

> DE WIJKGEDACHTTE 2012
COLLECTIVITY AND INDIVIDUALITY IN
LOMBARDIEN

> AN INTERVENTION SOLUTION
HANDBOOK FOR POST-WAR AREAS

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JUNE 2012

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> **DE WIJKGEDACHTE 2012**

COLLECTIVITY AND INDIVIDUALITY IN LOMBARDIEN

> AN INTERVENTION SOLUTION HANDBOOK FOR POST-WAR AREAS

> **STUDIO: FEIJENOORD AND LOMBARDIEN**

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(R)MIT

VELDACADEMIE

> JUNE 25, 2012

INTRO

> **Introduction**

Rotterdam, Lombardijen, 1960. A brand new neighborhood is being built in the very south of Rotterdam. Based on revolutionary ideas and principles on the structure of society, more than 6.000 houses are being constructed. "De Wijkgedachte", which had been created about 15 years before is being used to organise this large new area, tempting to create a new balance between the individual and the collective.

Rotterdam, Lombardijen, 2012. More than fifty years later, the balance between individual and collective has moved. The ideas on society and society itself have changed significantly. What remains of "De Wijkgedachte" is a built framework that does not seem to fit the time anymore. Or does it? What is the relationship between individual and collective in the current neighborhood? What are the problems to be solved? How can we use "De Wijkgedachte" in 2012?

This designing research shows possible ways to think and design on these kind of post-war area's, not only to preserve this important layer in the history of the city but above all to create a better living environment, which is ready for the future.

> **Structure**

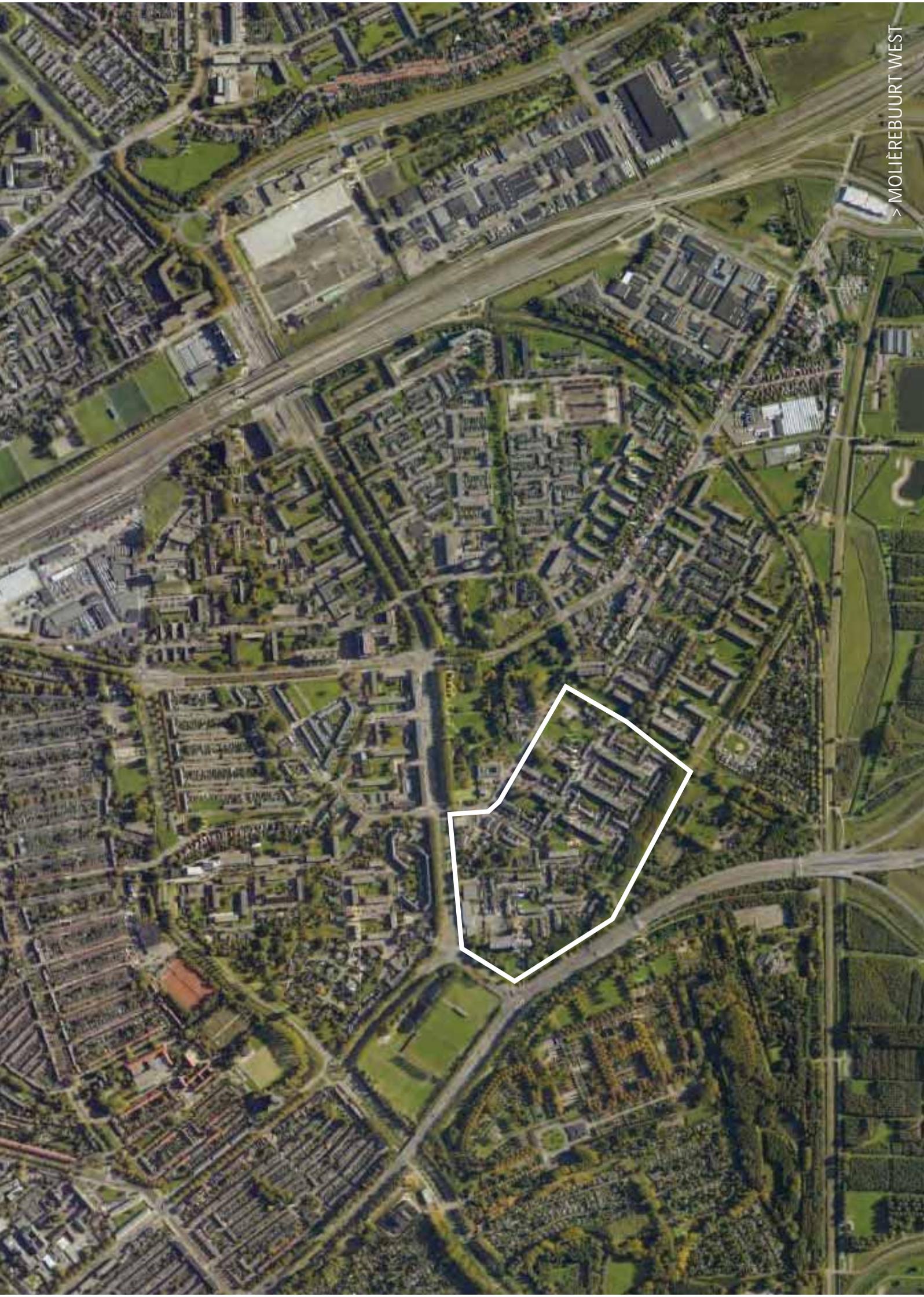
This book consists of four main parts. It starts with a paper on the area and the research that was done. This is followed by an impression of the area (and it's problems) in images.

The main part of the book is the handbook with solutions. The method of this handbook is first explained and is followed by an overview of tested generic design solutions and their evaluation, illustrated by design drawings and images. The book finishes with an overview of these solutions and their use and some conclusive schemes.

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PAPER

> DE WIJKGEDACHTE 2012

COLLECTIVITY AND INDIVIDUALITY IN MOLIÈREBUURT WEST

> Introduction

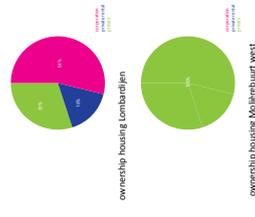
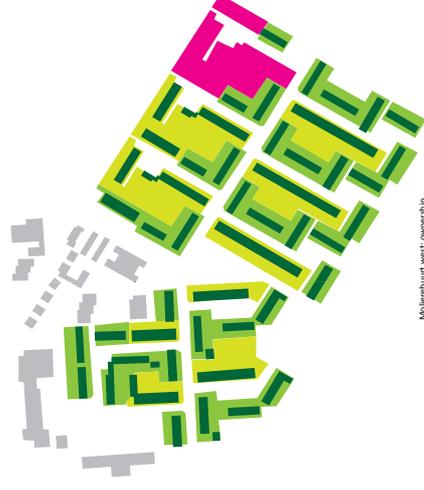
Molièrebuurt West is one of the seven neighbourhoods of Lombardijen that are linked around the central Spinozapark. Situated west of Homerusbuurt and Molièrebuurt Oost, Molièrebuurt West is the third neighbourhood south of the Spinozaweg which divides Lombardijen horizontally. Among these three neighbourhoods, Molièrebuurt West stands out.

Most of Lombardijen, and more obviously the southern part, has for financial reasons not been executed according to the urban design of Van Drimmelen and has turned into monotonous architecture with high densities.

“Van Drimmelen merkte in 1963 op dat: “financiële motieven te veel tot zuinige en monotone architectuur hebben geleid en plaatselijk tot te hoge dichtheden”. (...) Zuinige en monotone architectuur en plaatselijk hoge dichtheden zijn vooral in het zuidelijk deel van Lombardijen te vinden.”¹

Repetitions of similar housing blocks seem endless. The division in architecture between different neighbourhoods is not as clear as Van Drimmelen had suggested, giving most of the south of Lombardijen the same appearance. Molièrebuurt West is an exception. Instead of the monotonous and endless repetitive housing blocks, a rich diversity of different facades surrounds the streets. Suddenly all front doors are different and a wide spectrum of colors and patterns can be seen.

To understand why this neighbourhood stands out we have to look at the ownership of the houses. In Lombardijen as a whole, 70% of the houses are rental houses, which leaves only 30% of privately owned houses. In Molièrebuurt West 100% of the houses are privately owned. This is an essential difference compared to the other neighbourhoods. But how did this difference in ownership cause such a difference in aesthetics and scale? How did private ownership influence this neighbourhood? And what does this mean for future interventions?



Molièrebuurt west: ownership

dark green: privately owned housing blocks
light green: privately owned housing blocks with a shared parking space
yellow: privately owned housing blocks belonging to an investment building
pink: privately owned housing corporation

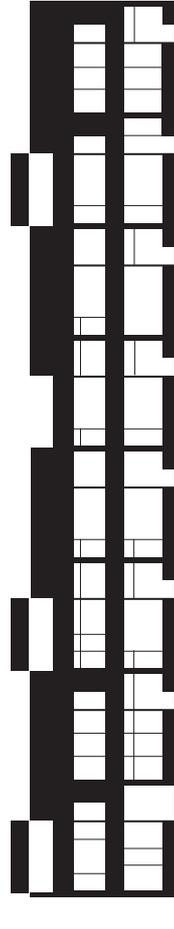
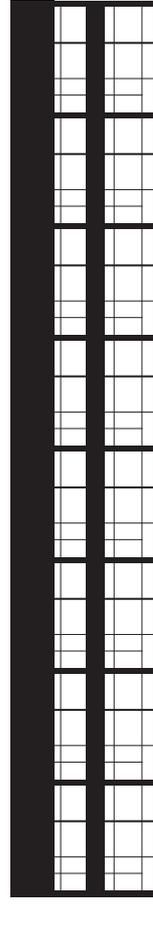
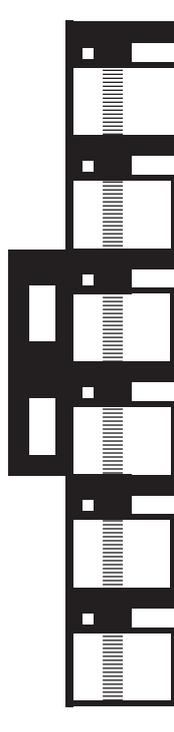
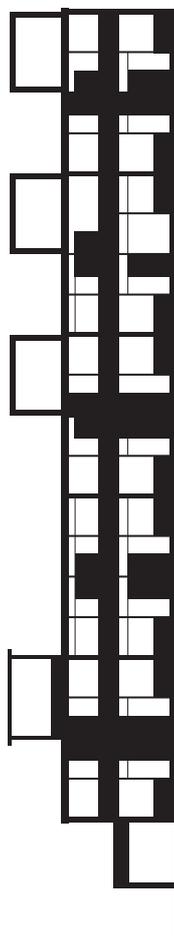
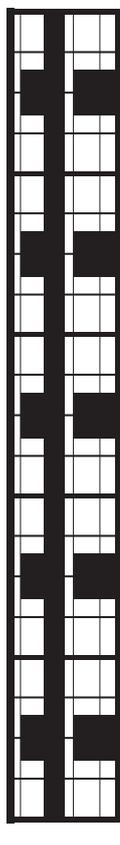
> Individuality

The housing in Molièrebuurt West consists of low-rise family houses with two floors and 5 floor porch apartment buildings. Other than in the other neighbourhoods of the south of Lombardijen, where only a few architects are responsible for all the housing blocks, Molièrebuurt West was designed by six architects. Most blocks were designed by Jos de Jonge and his son Leo de Jonge². From the moment the neighbourhood was built, the differences in architecture must have made this neighbourhood stand out. A lot has changed since then.

