Modern families in Minervahaven

Research report dwelling graduation studio spring 2019

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Between standards and ideals

The future of housing in the Netherlands

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Introduction

I have had the privilege to grow up in a traditional family, with two biological parents and 4 siblings. As do the majority of the children in the Netherlands. However, there is another possibility. Almost 1 in 10 babies is born into a single-parent family (CBS, 2018). In addition, more and more children do not live with both their birth parents (ANP, 2017). These statistics show the increase of non-traditional families in the Netherlands.

All throughout the Netherlands a trend is visible. Families are leaving the city and move to the peripheries. They are forced to move out because inside of the city suitable dwellings are scarce. Cities are seen as a bad place for children to grow up, but something is changing. Recently a trend is visible, more and more families make the conscience choice to stay in the city, even though it is difficult to find suitable dwellings. To encourage this development, suitable, affordable housing for families should be designed.

In the past decades families have become more diverse. There are multiple types of modern families. The most common are the single-parent families, co-parent families and patchwork or blended families. These modern families differ from traditional families in many ways, however they are obliged to live in the same neighbourhood, buildings and dwellings as traditional families. The distinctions between modern and traditional families will be investigated in this research as well as the challenges modern families face in regard to the built environment.
The location for this graduation project is Haven-Stad in Amsterdam, specifically Minervahaven. The chosen masterplan is the campus model, where a balanced combination between a family friendly environment and supporting facilities can be made.

Research questions:
The main research question is: How could we provide suitable housing for modern families in Minervahaven? To be able to create suitable housing for these modern families it is important to fathom what modern families actually are, what is important to them and why it is important to keep them inside of the city. Answering the next questions will provide insight into the target group:

- What are the reasons for families to leave the city and why would they stay?

- What is a Modern family?

- How to make affordable houses for modern families?

- How could we provide a safe environment for children to grow up in?

- What specific dwelling needs do modern families have?

1. Topic research

Modern families in Amsterdam

Modern Families in Amsterdam

A lot of young families are moving out of the city. This nationwide tendency is also vissible in Amsterdam. The amount of families leaving the city decreased due to the financial crisis between 2008 and 2012. After 2013 the housing market recovered and the amount of families leaving Amsterdam has steadily increased every year since. These families move out of the city, trading it for a a different often cheaper suburb. (CBS)

## Veel jonge gezinnen verlaten de grote stad

7-11-2017 02:00

(CBS)

Gezinnen met jonge kinderen verlaten Amsterdam

(Het Parool)

Compared to the distribution of households in the Netherlands, Amsterdam has a smaller amount of families. The average amount of family-households in the Netherlands is 26% while in Amsterdam this is only 16%. The amount of single-parent families in Amsterdam is higher than the national average, but also single-parent families are leaving Amsterdam. Most families are moving towards suburbs and neighbouring cities, like Almere and Lelystad. Cities which provide cheaper, more spacious houses with private outdoor space (MRA).
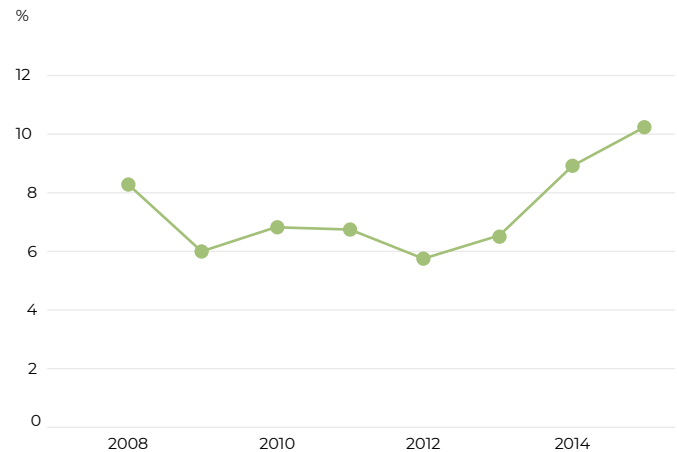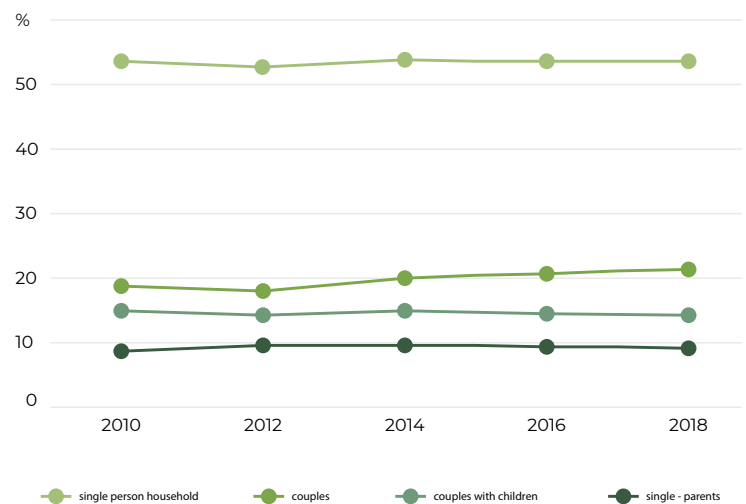

Share of Young Amsterdam Families leaving the city (Het Parool : CBS)

The trend of families leaving the city originated in the sixties. Inside the city families with young children became scarce. The city demographic shifted and is now dominated by singles and couples without offspring (Karsten & Felder, 2016). A trend also vissible in the demographic of Amsterdam as illustrated by the image below. However this trend is shifting. An increasing amount of families consciously chooses to stay in the city. This group, the urban families, has a strong connection to the city. However these families have a hard time finding suitable housing inside of the city, because they need more space than an average townhouse can provide. They also have a need for suitable outdoor spaces and amenities such as schools in close proximity. Due to the limited supply of suitable neighbourhoods and dwellings it is important to design for these families to ensure they will stay in the city.

Household composition the Netherlands

single person household · couples · couples with children · single - parents
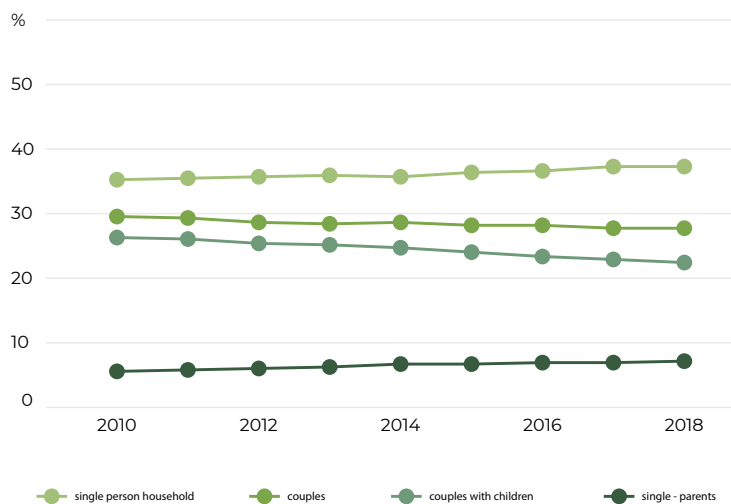
Household composition Amsterdam

single person household · couples · couples with children · single - parents

In the data of household composition as previously discussed, another trend is vissible. In both the Netherlands and Amsterdam there is an increasing amount of single-parent families. According to CBS in 2017 almost 1 in 10 children was born in a single-parent family. A trend more dominant in bigger cities like Rotterdam, Almere and Amsterdam. In Amsterdam 38% of families is a single-parent family.

Next chapters will elaborate more on why families are moving out of the city and why it is important for a city like Amsterdam to keep them in the city. Additionally the target group will be defined more precisely and the shortcomings of the current housing stock, as well as the wishes and needs of modern families related to the neighbourhood, building block and dwelling will be expanded upon.

Bijna 1 op de 10 baby's wordt geboren in eenoudergezin

(CBS)
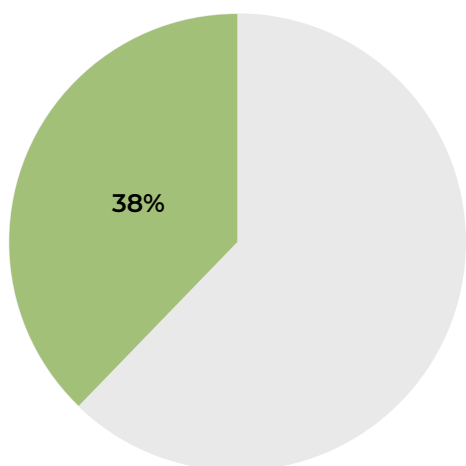
Single-parent families in Amsterdam (Heren5)

This tendency is part of a bigger trend: the rise of the modern family. On 18 December 2017 'het Parool' published an article on the increasing amount of children growing up in a family without both their biological parents. This number has increased from 400.000 to 600.000 children in the past twenty years. Families have become more diverse in character, but the family dwelling has not caught up yet.
Therefor the modern family is an interesting target group to design for. Due to a complete different structure of their daily life, the modern family has different demands for their dwelling compared to the traditional family.

Steeds meer kinderen niet bij 2 eigen ouders

(Het Parool)

Reasons for leaving Amsterdam:

There are multiple possible reasons for a family to leave the city. They all relate to the suitability of the dwelling, the building block or the neighbourhood for either the parents, the children or both. In their 2010 research report Heren 5 Architects state five main characteristics which determine the suitability of available dwellings in Amsterdam:

affordability   size   safety   lacking outdoor space   heavy traffic
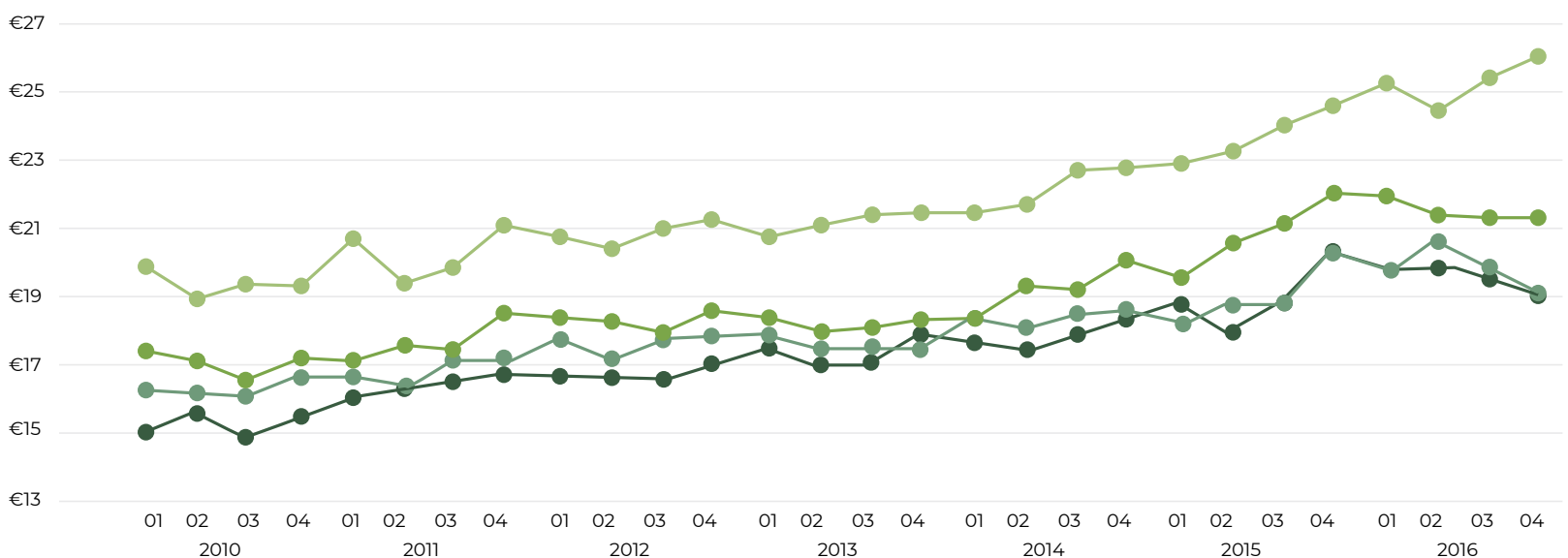
Affordability

Despite the increase in new dwellings in Amsterdam dwelling prices have been increasing steadily. In Amsterdam especially the rent of apartments between 50-75m^2 is increasing as is vissible in the graph below.

The average disposable income differs between single-parent families and families who have two parents with an income.

Single parent income: € 30800
Double income: €60800
(OIS Amsterdam, 2018)

In the Netherlands people spend on average 42% of their disposable income on their house. While they indicate 37% of their disposable income is what they would want to be the maximum amount they spend a month.

On average a single-parent families spends:
€ 30800 / 12 maanden x 0,42 = € 1078
While a family with two parents will spend:
 €60800 / 12 maanden x 0,42 = € 2128

If these numbers are compared with the average m^2 price of €22,79 in Amsterdam the average dwelling size for these families can be calculated.

Single parent income: € 1078 / € 22,79 = 47 m^2
Double income: € 2128 / € 22,79 = 93 m^2

Here the relationship between affordability and size becomes evident. There is an imballance between the needed or desired dwelling size and what people are able to afford. The price of 1 m^2 determines how big of a dwelling people are able afford.

Size

Size of the dwelling is often a reason to move out of the city. Affordability and size are closely related. Suitably sized dwellings inside of the city are often too expensive. At the same time families have make the consideration to move outside of the city where for the same price a dwelling is bigger, has a proper outdoor space compared to what they can afford in the city of Amsterdam.

Rental price development in Amsterdam (Pararius.nl)

Additionally modern families have more complex wishes towads what a dwelling should be. The complicated family composition in co-parent and blended families has an effect the needs in regard to their dwelling. The big family size and the fluctuating family composition, means the necessity for bigger dwellings, which as mentioned before is often too expensive. To balance costs and size, flexibly designed dwellings are needed, to prevent the modern family from leaving the city.

Safety
All families have one important shared interest, safety. The public space has to be family-friendly and provide a safe environment where children can grow up. Where they can safely play or learn to ride a bike. However, public space is often lacking quality. It is too busy, sidewalks are too small, and the public space is often lacking enough green space and trees. Also spaces can be badly maintained with broken furniture or dirt. Finally safety is also related to alcoholics on the street, loitering teenagers and not enough supervision. (Karsten& Felder, 2016) Therefore, safety can become one of the reasons families decide to move out of the city towards a more family-friendly neighbourhood.

Heavy traffic
Traffic is also a source of safety concerns for parents. And one of the reasons why children are often not allowed to be outside without supervision. Fear for accidents is widely shared between parents. Motorized traffic is part of the problem and dangerous for children, but also irresponsible cyclists play a role, especially inside of the city where cycling is one of the main means of transportation. Cities do not provide enough traffic lights and not enough space to walk or cycle with smaller children.

Lacking outdoor space
The lack of suitable private outdoor space is often mentioned as one of the reasons for families to leave the city. The suburbs around the city provide families with a dwelling and private garden, both bigger than what they could afford inside of the city.

Reasons for staying in Amsterdam:

There are multiple reasons for families to stay in the city. Karsten and Felder provide three different bonds a person can have to his environment. Bonds which can persuade families to stay in the city.

Functional bond
The functional bond is related to inhabitants connection to amenities. Living in the city is mostly appreciated due to the close proximity to among other things schools, playgrounds and cultural amenties for both parents and children. However the most influential factor for staying in the city is proximity to work. Nowadays both parents often have a job, making the balance between work and caring for their children more difficult. To create this balance it is important for at least one of the parents to have work and home in close proximity to one another. Something which is of even bigger importance for single-parents, who have to balance work and taking care for their children by themselves.

Social bond
The social bond to the city is related to whom people want to live near. Proximity of family, friends, colleagues and like-minded people can play an important role in staying in the city.
Something which is also important to divorced single parents. Often parts of their social network collapses after divorce. They have to leave behind old friends and relatives either because they were friends of their ex or because the parent is forced to move after the divorce. (jeudinstituut)

Symbolic bond
Identifying with the place you live in is the symbolic bond. Parents make the concience choice to stay in the city. Parents themselves often grew up in the city or have lived in the city since their studies. This has made them connected to the city itself and can be one of the reasons why families decide to stay in the city. These families can be seen as urban families.

Reasons for keeping families in Amsterdam:

Why is it important to keep families in the city? There are multiple reasons why families are important for the city. Most importantly families are of economic and social value.

Families are important for the economy of the city. Families tend to spend more compared to other target groups. Children require constant investments, they attend day-care, practice sports or have mu-sic lessons. Herewith creating jobs and ensuring a thriving city economy, making the city more interesting place to settle for other target groups as well.

Families also ensure social cohesion in the city. They are an invaluable link between different generations in the neighbourhoods they live in. Both parents and children encounter one another at schools, associations and day-cares. Creating interconnected network between a different and diverse group of people in the neighbourhood. (Jager-Janssens, Bouwmans 2017 & Heren5, 2010).

Families care for the neighbourhood they live in. Compared to other target groups, families are at home more often. Acting as the eye on the street, keeping an eye out for trouble, which creates social security. They notice irregularities, like malfunctioning street lights, dangerous crossroads and cars driving too fast. Raising attention to these issues will improve the overall liveability of the city.

Finally it's important to foster families in the city, because families are the future of the city. Children who grow up comfortably in the city, often become future residents, herewith keeping the life cycle of the city flowing. (Keesom, 2013)

Target groups

As written in the previous chapter there is an increase in the amount of modern families. Families who differ from the traditional or nuclear family, with a father, a mother and children. Current society is made up out of a lot of different types of these modern families. Most common are the families which are created due to divorce. However, to a deceased partner or single-parent by choice are also possibilities. These families have different wishes and needs regarding daily life and the built environment. Needs which differ from the traditional way traditional families live, but also different from eachother.

Single-parent families

Co-parent families

Blended families

Single-parent families:
A single-parent family is a family where one parent brings up at least one underaged child. (Merriam-webster) There are two categories of single-parents. The divorced or widowed single-parent who has a child from a previous relationship. And the single-parent by choice. A parent who consciously decides to have a child on their own. This group is mostly made up out of single-mothers by choice (SMC).

The biggest problem for single-parent families is their financial situation. Finances are the root of most problems single-parent families encounter. There is a big difference between higher and lower educated single-parents. Single-parents who enjoyed higher education have an easier time balancing work and caring for their child, because a part-time day job is sufficient to pay the bills. While lower educated single-parents have a hard time combining work and care. Their lower income ensures they have to work more to be able to provide for the family. Complicating the balance between work and care.

Co-parent families:
Co - parenting families are a very diverse target group. According to the Oxford dictionary a co-parent family is a family where a separated or unmarried couple shares the duties of parenting a child. In a co-parenting family both parents agree to be an active part of the childs live. (coparents.com)

Separated co-parents:
This is a type of family where after divorce both parents have custody over the kids and both make an effort to be in the live of their kids. Either with or without a new partner. These step-parents have no kids of their own. If the step-parents has kids or if the parent and step-parent have kids together, they are seen as a blended family. Which is a target group of its own, with different wishes and needs. This group will be elaborated on in the next paragraphs.

Homoparental families:
One option for a same-sex couple is to come to an arrangement, in regards to having a child together, with another couple or individual. The key difference in comparison to donor insemination is the parent will remain part of the childs life. Hence the homoparental family being a co-parent family.

For a co-parent family the wishes and needs in regard to a dwelling differ from a nuclear family in one important aspect, flexibility. The family composition of a co-parent family can vary on a day to day basis. Both biological parents are involved in the lives of the children, therefor they live in two different homes. Which encompasses an empty house for both parents during parts of the week.

Blended families:
Blended families or patchwork families are very diverse. They can be composed in multiple different ways, making it complex to define exactly what a blended family is. Blended families are formed when a household consists of two or more former households (Ginther & Polak, 2004). A group which can range from children to seniors. However, most common is the blended family which emerges when two separated parents form a new relationship. Both parents have children from a previous relationship and these families have to merge into one. The composition of this new family is complex and usually varies throughout the week. Ranging from a day where all children stay over at once, to half of the children or sometimes none. Any combination is possible. These families tend to be bigger compared to traditional families. Making it difficult to find suitable housing for this fluctuating group of people.

The biggest challenge for blended families is the amount of people living in one dwelling. This varies throughout the week, therefore flexibility of the dwelling is required. Rooms can have multiple uses to prevent empty rooms during the week and prevent an insufficient number of bedrooms if all children are present. Privacy is also an important issue. With the amount of people in one house it is important to be able to retreat into one's private zone. When children grow older their need for privacy grows (Levitt, 2018). This is especially important in blended families, because these children are living with relative strangers, particularly at the beginning of the relationship.

As introduced before modern families have specific challenges when looking for a dwelling. When designing specifically for modern families it is important to know these challenges and the differences between modern and traditional families. As is visible in the comparison diagram on the right, the traditonal or nuclear family values privacy and status as most important. Single-parent families need practical services nearby to enable a better balance between work and caring for their children. They also have a desire to be part of a group or cluster, because they miss the social security of a partner. Interaction with like-minded is therefore important. Providing these practical services and this cluster or community is an essential principle when designing for this group. Families with a fluctuating composition need flexibility in the dwelling, to maximize efficiency of expensive square meters.
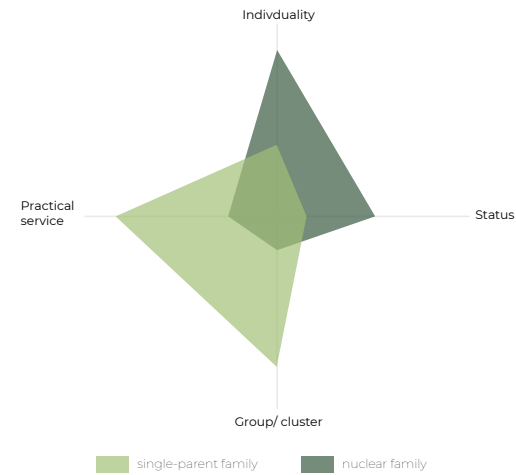
family needs (Kummeling 2011)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Single parent families							
Co-parent families							
Blended families							

Health

The previous chapter explores the anatomy of the modern family. Growing up healthy for children in modern families is dependent on the welfare of the environment they grow up in. CBS has researched the relation between welfare and well-being of people in the Netherlands. Visible is the vulnerability of multiple target groups. People who live together are the most prosperous. Elderly, singles and single-parents are vulnerable target groups. Single-parents score low on both welfare and well-being. Overall single-parents score lower on quality of life for income, satisfaction and health (CBS, 2017). Both the parent and child have a higher risk of health backlog.

Health of children
Compared to traditional families, children in single-parent families more often have health and development problems. Both for physical and mental health, children in single-parent families are more vulnerable. Children in single-parent families develop different from their peers. Early on they take on more responsibility and they have to be more independent and flexible due to their circumstances (NJI, 2014). Forcing them to grow up quicker than their peers. Mental problems can arise during the divorce:

Anger& Sadness
Divorce can lead to anger issues or sadness for the children involved. Getting used to the new family arrangement takes time and sometimes during the transition period children rebel. They can become angry towards parents, siblings and friends.

Scared & Loneliness
Depending on the age of the children the new situation can make them scared. The comfortable life they knew disappears. Often being scared is related to feeling lonely, feeling abandoned in the new life of the family.

Guilt
Children can feel as if they are responsible for the divorce of their parents. Especially at a young age this poses a problem for the child.
The mental pressure on the children make them vulnerable in life. They are more susceptible for developing bad habits and as a consequence have more health problems than their peers. There is not one direct cause for these problems, but a relationship is plausible in the amount of children who smoke, are overweight or in general less healthy (volkskrant,2003). The instability of life in the period before, during and after divorce are the main cause of the problems. Families of single-parents by choice are different, more stable. Before the birth of the children they already had a stable life, providing a better situation for children to grow up in.

