
zones can offer a flexible use.

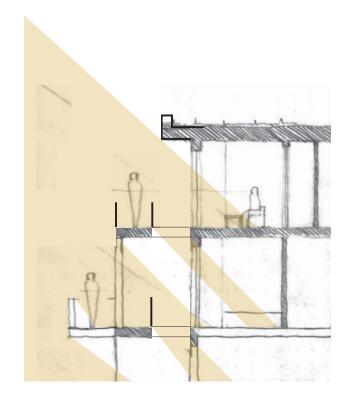


3.4 CIRCULATION SPACE

DISTANCE

The balcony access will be more than only the circulation space of the building, where everyone just enters and exits their apartments. It will offer the view to the lively outside space, as well as entrances, which will be shared by two house-holds. The floor plan already shows a certain way of zoning, as the entrances would be accessible to everyone, but through their corner position will feel more private. The corridor will be detached from the facade of the building to create a small buffer between private and shared space as well as to open up the visual connection between the floors. Detaching the circulation space furthermore reduces the shading onto the private façades.





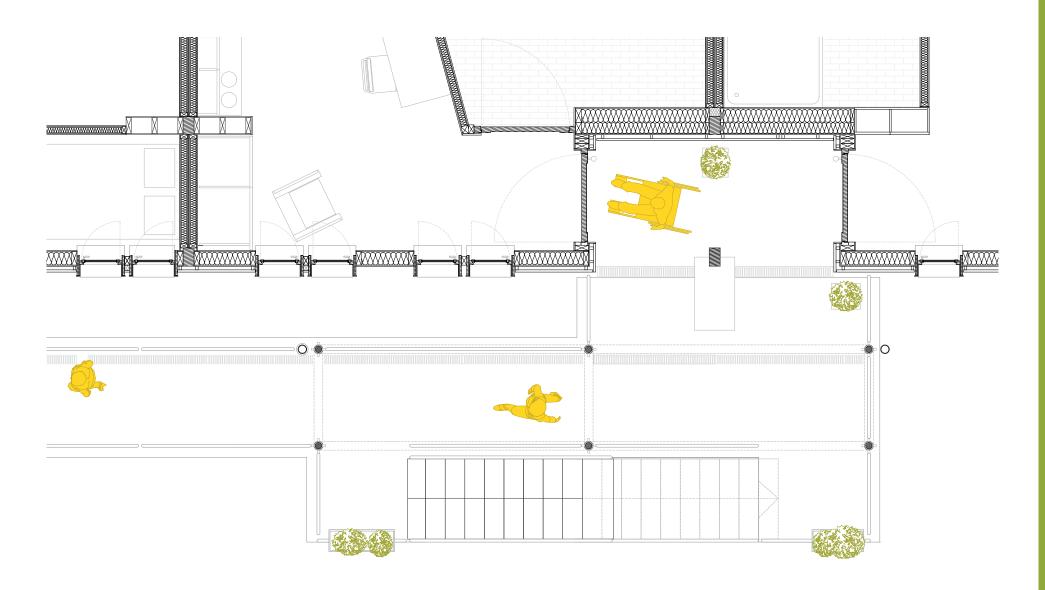


shared by 2 units

shared by 4 units

GRADUAL TRANSITION

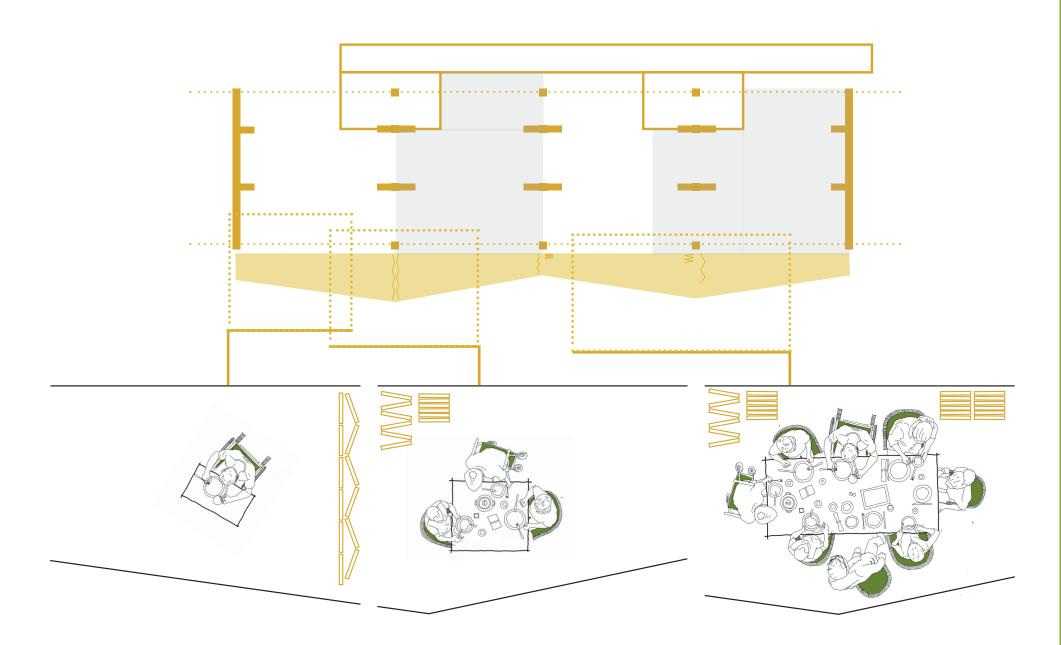
The floor plan of the entrance to the apartments shows, how they are wheelchair-accessible as well as offer a small bench, which can be used to rest, to remove dirty shoes or to set aside groceries for a while. The shape of the circulation space as well as the lines on the floor, which are the drains are creating the subtle transition from more public to more private.



3.5 BALCONY SPACE

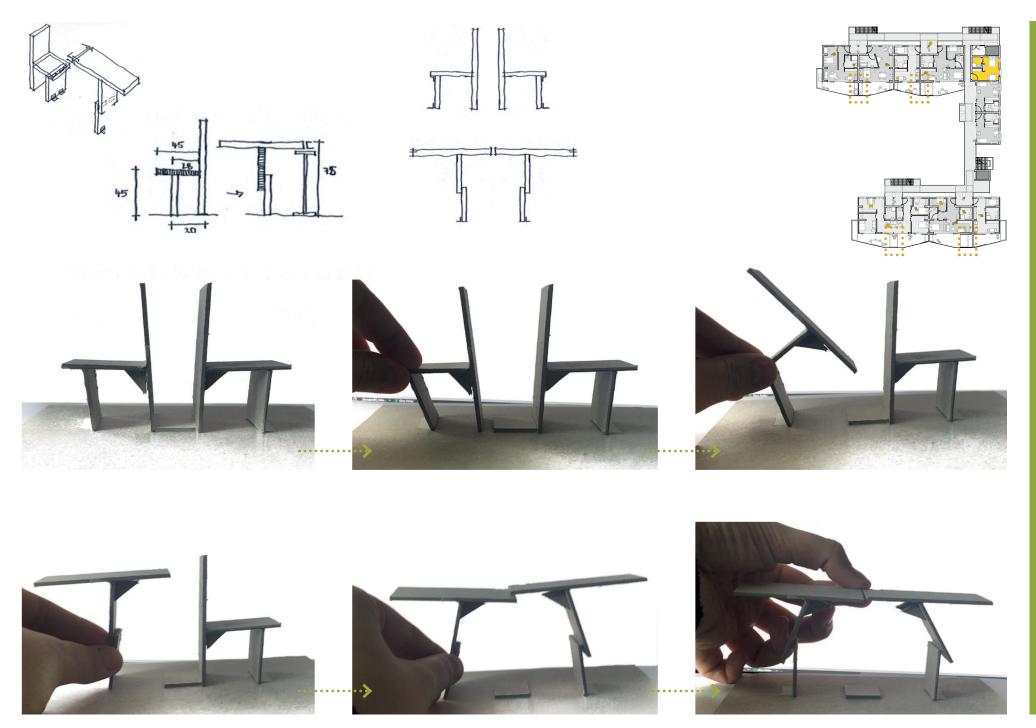
ALONE OR SHARED

The balcony space will offer the opportunity to be used alone or together with the neighbours. The shape of the balcony makes it possible, that more people can gather at certain points, where one household meets the other. By implementing separating elements in between the balconies the resident can decide depending on their mood or importance of privacy whether to open up the balcony or keeping it closed.



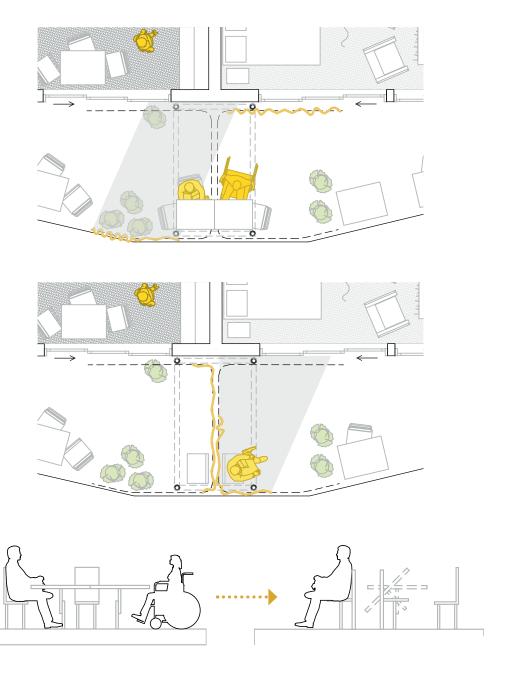
FLEXIBLE FURNITURE

Additional to the separating elements between the balconies, there will also be a flexible piece of furniture, which can be used alone as a chair or storing element and shared as a table. By folding the chair up and connecting it to the other one, it becomes a table, which now couldd be used for a dinner with the neighbours.



ALONE OR TOGETHER

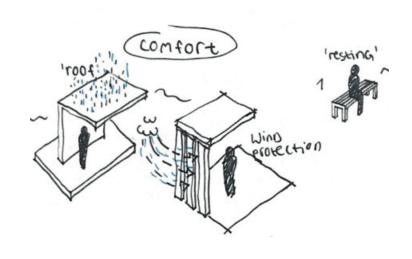
The images on the right show how the separating curtains as well as the furniture piece combined serve either the purpose of full privacy or togetherness.

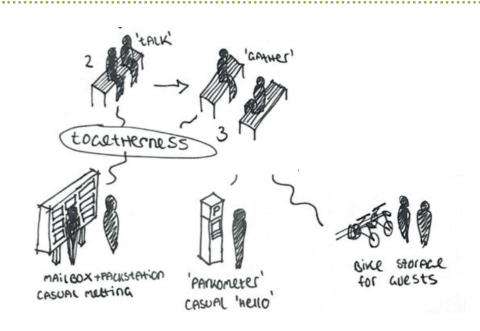


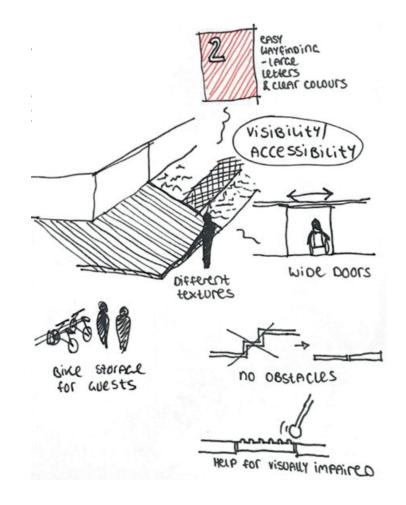
3.6 ENTRANCE

AMBIGUOUS LINES

The main entrances to the buildings should offer the resident more than only the possibility of entering and exiting. By creating ambiguous lines residents are encouraged to use it for interaction. It is important to create comfort by offering a roofed entrance as well as visibility and accessibility and the possibility of togetherness.