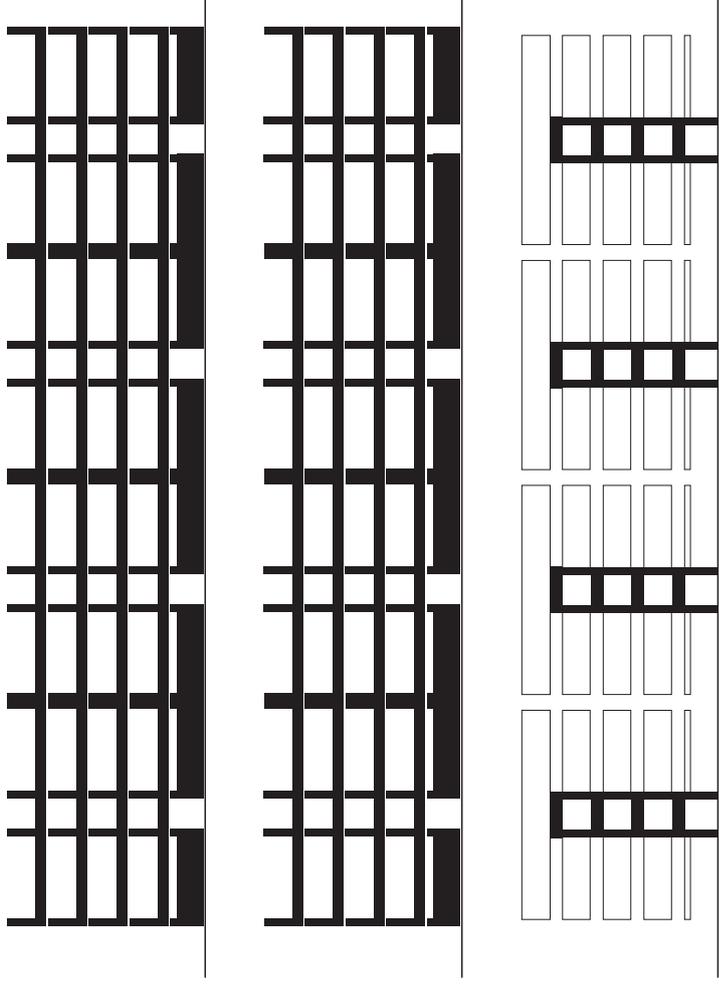
To understand the influence of the individual owners on the changes of the neighbourhood, the original drawings made by the architects have been compared to the current situation. Since the insides of the houses do not have a direct influence on the neighbourhood as a whole, the comparison focuses on the changes that are visible on the outside of the buildings; The changes in the facades and gardens have been researched, as well as the addition of extensions.

When we compare the original drawings with the current situation we can see large differences. Especially the ground based family houses have made a total transformation in which the original architecture from the late nineteen-fifties is rudimentarily recognisable: 50% to 100% of the front facades has been changed, 10 to 30% of the original surface of the blocks has been added in extensions on the side, behind and/or on top of the buildings and only 5 to 25% of the houses still has the original facade. Because of the structure of the buildings, the family houses have a large adaptable surface. The fact that there are mostly no constructive parts in the facades and that the floors, facades and roof are made of a timber construction, means that a lot of adaptations can be made without compromising the structure of the house. People have used this opportunity to adapt the houses to their personal demands, by extending and altering over the years. By doing this, owners have added their personal value in these houses and their gardens, altering the appearance of the street drastically. Instead of anonymous repetitive architecture and the unit of the block, each individual house has become a separate entity. The collectivity of the post-war period seems to have diminished and turned into a world of individuality.

The question rises if an intervention in these blocks is necessary. Because of the huge alterations to the buildings, we cannot talk about the blocks in terms of sixties architecture anymore. The cultural value as such does not lay in the preservation of sixties architecture. The value lies much more (if not only) in the added individual identity of each individual owner. The feature of ever changing different facades has become the most important characteristic of these housing blocks. We may think of these blocks as ugly or incoherent, but there is no real problem here. If we would interfere, what then is the added value, if the value mainly or only lies in the added individual value? The houses offer enough adaptation opportunities to suit



the owner's needs. Besides, the inhabitants probably appreciate this diverse image above the boring repetition as can be seen in the eastern part of Molièrebuurt. In any case, only few of these houses are for sale and people seem to stay. These blocks therefore seem ready for the future and need no urgent intervention.



> Collectivity

The porch apartment buildings have almost an opposite situation. The influence of private ownership on the outside of the apartment buildings is minimal, compared to the family houses. No extensions have been made and no or minimal individual value has been added. Only two blocks have a new insulating facade, altering the facade completely but not adding any individuality.

The reason for this minimal influence must also here be sought in the used materials and the building structure. Because of the big amount of brickwork in the facade and the stone and concrete construction, only 50% of the facade is easily changeable. Extensions and alterations to the construction are difficult, as is insulating the structure. People did change or replace window frames and by doing that changed 30% of the façade but because of the strong layer of brickwork that determines the appearance of the building, the architectural impact is low. Unlike the family houses, individuality has not prevailed. The blocks remain highly collective.

The high collectivity of the buildings seems to have lead to problems. The buildings are in a poor state. Different owners are joined in collectives of owners, which makes decision making difficult. The responsibility of different owners for the same building has lead to a neglecting of maintenance. The bad maintenance has even resulted in the demolishing of four of the apartment blocks in 2003. Until today the ground these buildings stood on is empty.

An intervention seems to be necessary. The apartments are mostly small, the buildings poorly taken care of, lack identity and offer much less opportunities to adapt to the individual owners needs. Not surprisingly, many of these apartments are for sale. Because of the collective of different owners, demolition is neither desirable nor possible but that doesn't mean that the value to the individual owner is the only remaining value of these dwellings. The untouched fifties architecture is not exemplary and so the value should probably not be sought in the architecture itself. The value of the apartment blocks and their gardens must be seen on the urban scale. In the whole of Molièrebuurt West and in the patchwork of different family houses the apartment buildings have a function of stability. In scale they give counterweight to the small scale of family houses and offer a framework in which the family houses can exist without falling apart into a chaotic individuality. Therefore an intervention is not only necessary for the condition of the buildings, moreover an intervention is essential for the neighbourhood.

> **Wijkgedachte 2012; three experiments**

As a conclusion of the previous we can note a contradiction. Collectivity i.e. the collective buildings are on an urban scale essential for the neighbourhood as they form a stable counterweight to the high individuality of the low-rise family houses. At the same time the collectivity i.e. the collective spaces are the problem on the building scale. This contradiction sets the most important guideline for an intervention; the collective problems must be solved but the collective cannot be completely removed. This means that there are two options; the collective has to be improved or the collective has to be reduced by improving the individual.

To test both approaches and their impact on both the individual, the collective and 'De Wijkgedachte' framework, three design experiments can be executed.

1. Improve the collective
Perhaps the most realistic way to answer to the demands of the neighbourhood, buildings and owners is to improve the collective space. In this experiment the individual apartments stay unchanged. The impact of the improved collective on the individual owner is the main goal.
2. Improve the individual
A more experimental and less realistic approach is improving the individual apartments and by doing that reducing the collective. Taking away the problem rather than fixing it. The goal here is to reduce the problems to a minimum without solving them directly, as is the case in experiment 1.
3. Building in the framework today: Wijkgedachte 2012
This experiment answers to the demand of designing on the empty plot in the neighbourhood. How to build in the 'Wijkgedachte' framework today? Using the solutions from the first two experiments, the goal is to redefine what the 'Wijkgedachte' can mean for the neighbourhood today.

> **Conclusion**

Private ownership has had a huge impact on Molièrebuurt West. It has transformed the collectivity of the family houses into a world of individuality, changing the appearance of the street completely. A lot of personal value has been added. For the apartment buildings the opposite is true. Collectives of owners have caused these buildings to be badly looked after and poorly maintained. The buildings did not allow the individual owners to add personal value. The result is that the high level of collectivity is maintained but in a bad condition, giving a negative influence on the individual.

Private ownership is not the only reason why the neighbourhood is in its current state. The ideas of 'De Wijkgedachte' theory do not answer or maybe have never answered to the current demands, causing certain social units to be without function and leave it to be a mere geographical framework. The transitions between the different scales of the framework prove to have been poorly designed, causing problems in the collective.

The 'Wijkgedachte' idea of mixing different kinds of housing i.e. low-rise and middle-rise did have a positive influence on the neighbourhood. It gave an answer to the changes that private ownership had caused and kept the scale of the neighbourhood stable.

Designing three experiments with a different approach to solving the problems stated can give insight into the different solutions of revitalizing the 'Wijkgedachte' framework and even redefine what the theory can mean for the neighbourhood today. In this way the mere skeleton of the framework of 'De Wijkgedachte' that it is today, can be transformed into 'De Wijkgedachte 2012'.

> **Notes**

1. Bommel, H. van, Eggens, N., Jansen, B., Ruitenbeek, J. (2003) Lombardijen, Cultuurhistorische analyse en beschrijving (1949-1965). Rotterdam: dS+V, Bureau Monumenten. Page 38
2. Jos de Jonge (1887-1965) and Leo de Jonge (1919-2009). These Rotterdam based architects were very active during the post-war period and designed multiple housing blocks in Zuidwijk, Lombardijen and Hoogvliet.
3. Doevendans, K., Stolzenburg, R. (1988) De Wijkgedachte in Nederland, gemeenschapsstreven in een stedebouwkundige context. Eindhoven: TU e Faculteit bouwkunde. Page 37
4. Swanborn, P.G., Eichholtz, W., Warners, C.M. (1965) Kerk in stedelijk perspectief, mogelijkheden van gemeentevormen in de stadssamenleving. Studie in opdracht van de Commissie voor de Deltazaken vanwege de Nederlands Hervormde Kerk. 's Gravenhage. Page 58
5. Online inquiry among the inhabitants of the apartment buildings in Marsmanstraat and Miltonstraat Rotterdam. Executed December 2011.

CONTEXT

> MOLIÈREBUURT WEST IN IMAGES















HANDBOOK

> SOLUTIONS

> Method

This handbook will show generic design solutions for post-war housing areas. The problems that came forward through analysis of the research area in Lombardijen are:

1. Safety issues
Lack of use and bad accessibility have led to unsafe spaces.
2. No clear responsibilities
The neglect of maintenance suggests that it is not clear or obvious who has to take responsibility.
3. Lack of use of the collective space
The collective spaces are not being used enough, making them leftover spaces.
4. Bad accessibility
The collective gardens are badly accessible. The route to the apartments are dark and without quality.
5. No individual value expression
The value that has been added on the inside of the apartments is hardly or not visible on the outsides, making these buildings highly anonymous.
6. Bad spatial quality
The quality of the spaces in general is not good and needs attention.

These problems have been attempted to solve through two experiments.

1. Improve the collective
Perhaps the most realistic way to answer to the demands of the neighbourhood, buildings and owners is to improve the collective space. In this experiment the individual apartments stay unchanged. The impact of the improved collective on the individual owner is the main goal.
2. Improve the individual
A more experimental and less realistic approach is improving the individual apartments and by doing that reducing the collective. Taking away the problem rather than fixing it. The goal here is to reduce the problems to a minimum without solving them directly, as is the case in experiment 1.

Within these experiments, a total of sixteen (eight for each) generic solutions have been designed and tested in two separate contexts. These solutions were based on the needs of the context and theory, solving different problems and serving different goals. The qualities, but also the

concessions and weaknesses of each solution were then noted.

Each solution was then evaluated by looking at their impact on the stated problems in both the collective and individual space. In this way the influence of collective solutions on the individual can be seen and vice versa. An assessment for which owner (individual, collective of owners, housing corporation) the solution is suitable was then done. For each solution, recommendations were then made.

The solutions were then compared, based on their evaluation and suitability for owners and organised. In this way a clear overview of the solutions and their specific benefits could be made for owners to use.

> PROBLEMS IN CONTEXT



no clear responsibilities



lack of use collective space



bad accessibility

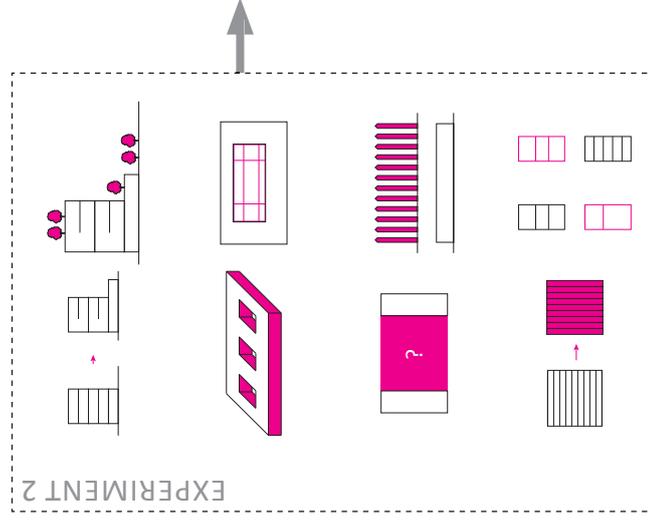
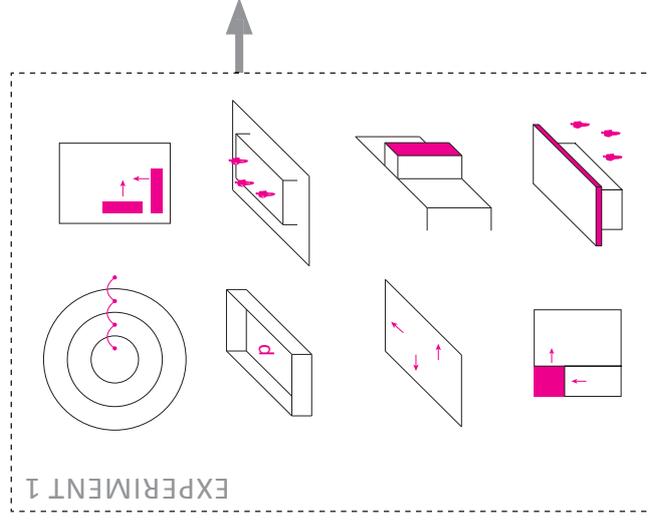