Children from single-parents by choice will develop less problems. However, there is a correlation between financial capacity and health of the parent and children. Low-income parents spend more time working, often during times the children are at home. Caring for themselves, allows for bad habits to develop. And less financial means, means lower standard of care.

Health of parents
Single-parents score relatively low for physical and psychological well-being. They more often visit the doctor, make use of mental healthcare and social work. Compared to traditional families they need more support in raising their children. Main problems arise due to the burden of raising children by themselves. Stress and loneliness are most common for single-parents, they are in need of support of like-minded people. People who know what they are going through. (GGD, nd.).
Both parents and children after divorce are in need of contact with like-minded people. They often feel misunderstood, because others can't understand the situation they are in. The existing social network often falls apart due to choosing sides during the divorce. Single-parents miss a partner in raising their children, being unable to deliberate or get help. Being with like-minded allows single-parents to share experiences. Having the same struggles and needs creates an invaluable support system among these single-parents.

Historical context

Until some decades ago, families could be easily characterised. Families were nuclear families consisting of a father, mother and their children. When they grew older, children moved out and formed a family of their own, with a father, mother and children. (Cherlin, 1983) Nowadays the traditional family is still very common. However, new, modern family types are rising.

Divorce

These modern families are relatively new type of family. In the Netherlands it is easier to divorce since 1971, due to the establishment of the liberal divorce laws. Marriages could be legally dissolved, without any demonstrable wrongdoing of one partner towards the other. (Janssen, 2011) Before 1971 at different times there were already divorce laws. Before 1796, divorce was only possible if one of the partners was proven or plead guilty for abuse or adultery. If the woman was proven innocent, she would be financially supported by charity and the church after the divorce. In 1796 the law for divorce changed, during the French occupation. The French introduced their laws for divorce in the Netherlands, laws which made divorce possible if there was a mutual agreement for the divorce. Partners were separated from 'bed and table' which allows them to live separately from each other.

However, as a result from Christian ideals, the marriage remained, and remarrying was not allowed in the hope to restore the relationship. This development was reversed from 1803 by the French revolutionaries and divorce was made harder after a new law was introduced in 1811. It was still possible to divorce in mutual agreement, but rules were more strict. Divorcing under mutual agreement was banned in 1838. Making it again possible to divorce only if wrongdoing was proven. Co-parent families and blended families are therefore a relatively new phenomenon in the Netherlands.

Single-parent families have more history, however single-parent by choice or single parent after divorce were non existend. There were two possible ways a single-parent family could arise, due to natural or unnatural deaths of one of the parents.

Natural deaths:

If the wage-earner came to pass, widows and orphans could claim a widow and orphan pension fund. Only from 1988 onwards widowers could also make a claim to this pension (SVB, nd.).

Unnatural deaths:

The second possibility for single-parent families were due to an unnatural death of a parent. A death as a consequence of war. Civilian-war victims were able to claim financial support, if a partner died at the front or during resistance.

Single-parent by choice:

Being a single-parent by choice is a relatively new development, changing the context of what a family is. The term single-mother by choice (SMC) was first introduced in 1981, by psychotherapist Jane Mattes. Becoming more widely known in 2005 after the book release of Choosing Single Motherhood: The Thinking Woman's Guide by Mikki Morrissette. (Hayford&Guzzo, 2015) The visibility of single-parenthood by choice is growing, due to media attention for birth among unmarried women. The rising visibility of single-parenthood by choice is consistent with the growing ease of becoming an SMC. Artificial insemination, adoption and in-vitro fertilization make it possible for single mothers to have a child. Most of the times single-mothers by choice decided to have a baby by themselves because long-term relationships haven't worked, and their fertility is finite. Falling in love is possible at any given time, but having a child is time-bound. (Curtis, nd.)

Neighbourhood

While briefly described before, this chapter will further investigate the wishes and needs of modern families. These wishes and needs mostly concern families in general, but are made more specific by relating them to the target group of modern families. Families have wishes and needs on different scales of the built environment, from their house to the neighbourhood. These different scales are discussed separately.

Range of action
Children have a specific range of action related to their age. It describes the maximum distance a child in this age categroy can cover. There are three separate fases:

0-3 years: the 30 meter radius In the first years of their lives children remain mainly in and around the house. Therefore they need enough room to play and explore inside of the dwelling. At this age they are still very dependent on their parents and therefore stay close to them at all times.

4-8 years: the 150 meter radius From 4-8 years the world of the child slower becomes bigger to approximately the size of the building block or street. It starts when they go to primary school. Here they will make friends and start developing socially while playing together with other children. Playgrounds and schools in close proximity to their action radius will benefit their development.

9-12 years: the 500 meter radius From the age of 9 children become more independent. Parents start to realise high school is approaching and therefore the kids have to develop their independence. The 500 meter radius is approximately the size of the neighbourhood. The neighbourhood needs to be a safe environment where these children can play unsupervised. Shops, the park and primary school are usually considered part of the neighbourhood and should therefore be inside of the 500 meter radius. (Heren5, 2010 & Karsten&Felder, 2016)

range of action of (Heren5)

The range of a parent is usually bigger than that of a child. Their sense of neighbourhood is based on bicycle distances instead of walking distances which is the case for children, increasing their action radius. Work is often outside of the neighbourhood, therefore accessibility of the neighbourhood is an important factor(Karsten&Felder, 2016). When living and working inside of the city, the proximity of public transport is most important in combination with accessibility of bicycle paths. When working outside of the city a connection to the highway is important.
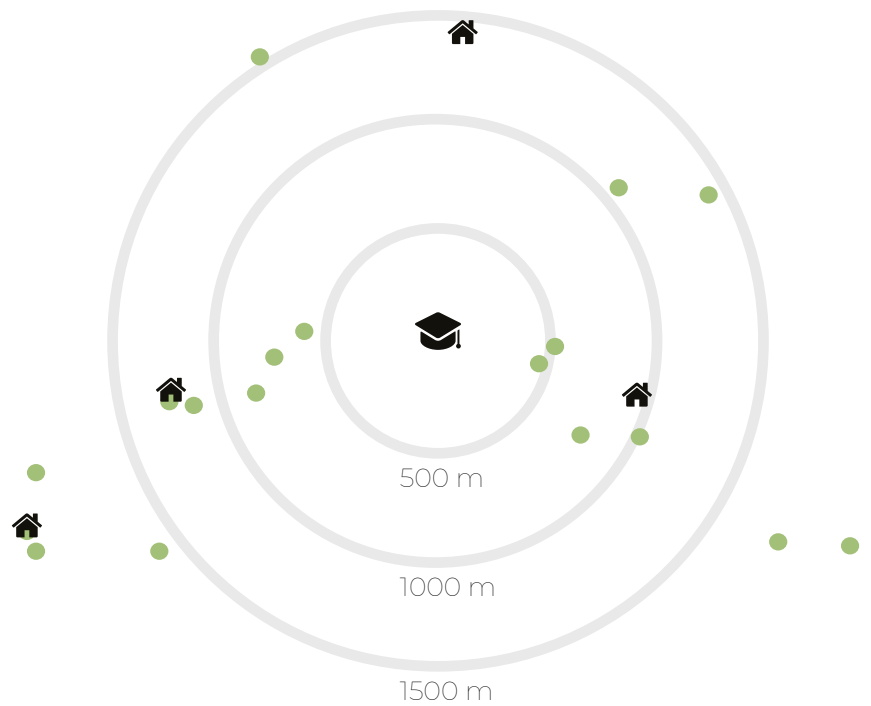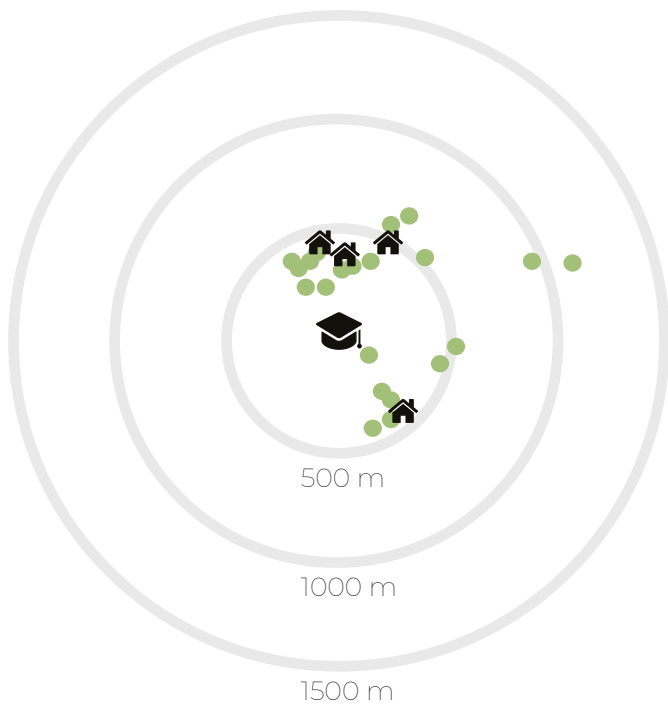
relationship school and friends (Karsten&Felder)

Education and daycare

Education is an important facility for families. Families consciously choose a neighbourhood with education nearby (Keesom, 2013) Primary schools and day-cares should preferably be in walking distance of the house, allowing older children to walk to school by themselves and minimizing time spent daily bringing children to school. Education in proximity to the house is also benefical for the children themselves. Most children make friends at school. If the school and therefore these children live nearby it is easy for children to make friends. Making it easy to play with other children from the neighbourhood after school as is also vissible in the image above (Karsten&Felder, 2016).

Facilities and shops

As mentioned before shops are considered part of the neighbourhood. For any citizen it is important to live close to amenities and it is an important argument for families to stay in the city. Proximity to supermarkets and other day-to-day shops is important in the daily life of families. Especially for lower income families who can't afford a car or public transport. Walkability is important for quality of life. Easing the task of grocery shopping, by decreasing the walking distance with heavy groceries or small children. This is also important for single-parents to ease the balance between work and caring for the children, if day-to-day shopping is made more convenient. (Karsten&Felder, 2016)

Building block

As mentioned before living with like-minded people is important. For families this means other families, neighbours with children to play with. These connections are important for both the parent and the child, because these interactions create closer social networks.

Playing
Children can play anywhere. They like to explore and think of new games to play themselves. Therefore, they often don't need specified playgrounds. Jumping over posts or from tile to tile can be enough to have a good time. There are three main places where children play. (Karsten&Felder, 2016)

Garden or balcony
Until a child is about two or three years old, children often play in a private garden or on the balcony. As they grow older these spaces become too small, playing with a ball or bicycle is often not possible in these small inner-city gardens. More importantly these gardens and balconies are private spaces. Spaces without the possibility to interact with other children. Interactions which are valuable for both the parents and children. This is feasible when they are young but becomes more important as they grow older.

Sidewalk or inner courtyard
As they grow older the second place becomes more common, the sidewalk or inner courtyard. It is close to home and an important place for children to play. Children who play here are a bit older but still need some supervision. However, they have more freedom and it unburdens parents, because they won't have to supervise the child at all times. Children often play with friends from the neighbourhood or their siblings in the hours in-between activities. Usually before dinner when parents are cooking, allowing them to keep an eye on the kids now and then, while they prepare a meal and in the meantime the children are able to play freely. As they grow older this becomes less interesting and children want to play with friends further away from the house.

Playing further away
The final phase for children is to play further away. There are two possible scenarios where this happens. Either the child and parent do an activity together or the child is old enough to play unsupervised. The schoolyard is an interesting place to play at, because it is a safe, defined space. It is familiar to both the child and parent making it easier to allow kids to play here. Provided that the route is short and safe.

The size of the schoolyard makes it interesting as well, because it allows for activities such as football or riding a bike without bothering others, something which is harder in a garden or on the sidewalk.
Nowadays children play outside less often than they used to. 20% of the children hardly go outside. A development more worrisome in less prosperous families. These children are unable to compensate their lack of outdoor activities by for instance going to sport associations, they stay inside watching tv or playing video games.
This situation can be improved by consciously designing an environment which enables children to play outside, safely easily supervised.

Supervision

Supervision of children playing outside has become very important for parents. 50% of the time children play outside under supervision of their parents. How much supervision is required is dependent on the age of the child. Older children need less supervision, because parents allow them to be more independent. Lack of safety in the public space is the main reason for parents to supervise their children. Both social safety and road safety are lacking according to most parents. This obligatory supervision means children are not able to play outside if parents are unavailable or do not feel like going outside. This is one of the reasons, as mentioned before, why children play less outside if compared to the past. Designing a safe environment, where children are able to play with limited supervision might change this, relieving some of the pressure of the parents. Supervising playing children takes a lot of time. Therefore parents need comfort during these activities. Lower income families prefer a bench to sit on and socialise with other parents, while affluent parents have higher standards and prefer a for instance a coffee corner to supervise their children from. (Karsten&Felder,2016)
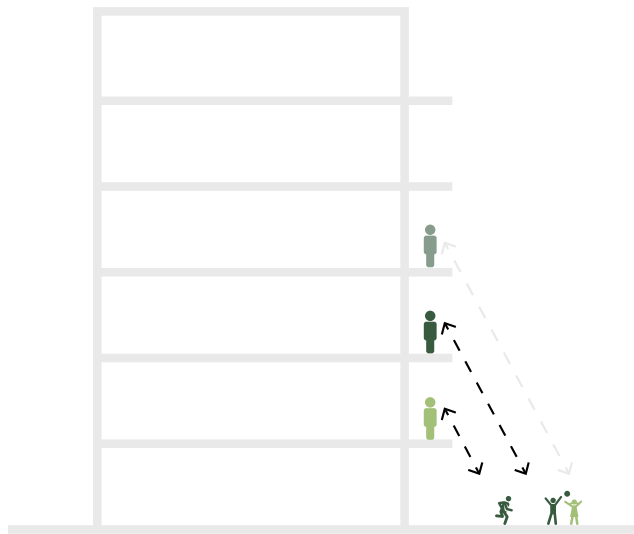
lack of supervision above the third floor

Children from six years and older are allowed to play outside by themselves, if supervision from within the apartment is possible. However, above the third floor this becomes problematic, because contact with the ground floor decreases. (Keesom,2013) The decreasing contact with the ground floor is a problem. Consequence is children will play outside less. From the sixth floor up both parents and children lose all connection to the ground floor. Also the amount of obstacles is important. Obstacles such as heavy doors or small, dark corridors. These obstacles can form

another barrier for children, preventing them from going outside (Mulderij&Bleeker, 1978). Introducing bigger galleries, creating streets in the air on higher levels of the building enables children to connect as they would to the ground floor. Another possibility is creating playing areas inside of the building or designing multipurpose spaces, for instance a stairwell which is a interior playground as well. (Keesom, 2013)
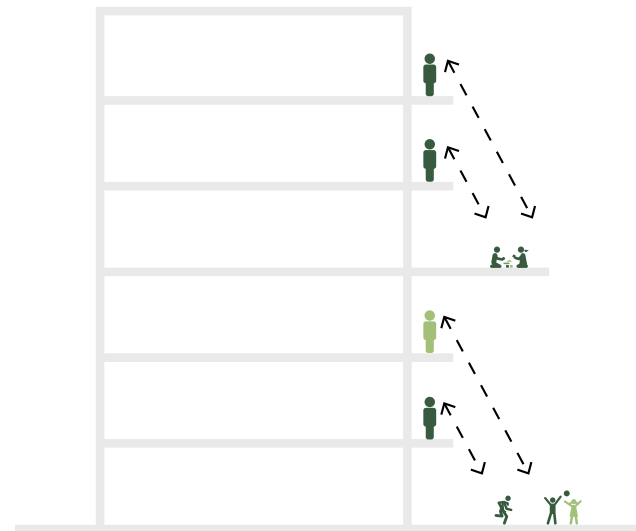
solution supervision above the third floor

Circulation space

Circulation determines how people will meet one another. Shared circulation increases the potential for social interaction, between both parents and children. Provided that the amount of people using the circulation space is limited. To be able to relate to your neighbours a maximum of 20-25 dwellings per entrance is desired. This will enable social security inside of the building(Levitt,2018). An elevator is desired because families tend to have bulky items like, strollers, bikes and heavy groceries.

Cluster

As mentioned before the amount of people in a cluster determines the social security inside of the building. Clustering is important for community forming and relating to your neighbour, a cluster is formed by group of dwellings with a shared entrance or street. 10-50 dwellings can form a cluster. (Habitat bill of rights) Comparing the cluster size of Levitt to the habitat bill of rights, the desired cluster size should be between 20-25. Single-parent families have a need for social network of like-minded, limiting the amount of dwellings per cluster to a maximum of 20-25 will provide a suitable living environment for them.
A cluster should be supported by communal facilities such as laundry rooms, storage for bulky items, areas for children to play, meeting spaces for residents and room for local activities. (Habitat bill of rights)

Parking:

In front of the house is traditionally the place where children can play outside. Parking your car in front of the house is a luxury most people would like to have, making it more difficult for children to play outside. (Heren5, 2010 and Karsten&Felder, 2016) Recently charging points for electric cars and garbage containers take up even more of this playing space. Safety is very important in the case of families, therefore direct access to parking is less important if children are able to play safely. Centralized parking could be the solution to provide spaces for both parking and playing. (Karsten&Felder, 2016) Allowing for both parking in proximity of the house, while children are able to play safely. Possible solutions are vissible in the diagram. But before thinking about integrating these solutions into the building, the norms for parking in the city of Amsterdam should be investigated.

In new developments Amsterdam uses the following norms. Dwellings up to 30 m2 require 0,1 parkingspot per dwelling. This is the requirement for a student dwelling, but also for temporary dwellings. Dwellings between 30 and 60 m2 require a minimum of 0,3 parkingspot per dwelling, which corresponds to the average car ownership for one person households. For dwellings above 60 m2 a minimum of 0,6 parkingspots per dwelling is required, which corresponds to the average car ownership of a multi-person household. Amsterdam has set a maximum of 1 car per household as a norm for parking to maintain the liveability of the city. This is in agreement with the trend of fewer cars per household, due to for instance shared car ownership. By introducing collective cars 1 parking spot equals 4 spots for privately owned cars. Sharing cars grows increasingly popular and could be a solution for the less mobile, lower income families. Families who can't afford a car but might need it at times.

These newly introduced rules are meant to decrease the amount of parked cars on the street. Creating room for pedestrians, cyclists and playing children while improving the quality of the public space. Parking is not only an issue for cars, also bicycle-parking is to be considered. Families often have bulky bikes, like cargo bikes or bikes with baskets therefore space to store these bike need to be reserved in the building.
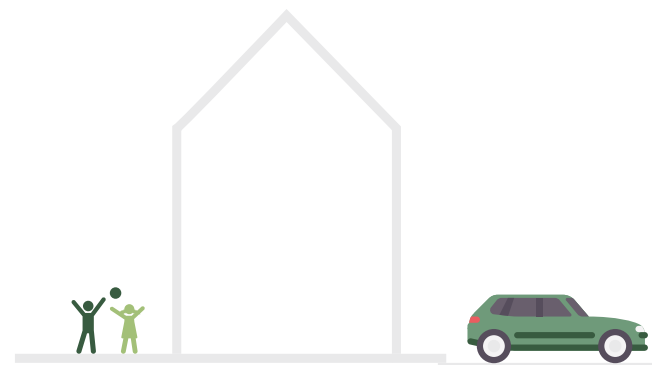
car at the front door

playing at the front door
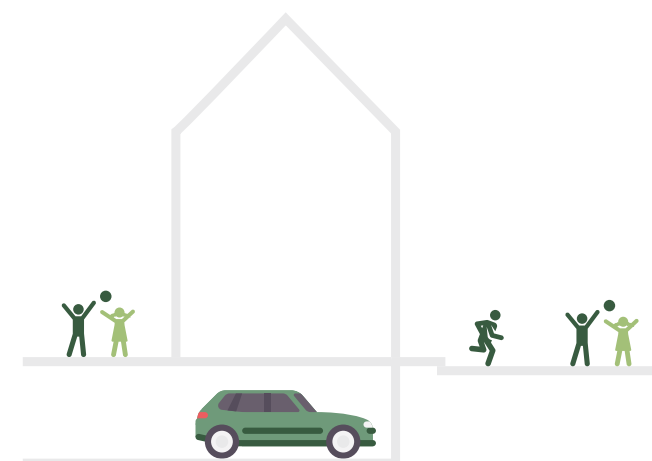
underground parking
both the car & playing in proximity
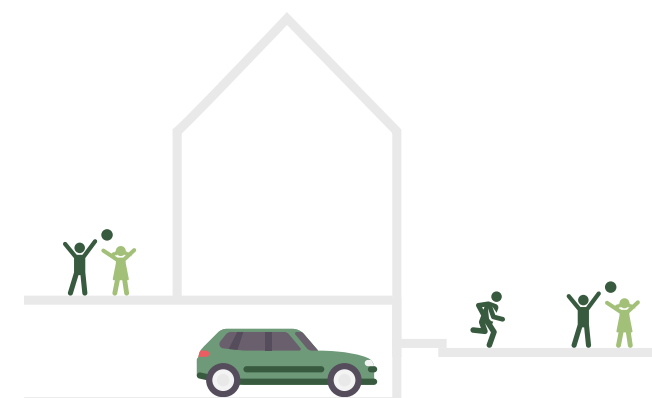
semi-underground parking
both the car & playing in proximity

Dwelling

In previous chapters some important issues were stated in regard to the size and affordability of the dwelling and the lack of valuable outdoor space. These issues are all relevant on the scale of the building block, but can also be improved in the dwelling itself.

Adaptability

Size and affordability are closely related and form a complex puzzle. Especially considering the limited funds of the target group combined with the high costs of living in Amsterdam. To create the best possible conditions, dwellings need to be flexible or adaptable. (Keesom, 2013) Adaptability focusses on long term changes, while flexibility focusses on short-term alterations. Both will be especially important for the co-parent families and the blended families considering the fluctuating family composition in their households.

There are multiple design options which ensure adaptability of the dwelling.

- separate kitchen and living room
- annex room
- oversized hallway
- multiple smaller rooms
- multifunctional spaces
- variable floor plan arrangement
- fine grained facade

Separate kitchen and living room

An open kitchen is often not desired in a family dwelling. Smells, clutter on the counter and the trash can are preferred to be hidden (Keesom, 2013). A separate kitchen and living also allows for multiple activities to occur simultaneously. Parents can entertain guests in the kitchen, while the children play in the other room. Designing two separate rooms or designing a possibility to close them allows for a more efficient use of the space.