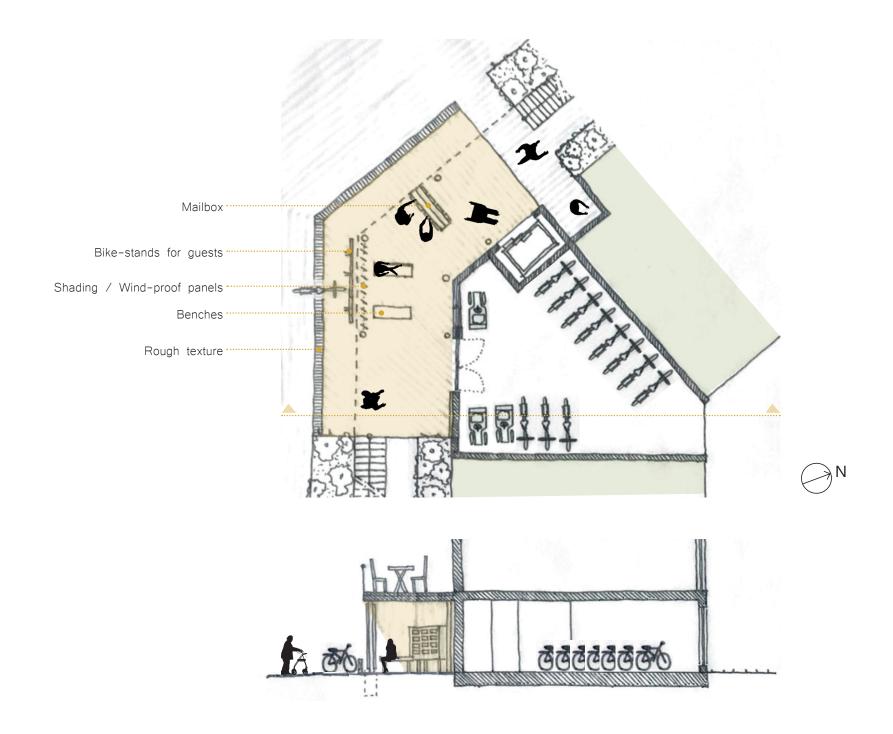






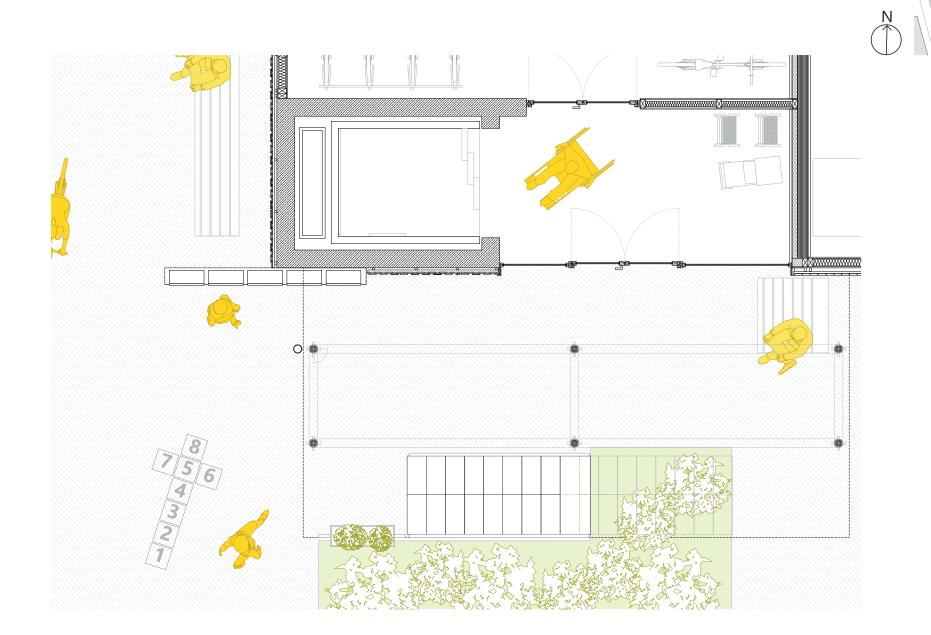
ENTRANCE - EXAMPLE

The floor plan shows a possible idea for the entrance, which creates ambiguous lines to make people use it for more than only entering and exiting.



ENTRANCE PLAYFUL ENSEMBLE

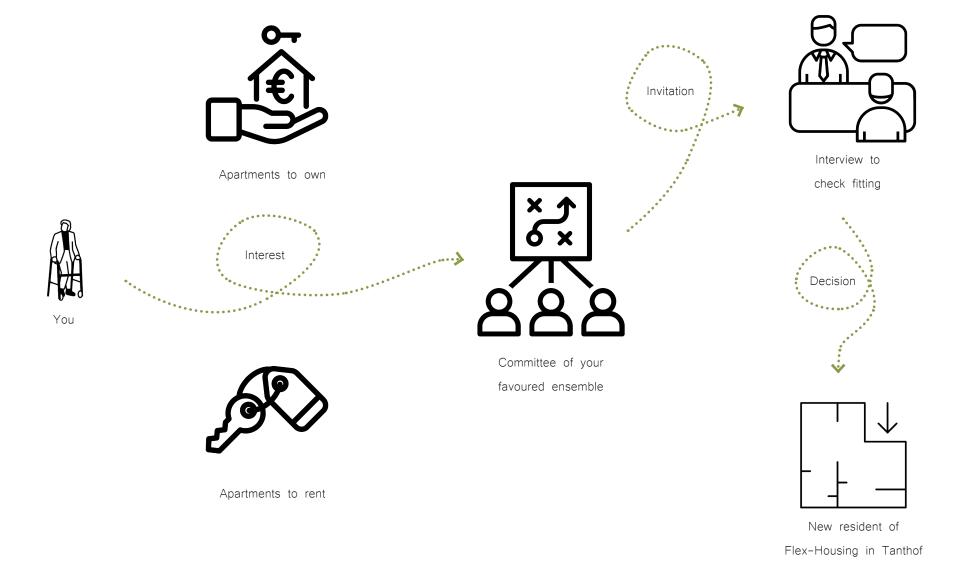
The entrance of the playful ensemble will offer benches to rest on, as well as the mailboxes next to it to create possible casual encounters between the residents. The stairwells are marked with greenery, therefore a different materiality than the surrounding. The elevator is a little bit hidden inside the building to motivate everyone to take the stairs, but still easily accessible. Next to the elevator is enough space to store a walker or a stroller for he residents.



3.7 CATALOGUE OF APARTMENTS

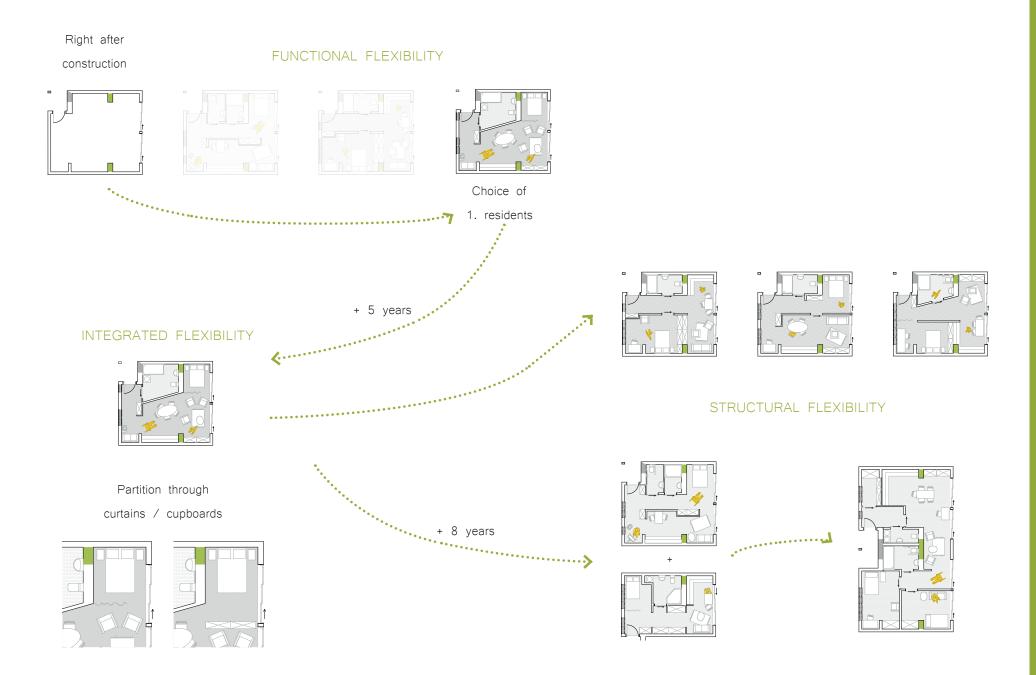
YOUR NEW HOME?

Are you interested in moving into Flex-housing in Delft Tanthof? No matter if you are looking for a place to rent or to buy, both is provided here. As this inclusive living environment wants to make sure, that you are a perfect fit for the neighbour-hood, you need to contact the committee of your favoured ensemble, who will check the distribution of generations in the ensemble and then invite you for an interview, where you will meet your future neighbours to talk about your ideal way of living. If both of the neighbours and you feel like you are a good fit, we will welcome you as a new resident of Flex-Housing in Delft Tanthof.



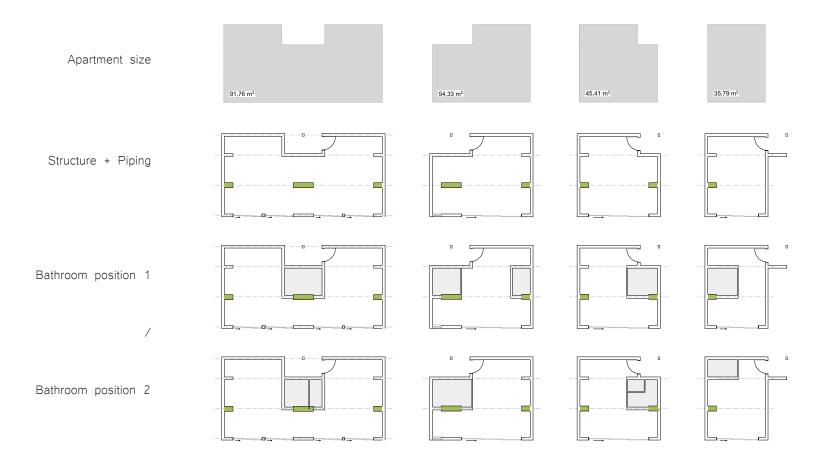
FLEXIBLE DWELLINGS

As a resident of Flex-Housing in Delft Tanthof, you will be provided with a large amount
of flexibility. Before moving in for the first time,
you can decide on the layout of your apartment.
During the lifetime of the apartment, you have
the possibility of adapting the layout with simple methods of integrated flexibility by separating
or opening up rooms with curtains or cupboards.
If you notice, your apartment becomes to small
or too large, you can also decide to change the
size of the apartment, which will be linked with a
larger structural change. The provided grid of the
complex opens up the possibility of adapting, so
you will feel at home for a lifetime.