no individual value expression



bad spatial quality

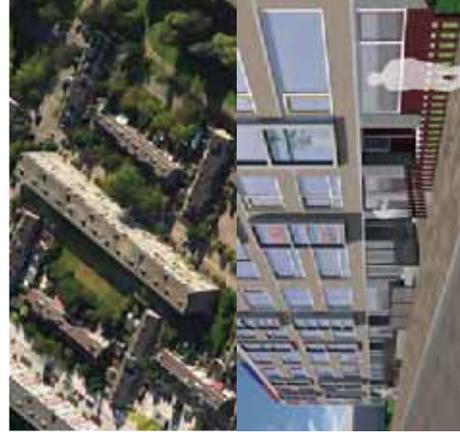
> GENERIC SOLUTIONS



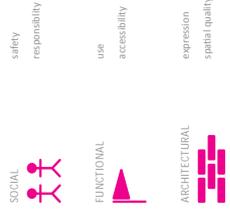
> TEST IN CONTEXT



DESIGN 1

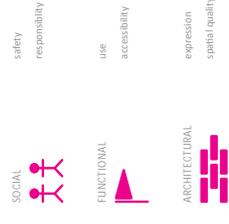


DESIGN 2



INDIVIDUAL	+	+	0	0	0	0
COLLECTIVE	+	+	+	0	+	+

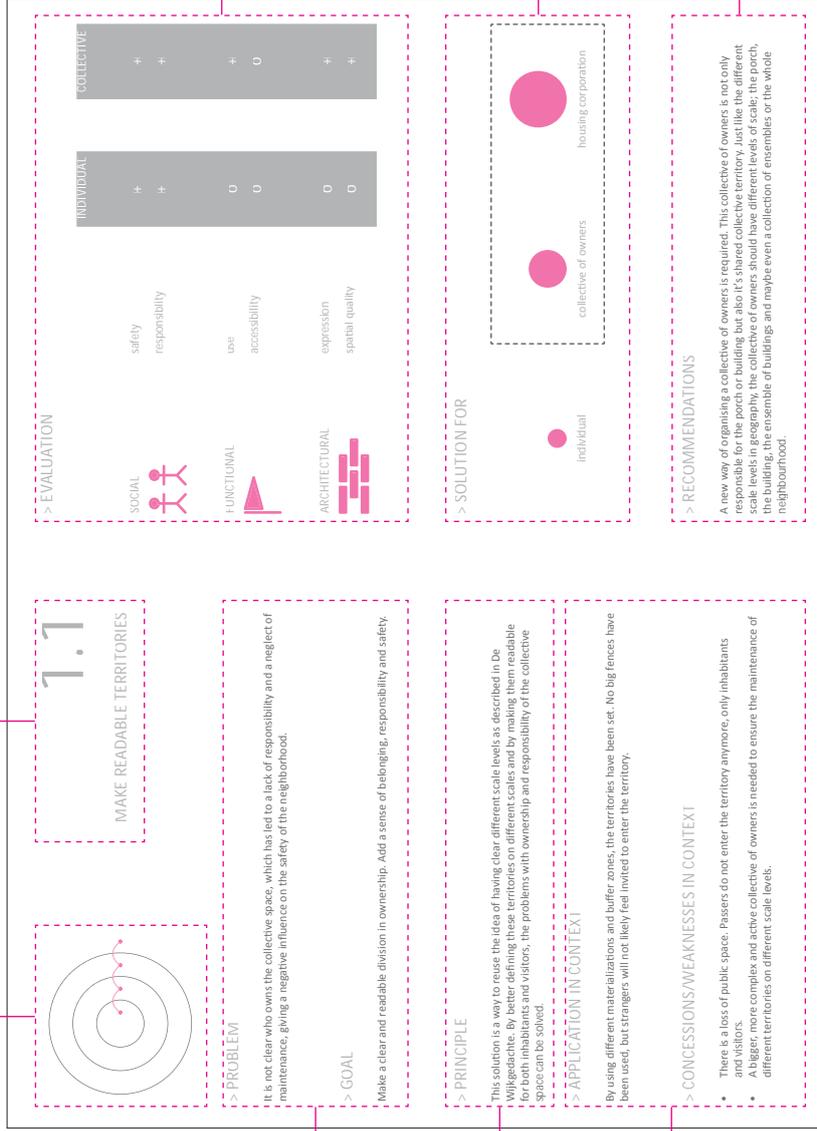
> EVALUATION



INDIVIDUAL	+	+	0	0	0	0
COLLECTIVE	+	+	+	0	+	+

RECOGNISABLE ICON

NUMBER AND NAME



EVALUATION

SUITABILITY

RECOMMENDATIONS

PROBLEM AND GOAL

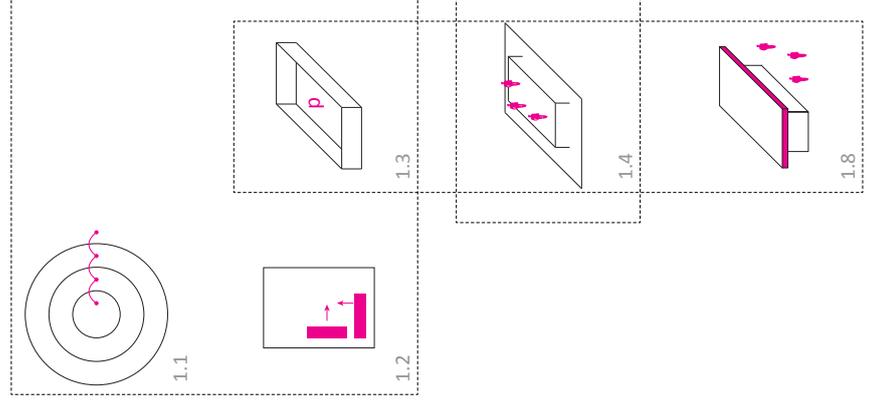
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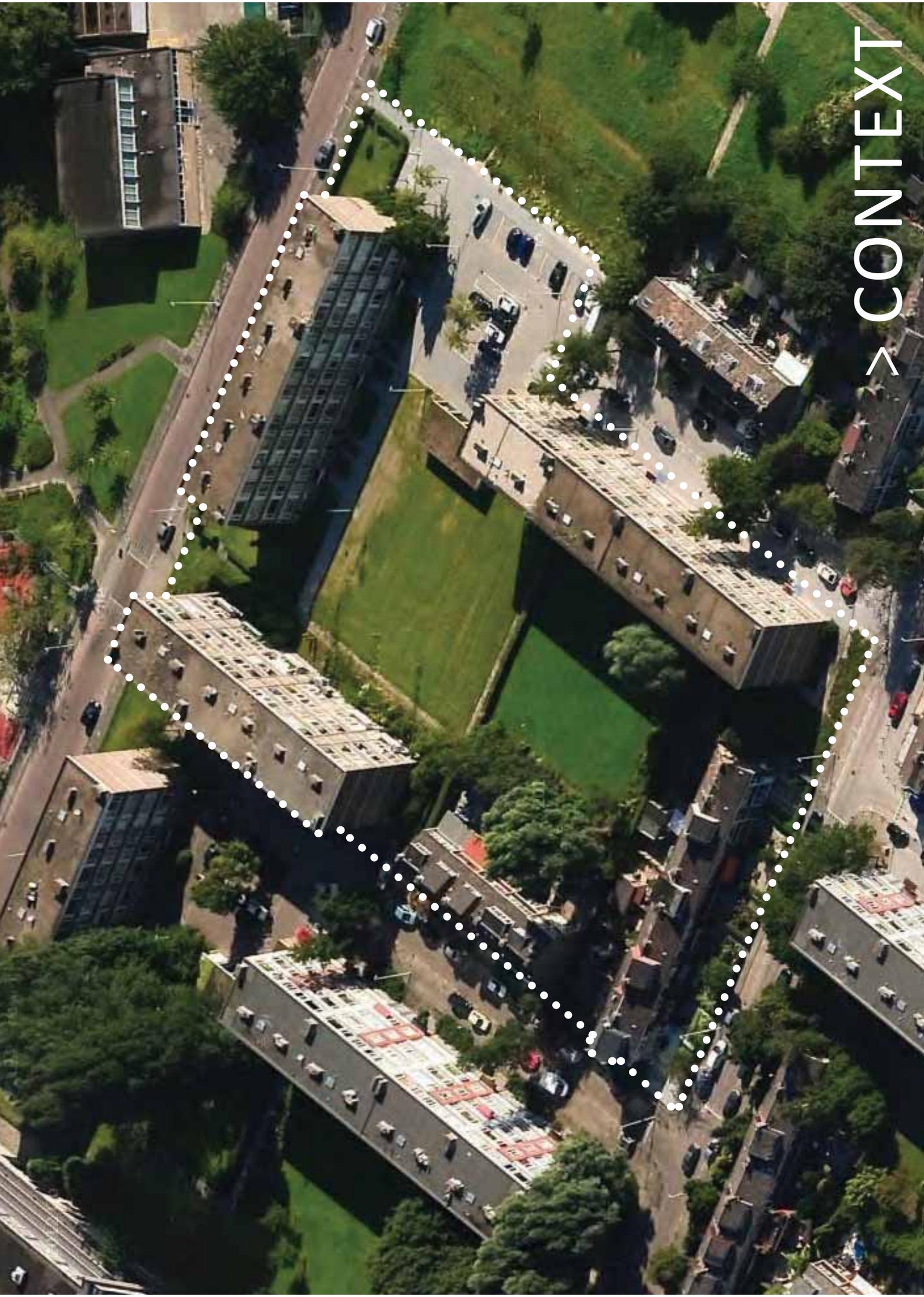
TEST IN CONTEXT

> EXAMPLE

EXPERIMENT 1

> IMPROVE THE COLLECTIVE





> CONTEXT

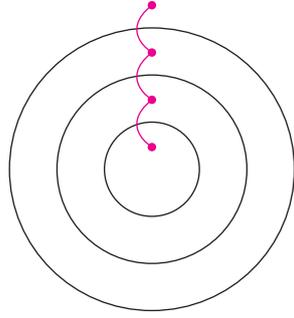




> EVALUATION

1.1

MAKE READABLE TERRITORIES



> PROBLEM

It is not clear who owns the collective space, which has led to a lack of responsibility and a neglect of maintenance, giving a negative influence on the safety of the neighborhood.

> GOAL

Make a clear and readable division in ownership. Add a sense of belonging, responsibility and safety.

> PRINCIPLE

This solution is a way to reuse the idea of having clear different scale levels as described in De Wijkgedachte. By better defining these territories on different scales and by making them readable for both inhabitants and visitors, the problems with ownership and responsibility of the collective space can be solved.

> APPLICATION IN CONTEXT

By using different materializations and buffer zones, the territories have been set. No big fences have been used, but strangers will not likely feel invited to enter the territory.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- There is a loss of public space. Passers do not enter the territory anymore, only inhabitants and visitors.
- A bigger, more complex and active collective of owners is needed to ensure the maintenance of different territories on different scale levels.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL

+

+

0

0

0

0

COLLECTIVE

+

+

+

0

+

+

> SOLUTION FOR



individual



collective of owners



housing corporation

> RECOMMENDATIONS

A new way of organising a collective of owners is required. This collective of owners is not only responsible for the porch or building but also it's shared collective territory. Just like the different scale levels in geography, the collective of owners should have different levels of scale; the porch, the building, the ensemble of buildings and maybe even a collection of ensembles or the whole neighbourhood.

> EVALUATION

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL

+

+

0

+

0

0

COLLECTIVE

+

+

+

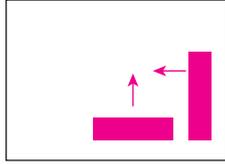
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+

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1.2

INVOLVE FAMILY HOUSES IN THE TERRITORY



> PROBLEM

The collective garden is not connected to the low rise family housing. The inhabitants of the family houses do not or rarely use the garden.

> GOAL

Create a larger community as originally designed according to the ideas of De Wijkgedachte to stimulate use of- and benefits from the collective space.

> PRINCIPLE

This solution is an extension of the first solution and tries to merge two different typologies into the territory of the ensemble of buildings by opening up the existing division.

> APPLICATION IN CONTEXT

In this context this solution was not applicable.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- It is hard to really connect the family houses to the territory since they are naturally oriented to the outside of the territory. The layout of these houses would have to be changed, which is no part of this experiment.
- The real benefits are not clear. The owners of these houses will not likely want to invest in the communal garden if their benefits are not obvious.