Oversized hallway

Lack of space often starts at the entrance of the family-apartment. The hallway is too small for a proper wardrobe, for storing a pram and welcoming guests in this small space is already a challenge. Creating an oversized hallway could contribute to solving multiple problems families have in these apartments. It can provide space to play, extra storage space, a place to work or study or for drying clothes (Keesom, 2013).
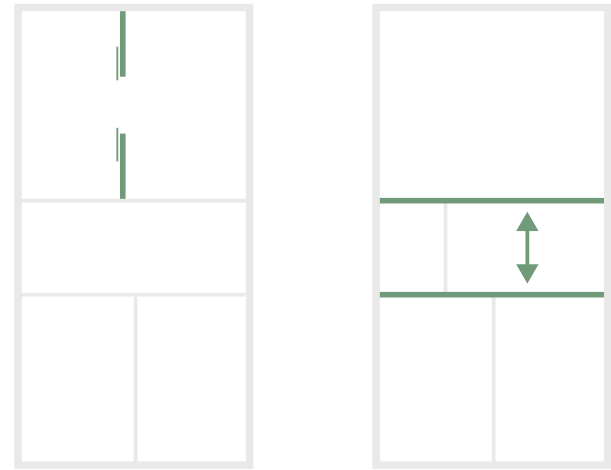
separate kitchen and oversized hallway

Multifunctional spaces

Creating spaces which can adopt different uses is one possible form of adaptability. To enable this type of adaptability the room should have a specific size allowing for these different functions. An example is given by Keesom: a room of 3x4m allowing for a master bedroom, a shared childrens room or a kitchen and dining according to the needs of the user.
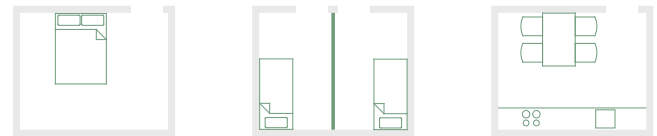
multifunctional spaces

Multiple smaller rooms

Designing multiple smaller rooms as opposed to a few big rooms can provide more quality of living for families. It will allow all children to have a private room, which is especially important in their teens (Levitt, 2018). But it also provides the opportunity to create a home office or a place to study in silence. These smaller rooms can be combined to larger rooms if desires or the family composition changes (Keesom,2013).

Flexible floor plans

Family compositions change gradually over time. However an apartment lay-out is often pre-determined. Changing family composition comes with changing needs in regard to the dwelling. To keep families satisfied with their apartment, an apartment which grows with their changing needs could be the solution. Transforming big rooms into multiple smaller bedrooms or a room for children to play in or an office. By the time the children move out, the apartment could be restored to its former lay-out.

Another form of flexibility is possible during construction. Future home-owners may decide between a variety of options which suit their way of life best.

Fine grained facade
Designing a fine grained facade creates opportunity for adaptability. There is room for a changing floor plan, without compromizing daylight entry. Larger rooms can easily be transformed into multiple smaller rooms. Fine grained indicates multiple narrow windows instead of fewer big ones.

multiple smaller rooms and fine grained facade

Outdoor space
One important reason for families to leave the city is the lack of proper outdoor space. To create suitable outdoor space it has to meet some requirements. According to Levitt outdoor space will be useful if it provides enough exposure to sunlight, protection from wind and appropriate levels of privacy and security. It should be an extension of the main living spaces. But most importantly the exterior space should compensate for the reduced external space for children to play and for storage. A collective outdoor space is therefore important, to provide the space for children to play and where parents can socialize. (Levitt, 2018; Keesom, 2013)

However, only 20% of the time private outdoor space is used for children to play. They are often too small and therefore are mostly used by the youngest group of children between 0-4 years. More importantly it is private space, where children can't meet others to play with (Karsten & Felder, 2016).

Storage
Storage is important for families. Families tend to have many things and therefore need storage. Not everything is needed regurlarly or some things are only needed outdoors. These items would preferably be stored in a storage space outside. (Keesom, 2013) Used the same way a shed is used in row houses in the Netherlands.
Also within the dwelling families have a need for storage space. In recent years there is often a lack of storage space in new developments. They lack sheds, basements and attics. Often there's some space near the central heating, for bags and shoes. But bigger objects such as prams and ironing boards don't have a place to be stored. (Keesom, 2013) Therefore, it is important to design enough storage space in dwellings specifically designed for families.

Privacy
All family members are in need of privacy, with the exception of small children. Small children seek protection from their parents. This changes when the child grows older, when they start to cherish their small 'secrets'. (Keesom, 2013) This should be integrated in the design of the dwelling. Open plan living only works for families with small children who have to be under supervision. As they grow older the need for a clear separation within the home becomes important, providing each member of the family with a private room to retreat to. This issue is especially important in the blended-families, where the children have to live with new family members. People who are strangers to them, who disturb established living patterns. This increases the need to retreat to a private space (Braithwaite, et al. 2001).

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2. Urban master plan

Minervacampus Amsterdam

Concept

The Minervacampus is a new development in the Haven-Stad area of Amsterdam. It is developed according to the campus model; an open field with free standing, multifaceted buildings, buildings without a front or back. The design is based on two other campuses in the Netherlands, the Chassee campus and the Mullerpier. The character of these different types of campuses are applied to Minervahaven. The piers in Minervahaven are suited for the campus typology of the Mullerpier, while the mainland is better suited for the campus model of the Chassee campus.

Both piers of the Minervahaven are well-suited for a campus model, similar to that of the Mullerpier. The road loops around the centralized buildings. An pedestrian zone with an urban character. Parts of the piers already have new buildings, some of these will be re-used or transformed if they fit the campus scheme for the pier. The rest of the pier will be densified with new buildings. Creating a mix between the existing creative industry and the newly developed dwellings.

The campus model of the Chassee campus is applicable to the mainland. The character of an open field is introduced here. The open form of this part of the masterplan is crossed by multiple routes. Connecting the mainland to both piers and the inner city. A square with supporting functions is located in this part of the campus, close to public transport on the campus.

This urban masterplan provides a mixed-use campus with a harmony between dwelling and everyday life activities. The variety in building and dwelling sizes creates a diverse range of typologies. Due to this diverse typology range, the Minervacampus provides dwellings for many target groups. The green centre is ideal for families and elderly who want to live in a soothing environment. Children are able to play safely. The piers are interesting for yups and young couples, due to the higher density, the creative industry and more apartment dwellings, more common for these target groups. Working and living can be combined in this area.

The Minervacampus will be a car-free area. The ring roads are used for circulation, the rest of the plan is a pedestrian area where the car is a guest. Due to the demotion of cars and the stimulation of bicycles the streets will become spaces for the collective use of the neighbourhood. The Minervacampus is a place for all generations, for working, playing and living in an open green environment close to the inner city of Amsterdam.

Two characters: green campus & urban campus

Circulation & parking

Design principles
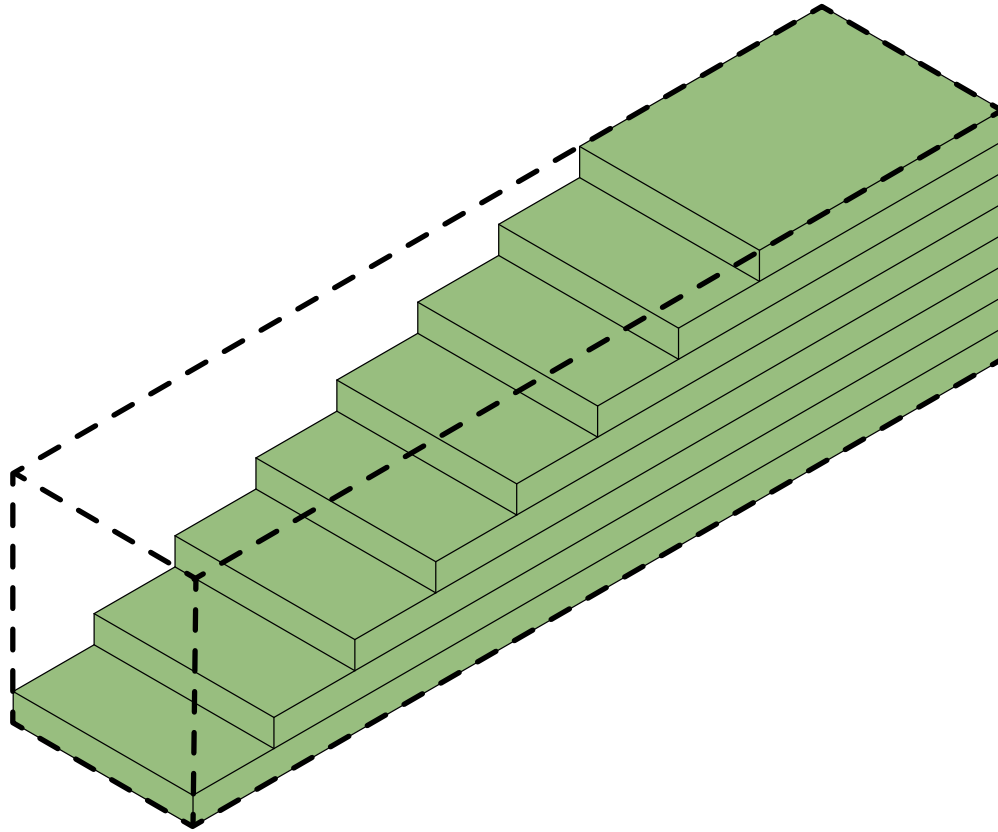
building envelope

Campus character
The Minervacampus is based on two different principles of the campus model. The urban campus of the Mullerpier, as is vissible on the piers of Minervahaven and the open field principle of the Chassee campus. Where buildings are placed into the green, open field. Focussed on nature and a soothing environment.

Circulation
The building blocks are all surrounded by green spaces, which are meant as a pedestrian zone. Providing room for public facilities and allow social interaction on the streets. Motorized vehicles are only allowed on the rings surrounding the different areas of the campus. Only local, slow traffic is allowed to access the campusses themselves.

Parking
Reducing cars to a minimum is only possible if they can be safely parked in the neighbourhood. Buildings adjacent to the ring should provide parking spaces for residents of the entire campus. Enabling the quiet character of the campus itself.

Building envelope
The building blocks in the Minervacampus have a freedom in their design. The building can be shaped however the design requires, within the boudaries of certain prescribed limitations. These limitations mainly concern the building envelope provided within the master plan. A building can't extend beyond the envelope of the desired plot. The building chosen for the graduation studio should fit within the 92x20 meters of the plot. The maximum building height is six stories with an average height of 3 meters. The building hight can be extended with a maximum of two stories, but the sun orientation has to be taken into account when deciding to add extra floors.

Amenities

To create an attractive neighbourhood for all different target groups, a mix of different functions is added in the master plan for Minervahaven.
The master plan is designed with two different characters and is devided into three separate clusters. Each cluster has a specific mix of functions, creating different climates, suitable for different target groups. To create a suitable character in accordance with the current functions of the existing buildings, all current buildings were evaluated. Suitable buildings were preserved and became a starting point for for the new mix of functions in these clusters. The schemes on the side show the different mix in functions for the different clusters. With a focus on creative industy, dwelling or mixed use.

The chosen block should contain a mix between dwelling and public functions, like a small shop, café or other social function.
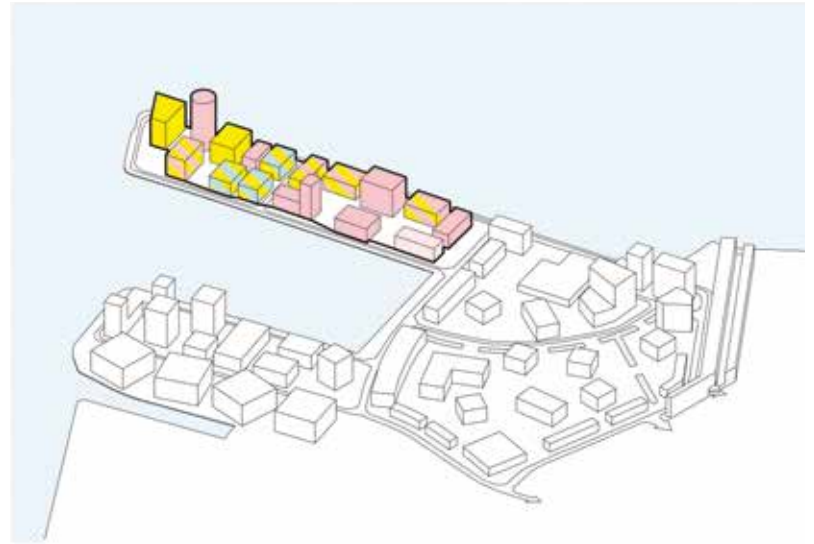
creative industry
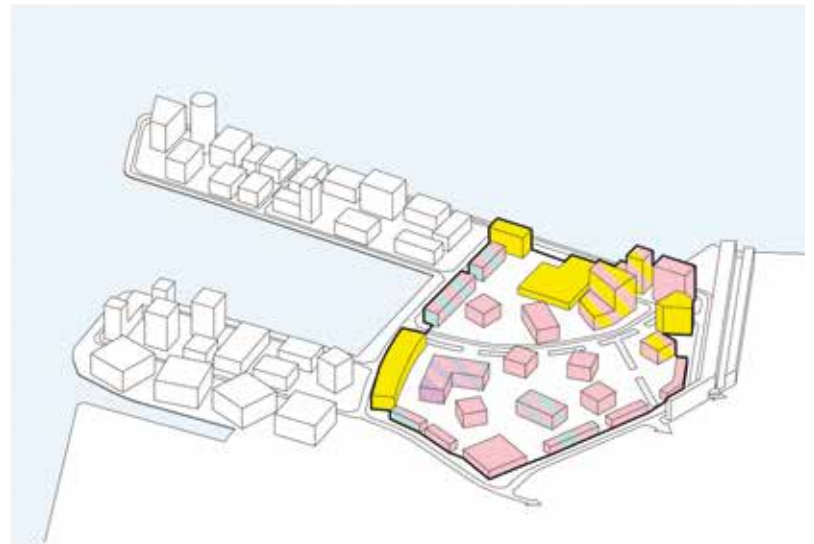
mixed use
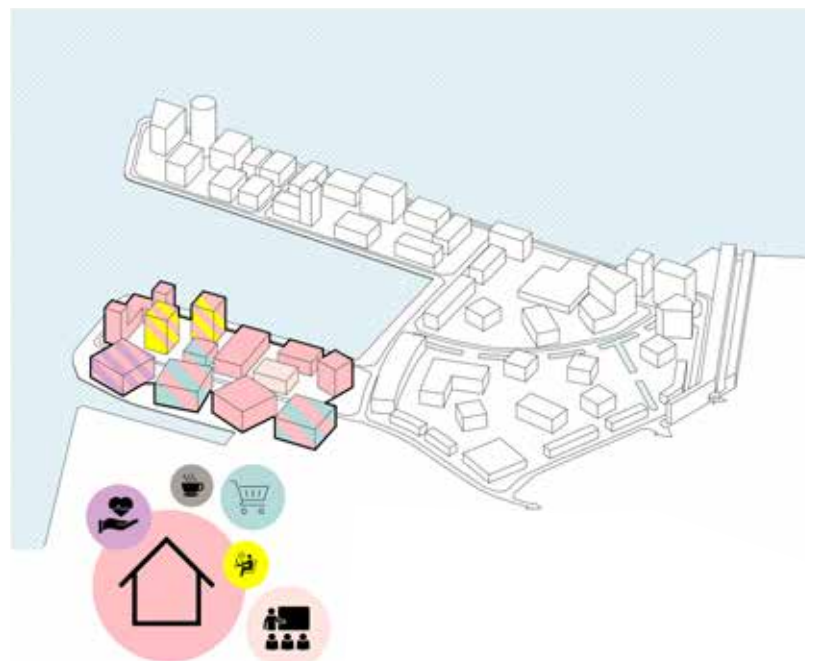
mainly dwelling and supportive functions

Street profile 1

The chosen block has a different character on all sides of the building. It borders the waterfront in the north. It is adjacent to the boulevard which runs along the waterfront. Because it is next to the ringroad, the building needs to provide parking spaces, to allow for the car-free campus. The south side of the building is adjacent to the park area. There are no specified rules on how to anchor the building in the park, this is something which should be researched further in the design process. Should it become part of the park or should the building be a boundary where the park ends.

| 14 m | 6 m | 12 m | 20 m |

Street profile 2

20 m	6 m	9 m	8 m	6 m	11 m	22 m
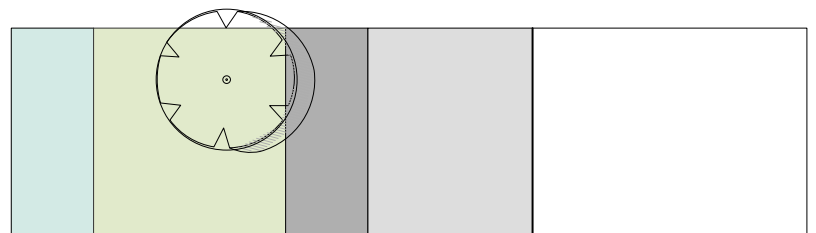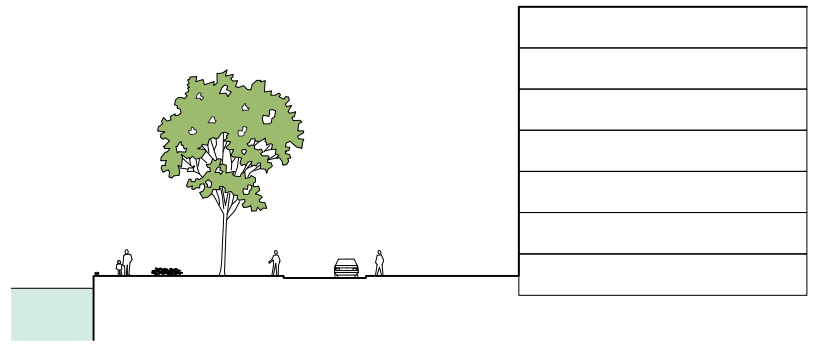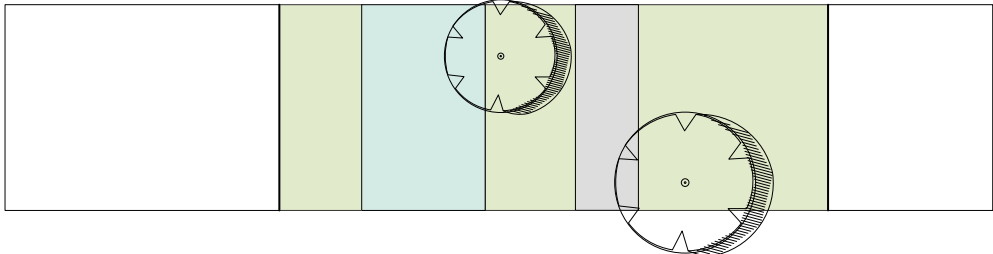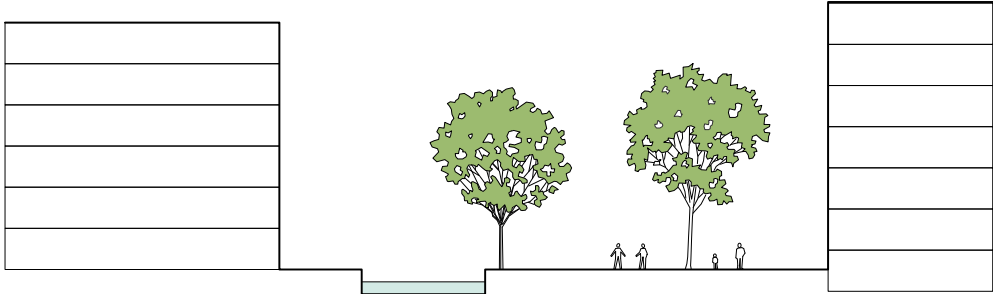
3. Massing studies

Quick start & Virtual reality

Quick start

At the start of the design process of the graduation studio, a quick start was organized. Kickstarting the design process, by making a first attempt at designing a building for the chosen target group, to get a grip on the site, size of the building and dwelling typologies.

The building shape was researched by superimposing possible dwelling typologies onto the design site. The case studies were the point of departure. Suitable design aspects were filtered from these case studies and directly transfered onto the design site. The problems which arose due to this process were points of further investigation during the week and at the end of the week became valuable lessons to take into account in the design process of the conceptual design.

The next pages show the outcome of the quick start week. The design is built with two main components. Duplex dwellings transfered from Wisselspoor in Leuven by HCVA and apartments transfered from the Kolenkithuis in Amsterdam by Heren5. These dwelling types were then transformed to fit the plot in Minervahaven.

To create pleasant dwellings, with enough natural light, circulation is done with two main cores, connected every other floor with a galery. Allowing access to the apartments by stairs from these galeries. Although creating galeries on every other floor is desirable when using a galery system for circulation, stairs connecting to the dwellings are not very practical for families. This is one of the lessons taken into account for the conceptual design.

Shifting parts of the volume creates spaces for communal areas on all sides of the building, creating a multifaceted building. With active life for residents on all sides and all levels of the building.