THE PERFECT FIT

Flex-Housing in Delft Tanthof offers four different apartment sizes, which can be freely adapted to the needs and preferences of the first-time resident. The sizes range from smaller studios of around $\sim 35~\text{m}^2$ to larger dwellings up to around $\sim 90~\text{m}^2$. The resident can freely choose the amount of rooms, the orientation of the kitchen and living room as well as the partitioning elements.



VARIOUS LAYOUTS





1 single elderly





wheelchair dependant









Elderly couple

1 bedroom





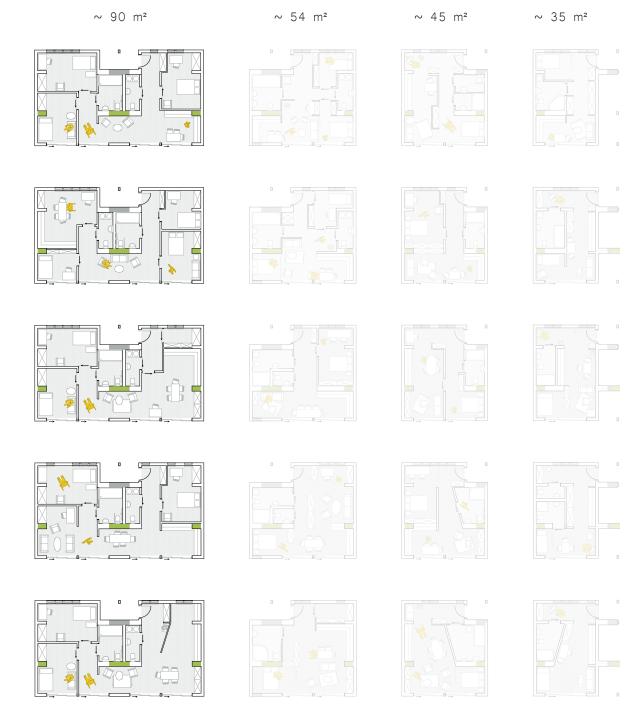
Elderly couple separate bedrooms



 $\sim 45 \text{ m}^2$

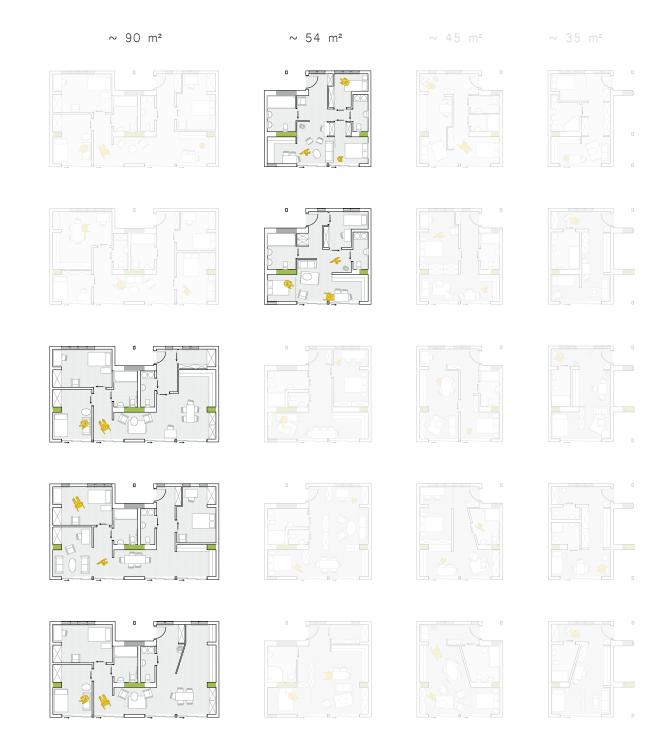
 $\sim 35 \text{ m}^2$







Family with 2 children





2 bedrooms





Shared flat 3 bedrooms

MOVING IN TOGETHER

As the Flex-Housing in Delft offers not only individual apartments, but rather a community to move in to, you will be very welcome to join us together with other parts of your family, friends or people with the same interest. As privacy is very important to us, you will always have the opportunity to live in your private apartment, but optionally share the generous balcony space.

According to your preferences both the benefits of privacy and togetherness will be available.

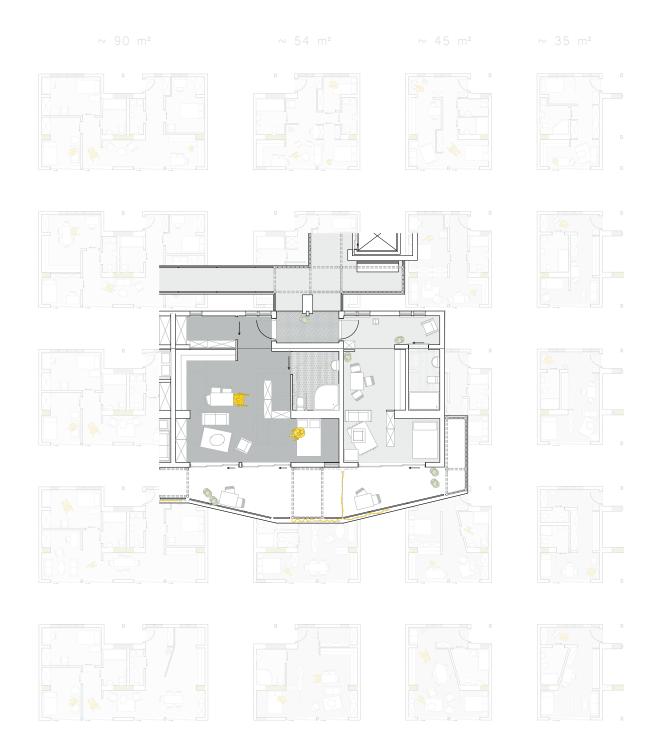


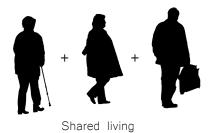
2 apartments + balcony



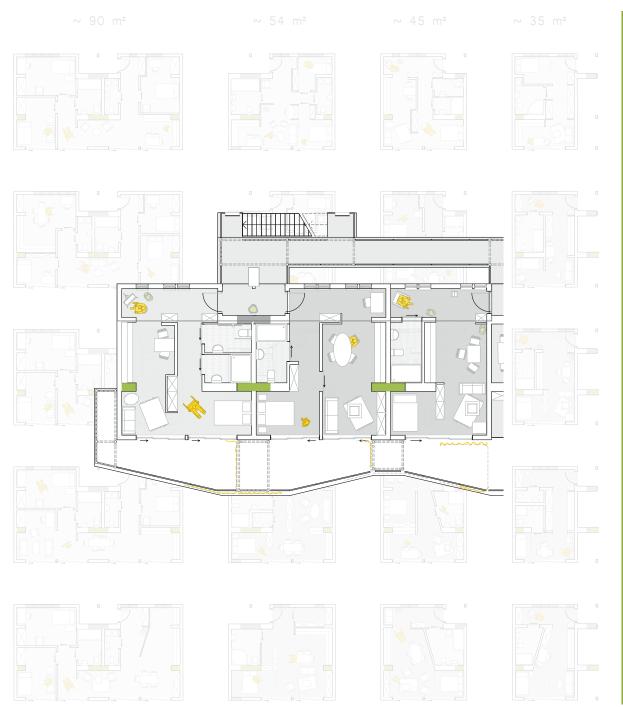


Elderly couple + daughter 2 apartments + balcony



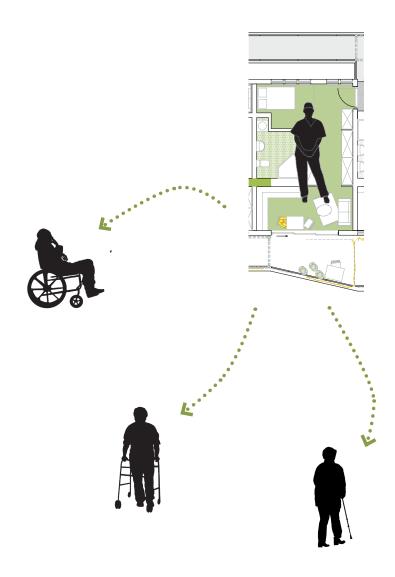


3 apartments + balcony



PROVIDED CARE

You are welcome at our complex independent of your age, needs or limitations. For your care, there will be professional caregivers at every ensemble to provide you with the best service. If you value your privacy very high, the caregiver will be instructed to ring your doorbell before they will help you, so you can decide when they will enter your apartment for help. If you become more dependent, the caregiver can also ensure your safety by walking over the balcony, so accidents can be avoided or quickly noticed.





2 apartments + balcony



2 dependant elderly + Caregiver 3 apartments + balcony



CAREGIVERS WANTED!

Are you a professional caregiver, who enjoy working with elderly in a beautiful suburban neighbourhood in Delft Tanthof? We can offer you a reduced rent and short routes to work, as your clients will be your direct neighbours, so you can always be there for emergencies. As your route to work is very short, you will have time to maybe develop a friendship with your clients to create a more friendly and welcoming workplace. Your privacy will be guaranteed in your private apartment, if you want to keep your work professional. As a caregiver at the Flex-Housing in Delft Tanthof you can also become a part of the community by participating in group activities and meeting your neighbours casually in the complex.