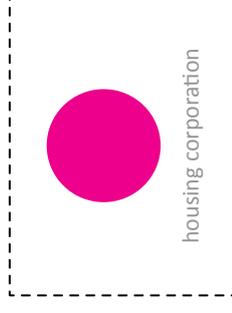
> SOLUTION FOR



individual



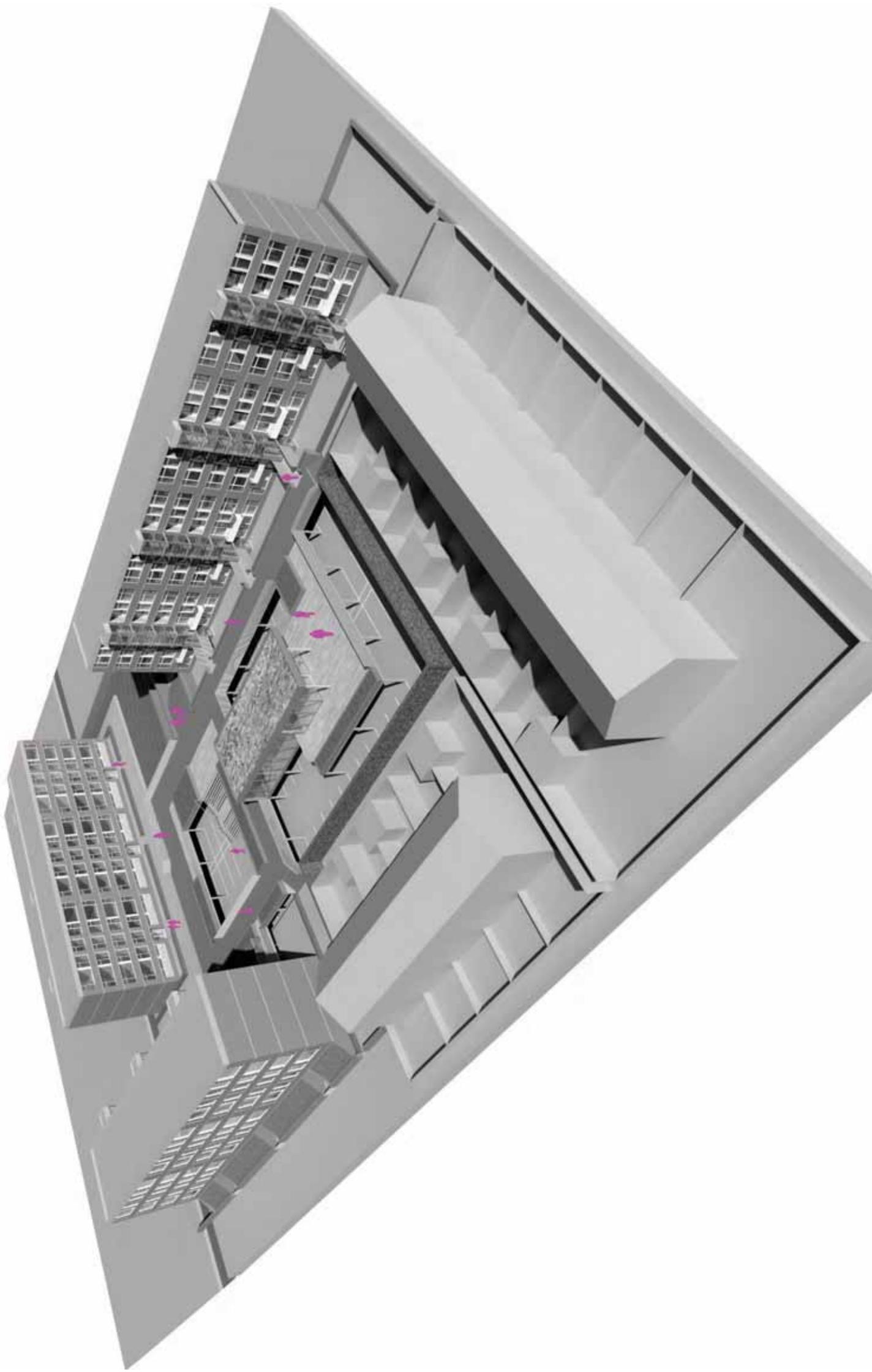
collective of owners



housing corporation

> RECOMMENDATIONS

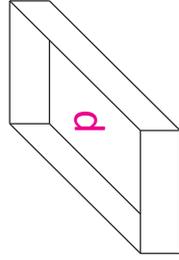
Although this solution can help solving the set problems, it has proven to be hard to realize in the specific context. In another context where the orientation of the houses is more opportune or in a case when the houses can be converted as well, the solution may very well work.



> EVALUATION

1.3

MOVE PARKING SPACES INTO THE TERRITORY



> PROBLEM

There is a high parking pressure in the neighborhood and there is a lack of use of the collective garden.

> GOAL

Lower the parking pressure of the neighborhood and get the parking spaces within the territory.

> PRINCIPLE

The replacement of communal gardens for parking spaces. The parking spaces are meant for the inhabitants around the communal garden.

> APPLICATION IN CONTEXT

The parking spaces have been applied in a half deep basement with a community deck as described in solution 1.4. The parking lot is not accessible for outsiders and offers enough spaces for the apartment buildings. A space has been left between the buildings and the parking spaces to ensure the privacy of the apartments.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- Communal green space gets lost, having a negative influence on the spatial quality
- Cars are more in sight, also having a negative influence on the spatial quality as well as privacy and possibly safety.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



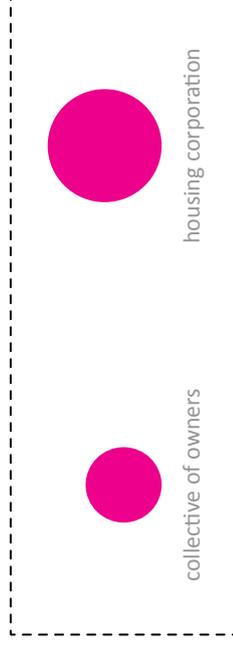
expression
spatial quality

INDIVIDUAL	COLLECTIVE
0	0
0	0
+	+
0	+
0	-
-	-

> SOLUTION FOR

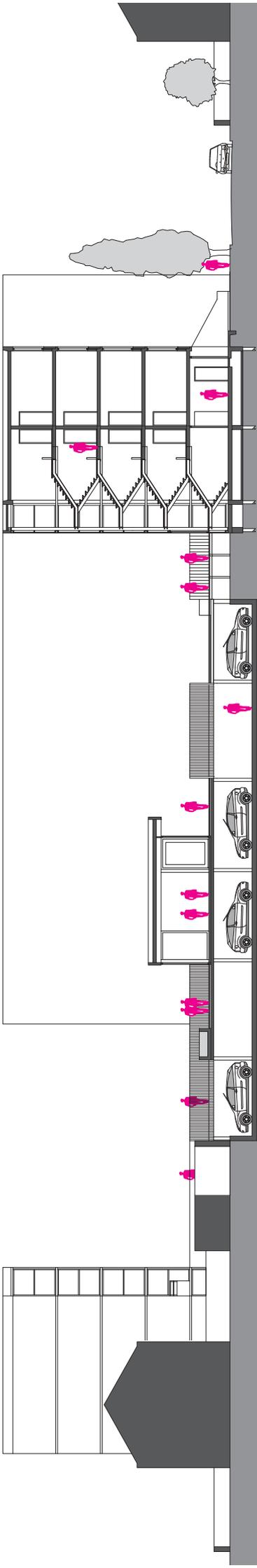


individual



> RECOMMENDATIONS

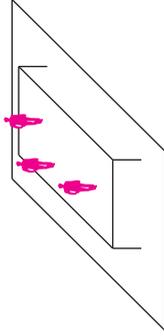
Adding parking space within the communal gardens can only contribute to a better living environment when they are carefully designed to ensure the spatial quality and privacy. This can either be done by better designing the parking spaces themselves or by hiding them underneath for instance a community deck as explained in solution 1.4.



> EVALUATION

1.4

MAKE A COMMUNITY DECK ABOVE PARKING



> PROBLEM

The added parking spaces in the communal garden take in too much space. This has a negative influence on both the required routing space, privacy and spatial quality.

> GOAL

Bring back usable space taken by the parking space for routing and activities with an attractive appearance without taking away the buffer between public and private.

> PRINCIPLE

The solution is a consequence of the previous solution in a context where there is no space for a sufficient amount of parking spaces and to ensure the spacial quality and quantity. The lost space is brought back on top of the parking spaces in the form of a community deck that provides space for both routing and activities.

> APPLICATION IN CONTEXT

The deck is built upon a half deep parking basement to ensure privacy and light for the ground floor apartments. Large holes have been carved out to ensure enough natural light in the parking spaces. One large entrance provides access from outside the community and one stairway provides access from the parking level to the community deck, leading everyone across it.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- The deck might not be used other than as a routing space. Space for activities might not be used.
- The apartments are more exposed, as well as their balconies. This lowers the amount of privacy.
- The parking spaces have the threat to have a bad atmosphere and could be experienced unsafe.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL

-
+

COLLECTIVE

+
+

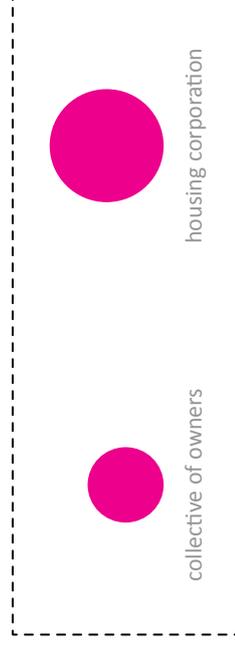
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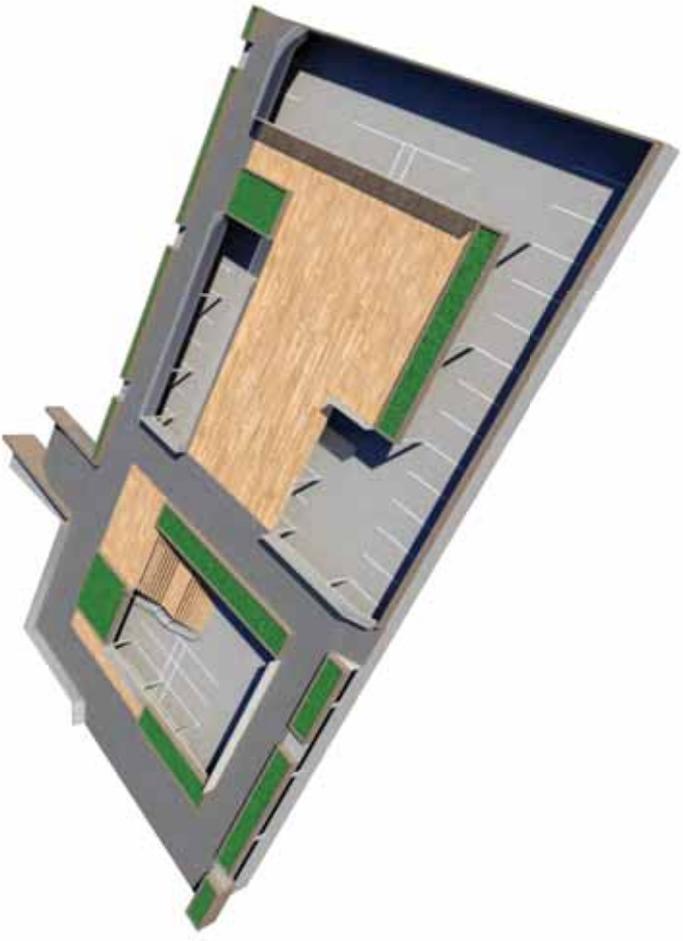
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> SOLUTION FOR



> RECOMMENDATIONS

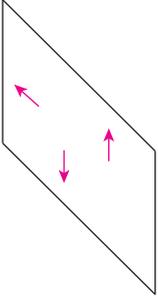
To build a half deep parking lot with a community deck above as suggested here will be very costly and probably not possible in the current ownership structures. New ways of structuring ownership and financing such an intervention would be necessary.



1.5

> EVALUATION

MOVE ENTRANCES TO THE INSIDE



> PROBLEM

The communal garden is not being used well because there is no access from the collective garden to the apartment buildings. The entrances are located on the outside of the perimeter, which forms a problem when activities like parking and routing are placed to the inside of the ensemble.

> GOAL

To enter the apartment buildings easily from the inside of the territory, increasing the use of the collective space and the accessibility of the buildings.

> PRINCIPLE

The addition of entrances on the side of the communal garden, on the inside of the ensemble.