To create an active plinth, the ground floor is made up of dwellings, all with an entrance at street level. Also here a multifaceted building is emphasised, by spreading these entrances around all sides of the building.
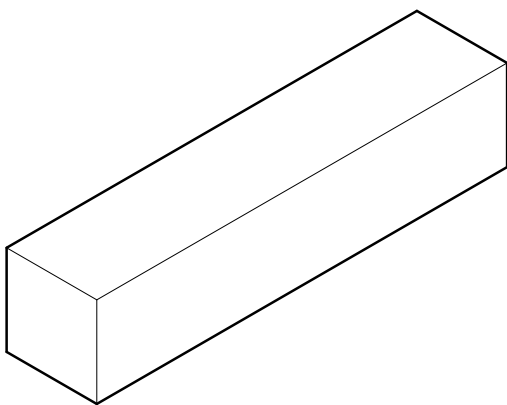
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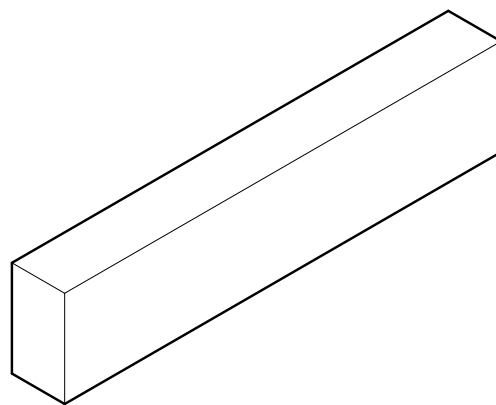
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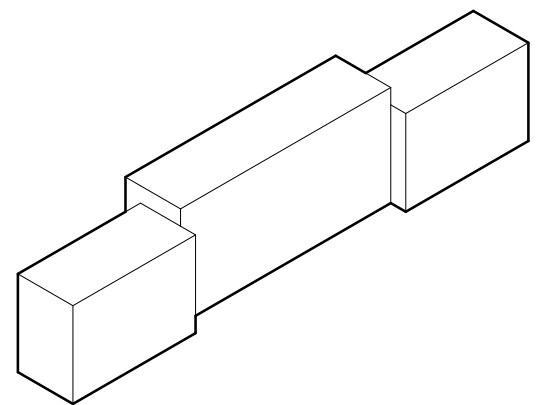
03. Diversifying the volume
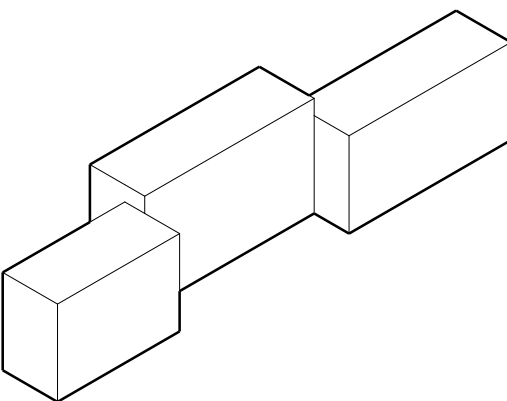
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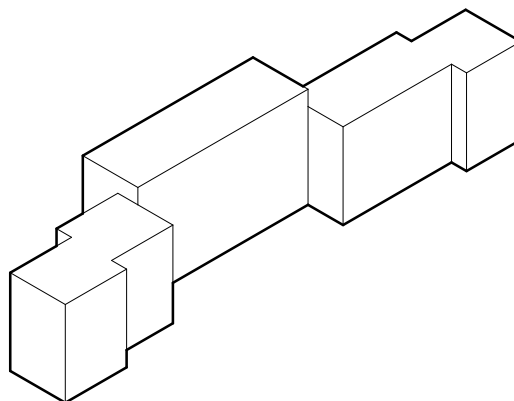
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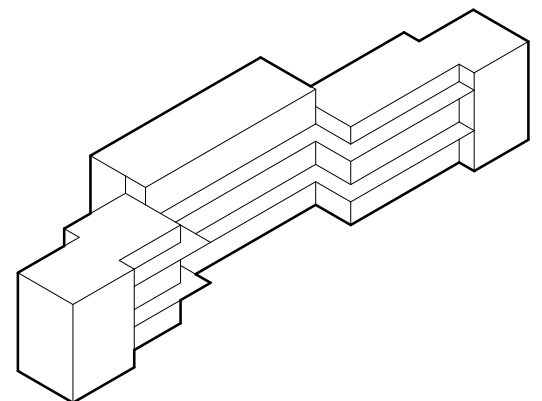
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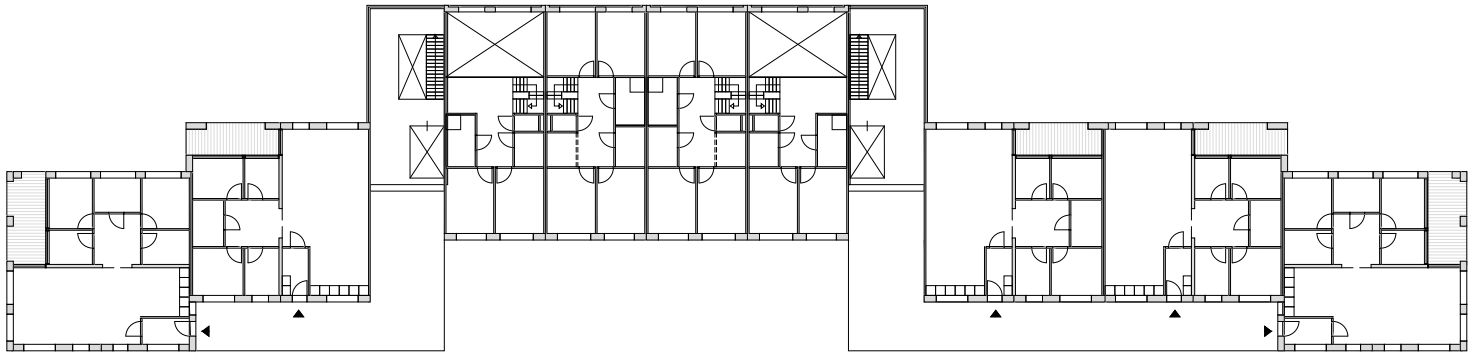
Third floor
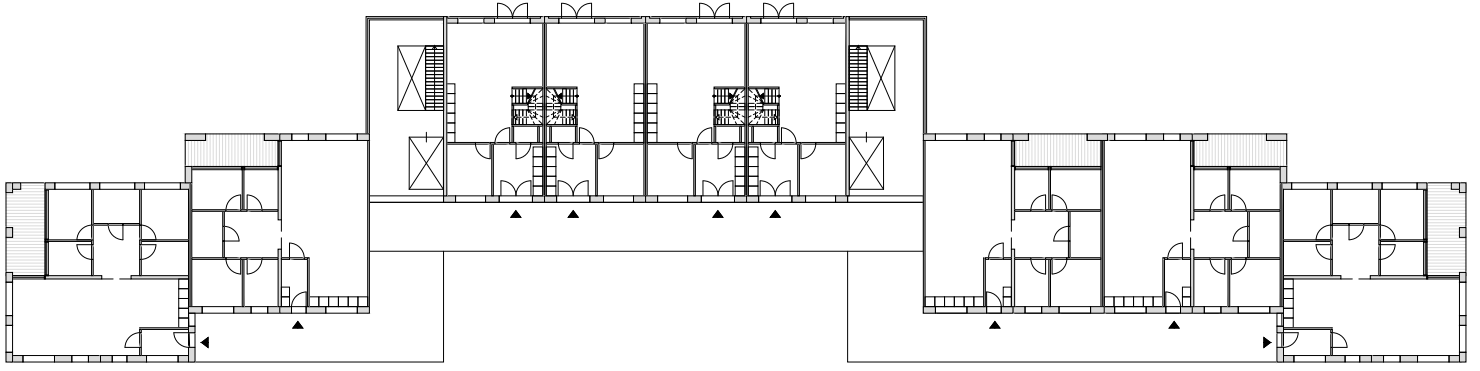
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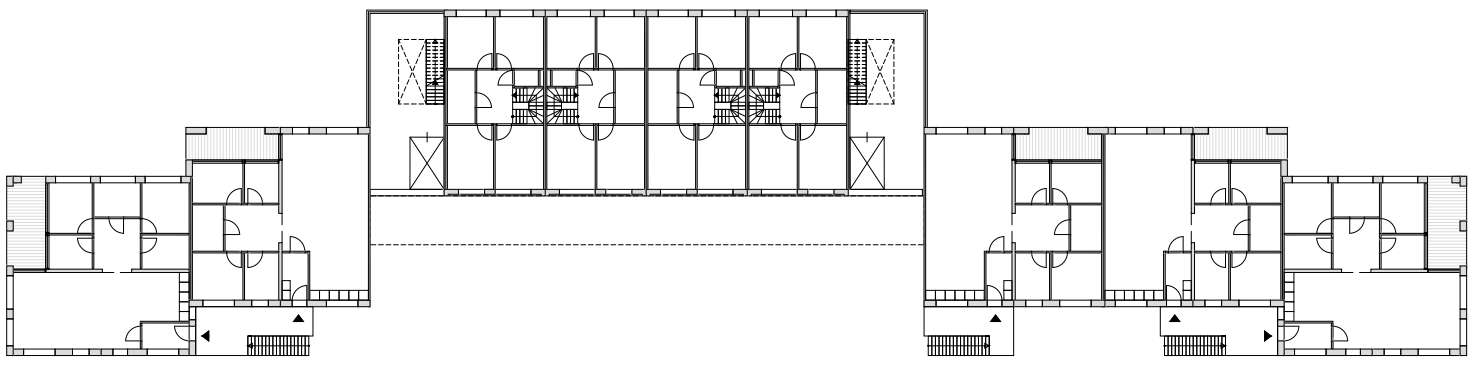
First floor
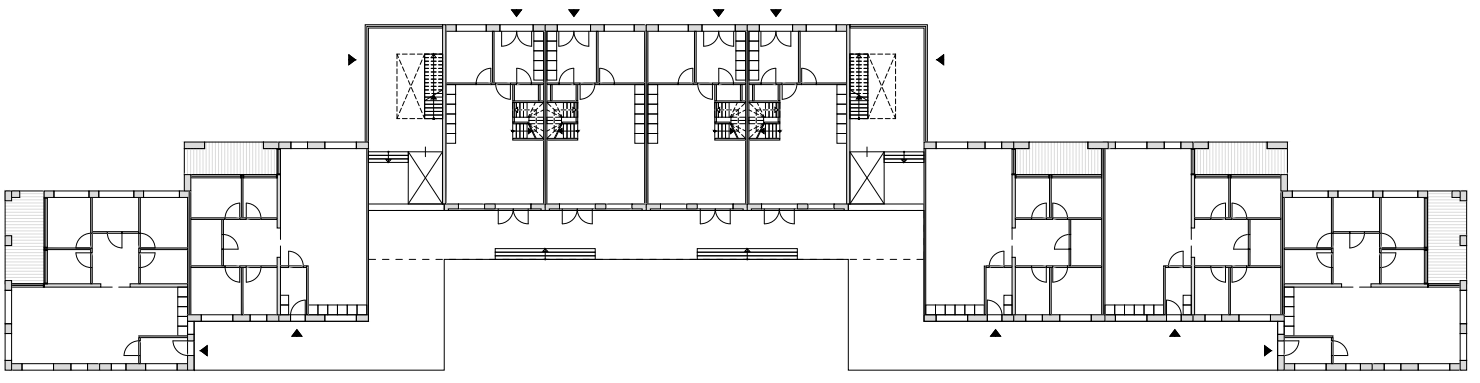
Ground floor
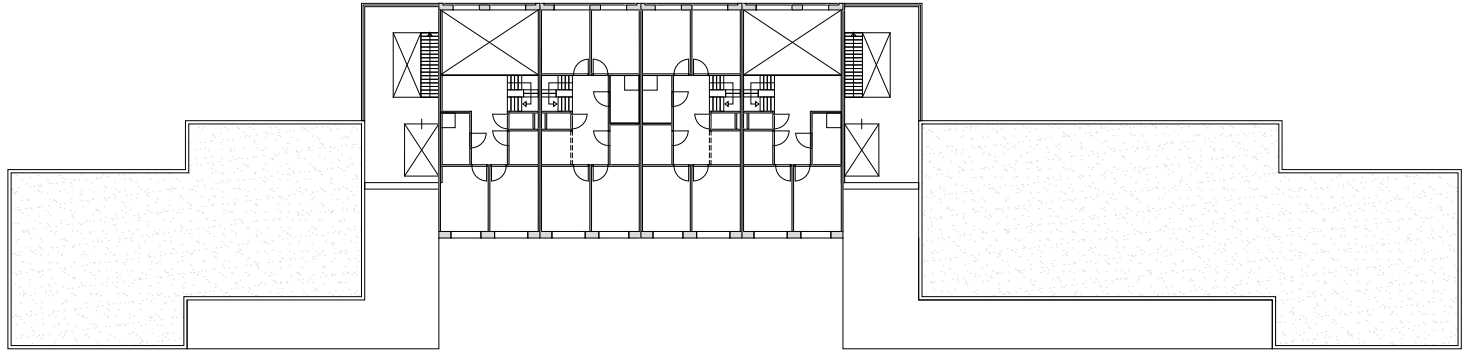
Fifth floor
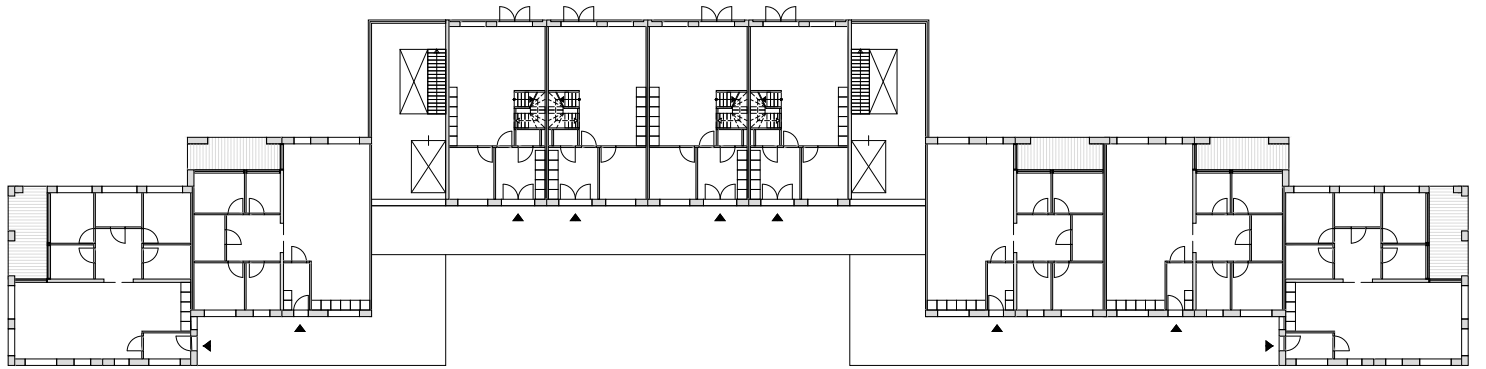
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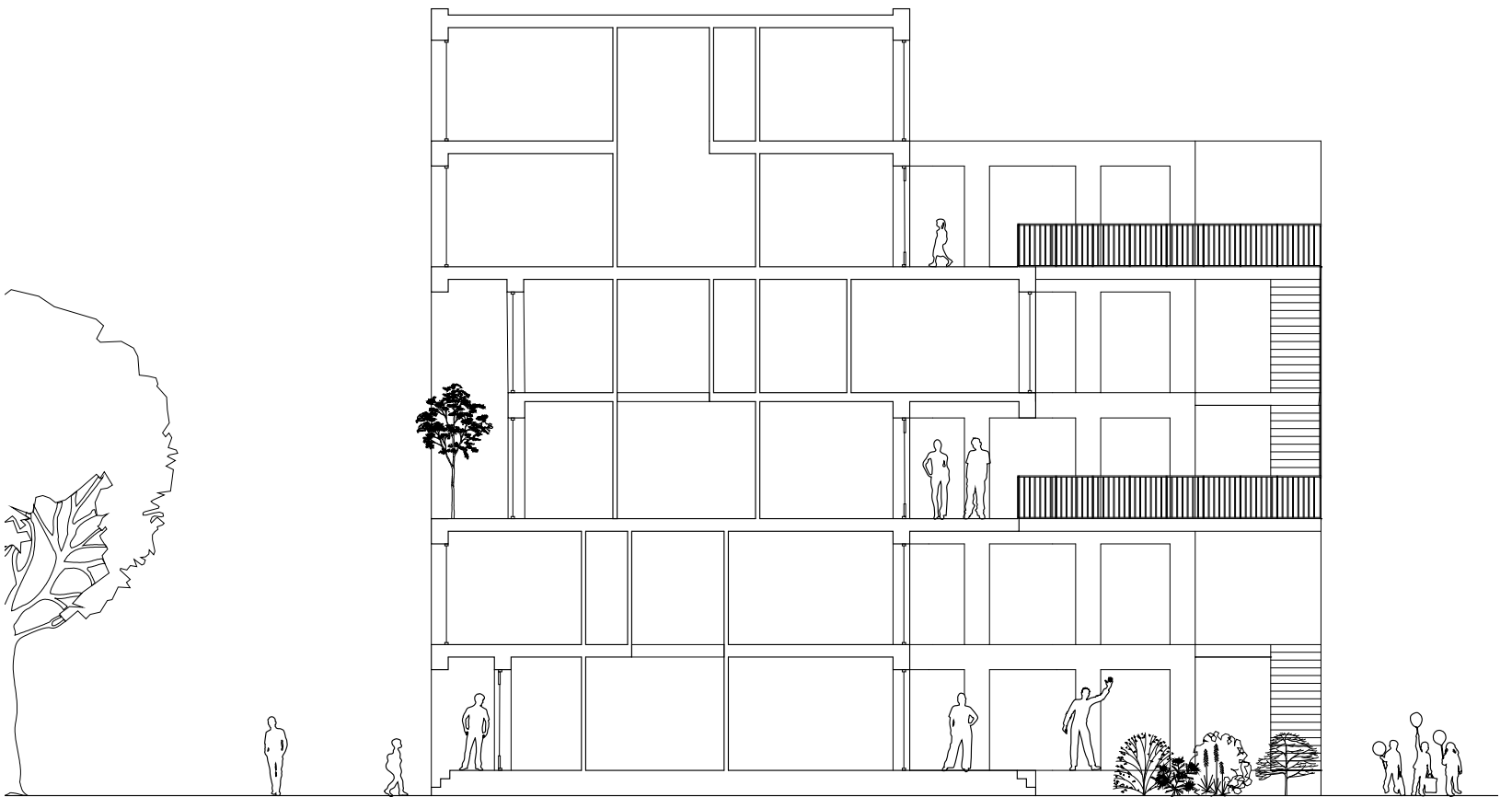
Section A

Impression
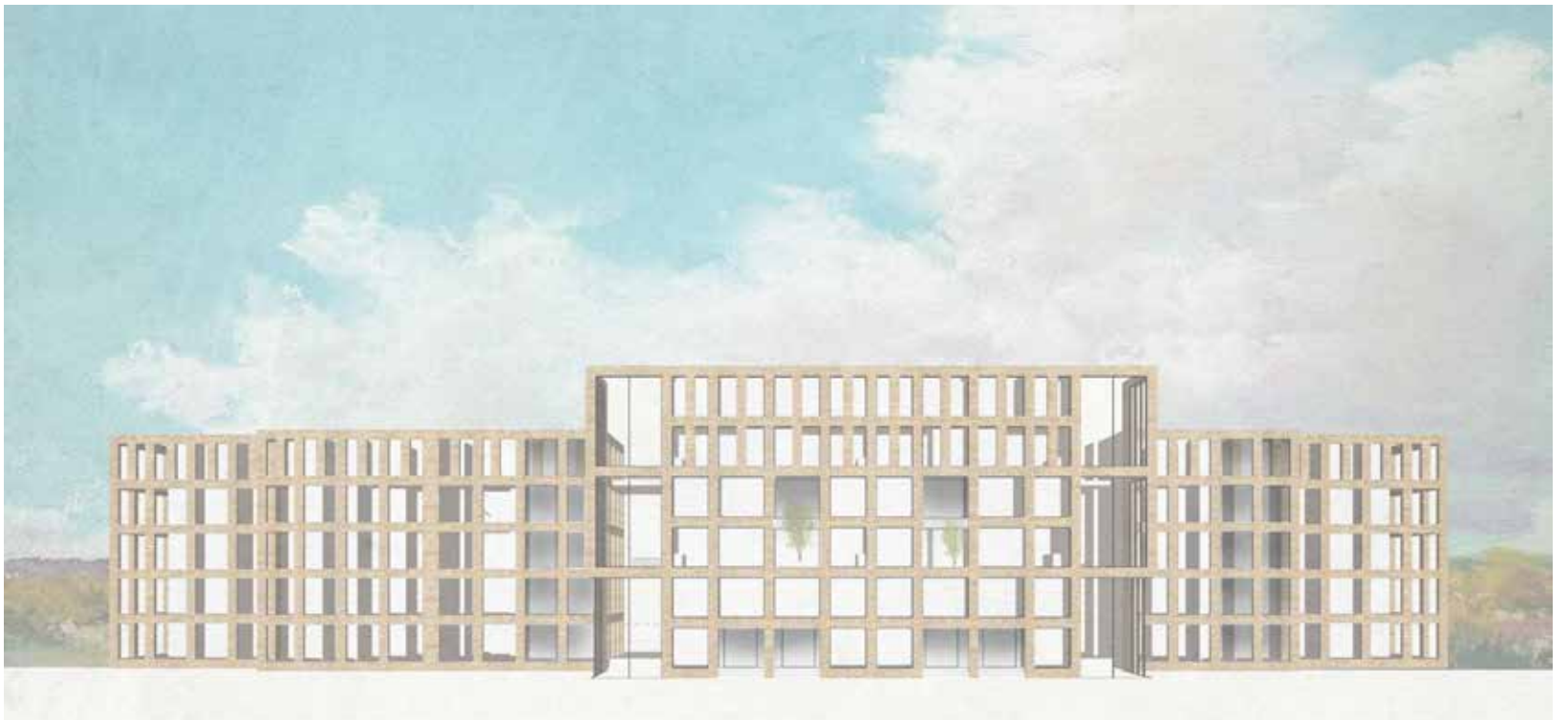
North facade

Virtual reality

During the virtual reality course an idea for the site was developed, seperate from what was researched during the week of the quick start.

Introduction

From before the start of this course I have been very enthusiastic about using Virtual Reality in the design process. I used VR before both for studying and for personal projects. However, in both cases VR was not used as a design tool, but as a presentation or education tool. The course was meant for us to get to know VR, similar to this course, except in this course the focus is more on the design and storytelling capabilities of VR. While the personal design was put in VR after the deadline, just to see what our design would be like in real life. These experiences showed me the power of VR in capturing an idea. Making it easy to understand what a design would look like.

Using VR during the process was therefore something I was interested to learn.

The first two weeks of the course was all about finding a suitable topic to research in a virtual environment. A topic which could contribute to both this course and the studio. Because I was struggling with clearly defining my direction for the studio topic, I had a hard time coming up with a suitable topic for this course. After the first two weeks I finally chose my direction and was able to focus on the topic of creating a recognizable building for modern families.

01. site

02. building mass

03. differentiation in height

04. diversifying the height

There are 3 main stages recognizable in my process of this course.

Stage 1:

The first step to a recognizable building is to differentiate the volume from its surroundings. The first ideas I had were all focussed around the aspect of being taller than your surroundings. What I noticed is this works from a distance. On eye-level this is not really the case and therefore additional steps had to be taken.

Stage 2:

To increase the recognizability of the building up close, at eye-level, I shifted parts of the building. This creates separate parts of the building which are recognizable on their own. Creating a more readable building as a whole, instead of one big volume it can be seen as multiple smaller elements, which together form the building.

Stage 3:

The third stage focussed on the versatility of the building. It should be recognizable from all sides, ensuring that children and parents easily recognize the building wherever they approach the building from.

Conclusion

My idea of the value of VR in the design process has been reaffirmed. VR can make the design process easier by showing what your ideas would feel like in real life. As long as you use it as a tool for designing and not for just presenting it VR is of value for design. I hope to use VR in this way during graduation. Use it to help me understand the things I design more deeply and hopefully coming to new insights this way.

05. diversifying the mass

06. focus on the different side

07. focus on both sides of the volume

08. accent creating a recognizible entrance

4. Plan analysis

A plan analysis of family dwellings

focussing on the perspective of the parent

How is outside space connected to the building, related to the comfort of the parent?

Wisselspoor

Location	Leuven BE
Architect	URA
No. of dwellings	52 residences
Size	- m²
Realised	1st prize
	expected completion 2024
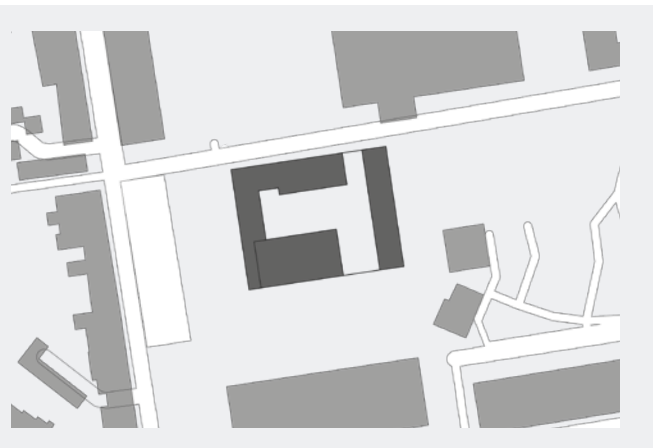
Wisselspoor in Leuven is designed by URA. The design won first prize in the design competition and will be realized in 2024. The building is designed for a variety of target groups, mainly focussing on families. The design is build up in two parts, low rise and a tower. The lower levels make use of a galery for circulation. Galeries which are designed to be used as a communal space, a space for social interaction and a space where children can play. The tower is build around a core and provides a variety of different types of apartments.