-> reduced rent



-> short route to work



-> always there for emergencies





-> friendships with elderly possible, but not necessary



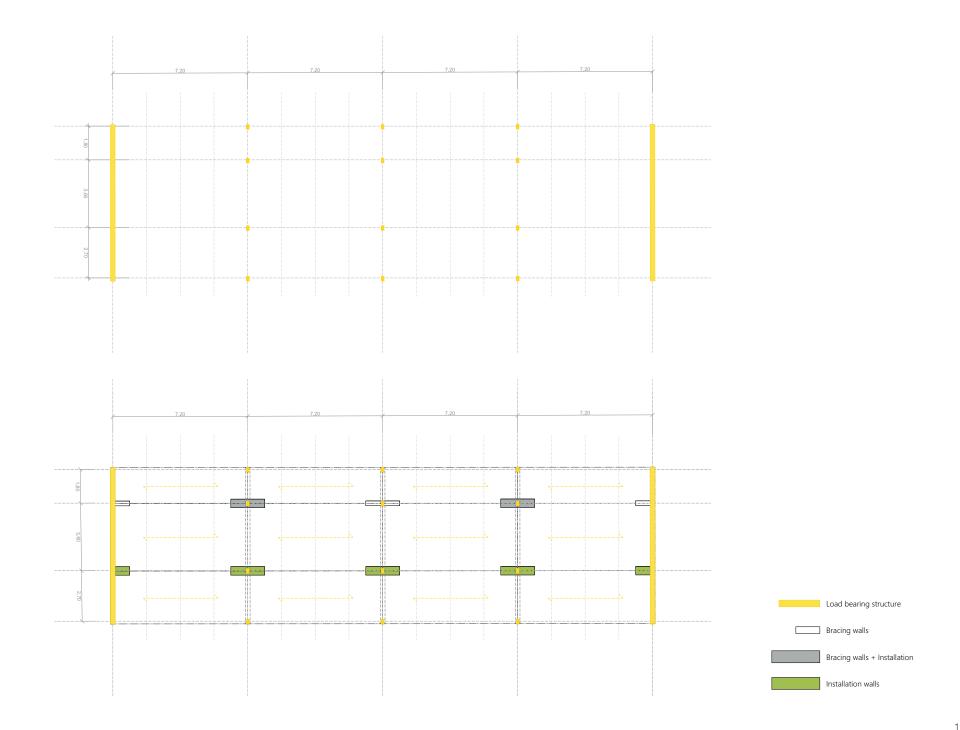




3.8 STRUCTURE

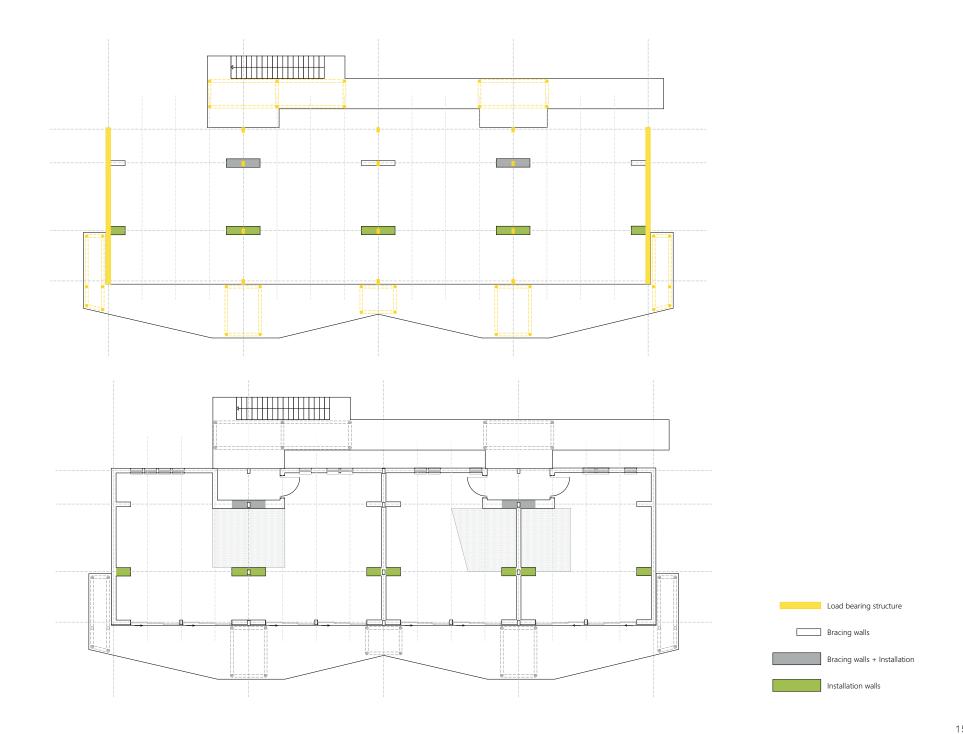
FLEXIBLE GRID

To offer flexible apartment sizes, the structure will be very open, The outside walls as well as the three rows of columns in between and the floor slabs will be constructed in cross-laminated timber with a grid size of 7,2 on 8,1 m. To stiffen the structure and add installation appliances, smaller orthogonal elements are added.



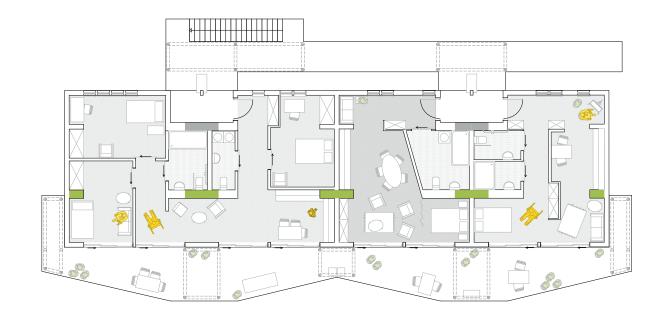
SHARED SPACE

The difference in function (Apartments - private / Balcony & Circulation - shared) will also be visible in the structure. The shared spaces will be constructed out of steel columns and prefabricated concrete slabs to create an open and airy felling corresponding to the communal use.



APARTMENT ZONING

After inserting the flexible layouts of the apartments, it becomes visible how the shape of the different zones gradually transition into each other. The dark yellow shows the most public area, which is the stairwell, as it is used by everyone in the building whereas the darkest green shows the most enclosed and private zone of the apartment.



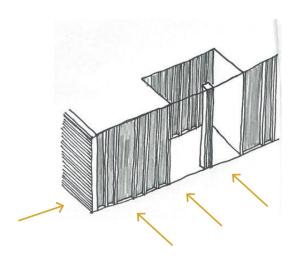


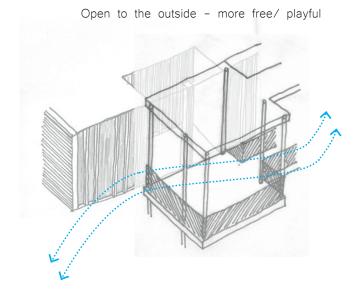
3.9 MATERIALITY

SOLID VS. AIRY

Looking into the materiality of the façades the difference in private versus shared should become visible. Therefore the private part, which is constructed out of timber will also have a quite massive, regular facade out of differently orientated wooden panels to represent the private character of the space. The shared spaces give an open and airy atmosphere by slim steel columns and concrete floor slabs, as well as an airy railing out of a metal mesh.

Solid/ Massive shape for private spaces certain regularity





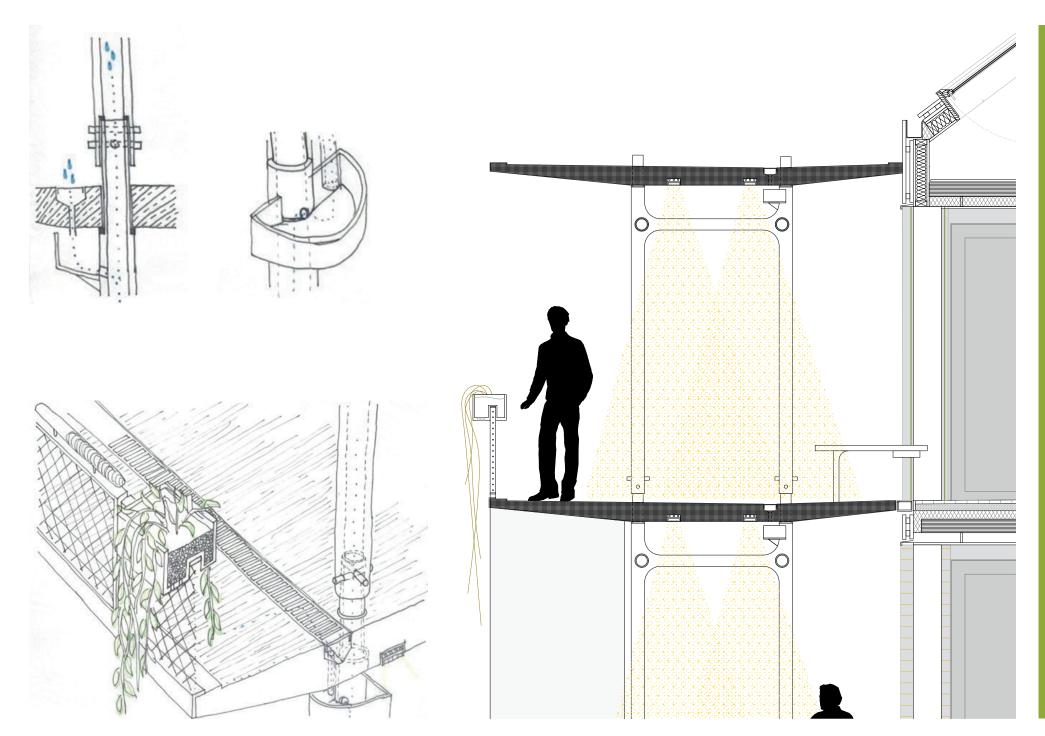
Open / Airy shape for balconies





STRUCTURE - IDEAS

The circulation space, which is also a shared space and therefore light and airy will be marked with plant pots on the railing to attract residents to use it rather than the elevator. Originally my idea as to combine the structural system of the steel columns and the drainage pipes, which I later separated from each other again. By prefabricating the floor slabs it opens up the possibility of integrating the drains in it.



CREATING RECOGNITION

In Tanthof it is quite common, that certain complexes are recognized as belonging together through a colour code, which I will pick up for the new neighbourhood. The façades of the private apartments should enable every resident to recognize their specific apartment as well as to create a feeling of familiarity. As each ensemble has been assigned a certain colour code, the facade of the playful ensemble will be mostly yellow shades. To create a more playful elevation, I also decided to change the orientation of the wooden panels depending on the floor level. The windows on the side of the circulation space are quite small and narrow to keep the private character of the facade. Every resident should be able to recognize their specific apartment easily through their bright yellow house number and the colour / orientation if it. This will create a feeling of orientation and belonging to a neighbourhood.

















4. THE BUILDING SCALE PLAYFUL ENSEMBLE

This chapter will focus on the playful ensemble of the inclusive living environment and therefore on the building scale. It will link the urban design, the apartments, interactive spaces, the structure and materiality together. The following chapter will show how the ensemble and the public centre next to it work as a whole and how it can be used by the residents.

4.1 THE PLAYFUL ENSEMBLE	168-191
4.2 DETAILS & BT	192-205
4.3 THE PUBLIC CENTRE	206-213
4.4 MODEL PICTURES	214-219
4.5 IMPRESSIONS	220-229
4.6 A DAY IN THE LIFE OF	230-249

4.1 THE PLAYFUL ENSEMBLE

Elderly, who like an active and lively surrounding as well as the presence of children and families, would like to live in the playful ensemble in the South of the site close to the public centre.





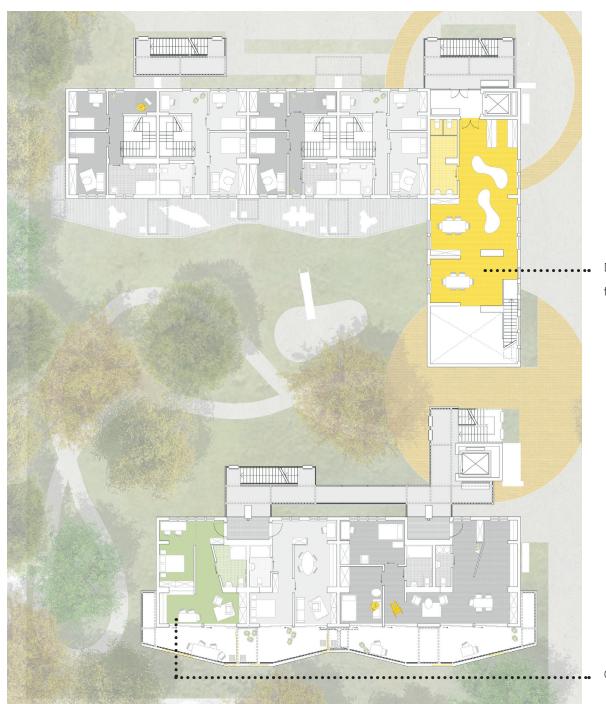
GROUND FLOOR

To ensure the playful ensemble will always be active and lively, the public function of the ensemble is a small childcare, which can use the garden with the tree-house and the playful routing in the middle together with the other residents. The North of the ensemble offers Maisonette dwellings for larger families, who like to own a house but still be surrounded by many others.