> APPLICATION IN CONTEXT

In the specific context the new entrances provide a connection between the newly created community deck and the porches on the inside of the ensemble.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- The former front side (streetside) becomes a backside because of the solution. However, this side is still the face of the neighbourhood, making this a vulnerable side that needs designing even though it is not part of the solution.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



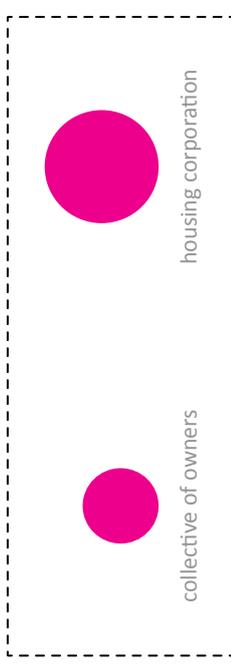
expression
spatial quality

INDIVIDUAL	COLLECTIVE
o	o
o	+
+	+
+	+
o	o
o	-

> SOLUTION FOR

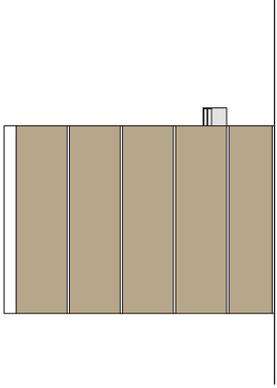


individual

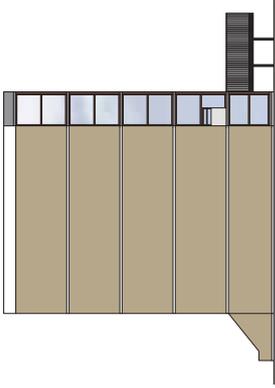
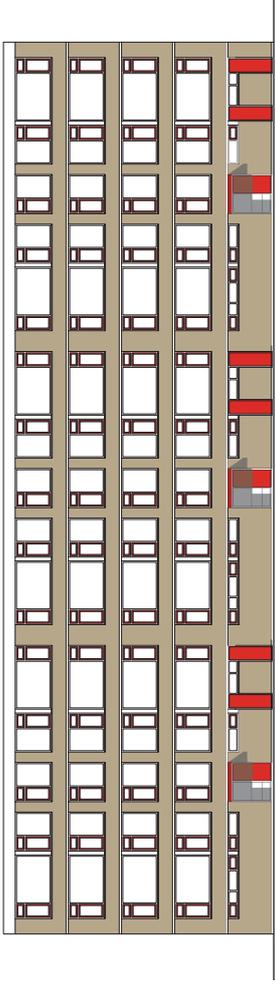
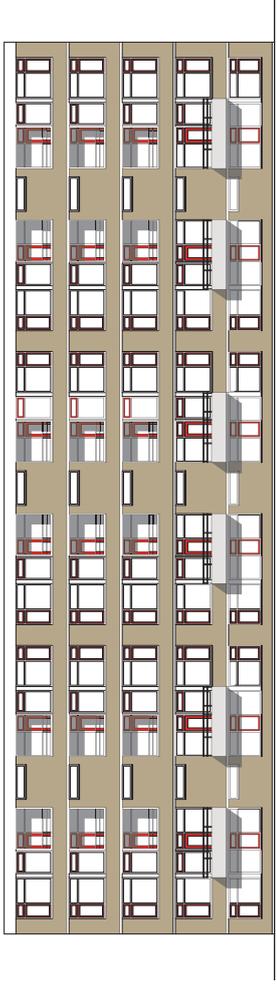


> RECOMMENDATIONS

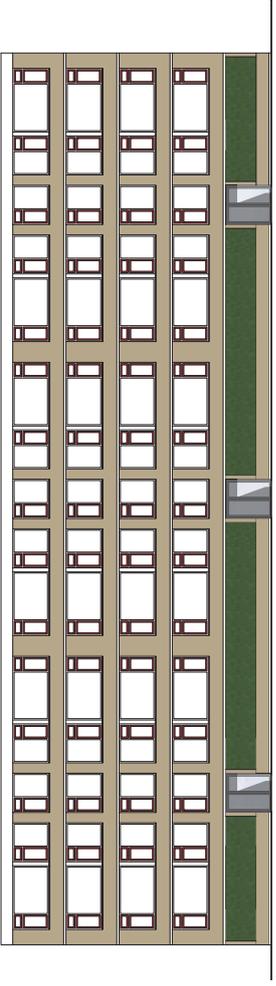
When the entrances are replaced to the inside of the ensemble, the outside becomes less used and vulnerable. In a single case this is no large problem. If the solution is applied to more ensembles in for instance a complete neighborhood, the problems might move to the outsides of the ensembles. This creates islands and is not desirable. Designing the streets in a good way becomes essential.



EXISTING



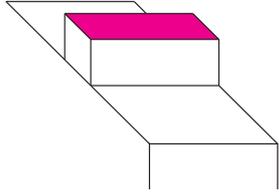
DESIGN



> EVALUATION

1.6

CREATE NEW STAIRCASES



SOCIAL



safety
responsibility

> PROBLEM

The staircases of porches are very dark and don't have spatial qualities, leading to safety issues. The porches are not clearly defined as an entity.

> GOAL

Make new entrances on the inside of the ensemble possible and add spatial quality to the porch. Add a sense of responsibility and belonging.

> PRINCIPLE

To create a clearly definable new staircase with better spatial qualities. This both defines the porch as an entity and creates a relationship between the porch and the ensemble.

> APPLICATION IN CONTEXT

In the context large glass staircases have been created on the inside of the ensemble. This clearly defines the new entrances and creates a visual relationship between the porch and the community deck. The materialisation of glass, wood and steel gives an attractive atmosphere which will add to the value of the apartments and to the sense of belonging and responsibility.

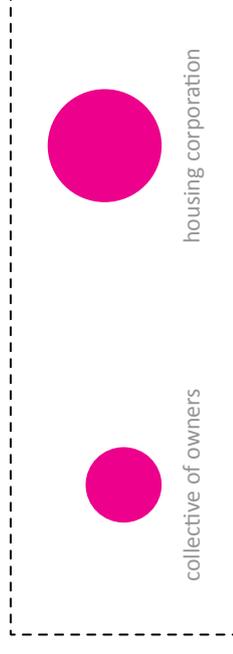
> CONCESSIONS/WEAKNESSES IN CONTEXT

- The construction of the building has to be reinforced to make the intervention possible.
- The balconies of the apartments are situated next to the staircases, making them more exposed, which leads to privacy issues.

> SOLUTION FOR



individual



INDIVIDUAL

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+

+

0
-

COLLECTIVE

+

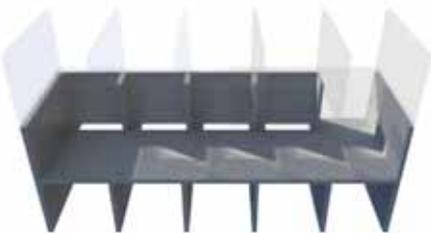
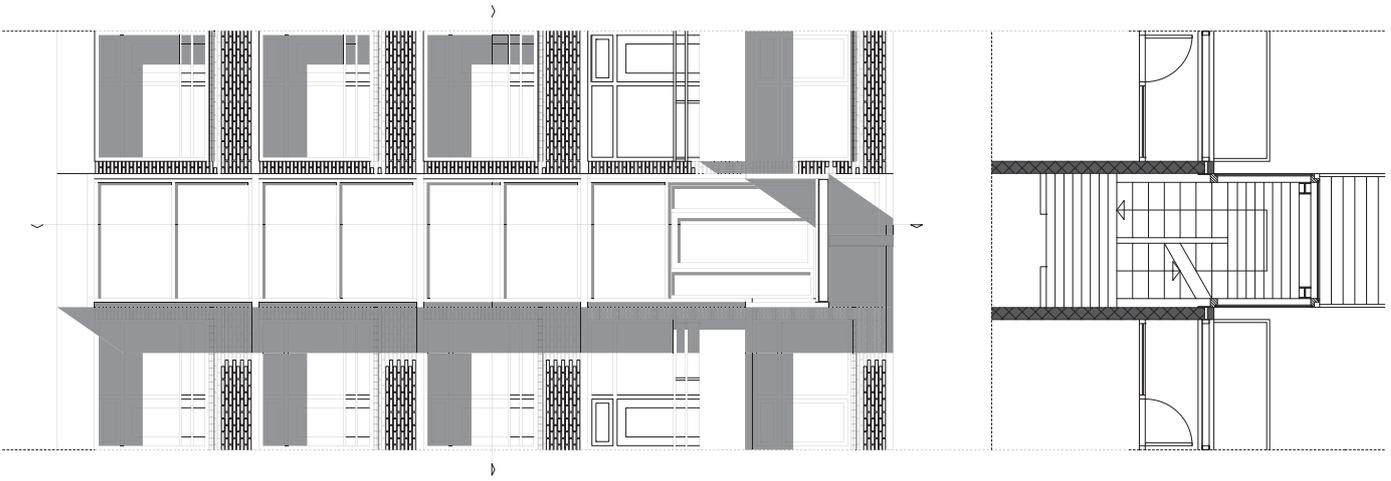
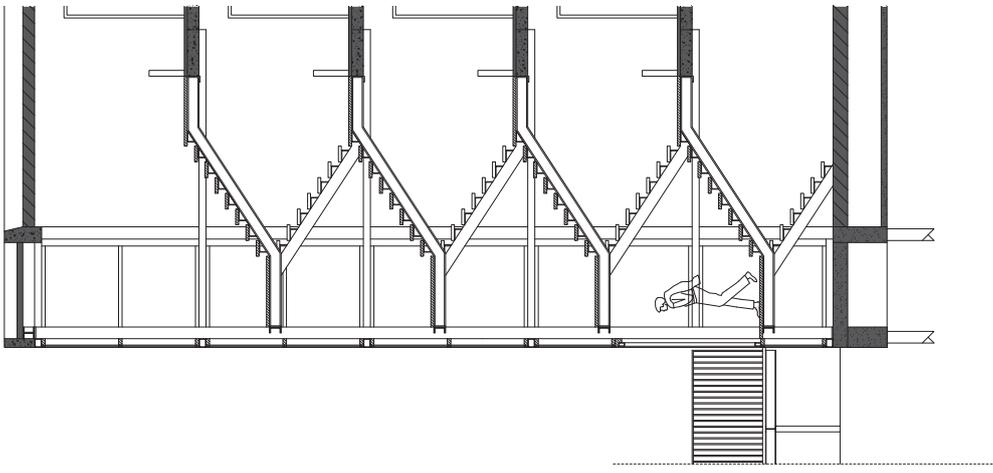
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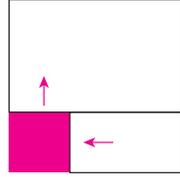
expression
spatial quality

> RECOMMENDATIONS

Making a new staircase can bring extra benefits for the individual when a solution like 1.7 is taken into the design.



> EVALUATION



1.7

CREATE A BUFFER ZONE BETWEEN PORCH AND APARTMENT

> PROBLEM

The connection between porch and apartment is very hard. The doors of the apartments are situated in the routing of the stairs.

> GOAL

Create a smoother transition between porch and apartment.

> PRINCIPLE

To create a buffer zone between the porch and the apartment. A zone where the owner can put something personal like a plant or simply a door mat. This zone functions like a micro version of a front garden in a family house and marks the transition from (semi) public to private.