01. Kindergarden
02. Café/restaurant
03. Music academy
04. Primary school

0-4 Years
4-8 Years
8-12 Years
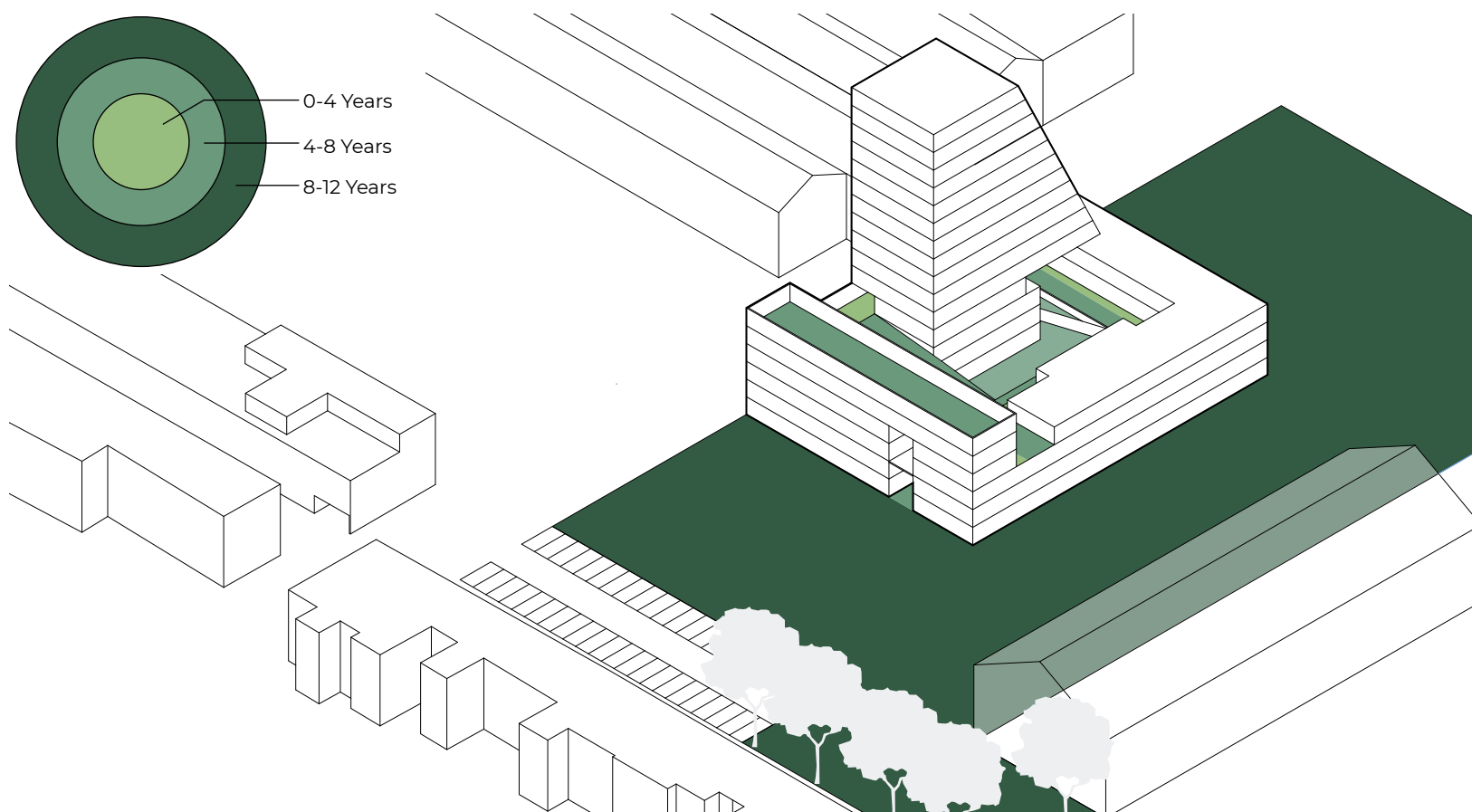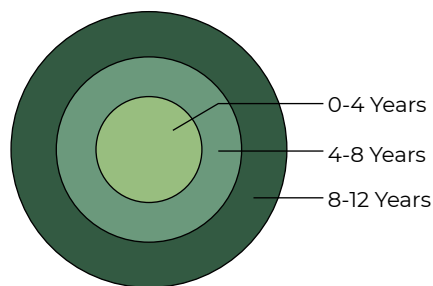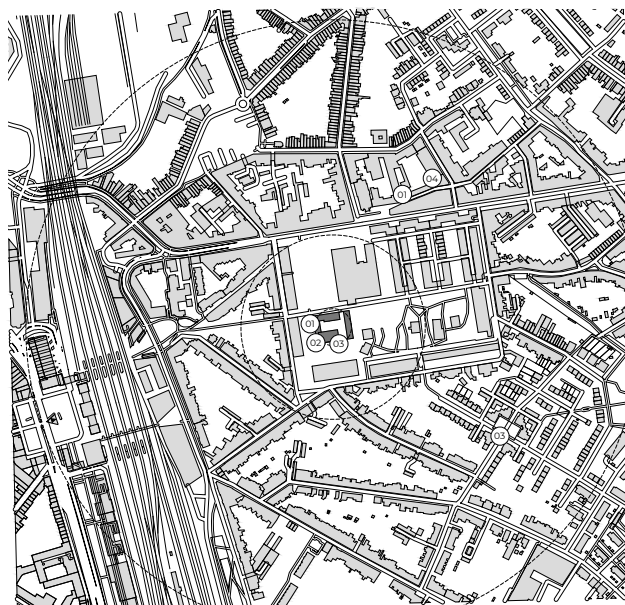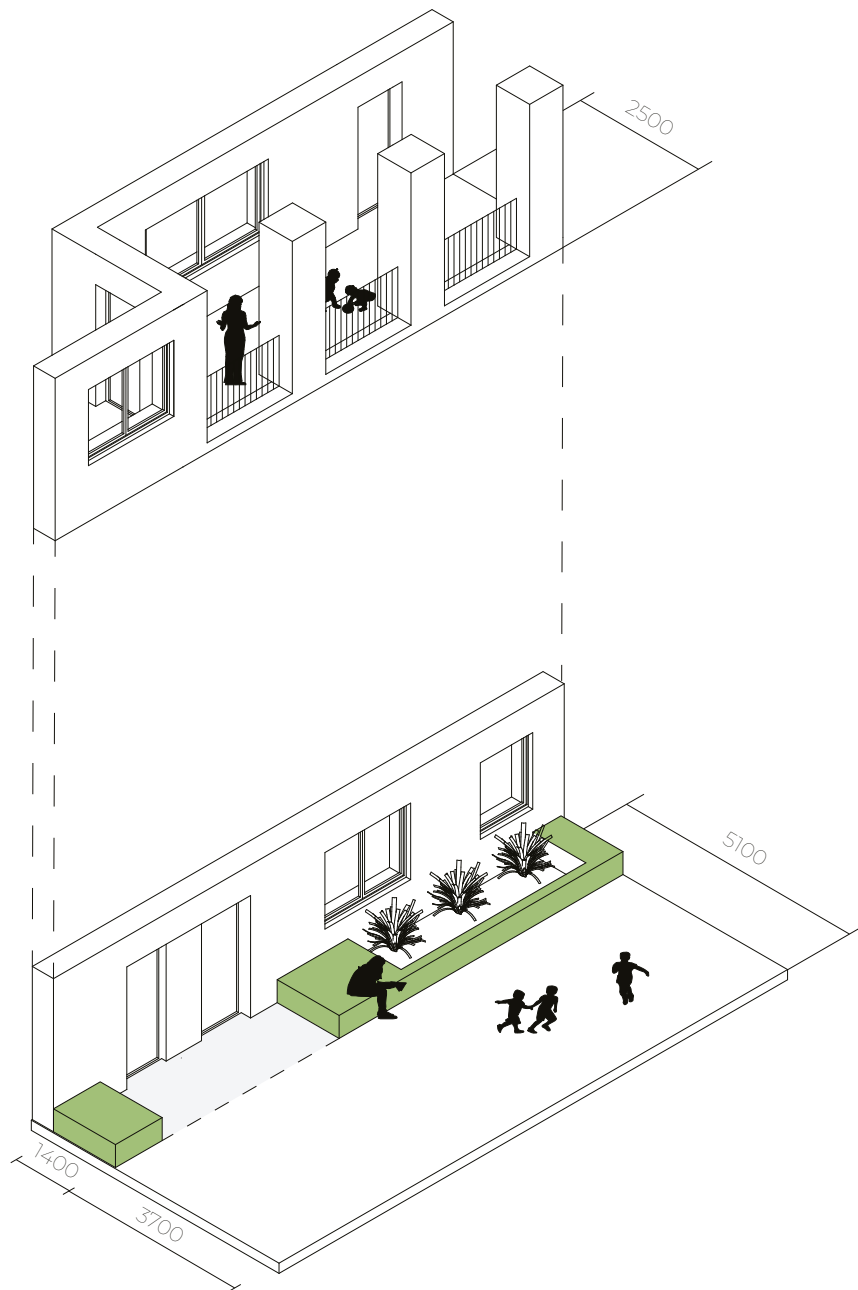
Zoning and comfort

The design provides children with different areas to play. In the low-rise children can play on the galery in front of the house. Gardens and furniture are used to divide the galery into a private and public zone, while also providing parents with a basic level of comfort when supervising their children, when they are playing on the galery. This only works for the low rise. Residents of the high rise lose all contact with the ground floor.

Supervision

The first levels of the building allow for easy supervision of children playing in and around the building. However, residents of the tower lose all contact with the ground floor. This results in less outdoor activities for children who live in the high-rise. Children play either on the balcony, where they can be easily supervised or parents are forced to come outside and supervise them up close.

Circulation

Circulation is important to provide parents with the chance to encounter neighbours. This is important for community forming. This is visible in both the low- and high-rise. In the low-rise circulation passes the front doors of neighbours, and neighbours share a front garden. The small scale of the core in the high-rise, and the shared hallway allows for the chance encounter as well.

Typologies

The project is build up with a lot of different dwelling types, but there are three main categories. The duplex dwellings in the low rise, big apartments and small apartments. In total there are 14 different dwelling types.
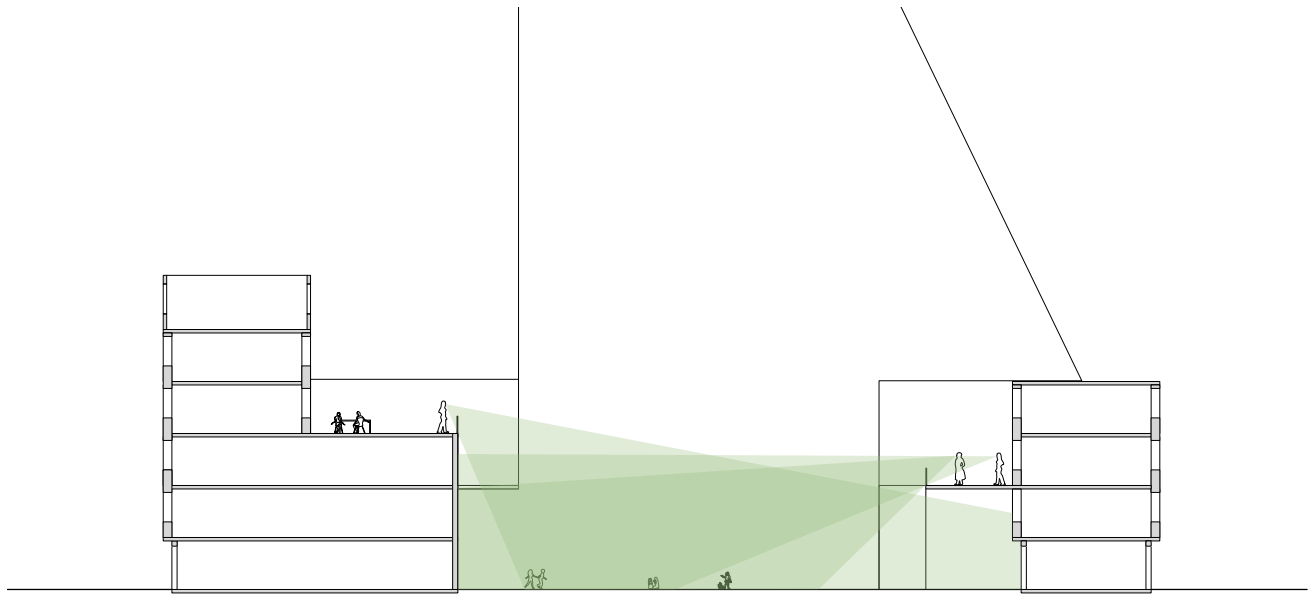
supervision
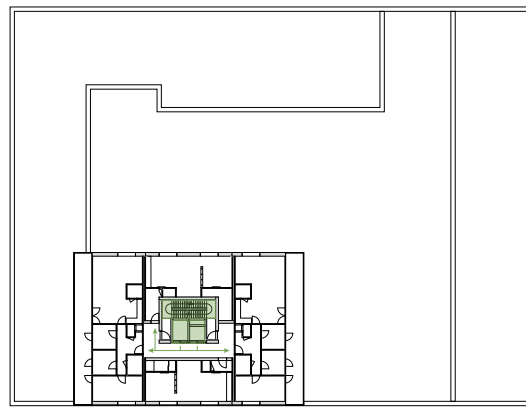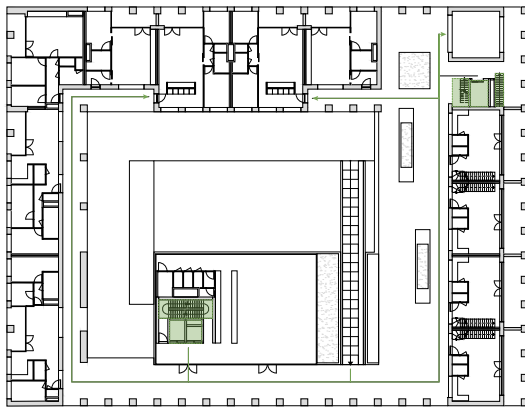
circulation
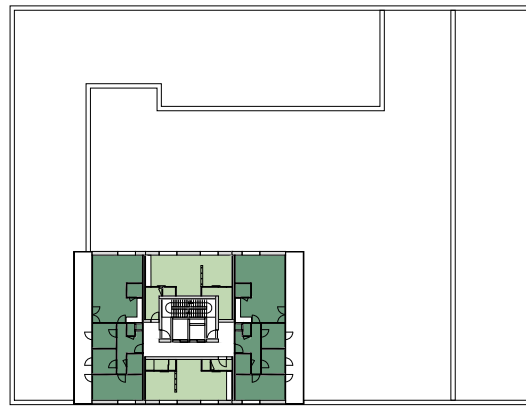
| Type A | Type B | Type C | Type D | Type E | Type A' | Type F |

typologies

5500
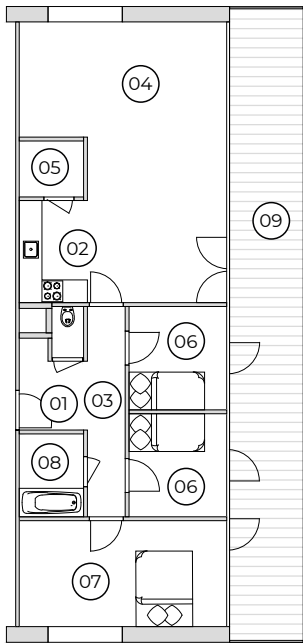
01. Entrance   07. Master bedroom
02. Kitchen   08. Bathroom
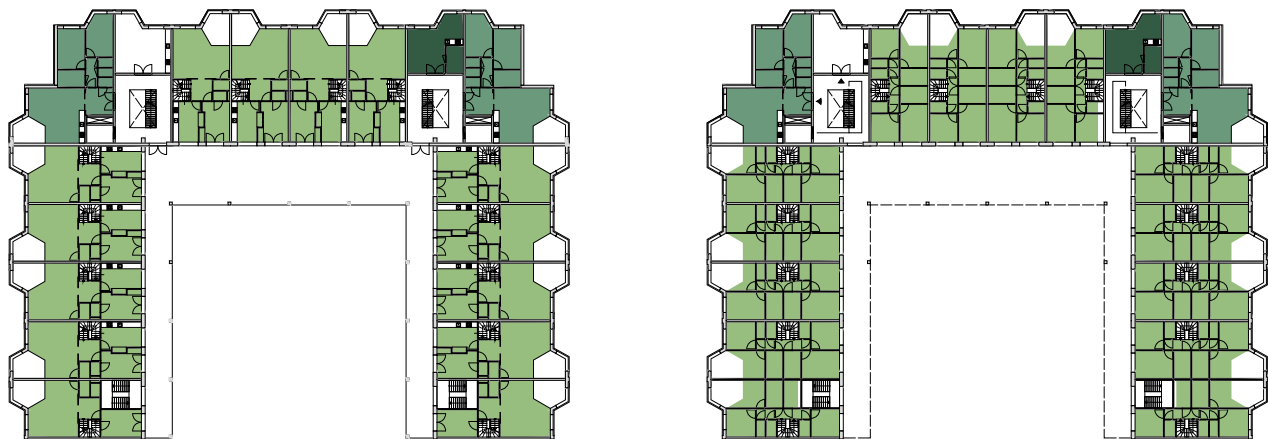03. Hallway   09. Terrace
04. Living
05. Storage
06. Bedroom

04
05
09
02
06
01 03
08
06
07

16000

type A'   Apartment
dwelling size   97 m²
no. rooms   4
price   €345.791
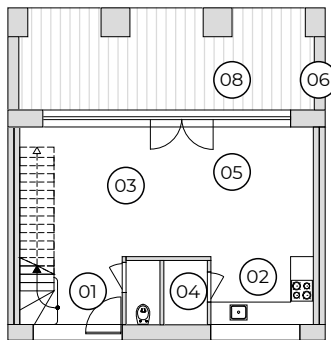
8200   8200
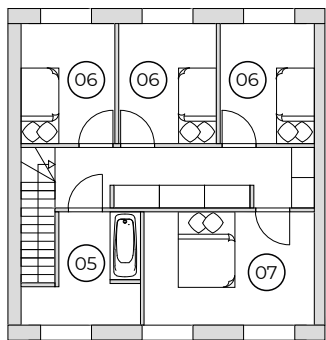
01. Entrance
02. Kitchen
03. Living
04. Storage
05. Bathroom
06. Bedroom
07. Master bedroom

2700

08   06

03   05

5300

8500

06   06   06

05   07

8000

01 04 02

type E   Duplex
dwelling size   119m²
no. rooms   5
price   €338.259

Using an oversized hallway provides the opportunity.
for storage space and it can be used as a flexible space
where children can play. An extra storage space in the
kitche is also useful for families, who often need room
for their a stroler, shoes etc.

Wisselspoor

Location	Leuven BE
Architect	HCVA
No. of dwellings	54 residences
Size	- m²
Realised	2ⁿᵈ prize 2016
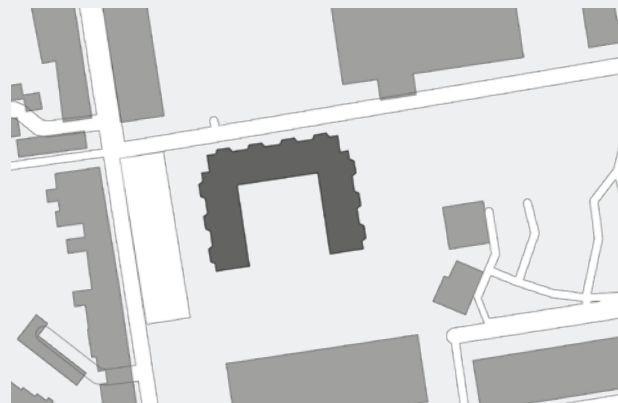
Wisselspoor from Happel Cornelisse Verhoeven Architecten won 2nd prize in the design competition. This building is designed especially for families. A collective square where children can play is the centre of the building. The galeries serve multiple purposes. They provide circulation, room for children to play and a semi-private front garden. Oversized, multipurpose hallways and extra storage space make the dwellings suitable for families.