FIRST FLOOR

The small Day-Care continues on the first floor and has another entrance in the North where it connects to the other residents. In the South West corner the first care-giver apartment is located.



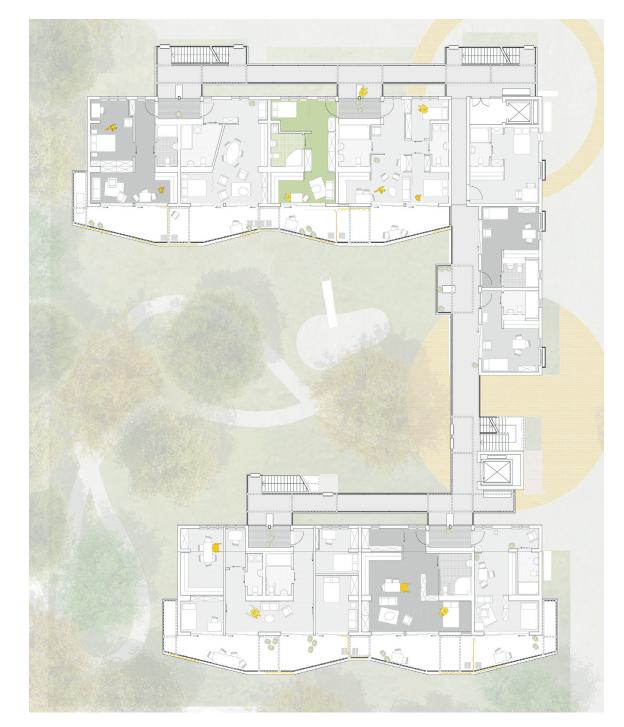
Day-Care for children

Caregiver apartment



SECOND FLOOR

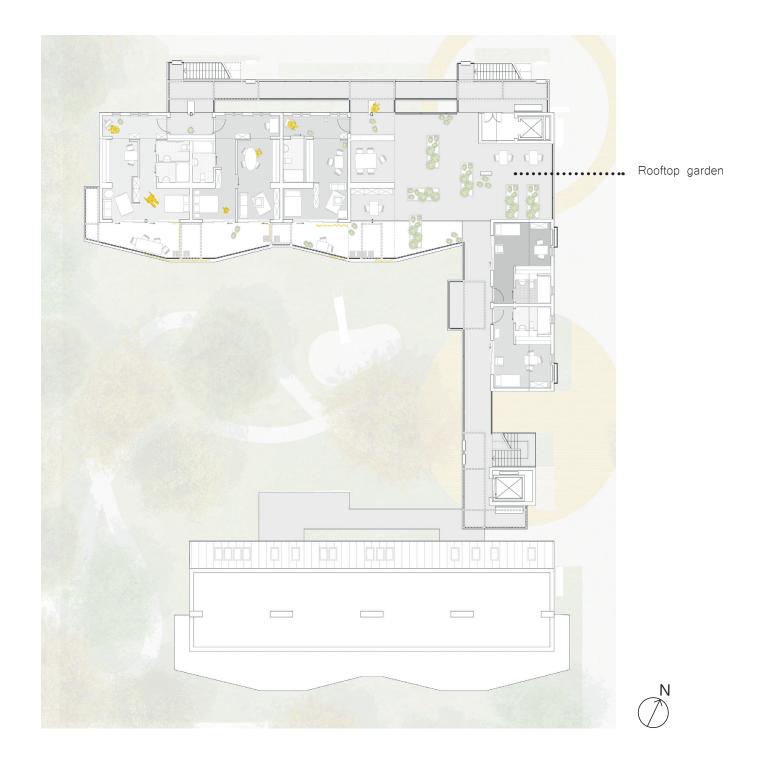
The green apartment marks the second care-giver apartment. The second floor shows a variety in apartment sizes as well as a playful routing over the circulation space, which links all apartments with each other.





THIRD FLOOR

The third floor offers a roof garden for all residents. The roof garden allows the view both in the garden with the tree-house inside the court-yard as well as the view towards the more public space in the East and South.



SECTION

To allow more light into the garden of the playful ensemble as well as to create a playful shape, the Southern part of the building only offers three floors.





ELEVATION

The North facing facade of the ensemble shows the open circulation space against the more massive wooden facade of the private spaces. The yellow colour code of the ensemble is clearly visible. To mark the entrance with the elevator tower, this part of the facade is made of wooden shingles in another yellow shade corresponding to the yellow shade visible on the ground of the ensemble. The public benches, the mailbox and the differently shaped doors invite the resident to enter. The vines mark the stairwells and lead the visitor towards the rooftop garden.







ELEVATION

The facade facing the East opens up the complex by introducing a passage in between. The Daycare on the ground and first floor becomes visible as a public functions, as it continues the same materiality as the elevator towers. Following the playfulness of the ensemble, the placement of the windows is freer than the regular apartments and follows the shape of the interior stairwell, so children can peak through them. The apartments on top of the childcare offer French balconies, so that these smaller apartments also have a more private outside space.







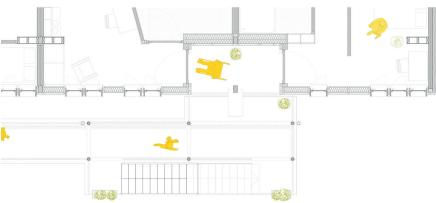


ELEVATION - SECTION - PLAN

Looking at the facade in relationship with the plan of the second floor and the full height section the difference in shared and private space becomes visible. The ground and first floor in that part are one larger town-house linked with a stairwell in the middle, which serve as Maisonette dwellings for families. All apartments apart from the maisonette dwellings are accessible by elevator, so people independent of their physical abilities can live on any floor.







ENTRANCE TO APARTMENT

The difference in structure as well as openness marks the zones of the building. The light weight and open structure of the circulation space stands detached from the more massive wooden structure of the private apartments. The entrance is set back to create a gradual transition to the inside. The apartments on the top floor offer higher ceiling heights and additional space.





CIRCULATION - PLAN

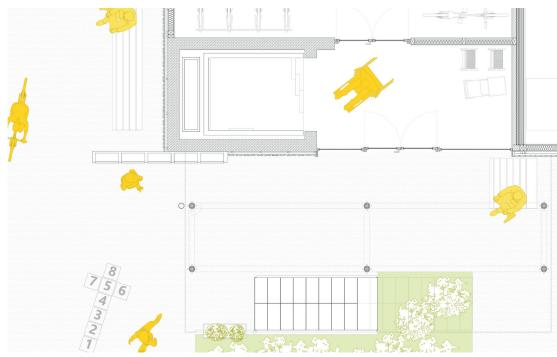
The floor plan of the entrance to the apartments shows, how they are wheelchair-accessible as well as offer a small bench, which can be used to rest, to remove dirty shoes or to set aside groceries for a while. The shape of the circulation space as well as the lines on the floor, which are the drains are creating the subtle transition from more public to more private.



ENTRANCE TO BUILDING

The entrance of the playful ensemble offers benches to rest on, as well as the mailboxes next to it to create possible casual encounters between the residents. The stairwells are marked with greenery, therefore a different materiality than the surrounding. The elevator is a little bit hidden inside the building to motivate everyone to take the stairs, but still easily accessible. Next to the elevator is enough space to store a walker or a stroller for the residents.