> APPLICATION IN CONTEXT

In the context, the new staircases have been moved slightly to the outside of the building, creating space between the staircase and the apartment entrances. This space is separated from the staircase only by half high walls, giving owners the opportunity to claim this space and use it as they wish.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- The buffer space is situated quite deeply in the portiek and is quite dark. It therefore needs extra attention in designing. Artificial light and light materialisations and colors are essential to make this space have good spatial qualities. Otherwise the space might turn into a threat instead of a benefit.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

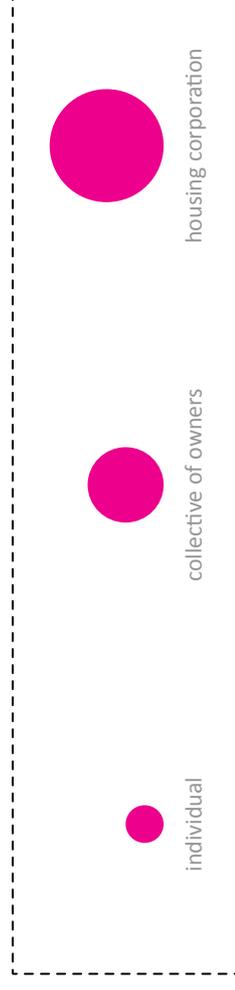
ARCHITECTURAL



expression
spatial quality

INDIVIDUAL	COLLECTIVE
+	0
+	+
+	0
+	0
+	0
+	+

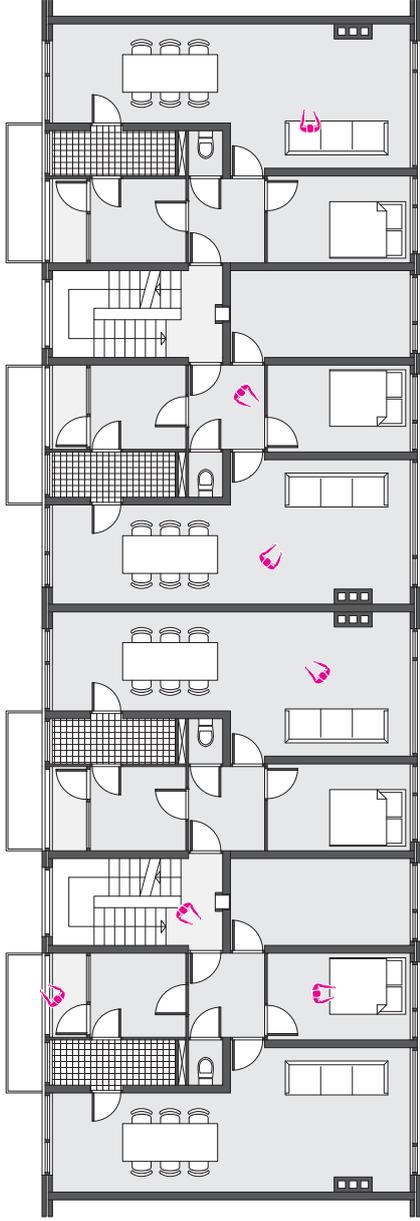
> SOLUTION FOR



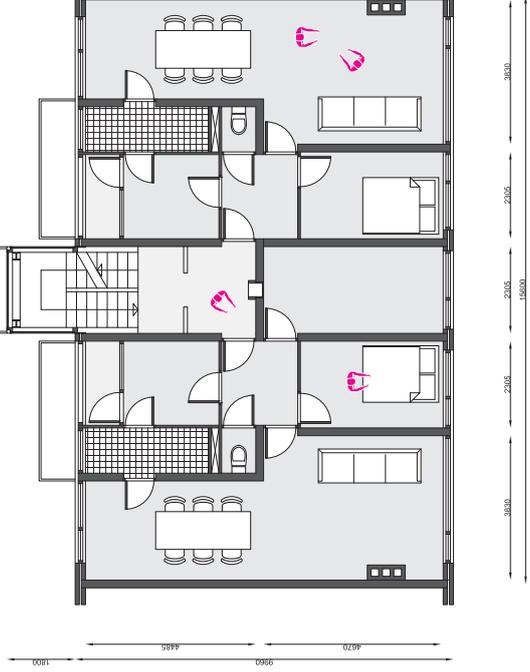
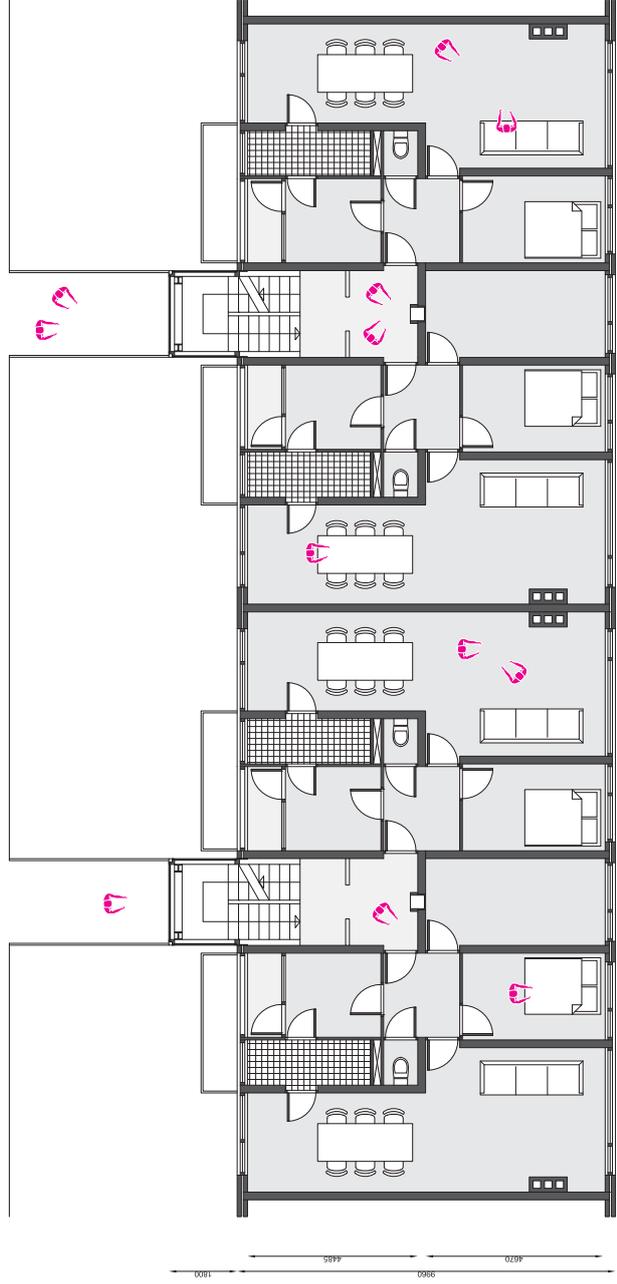
> RECOMMENDATIONS

The atmosphere of the buffer space will be essential and should be carefully designed to not make it a threat instead.

EXISTING



DESIGN



> EVALUATION



SOCIAL

safety
responsibility

INDIVIDUAL	COLLECTIVE
○	○
○	+
○	+
○	○
+	+

FUNCTIONAL



use
accessibility

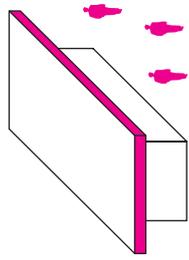
ARCHITECTURAL



expression
spatial quality

1.8

CREATE A COMMUNITY BUILDING



> PROBLEM

There is no specific space to have meetings for the collective of owners or to house other communal activities for the ensemble of buildings.

> GOAL

To have a symbol of belonging and a place to discuss communal issues.

> PRINCIPLE

This solution is to have a building for meetings and collective activities that at the same time is a symbol for the community.

> APPLICATION IN CONTEXT

A community building has been placed in the middle of the territory on the community deck. The walls are made of glass to ensure a maximum transparency. Two big doors connect to the deck that can be used for activities related to the building.

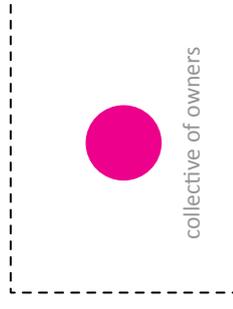
> CONCESSIONS/WEAKNESSES IN CONTEXT

- The building might only be used for meetings of the collective of owners.

> SOLUTION FOR



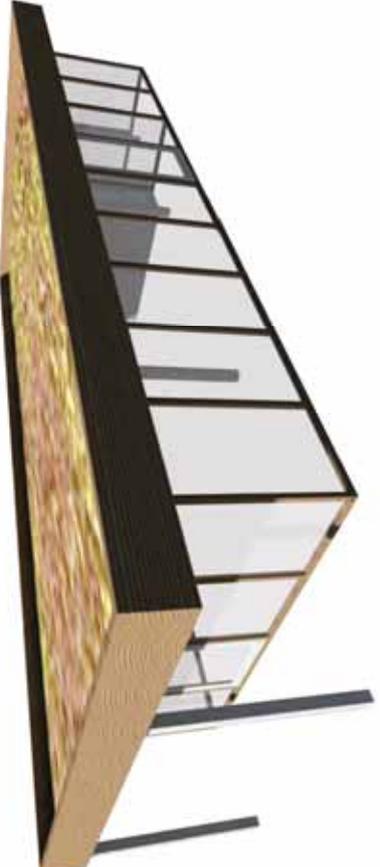
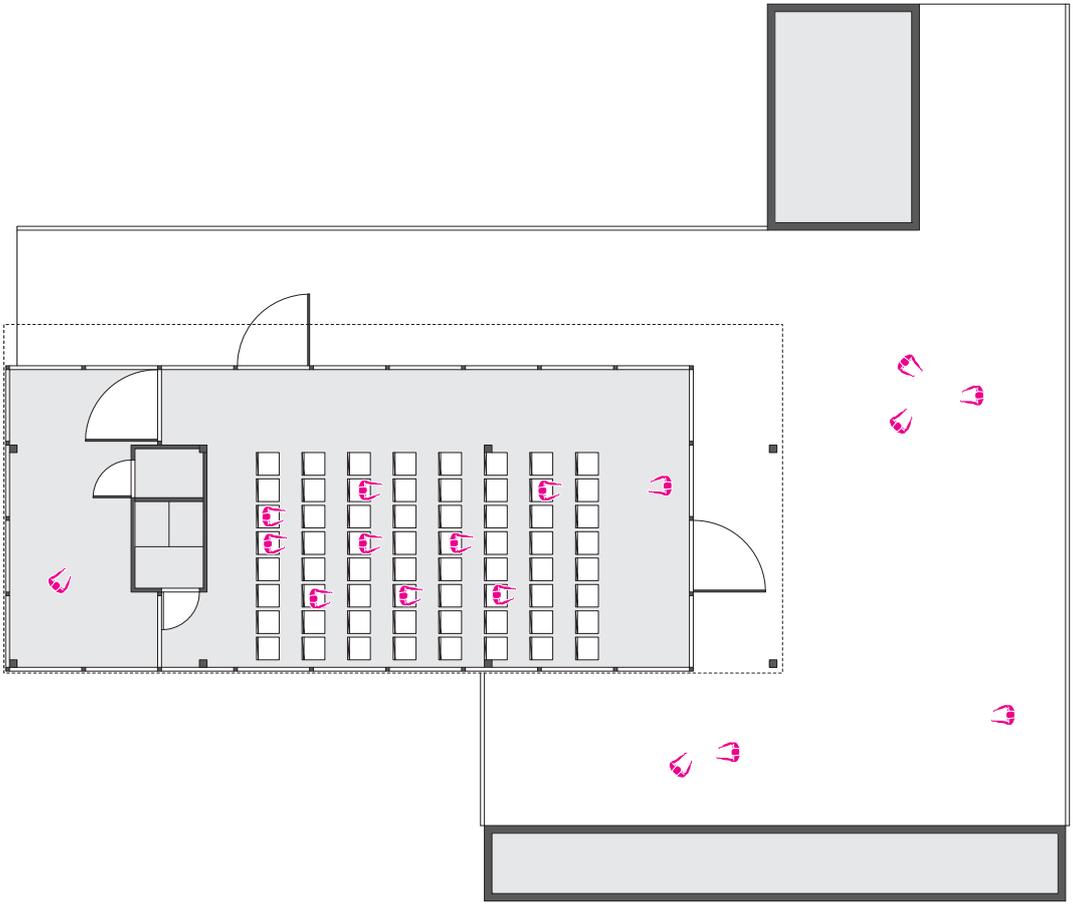
individual



housing corporation

> RECOMMENDATIONS

- The building could very well be rented out for other groups in the neighborhood that could have a use for it.
- This building would work in a single case. One of such buildings would be enough for a neighborhood.



> INFLUENCE ON COLLECTIVE SPACE

	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
SOCIAL 								
safety	+	+	0	+	0	+	0	0
responsibility	+	+	0	+	+	+	+	+
use	+	+	+	+	+	+	0	+
accessibility	0	+	+	+	+	+	0	0
ARCHITECTURAL 								
expression	+	+	-	+	0	+	0	+
spatial quality	+	+	-	+	-	+	+	+

> INFLUENCE ON INDIVIDUAL SPACE

	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
SOCIAL 								
safety	+	+	0	-	0	-	+	0
responsibility	+	+	0	+	0	+	+	0
use	0	0	+	0	+	+	+	0
accessibility	0	+	0	+	+	+	+	0
ARCHITECTURAL 								
expression	0	0	0	0	0	0	+	0
spatial quality	0	0	-	+	0	-	+	+

> Experiment 1; evaluation

The first experiment had the goal to improve the collective space and have an impact on the individual space. When we look at both the influence on the collective and individual of all the solutions together we see that there is a positive influence on both. Since no improvements were made to the individual space, this means that the improvements of the collective space have had a positive influence on the individual space. The influence on the individual is not as big as the influence on the collective, but especially on functional aspects, well noticeable.

If we look at the impact on the different problems we can see that the problems that have to do with function; use and accessibility have had the biggest improvement, as well as the safety and level of responsibility. The collective improvements have, not surprisingly, had the lowest influence on the individual spatial quality and expression.

Although the solutions have a positive influence on the individual, they are almost all only applicable by collectives of owners and housing corporations. Individual owners will not likely want to invest in the collective space on own initiative, except when it has very direct benefits like the creation of a buffer zone between collective and individual, like solution 1.7 shows.