01.   Kindergarden
02. Café/restaurant
03.   Playground
04. Primary school

0-4 Years
4-8 Years
8-12 Years
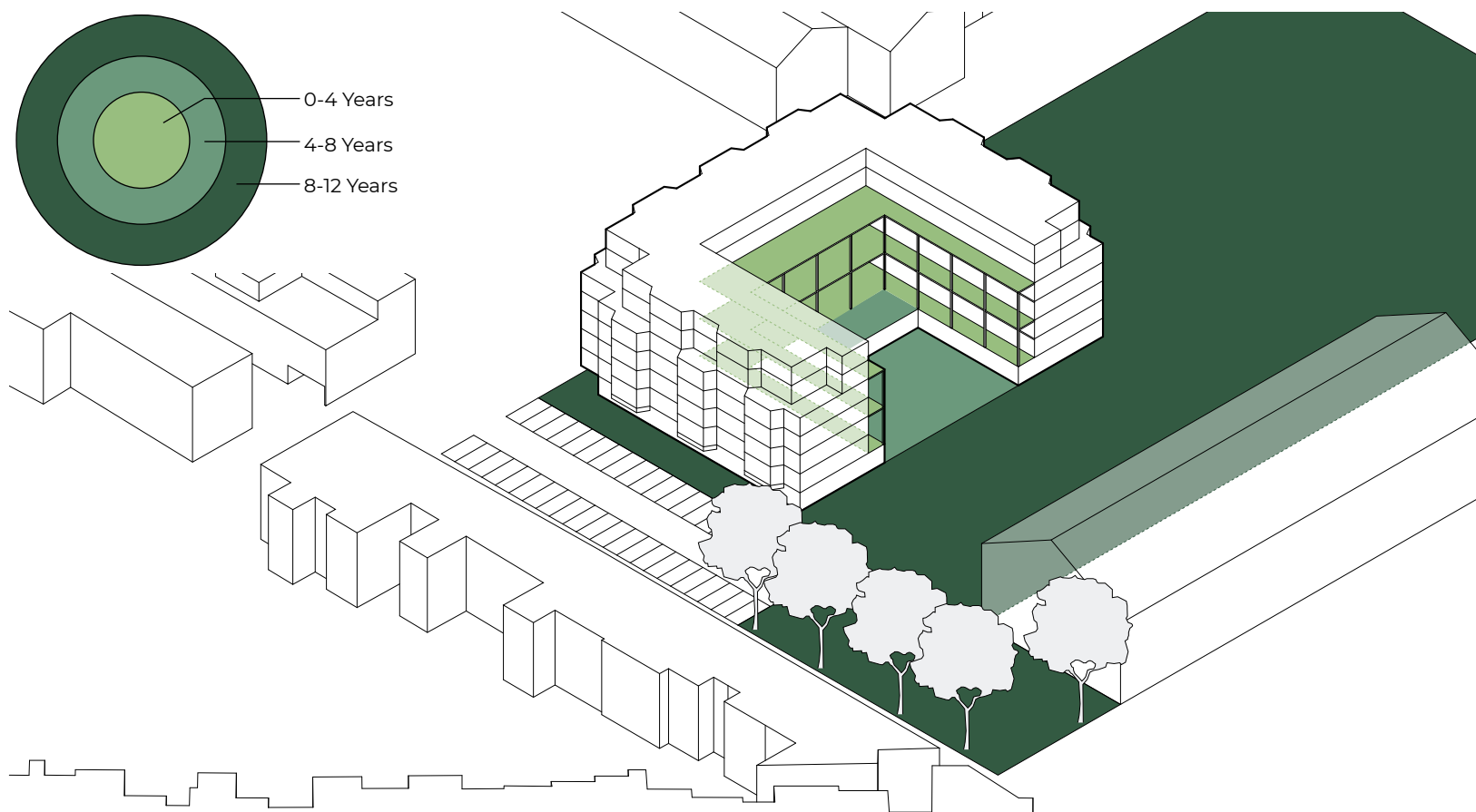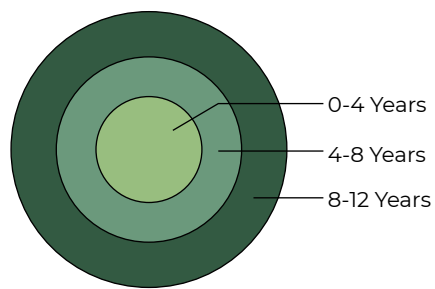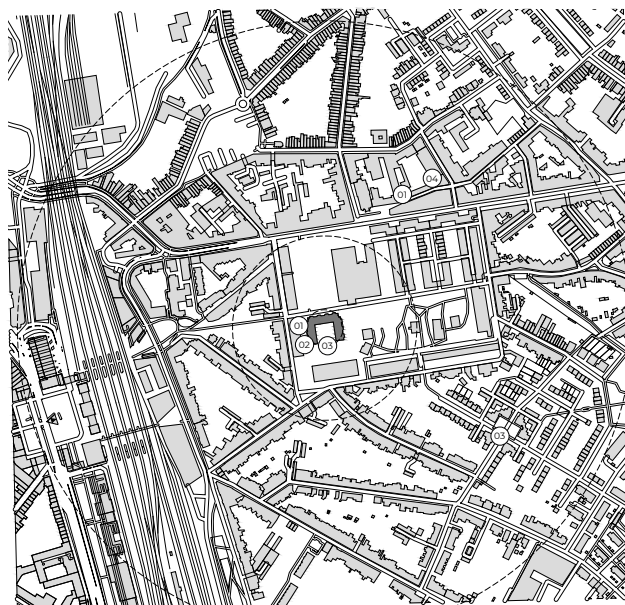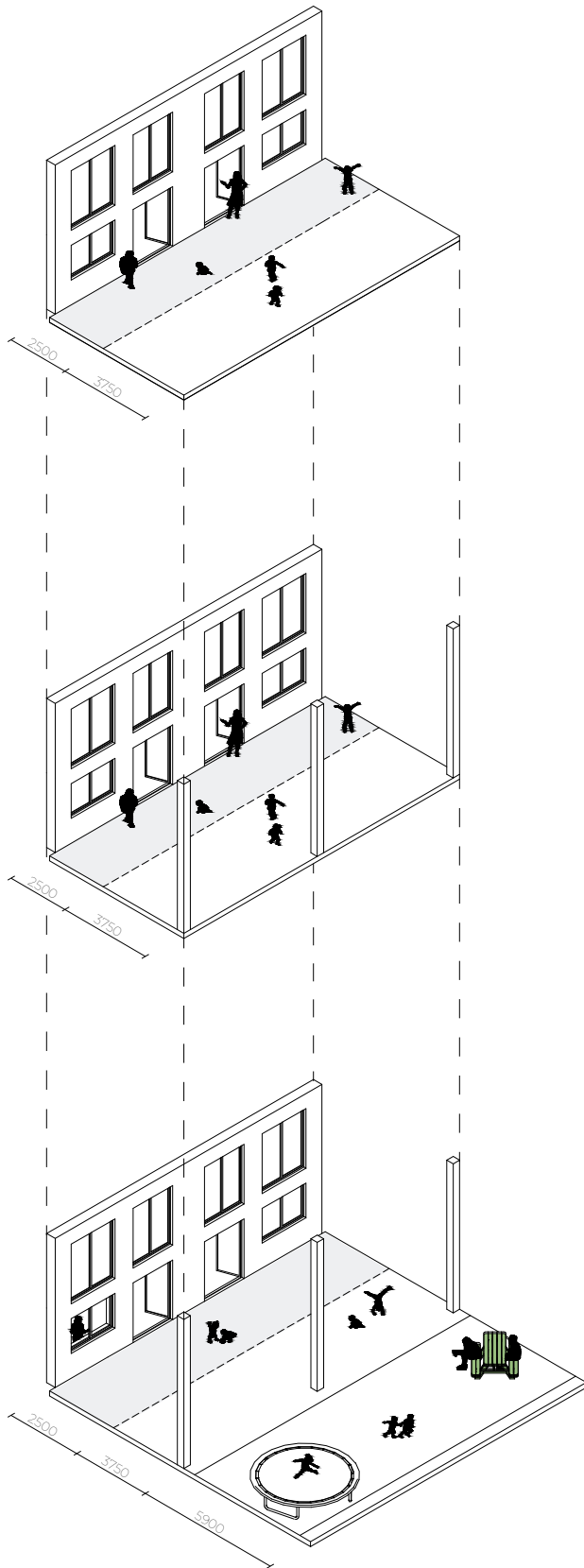
Zoning and comfort

The building provides multiple places where children could play, makint it suitable for children of different ages. Younger children can play in front of the house, where parents can supervise from their front garden. Older children can play on the galeries throughout the building and on the playground on the first floor. Older children can play throughout the entire building, but also in the park next to the building. Comfort for parents who are supervising playing children is hardly provided. There is a bench near the playground. All other comfort needs to be introduced by the inhabitants when furnishing their garden.

Supervision

The first levels of the building provides proper supervision. Parents are able to see all parts where children play. Above the third floor contact with the ground floor becomes harder. This is reinforced by the design of the galeries. The upper galery blocks a large part of the view. Making supervision of playing children more difficult. This will create clear seperation in who can play outside. Older children are allowed to play independently, while children until the age of 10 will have to play in front of the house.

Circulation

Two central circulation cores provide the parents with a lot of chances for encoutering neighbours. The shared galery and open front gardens contribute to community forming as well.

Typologies

The building consists of two main typologies. A duplex dwelling, which is most common and apartments at the corner, adjacent to the circulation core.
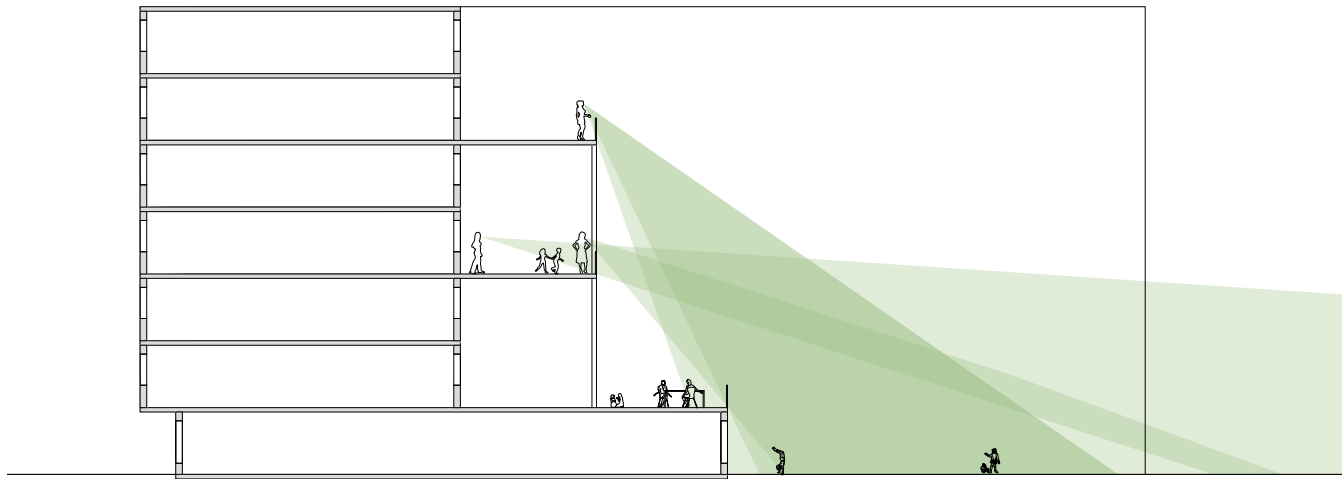
supervision

circulation

Type A   Type B   Type C

typologies
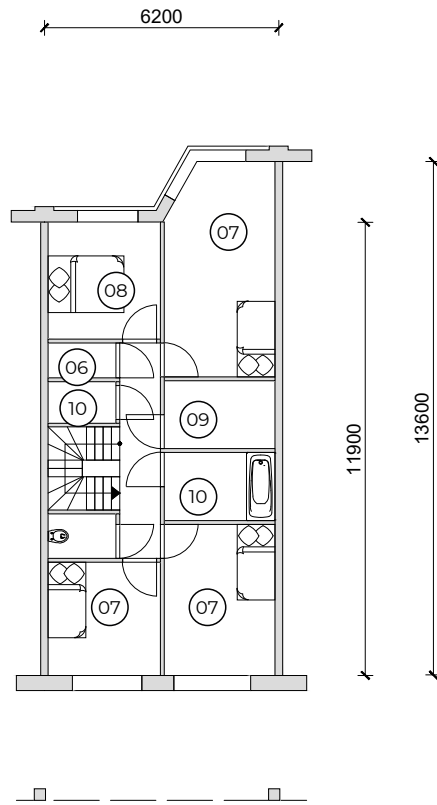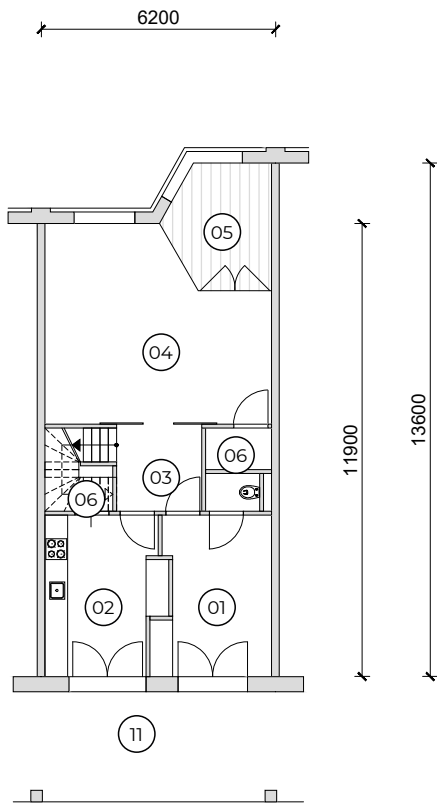
01. Entrance
02. Kitchen
03. Hallway
04. Living
05. Winter garden
06. Storage
07. Bedroom
08. Master bedroom
09. Multifunctional space
10. Bathroom
11. Terrace

type A	Duplex
dwelling size	151 m^2
no. rooms	6
price	€564.740
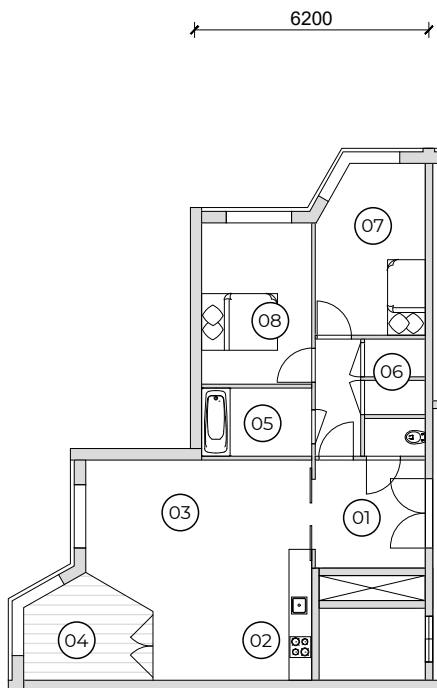
01. Entrance	07. Bedroom
02. Kitchen	08. Master bedroom
03. Living	
04. Winter garden	
05. Bathroom	
06. Storage	

type B	Apartment
dwelling size	90 m^2
no. rooms	3
price	€336.600

The design uses an oversized entrance and hallway, to provide storage and flexible space where children can play. Seperating the kitchen and living makes it possible for parents to entertain guests, while children play in the other room. Multiple (smaller) bathrooms are helpfull in the busy life of a family.

BIGYard

Location	Berlin De
Architect	Zanderroth Architekten
No. of dwellings	45 residences
Size	9100 m²
Realised	2010

The project was designed as a joint venture. 72 home owners participated actively in the design process, creating a lot of personal touches throughout the complex. The project consists of penthouses, garden houses and townhouses, connected to a collective garden, situated on the raised deck.
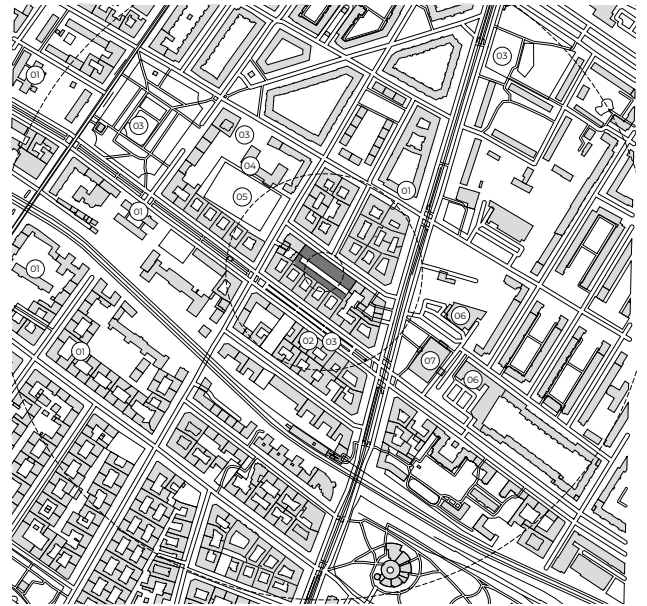
01.   Kindergarden
02. Café/restaurant
03.   Playground
04. Primary school
05   Sport
06   Shops
07   Hospital

0-4 Years
4-8 Years
8-12 Years
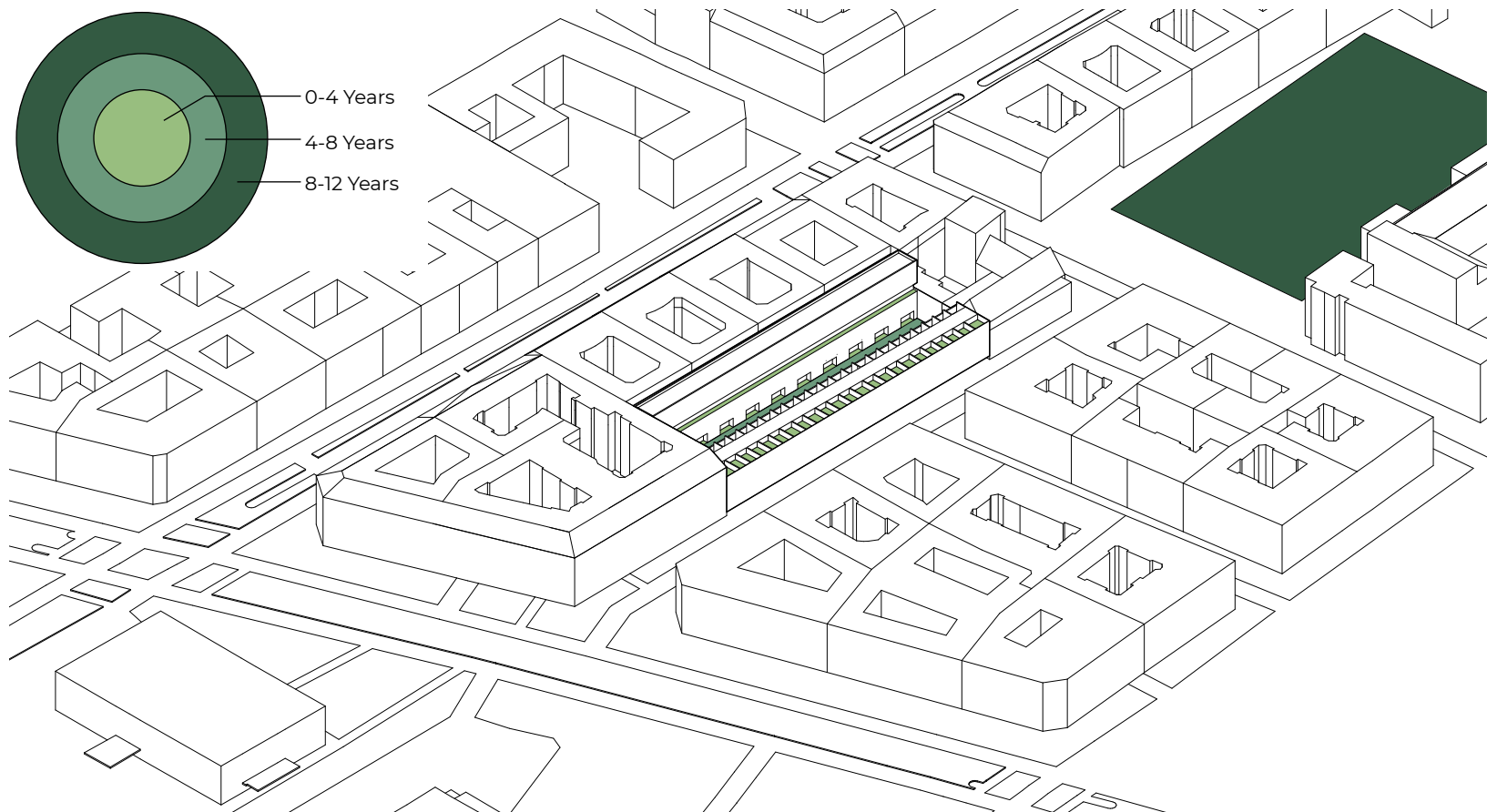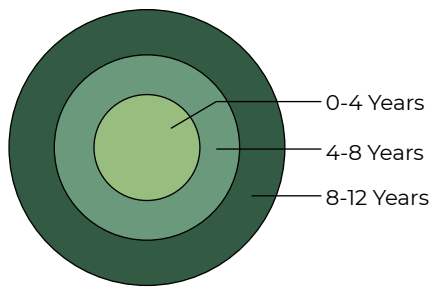
Zoning and comfort

The internal courtyard provides a safe place for children to play. All dwellings are connected to the courtyard either visualy, physically or both. Private gardens and balconies allow parents to comfortably supervise their children, even though this comfort is not specifically designed with for instance furniture.

Supervision

The dwellings directly connected to the courtyard provide easy supervision. The safe, closed off environment makes it easier for parents to allow their children to play independently. The upper dwellings are above the third floor and therefore supervision from this floor becomes harder, but the safe courtyard might negate this effect.

Circulation

Circulation does not play the biggest role in encountering your neighbours. Most dwellings have an independent entrance, making it possible to come and go without meeting others. In the case of BIGyard the collective garden provides the places to meet your neighbours and create a social netwrok within the building.

Typologies

The building consists of three different typologies. Three types of maissonettes, using split level to connect the different floors to the raised deck.
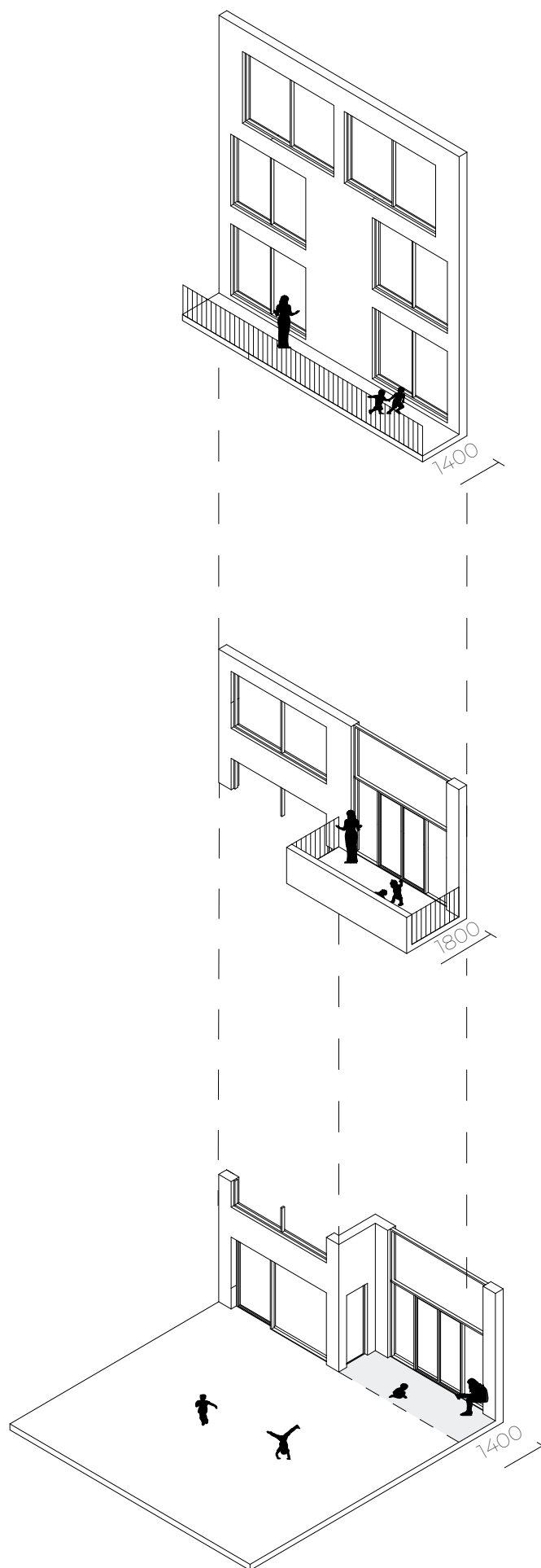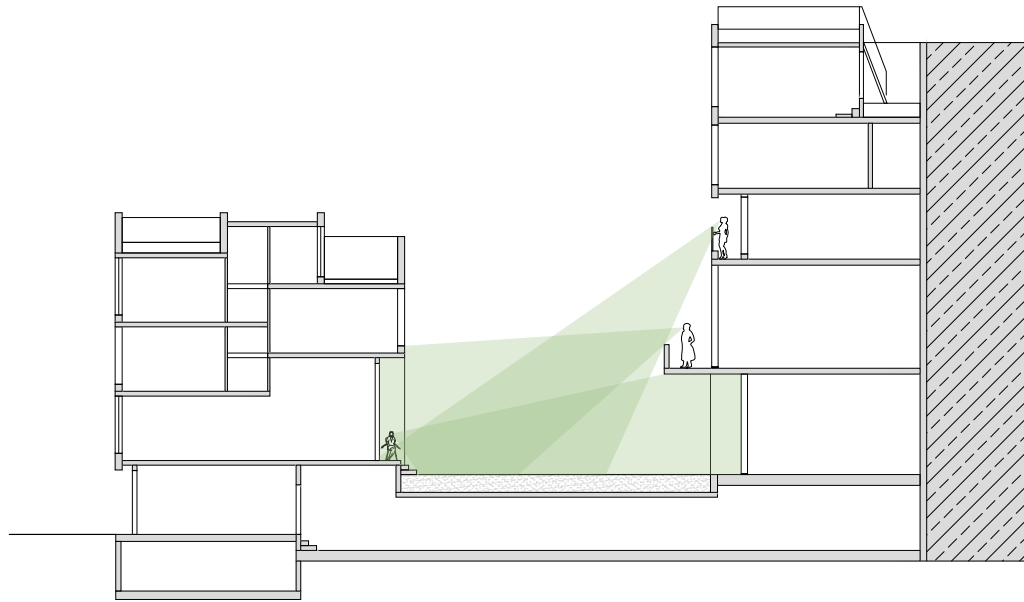
supervision
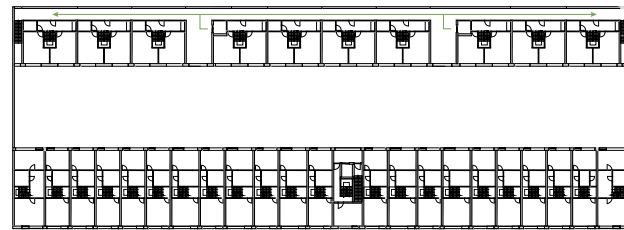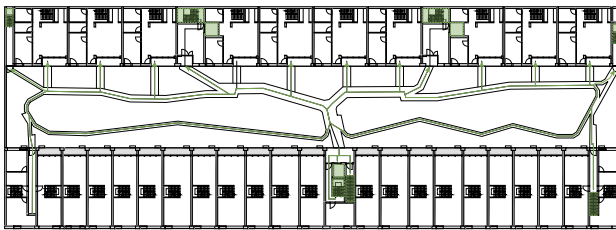
circulation