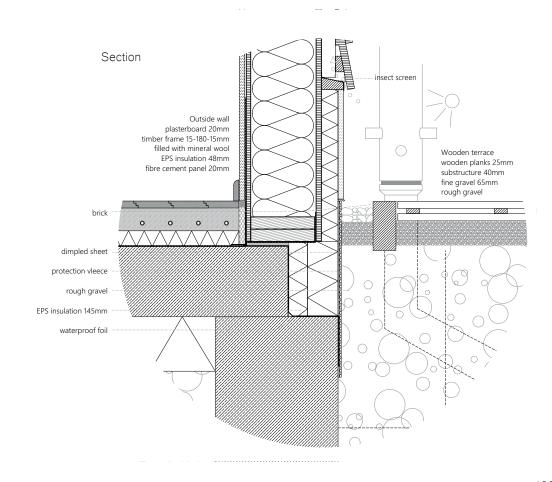




4.2 DETAILS & BT

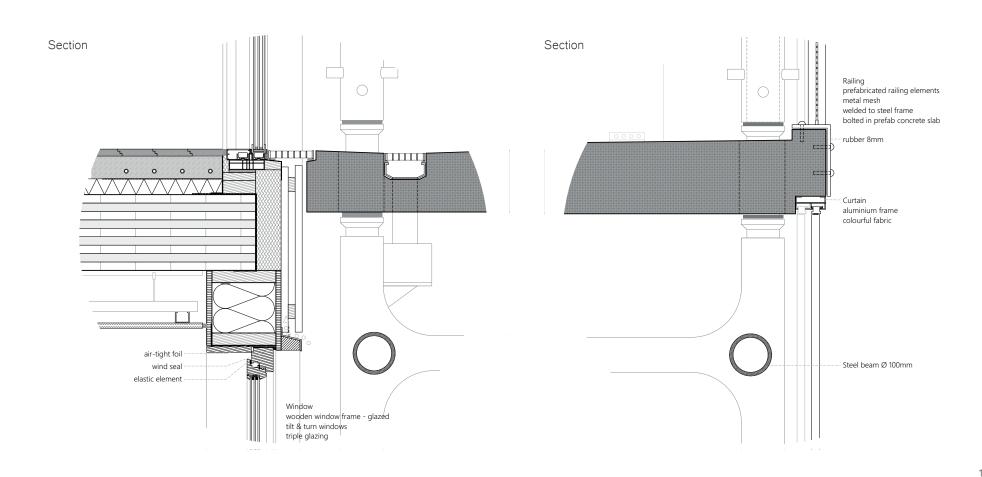
FOUNDATION





BALCONY

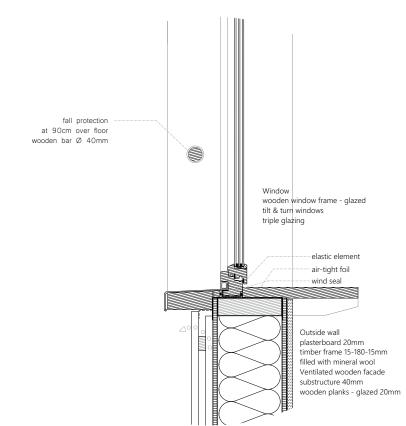




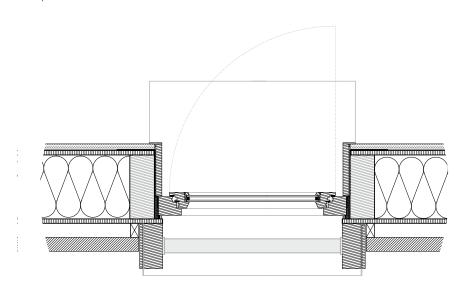
WINDOWS



Section

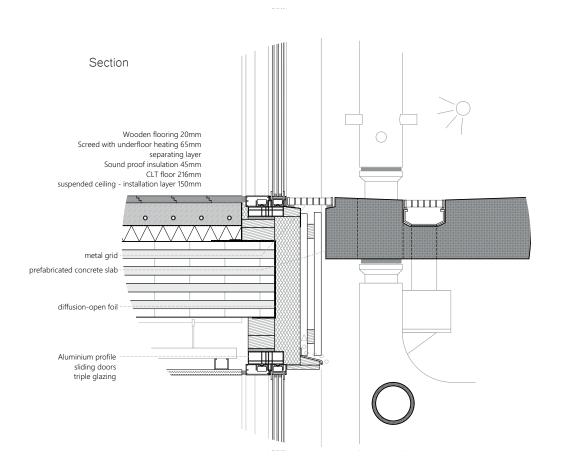


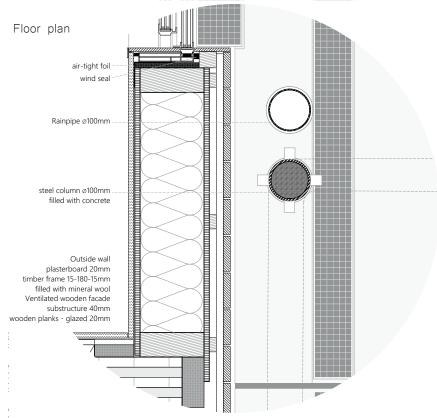
Floor plan



PRIVATE TO SHARED



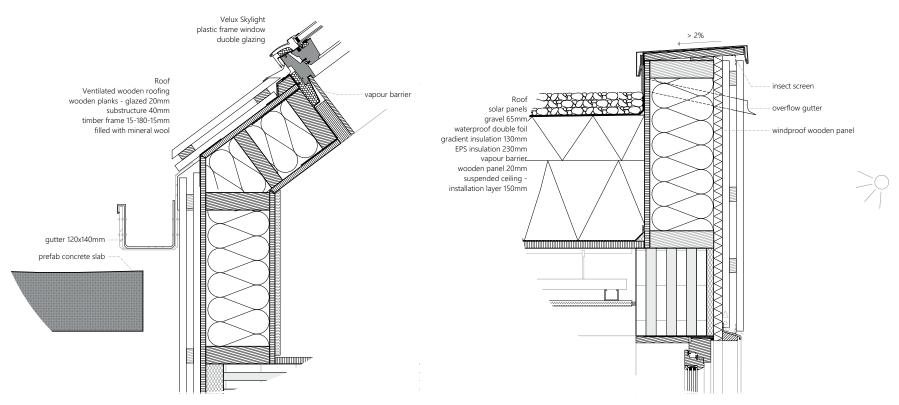




ROOF

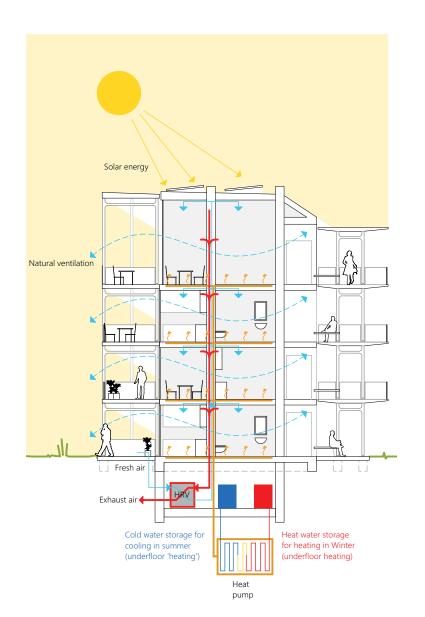


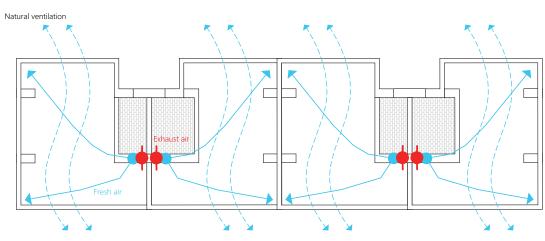
Section



CLIMATE DIAGRAM

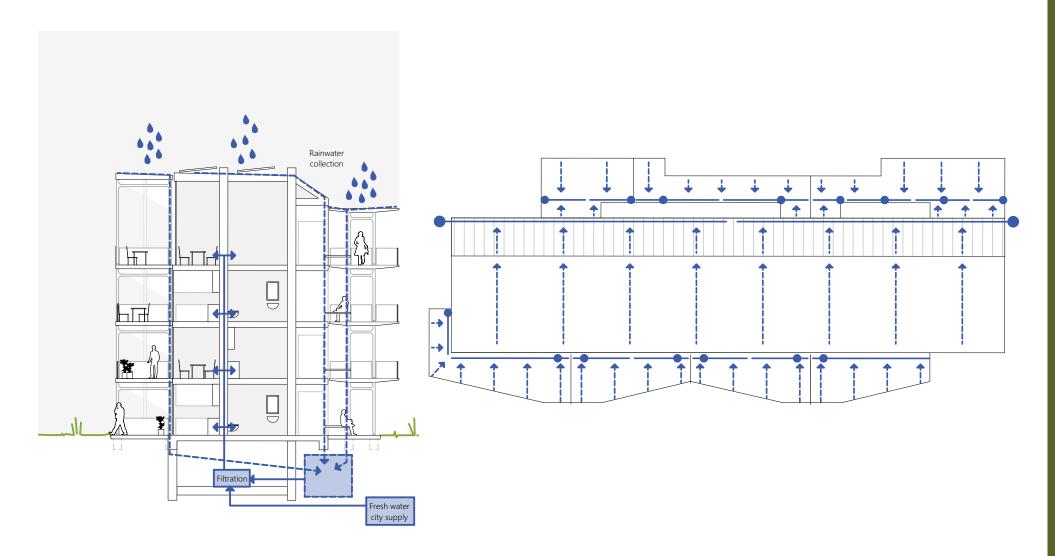
The roof tops will be covered with solar panels to make use of solar energy. A ground heat pump will provide heating and cooling with extra water tanks to store excess hot and cold water for further underfloor heating. The ventilation will be possible in a natural way through opening windows, but a heat-recovery ventilation system is providing the ventilation in bathrooms and kitchens or everywhere for the residents, who might not want to naturally ventilate.





RAINWATER COLLECTION

The rainwater is going to be collected on the roofs and balconies and partly reused for the water supply in the buildings.



4.3 THE PUBLIC CENTRE

The public centre in the South East of the inclusive living environment will offer larger flexible spaces for shared activities.





KEEPING THE MEMORY

To mark the public function of the public centre I decided to keep the memory of the former school alive by reusing some materials from it. The school's character is defined by the use of brick façades as well as the colourful window frames in red, blue and yellow. Visitors as well as residents, who might have been students at the school can keep using this space as a public space, just with a different function.

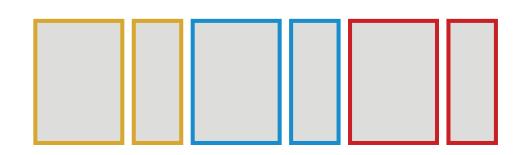












AXONOMETRIC

The entrance of the public centre is marked with a red circle of bricks to clearly invite visitors into the open front space framed with the reused window frames of the former school.



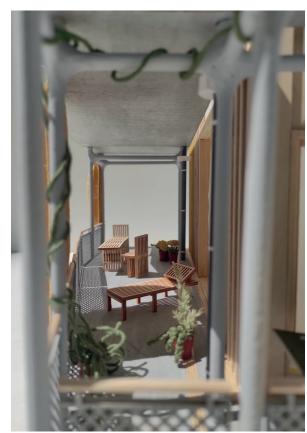
FLEXIBLE USE

The entrance of the public centre offers tables to work at, as well as a small kitchen and bathrooms. The Northern room can be used for flexible activities, such as a theatre play, sport classes or be adapted for larger gatherings or celebrations. The public centre is meant to be used by all the residents of Tanthof East.