In conclusion we could say that improving the collective space has a good influence on both collective and individual but in order to improve the individual expression and spatial quality, other measures in the private sphere will be necessary.

SOCIAL



FUNCTIONAL



ARCHITECTURAL

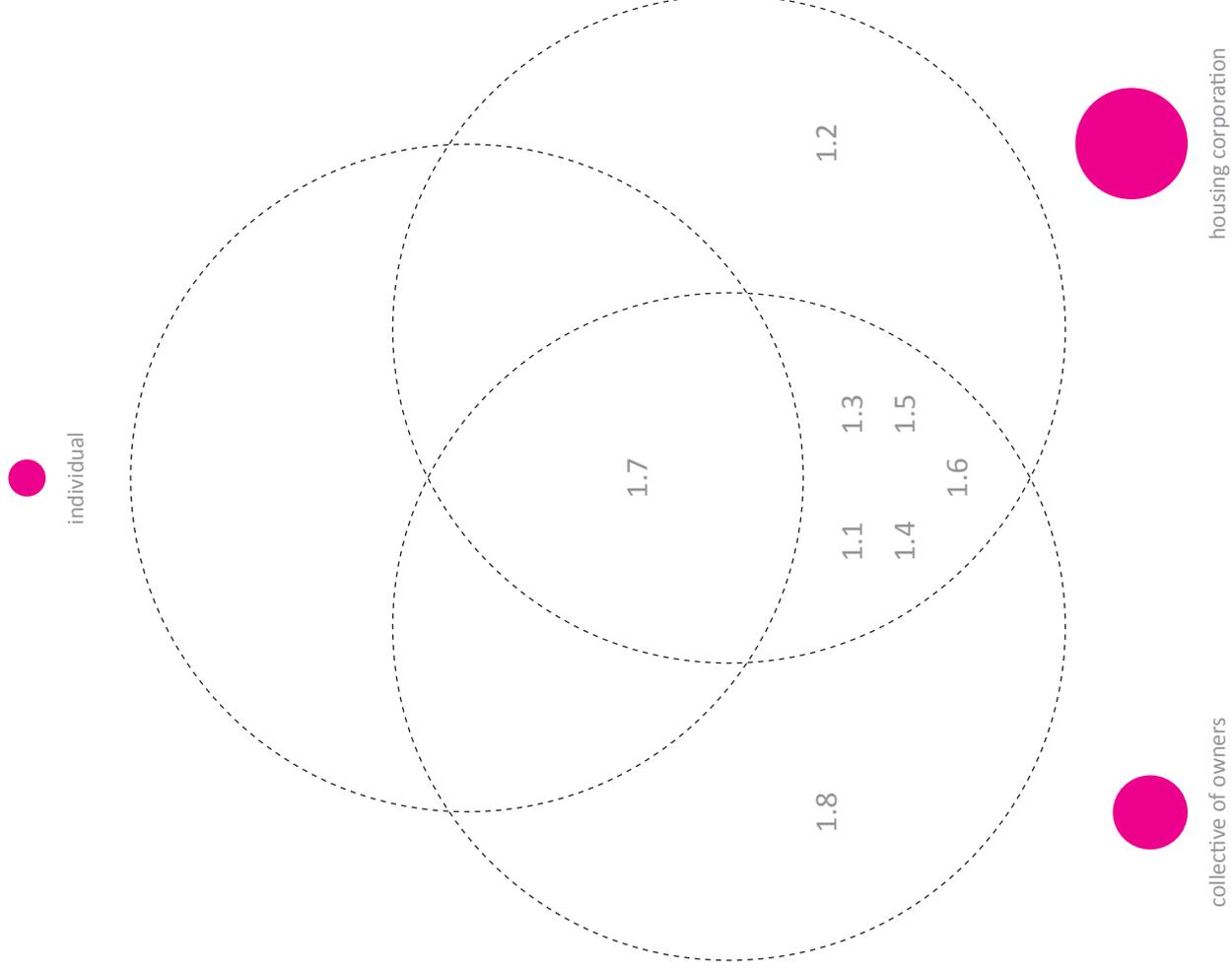


INFLUENCE ON
INDIVIDUAL



INFLUENCE ON
COLLECTIVE



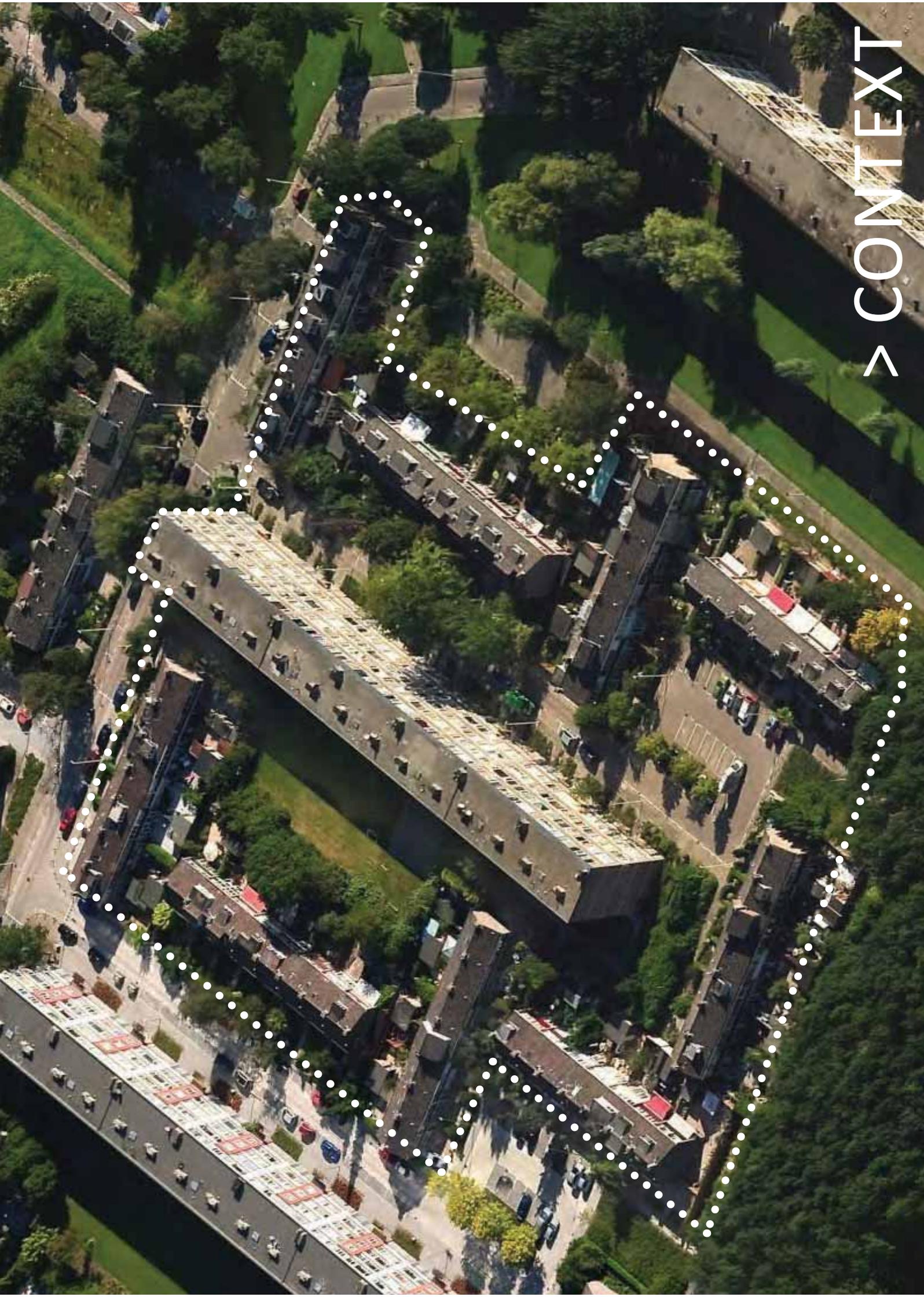


- 1.1 MAKE READABLE TERRITORIES
- 1.2 INVOLVE FAMILY HOUSES IN THE TERRITORY
- 1.3 MOVE PARKING SPACES INTO THE TERRITORY
- 1.4 MAKE A COMMUNITY DECK ABOVE PARKING
- 1.5 MOVE ENTRANCES TO THE INSIDE
- 1.6 CREATE NEW STAIRCASES
- 1.7 CREATE A BUFFER ZONE BETWEEN PORCH AND APARTMENT
- 1.8 CREATE A COMMUNITY BUILDING

EXPERIMENT 2

> IMPROVE THE INDIVIDUAL





> CONTEXT

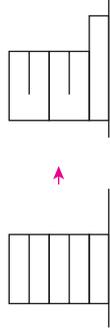




> EVALUATION

2.1

MERGE APARTMENTS



> PROBLEM

There are too many apartments of a too little size. Many small apartments are for sale and the collective space is shared by too many people.

> GOAL

Reduce the amount of users of the collective space and create bigger apartments.

> PRINCIPLE

To merge two smaller apartments into one larger. Have less entrances in the porch.

> APPLICATION IN CONTEXT

The building in this context has five floors and eight apartments per portiek. The ground floor is extended and gets a separate entrance. The four floors above are transformed into two maisonnettes. Every portiek now has four, instead of eight front doors.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- It has been proven to be virtually impossible to have no porch at all, so the weak typology remains.
- The individual apartments have been improved but the number of individuals is lower.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL	COLLECTIVE
+	0
+	0
+	0
+	0
0	0
+	0

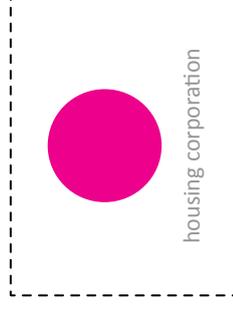
> SOLUTION FOR



individual

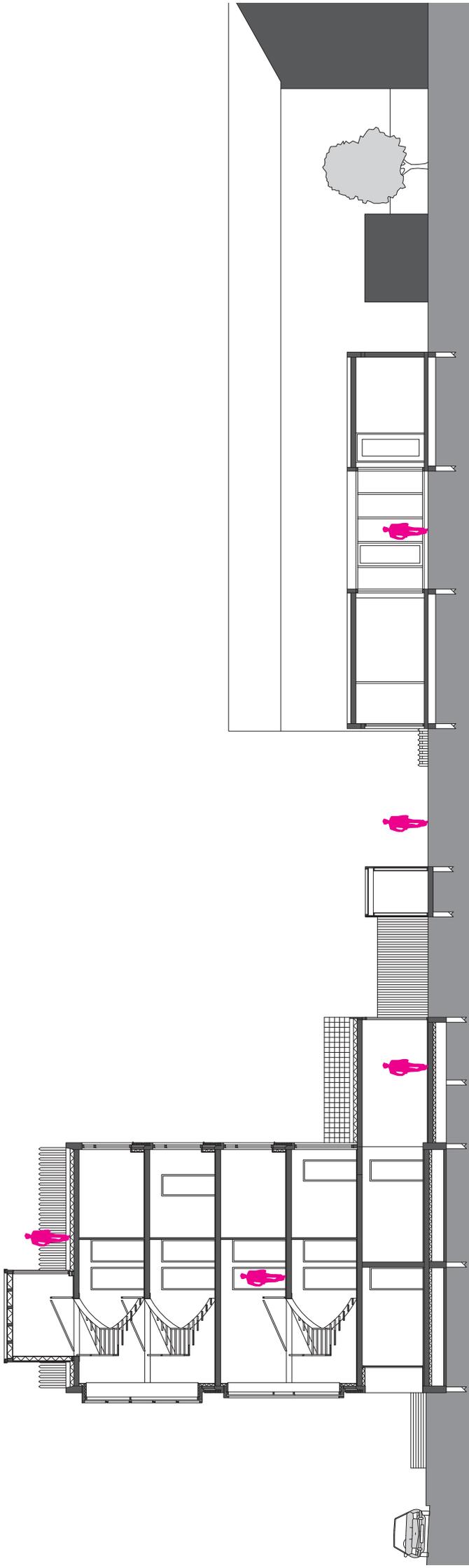


collective of owners

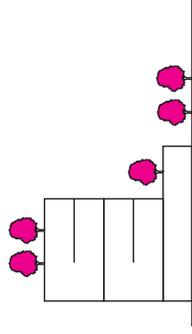


> RECOMMENDATIONS

This solution is only possible when the whole building is bought, transformed and sold again. This is why this solution will only be possible for corporations. If a collective of owners or an individual would want to merge, this will be possible in another form.



> EVALUATION



ADD PRIVATE OUTSIDE SPACES

SOCIAL



safety
responsibility

> PROBLEM

The apartments have very small balconies. The communal garden is an extension of their private outside space but is not being used as such.