| | Type A | | Type B | | Type C |

typologies
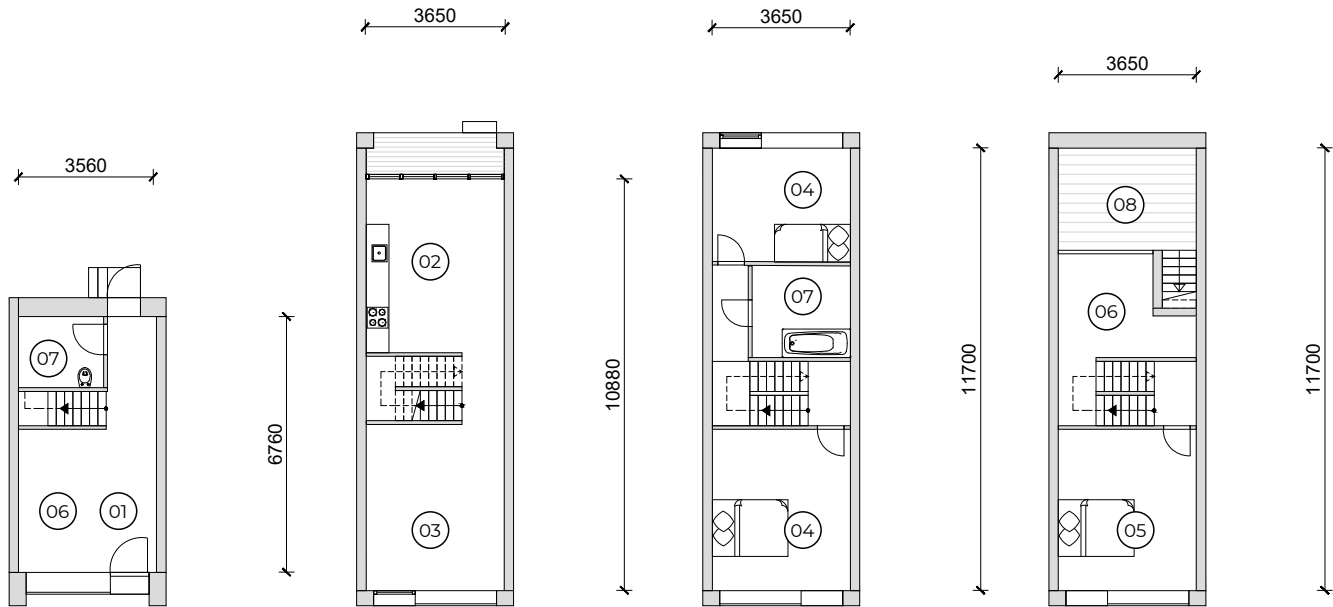
01. Entrance
02. Kitchen
03. Living
04. Bedroom
05. Master bedroom
06. Multifunctional space
07. Bathroom
08. Terrace

type A
dwelling size
no. rooms
price

Maissonette
140 m^2
7
€490.000
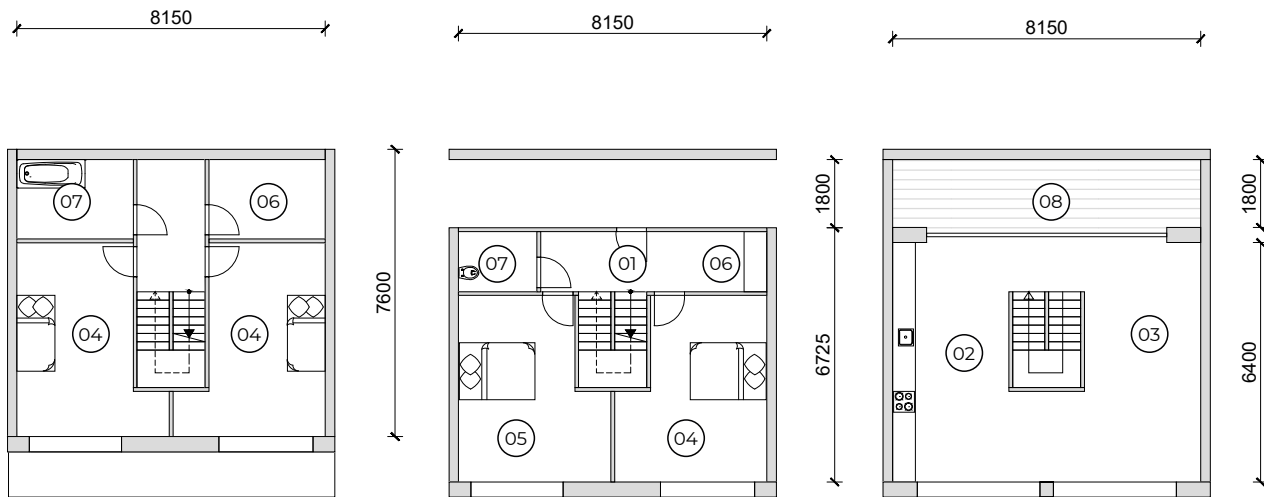
01. Entrance
02. Kitchen
03. Living
04. Bedroom
05. Master bedroom
06. Storage
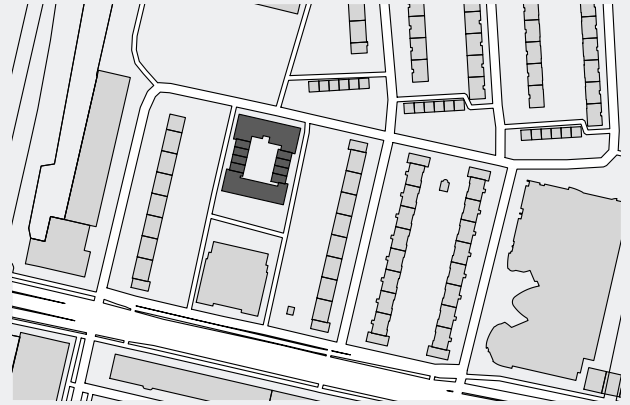07. Bathroom
08. Terrace

type A
dwelling size
no. rooms
price

Maissonette
165 m^2
6
€578.550

Kolenkithuis

Location   Amsterdam NL
Architect   Heren5 Architecten

No. of dwellings   37 residences
Size   - m²
Realised   2017

De Kolenkit is a project in Amsterdam based on the research 'Nestelen in de stad' by Heren5 architecten. It is designed for families who would like to stay in the city. The design of the homes has taken into account the wishes of families as dicoverd in the research. The dwellings provide many smaller rooms, spacious entrances, annexes to the living room and a good organization between private and public rooms. An internal courtyard can be used both for parking at night and for playing during the day.

01.   Kindergarden
02. Café/restaurant
03.   Playground
04. Primary school
05   Sports
06   Shops

0-4 Years
4-8 Years
8-12 Years
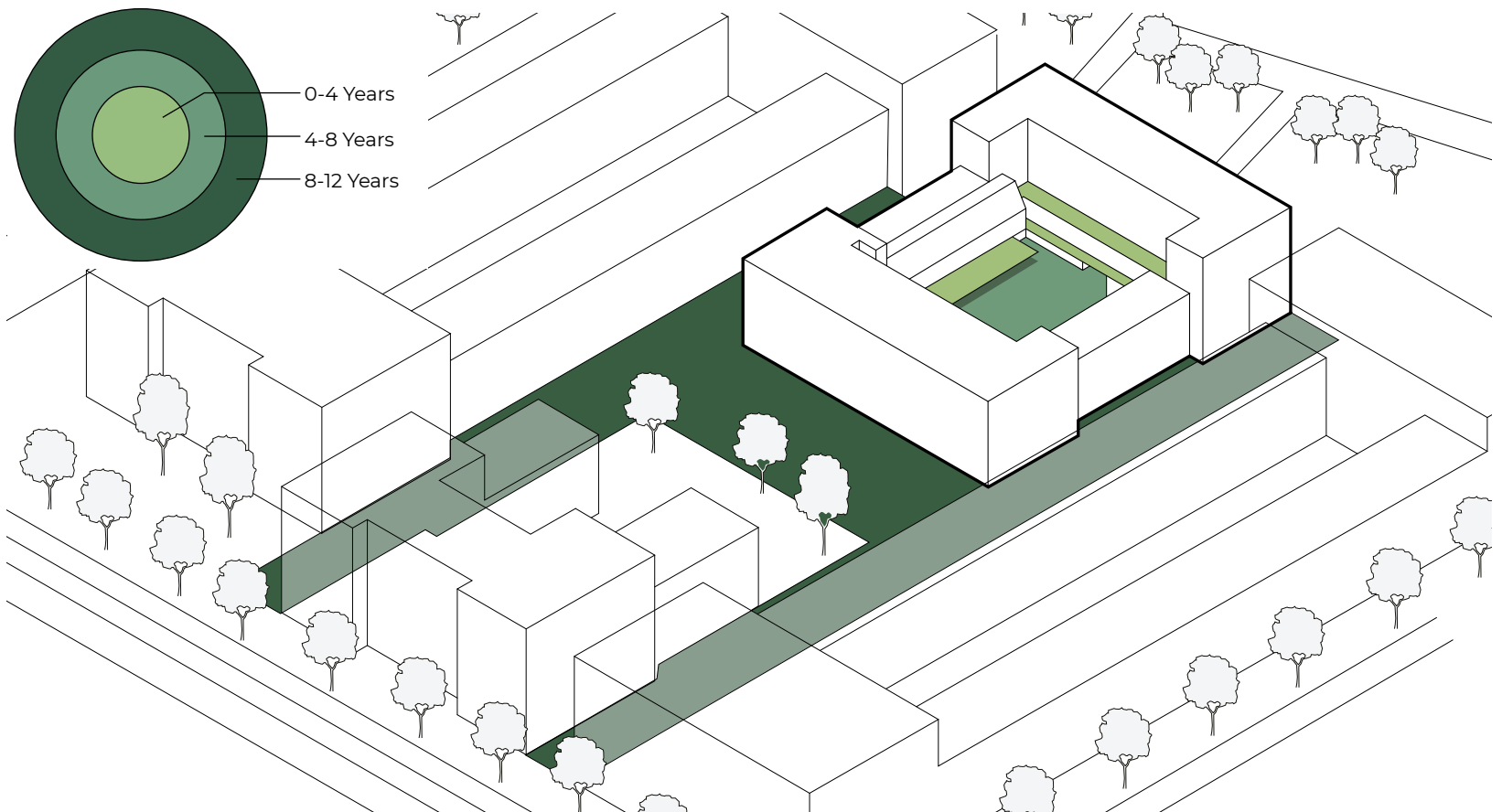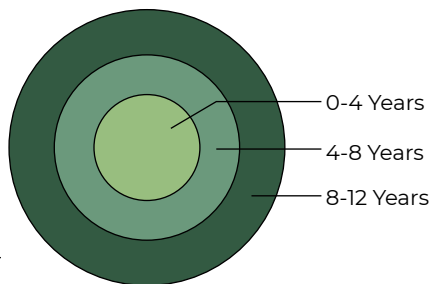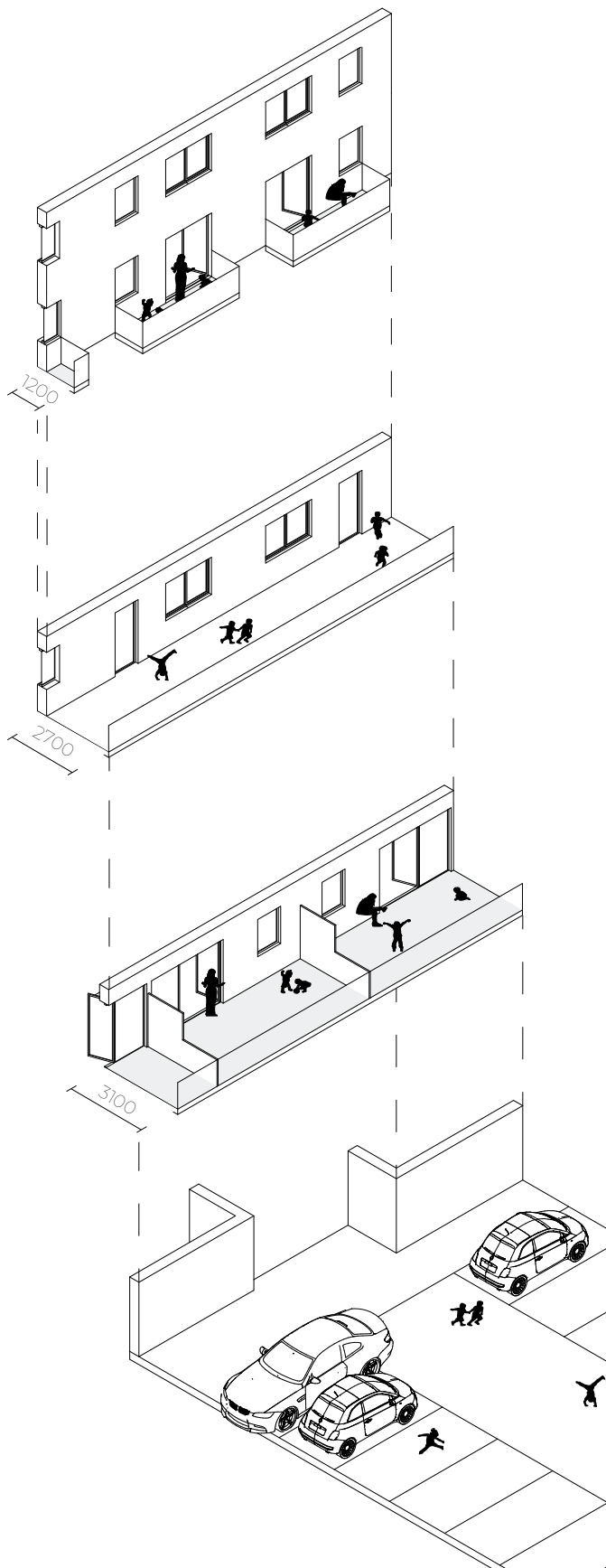
Zoning and comfort
Inside of the building children can play on the galeries or in the courtyard. Comfort for parents is not integrated into the design, however both collective and private outdoor space allow for supervision of the areas children play at.

Supervision
As mentioned before supervision is possible from all outdoor spaces of the building. Allowing more room for children to play, as long as they remain inside of the building. However, above the third floor contact with the ground floor becomes harder. This is reinforced by the design of the galeries in front of the apartments. The top galery blocks a large part of the view, making supervision of playing children more difficult. This will create a situation where less children from these floors are allowed to play outside, unless co-supervision by other inhabitants is possible.

Circulation
Circulation is done, by using two circulation cores. These cores are shared with the smaller cluster the families live in and provides the parents with a lot of chances for encoutering neighbours.

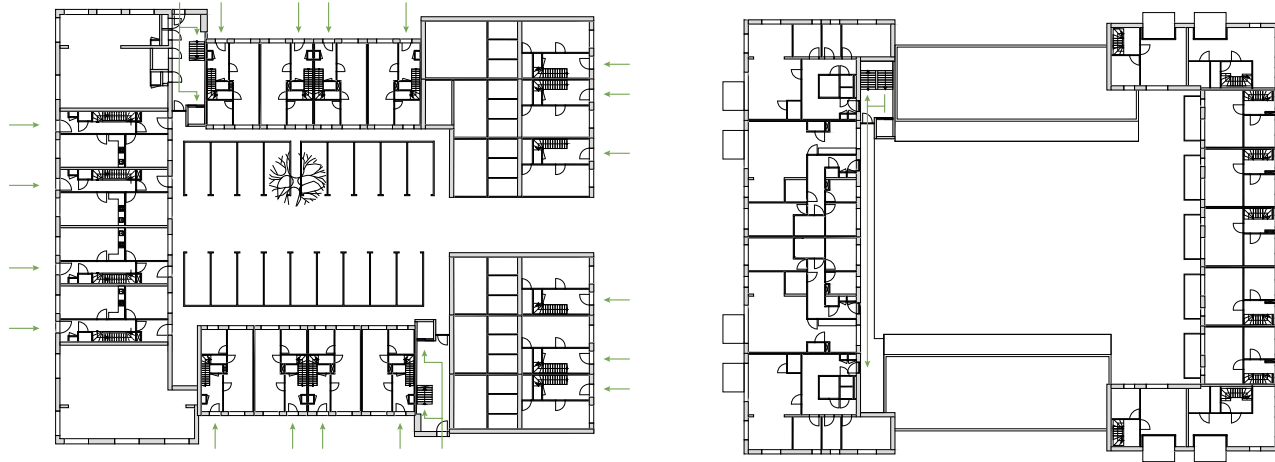## Typologies
The building consists of two main typologies, in a couple of configurations. A couple of different duplex dwellings and some apartments, suited especially for the urban family.
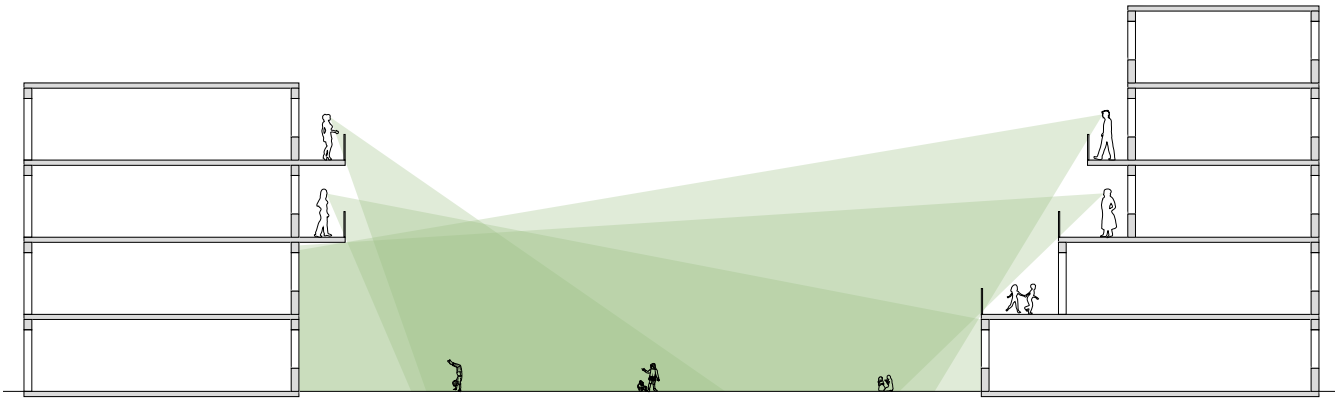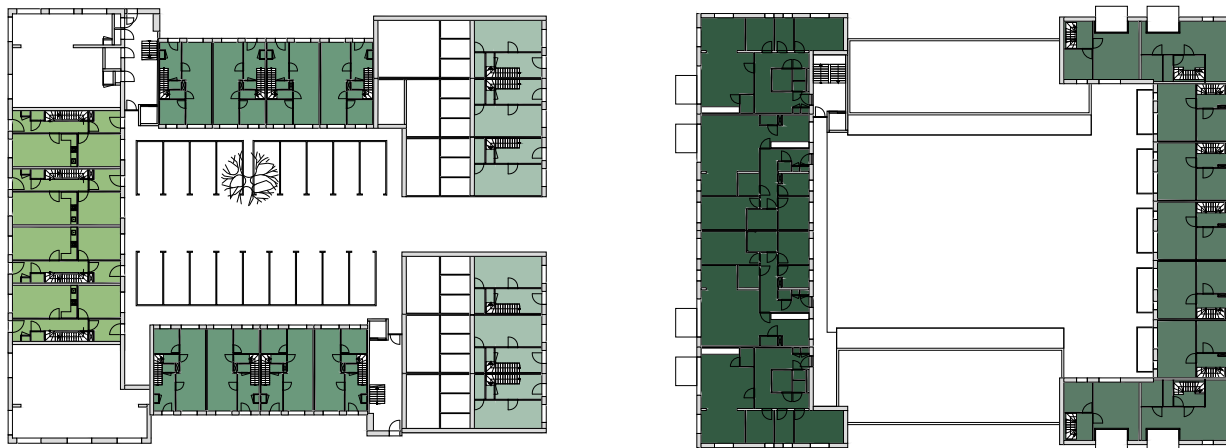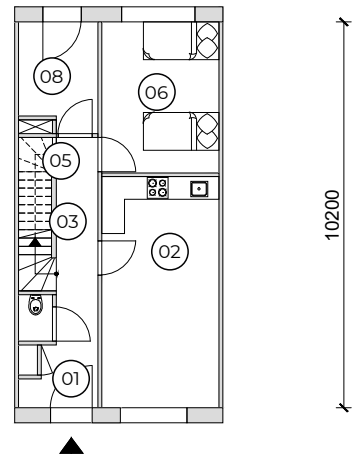
supervision

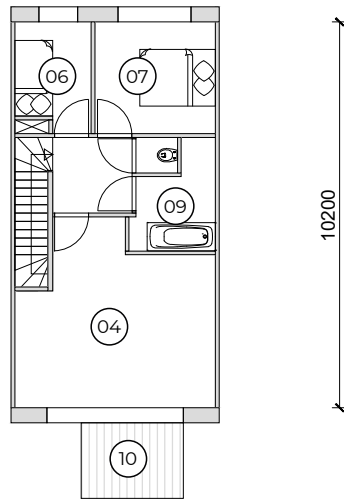*circulation*

Type A   Type B   Type C   Type D   Type E

typologies

5500

5500

10200
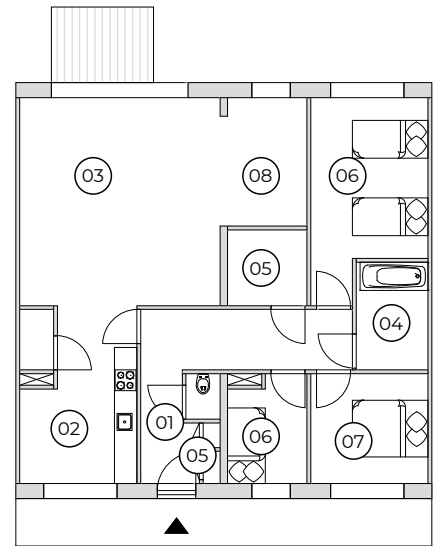
10200

01. Entrance
02. Kitchen
03. Hallway
04. Living
05. Storage
06. Bedroom
07. Master bedroom
08. Multifunctional space
09. Bathroom
10. Balcony

type A	Duplex
dwelling size	156 m^2
no. rooms	6
price	€762.996

5500   5500

10200

01. Entrance   06. Bedroom
02. Kitchen   07. Master bedroom
03. Living   08. Multifunctional space
04. Bathroom
05. Storage

type B	Apartment
dwelling size	150 m^2
no. rooms	5
price	€733.650

The design provides many smaller rooms, instead of a few big rooms. It provides a spacious entrance, usable for storing bulky items like strollers. Annexes to the living roomkitchen provide some flexibility in the use of the dwelling. Providing storage space is also valuable for families.