4.4 MODEL PICTURES BALCONY SPACE

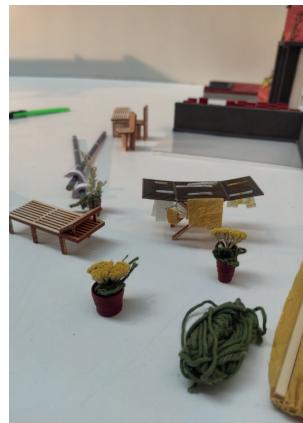






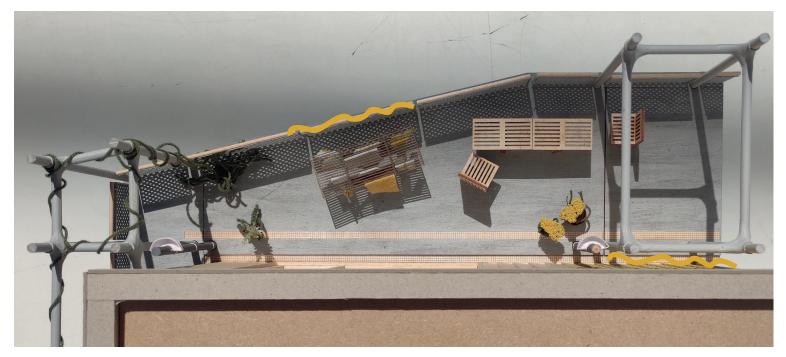


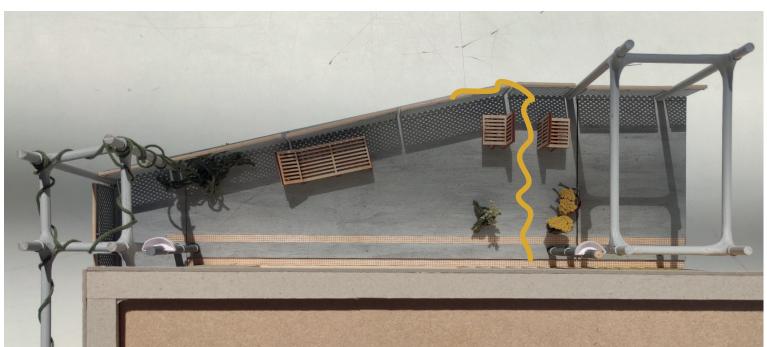






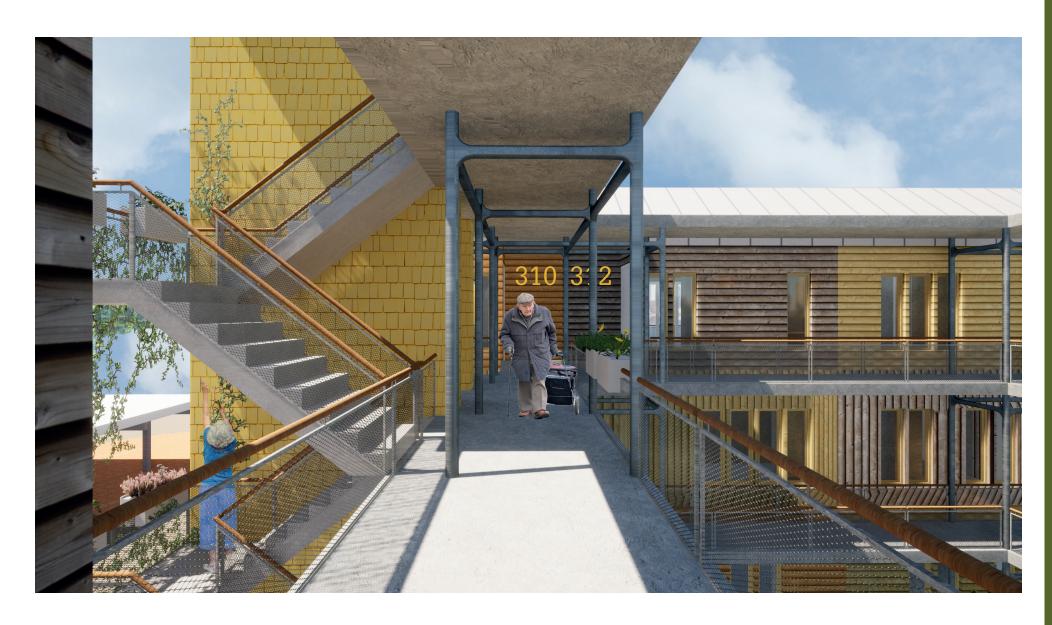






4.5 IMPRESSIONS

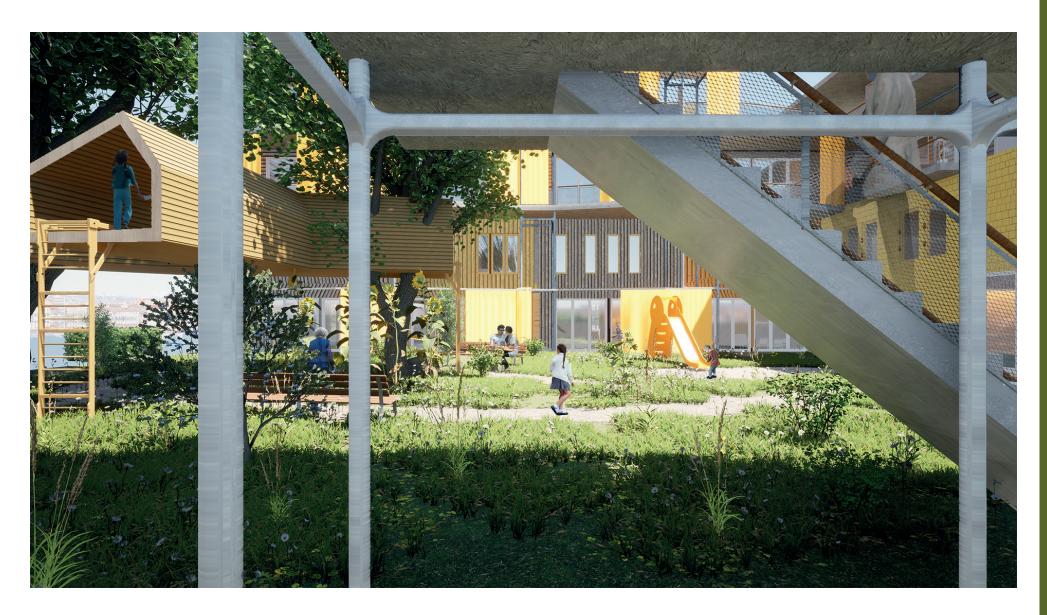
CIRCULATION SPACE



THE PLAYFUL GARDEN



UNDER THE STAIRS



CIRCULATION SPACE



PRIVATE SPACE



4.6 A DAY IN THE LIFE OF THE RESIDENTS

This part of the booklet will showcase how a day in the life of the resident Thea could look like showing how the professional and informal care works, how the neighbourhood can spark interaction and how the flexible use of spaces opens up the possibility of privacy and togetherness. On the right are shown seven characters, who will play a role on the following pages.



Thea, 78 years old

lives alone

enjoys singing & a busy surrounding

needs care sometimes



Simon, 68 years old

lives alone

is wheelchair-dependent



Hannes & son David

Family



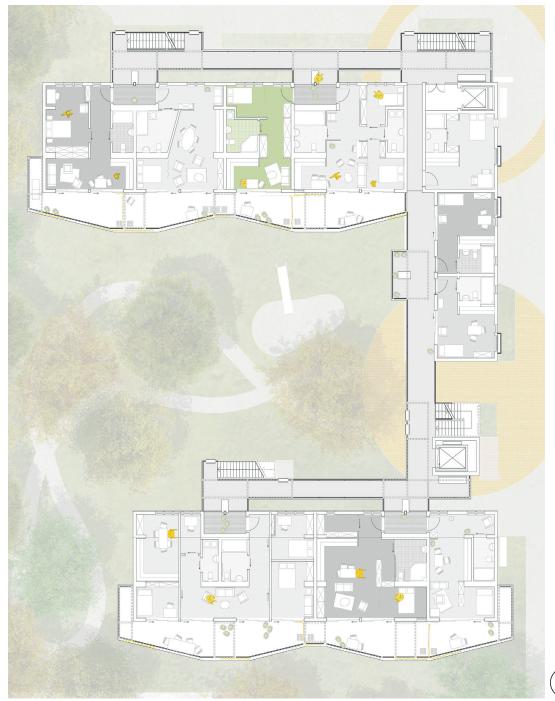
Karolina, 32 years old

Professional caregiver



Sandra & Kai

Students





WAKING UP

It is 7:30 in the morning.

Thea wakes up in her apartment on the second floor of the playful ensemble. She slowly gets out of bed and dressed.

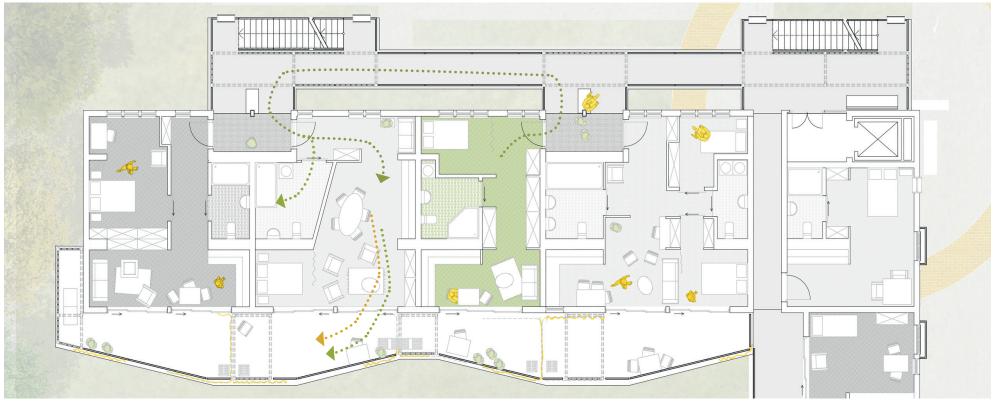
Karolina, who lives next to her & works as a professional caregiver at the ensemble wakes up at the same time and is again happy, that she works & lives at the same place, as her routes to work are so short.

At 8 am Karolina rings Thea's doorbell, as it is important to Thea to keep her privacy, even though she is dependent on care sometimes. Karolina helps Thea to take a shower and together they prepare a breakfast, which they eat on their balcony. As Thea forgot to buy milk the day before, Karolina goes back to her apartment to get milk from her fridge.

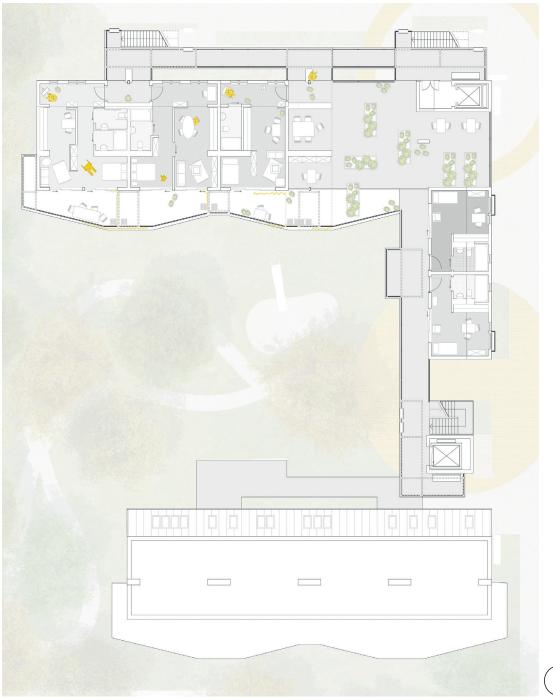
As Karolina does not have a long route to work, she can take more time spending with her client, who has become more than only a client, but rather a good neighbour and friend.











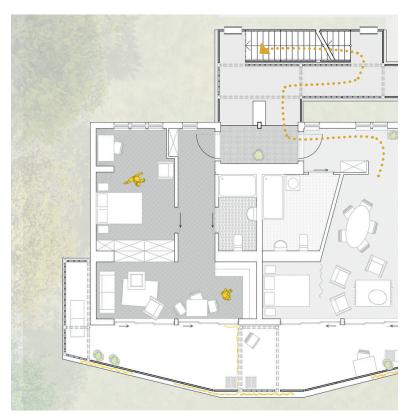
READING

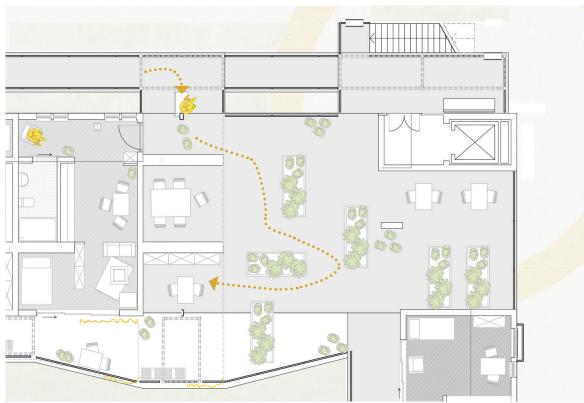
After Karolina has left, Thea decides to spend the morning reading a book on the roof terrace. As it is only one floor up, she decides to take the stairs as a small exercise, why she needs a quick rest on a bench upstairs. She walks through the plants, waters them quickly and then sits down and starts reading her book. After a while she starts hearing the children on the ground floor chatting with their friends at the small playground next to the childcare.