Design brief

Dwellings

- +/- 65- 85 dwellings

- 50-120m2

- Minimum of 2 bedrooms in smaller dwellings

- Minimum of 3 bedrooms in bigger dwellings

- Adaptability in floorplan

- Private outdoor space (balcony or garden)

Building block

- Circulation
    - o Wide circulation spaces to allow multiple uses, like playing
    - o Room for chance encounter/ meeting neighbours

- Supervision
    - o Comfort for parents

- Playing
    - o Playgrounds for all age groups: 0-4, 5-8 and 9-12 years

Facilities
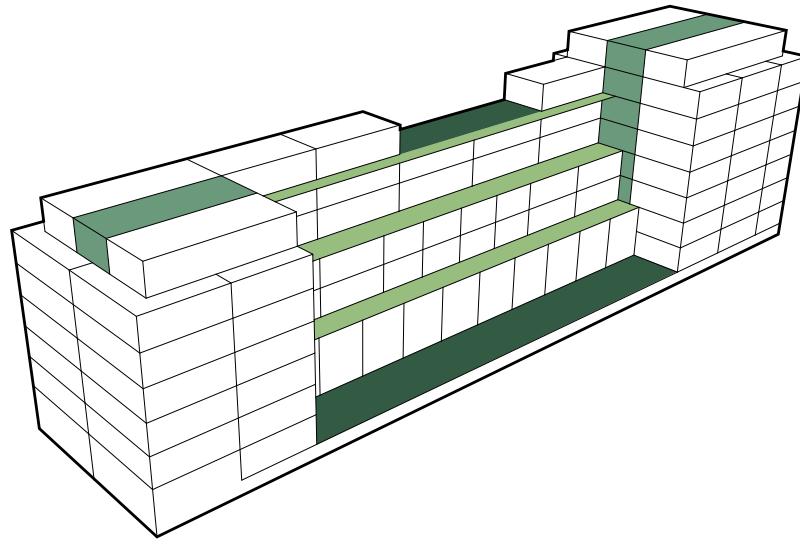
- Laundry facilities

- Flexible collective spaces

Parking

- 65 x 0,6 = 39 parking spaces

- Or 5 collective-car parking spaces and 19 parking spaces
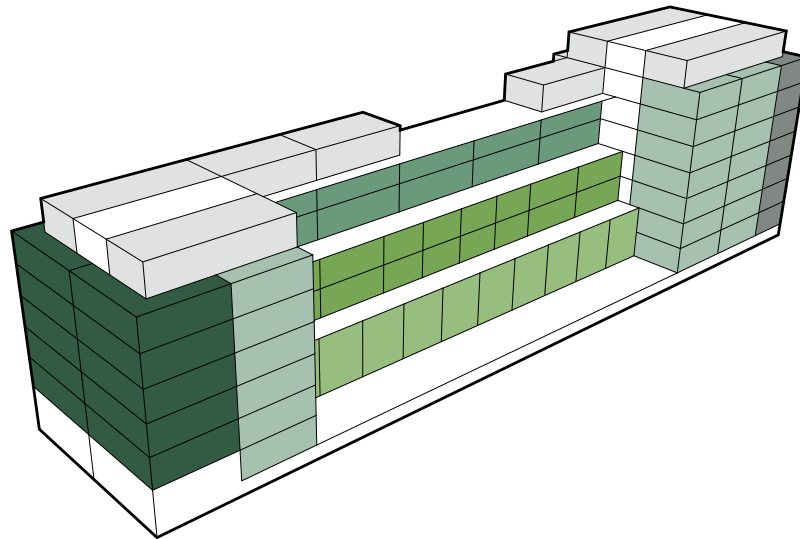
- Bicycle parking

5. Conceptual design

Modern families in Minervahaven
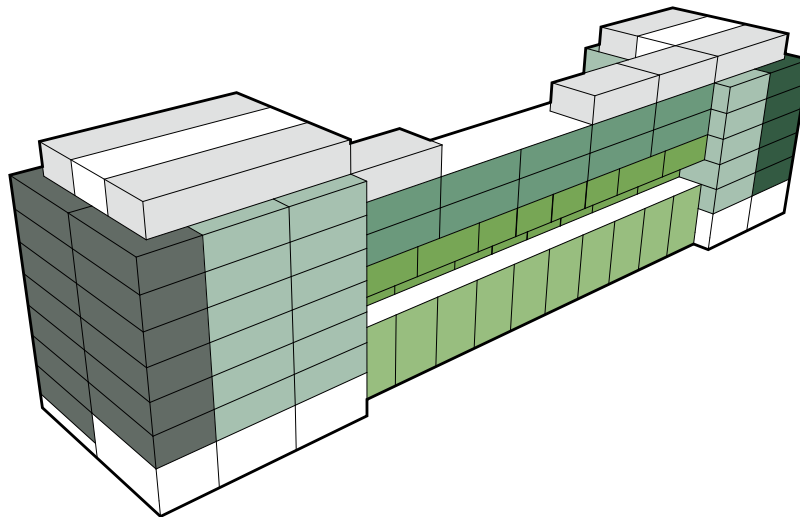
horizontal circulation   vertical circulation   garden
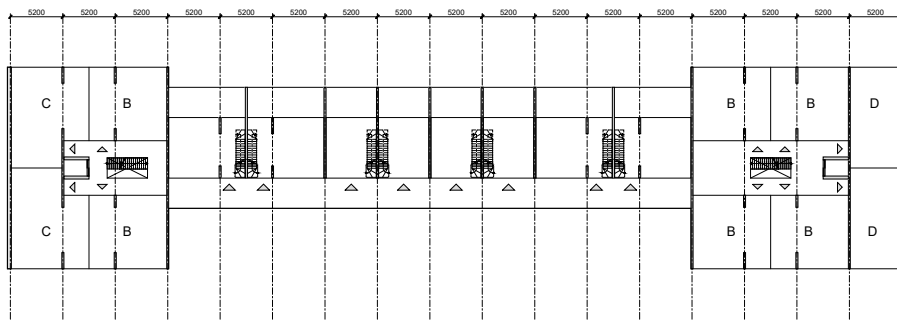
circulation

Type A   Type B   Type C   Type D
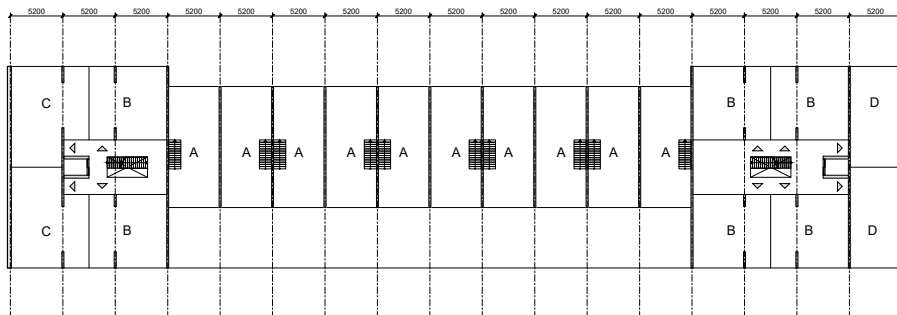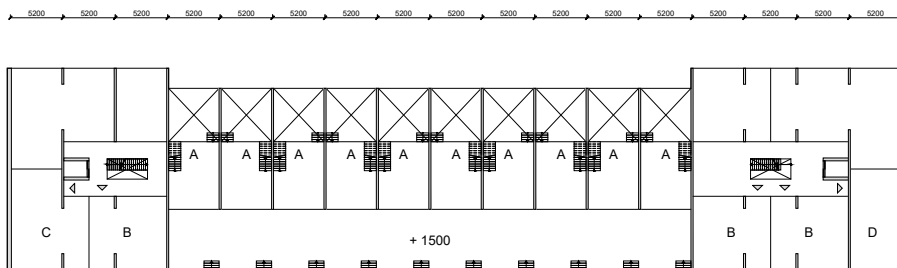
Type E   Type F   Parents house
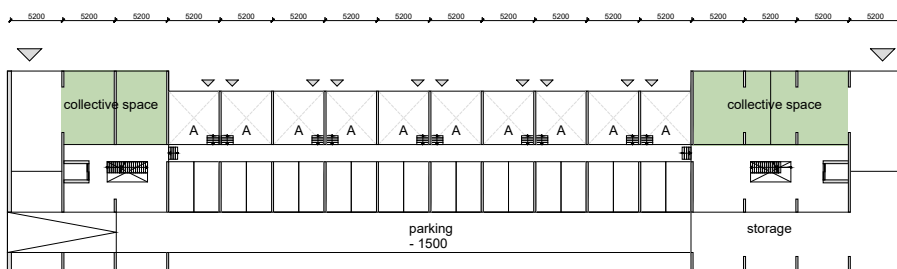

dwelling typologies
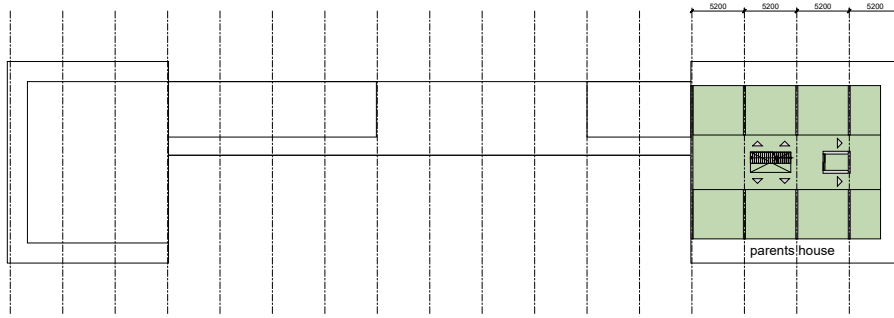
Floor 03

Floor 02

Floor 01

Floor 00

The building is situated at the edge of the park, the square and the waterfront in the Minervacampus.

The lower levels are connected to the ground level, creating an active plinth. Collective spaces on the ground floor connect the building to the neighbourhood and the residents to eachother.

The upper levels are connected via two central circulation cores. Spaces which have multiple uses, next to circulation it can be used as a space for children to play. Horizontal circulation happens via wide galeries. Galeries which provide, besides circulation, room for interaction with neighbours and room for children to play in the proximity of their home. Lowering the treshhold for playing outside for both the children and the parents. Children can easily go outside while parents can supervise from their house or front door.

The diverse target group is represented in the mix of different typologies. Dwellings vary in size from 50 m^2 to 120 m^2. They also vary in type, providing both duplexes and apartments. The top layers provide space for emergency shelter for single-parents and divorced parents. During a divorce suddenly one of the parents needs to move, the parent house can provide temporary accomodation for these parents.

Floor 08
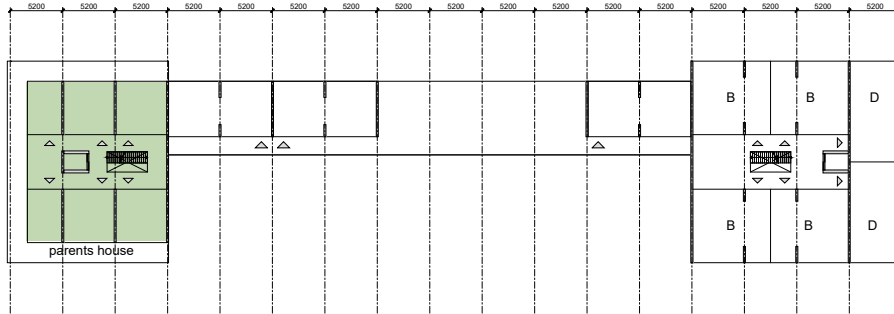
Floor 07
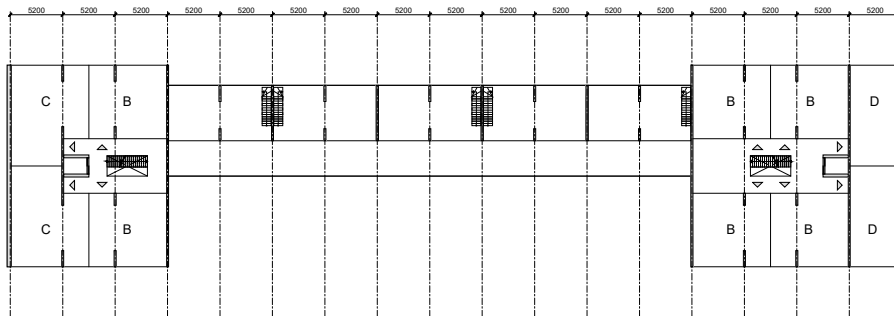
Floor 06

Floor 05

Floor 04

Apartment F

Apartment F

Maissonette E

Maissonette A

Car parking

6. Graduation plan

Graduation plan

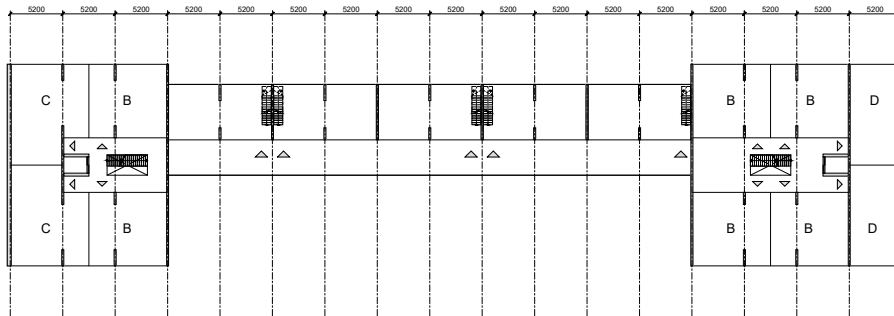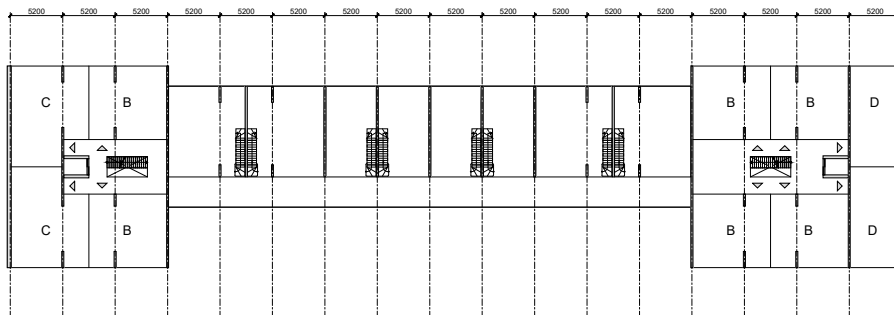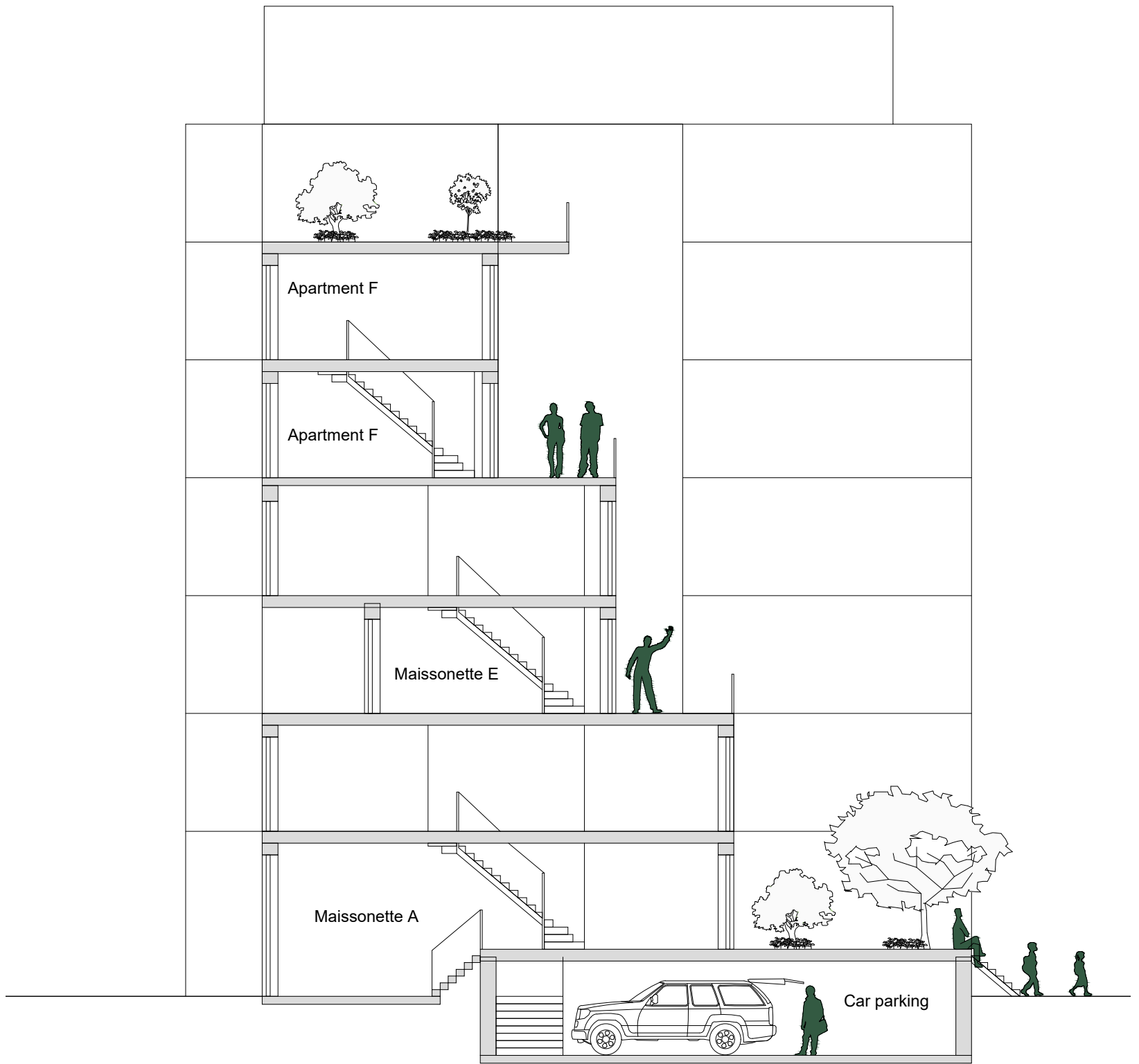| Personal information	
Name	Frank van Vliet
Student number	4276094
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Private e-mail address	f.d.vanvliet@gmail.com

Studio	
Name / Theme	Dutch dwelling. Between standards and ideals. The future of housing in the Netherlands.
Teachers / tutors	T. Kupers, P.S. van der Putt
Argumentation of choice of the studio	Every person encounters dwelling daily and is therefore familiar with what a dwellings should be. However, in practice there is a lack of quality and quantity of dwellings in the Netherlands. To solve this problem there's a need for qualitative architecture instead of mass-produced repetitive dwellings. Creating high quality, specialized homes is important to create a sustainable housing market and the main reason for choosing this studio. Creating more personalized dwellings to improve compatibility and therewith the quality of life of the residents.

Graduation project	
Title of the graduation project	Modern families in Minervahaven
Goal	
Location:	Minervahaven Amsterdam
The posed problem,	All throughout the Netherlands families are leaving the city, moving to the peripheries. They are forced to move out because inside of the city suitable dwellings are scarce. Currently dwellings lack either space, safety, qualitative outdoor space, amenities in proximity or they are too expensive. However, a trend is visible, more and more families make the conscience choice to stay in the city. To enable this development, suitable housing should be provided. In the past decades families have become more diverse. Shifting from a traditional family with a father, mother and children towards a modern type of family. A family with one parent, or two fathers or two mothers, or a blended family. These new types of families have specific wishes towards their living environment. Wishes which differ from the wishes of traditional families, but dwellings in the city haven't caught up yet.

	Creating these new dwelling types is important to maintain families in the city.
research questions and	The main research question is: How could we provide suitable housing for modern families in Minervahaven? To be able to create suitable housing for these modern families it is important to fathom what modern families actually are, what is important to them and why it is important to keep them inside of the city. Answering the next questions will provide insight into the target group: - What are the reasons for families to leave the city and why would they stay? - What is a Modern family? - How to make affordable houses for modern families in Amsterdam? - How could we provide a safe environment for children to grow up in? - What specific dwelling needs do modern families have?
design assignment in which these result.	The goal is to provide dwellings specifically designed for the needs and wishes of modern families. Starting point for the design is to keep families in the city. Therefore, all reasons for leaving should be battled: size, affordability, safety, quality outdoor space, amenities in proximity. Because these characteristics are important to all families it is important to focus on what makes the modern family unique. There is not one specific type of dwelling for the modern family, because there is not one type of modern family. The target group is very diverse and therefore inherently has very different, specific needs towards their dwelling. The design should provide multiple types of dwellings specific to the types of modern family accommodated in the building. Focussing on affordability, supportive community and nearby amenities for single-parent families and focussing on flexibility of the dwelling for blended families.

Process

Method description

Literature research and plan analysis are both invaluable for understanding how to design for modern families. Using literature research an answer is provided for why families want to live in the city, what modern families are and what their wishes and needs are towards the built environment. Plan analysis is used to further elaborate on how families live in the city. The information gathered through these methods of research is used as a basis for the conceptual design. During the design process virtual reality is used to assess the massing of the concept. Adding the user experience as an extra layer into the conceptual design and herewith further developing the ideas generated from the research.

Literature and general practical preference

Literature:

- Heren5. (2010) Het gezin in de stad Amsterdam
- Karsten, L., & Felder, N. (2016). De nieuwe generatie stadskinderen: ruimte maken voor opgroeien.
- Keesom, J. (2013). Nestelen in de stad; appartementen voor gezinnen. Amsterdam: BNA
- Kummeling. E. (Ed.) (2011). Gezin in Den Haag, Kansenboek stedelijke gezinnen: van kans naar realisatie. DSO Gemeente Den Haag, afdeling wonen. retrieved from: https://kummeling.files.wordpress.com/2013/08/visie-stedelijke-gezinnen-27102011.pdf
- Levitt, D. (2018). The Housing Design Handbook; A guide to good practice. Oxford: Routledge
- OIS Amsterdam. (2018). Amsterdam in cijfers, jaarboek 2018
- Woonlab 010. (2017). Eengezinsappartement; Een gesprek tussen stadmakers. Gestapeld wonen voor gezinnen in de stad?.Rotterdam: Veenman+

Precedent:

- Kolenkithuis Amsterdam Heren5:
  Heren5. (2017) retrieved 08-04-2019 from
  http://heren5.eu/portfolio/kolenkithuis/
- BIGyard Zanderroth Architekten:
  Archdaily. (2016) retrieved 08-04-2019 from
  https://www.archdaily.com/793287/bigyard-zanderroth-architekten
- Wisselspoor Leuven HCVA:
  HCVA. (2016) retrieved 11-04-2019 from https://hcva.nl/werk/wisselspoor
- Wisselspoor Leuven URA:
  URA. (2019) retrieved 25-05-2019 from https://www.agsl.be/nl/t-wisselspoor

Reflection

The studio 'between standards and ideals. The future of housing in the Netherlands' focusses on what dwelling should be in the Netherlands. The subtitle of the studio captures the aim of the studio while it also shows the relevance of the project: the project should secure the future of housing in the Netherlands. The trend of families leaving the city is undesirable for Amsterdam. The graduation project battles this trend, by providing dwellings for these families in the city. Maintaining the diversity in the city and keeping this valuable target group inside Amsterdam. More and more families in Amsterdam are modern families, designing specifically for them provides families with a qualitative living environment, suited to their wishes while making the city of Amsterdam future proof.