Second Floor Third Floor



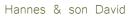
N First Floor

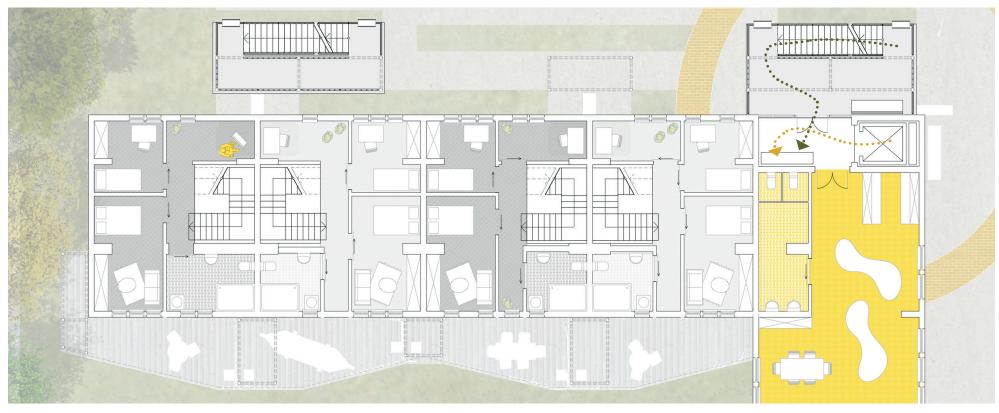
CASUAL ENCOUNTER

A little while later she remembers a meeting with a friend, hy she uses the elevator to go downstairs. As the door opens at the first floor, she meets Hannes & his son David, who are on their way to the childcare. After David has said goodbye for the day, Thea and Hannes sit down in front of the entrance & talk for a short while.











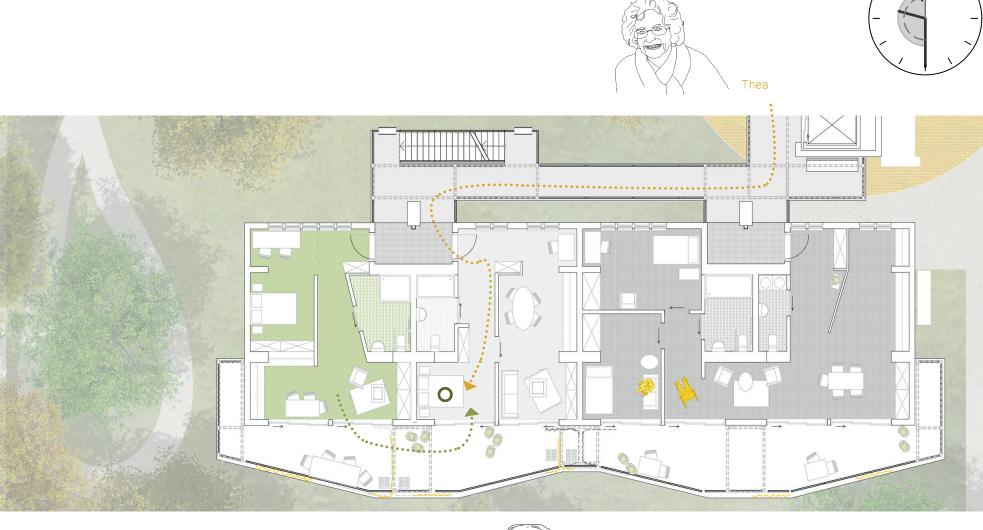


N First Floor

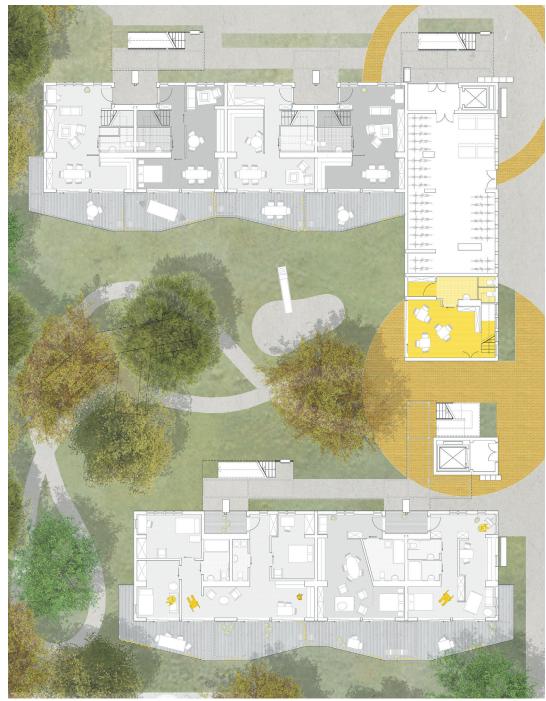
HELPING HANDS

At 10:30 am Thea opens the door to her friend Simon's apartment with her spare key, as they had agreed on. Simon is wheelchair dependent, why a while later his neighbour, who is the second caregiver in the playful ensemble, comes to help him out of bed.

Thea promises to buy some groceries for Simon later and they continue to talk about their weekly activities. Thea says goodbye to Simon, but will see him later again at their choir practice in the public centre close by.







PICKING UP MAIL

After a while Thea leaves the building to buy herself and Simon their groceries.

On the way out she also picks up Simon's mail from the mailbox.







CASUAL ENCOUNTER

She passes by the childcare, where David waves at her through one of the round windows.









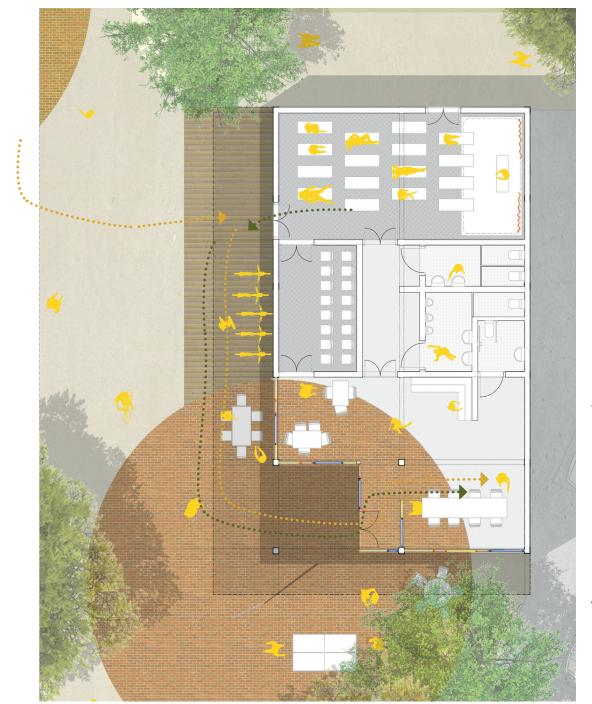






FLEXIBLE ACTIVITIES

After a quiet afternoon Thea leaves her home to walk over to the public centre, where her choir practice starts soon. At the side entrance she meets Simon as well as the two students Kai & Sandra, who just exited their Thai-Chi course. They wave at each other and talk about the communal dinner later, where they will see each other again.







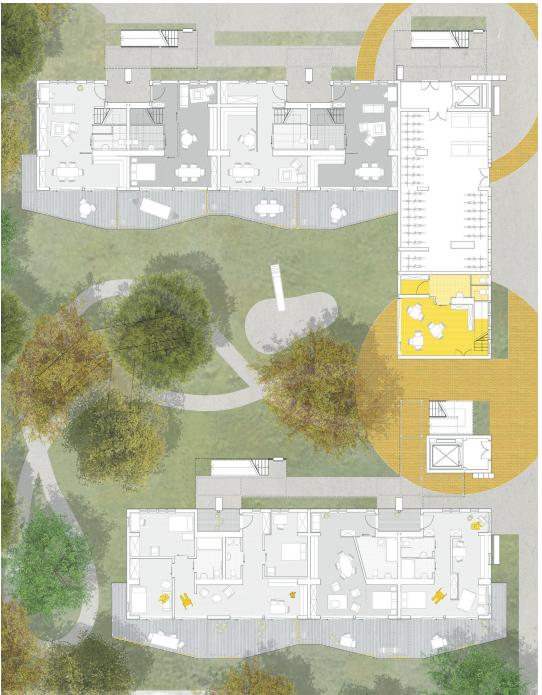




Sandra & Kai



Simon

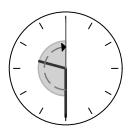


RETURNING HOME

After an exhausting, but enjoyable evening Thea returns after picking up her mail from the entrance.

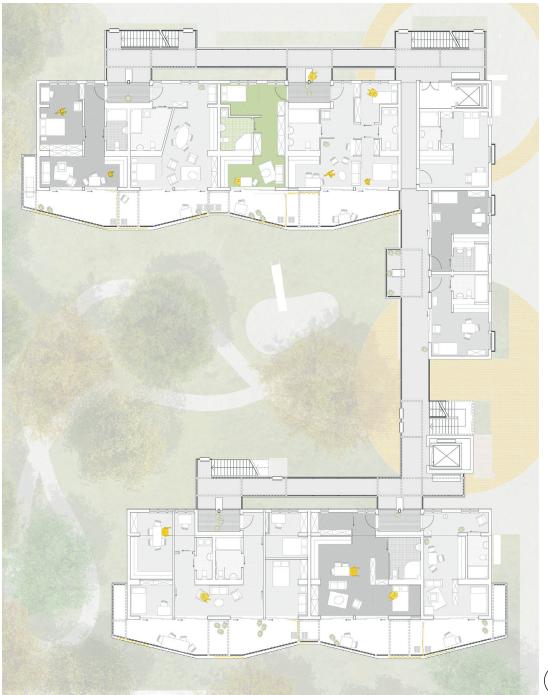
She goes up the two floors with the elevator and walks over towards her apartment.







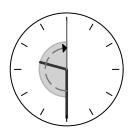


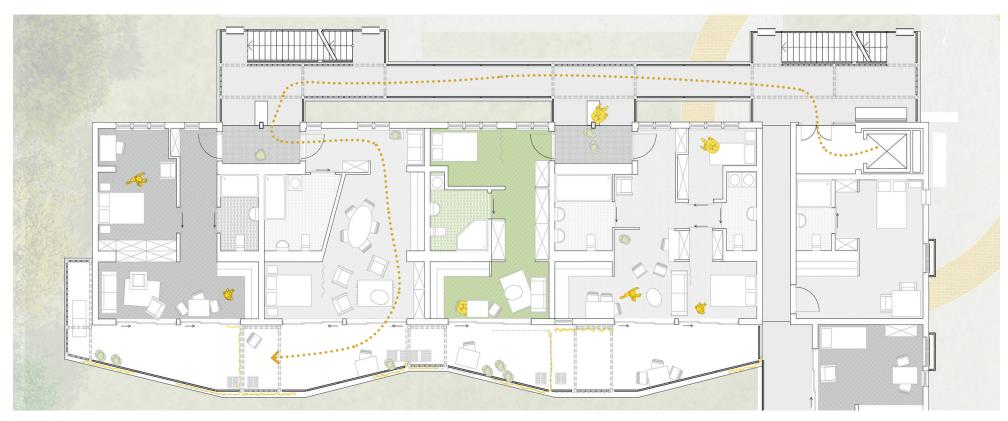


BACK AT HOME

Back in her apartment she goes on her balcony, where she sat together with Karolina in the morning. She waves at Karolina, who is having guests over on the balcony, moves the adjustable table back into a chair, closes the curtains between the two balconies and sits down. Listening to the distant chatter next to her, she enjoys the warm summer air for half an hour and then decides to go to sleep.













Antonia Bohn

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