> GOAL

To create larger private outside spaces, to replace the communal garden.

> PRINCIPLE

Create large roof gardens on the building and private gardens in the communal garden, linked to the apartments.

> APPLICATION IN CONTEXT

The ground floor apartments get a private garden in the space of the communal garden. The first floor apartment gets a roof garden on top of the newly built extension. The third floor maisonette gets a roof terrace.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- The outside spaces are quite exposed to one another, especially from above.

INDIVIDUAL

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+

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+

+
+

COLLECTIVE

0
0

+
+

-
-

FUNCTIONAL



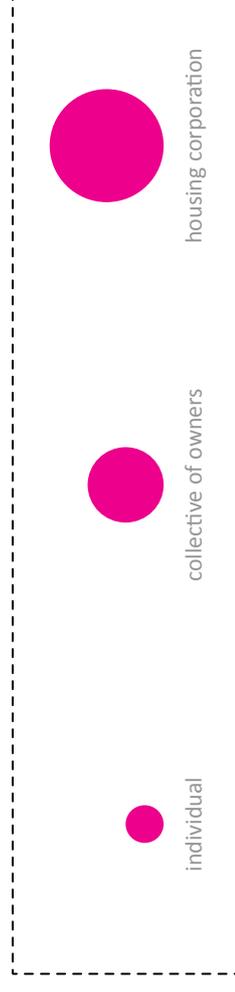
use
accessibility

ARCHITECTURAL



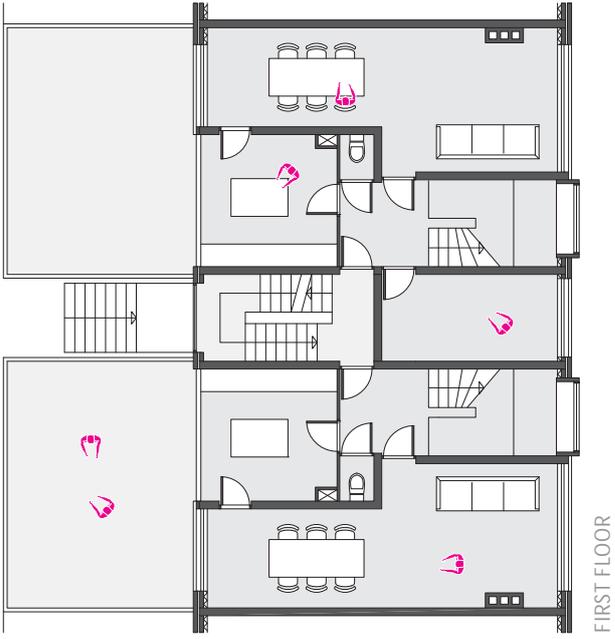
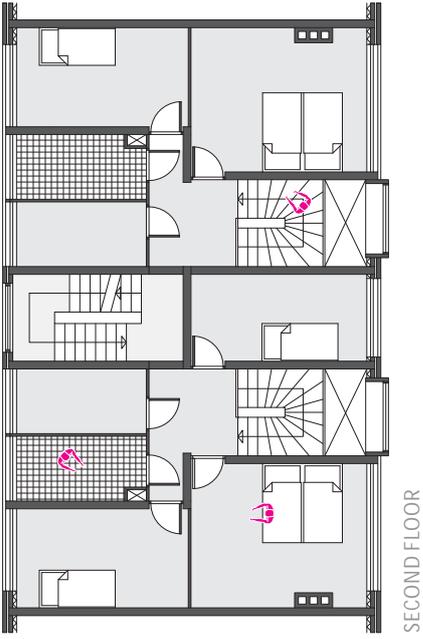
expression
spatial quality

> SOLUTION FOR



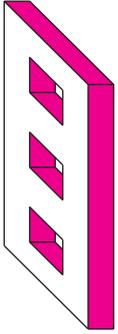
> RECOMMENDATIONS

The simplest form of this solution, namely adding private gardens to the ground floor apartments can easily be applied, even by individuals and is already being applied in the neighborhood by one of the collectives of owners.



2.3

> EVALUATION



FILL THE COLLECTIVE GARDEN WITH HOUSING

> PROBLEM

The collective space is not being used and is badly maintained, making it a threat for the neighborhood.

> GOAL

Make the collective space individual.

> PRINCIPLE

To fill the collective garden with newly built housing with gardens.

> APPLICATION IN CONTEXT

In this context ground based one level patio houses fitted best. This typology suits best for elderly. Six of these houses have been designed on a new entrance path which is not accessible for cars. The houses have been limited to one floor and given a green roof to not disturb the existing housing.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- The orientation of the patio houses is weak. Cars cannot reach the houses and the entrances of the houses are facing the back gardens of the apartment buildings. This means that the back of the apartment gardens need (collective) designing.

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL	COLLECTIVE
+	+
0	-
0	+
+	+
0	-
0	-

> SOLUTION FOR

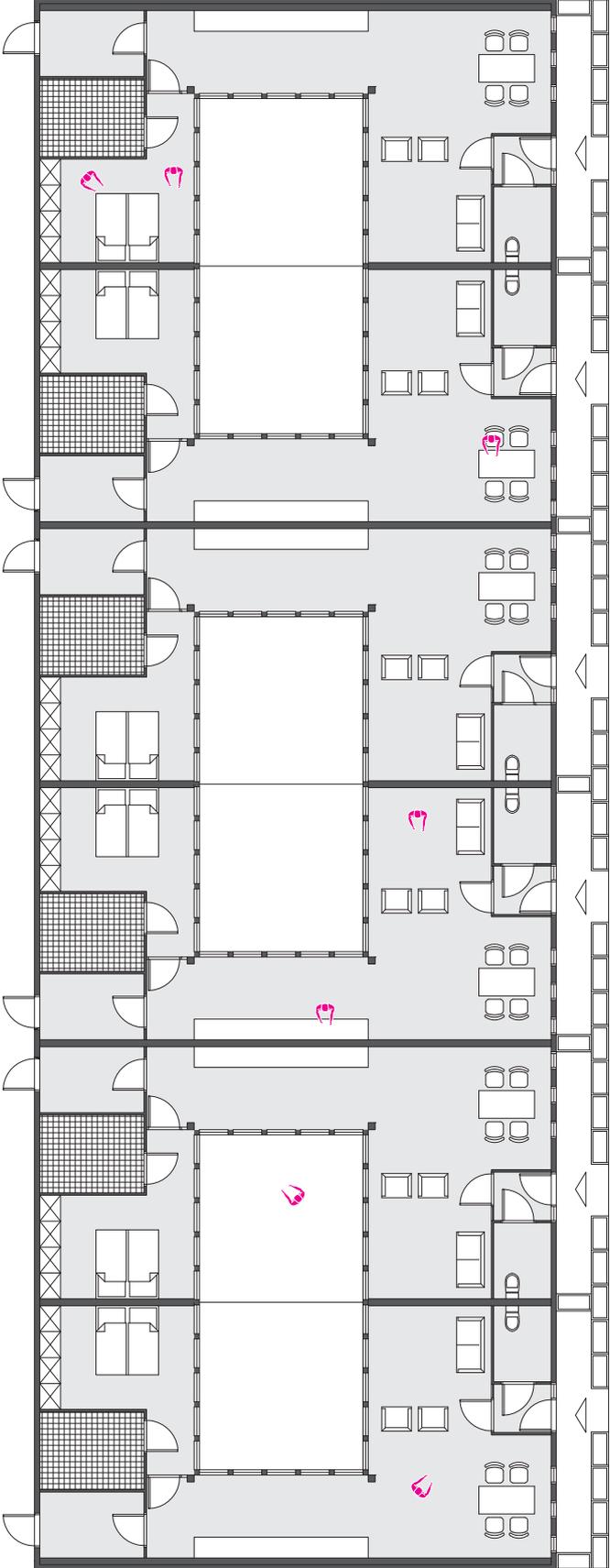


individual



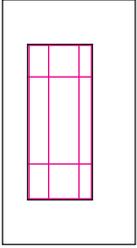
> RECOMMENDATIONS

Collectives of owners should be able to develop their own collective garden and get permission to build there.



2.4.1

OWNERS CHOOSE OWN WINDOW FRAMES



> PROBLEM

The apartment buildings look very rigid and anonymous. The individual value that owners have created in their apartments can hardly be seen from the outside.

> GOAL

Create a less anonymous and more diverse image on the outside of the building.

> PRINCIPLE

To show individual value on the outside of the building by breaking through the rigid and collective design of the building.

> APPLICATION IN CONTEXT

During construction the window openings will remain open. The new owners can choose and apply their own window frames without any limitations.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- This intervention by itself does not break through the strong collective architecture and does not have a huge effect on the individual expression.
- In practice an amount of the houses will not be sold right away and be filled with window frames by the contractor.
- It will be cheaper to arrange the window frames within the collective of owners.

> EVALUATION

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

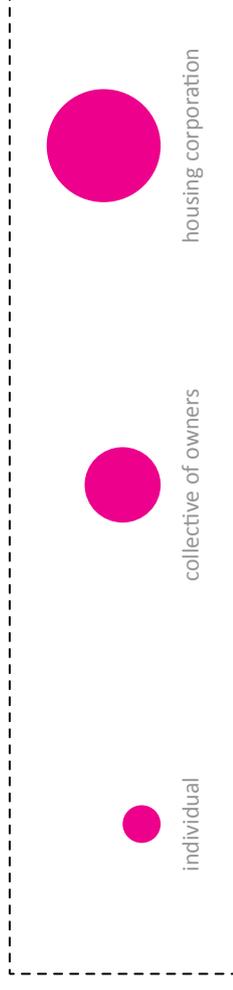
ARCHITECTURAL



expression
spatial quality

INDIVIDUAL	COLLECTIVE
○	○
+	○
○	○
○	○
+	-
○	○

> SOLUTION FOR



> RECOMMENDATIONS

This solution needs to be used in combination with a solution like 2.4.5 to have effect.

2.4.2

OPEN PARTS FACADES FILLED BY OWNERS



> PROBLEM

The apartment buildings look very rigid and anonymous. The individual value that owners have created in their apartments can hardly be seen from the outside.

> GOAL

Create a less anonymous and more diverse image on the outside of the building.

> PRINCIPLE

To show individual value on the outside of the building by breaking through the rigid and collective design of the building.

> APPLICATION IN CONTEXT

During construction parts of the facade will remain open from floor to floor. The new owners can design and apply their own facades with full freedom.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- In practice an amount of the houses will not be sold right away and be filled with a standard facade by the contractor.
- In some cases this solution can give a messy whole and the framework wherein these facades can be applied should thus be very rigid and strong.
- The main entrances to the porch become less clear.

> EVALUATION

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

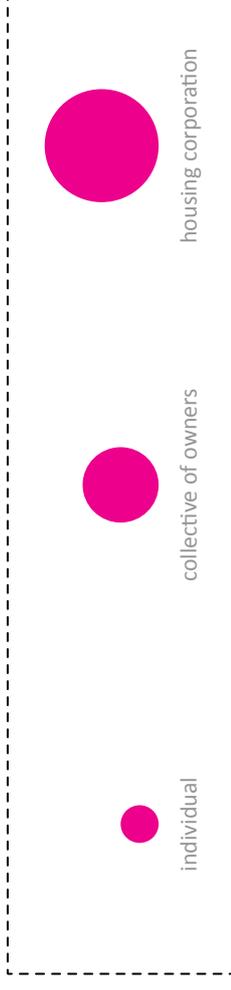
ARCHITECTURAL



expression
spatial quality

INDIVIDUAL	COLLECTIVE
0	0
+	0
+	+
0	0
+	-
+	0

> SOLUTION FOR

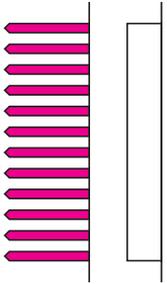


> RECOMMENDATIONS

This solution is only possible with a very rigid framework and works best on the ground floor where a direct relationship with a garden is possible.

2.4.3

OWNERS CHOOSE THEIR FENCES



> PROBLEM

The apartment buildings look very rigid and anonymous. The individual value that owners have created in their apartments can hardly be seen from the outside.

> GOAL

Create a less anonymous and more diverse image on the outside of the building.

> PRINCIPLE

To show individual value on the outside of the building by breaking through the rigid and collective design of the building.

> APPLICATION IN CONTEXT

During constructing the private outside spaces are left without separations. The new owners can choose and apply their own fences and other separations.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- In practice an amount of the houses will not be sold right away and be filled with a standard separation by the contractor.
- Unlike in the facade, there is no strong framework in between the different fences, making the whole somewhat messy.

> EVALUATION

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

ARCHITECTURAL



expression
spatial quality

INDIVIDUAL

+

+

0

0

+

+

COLLECTIVE

0

0

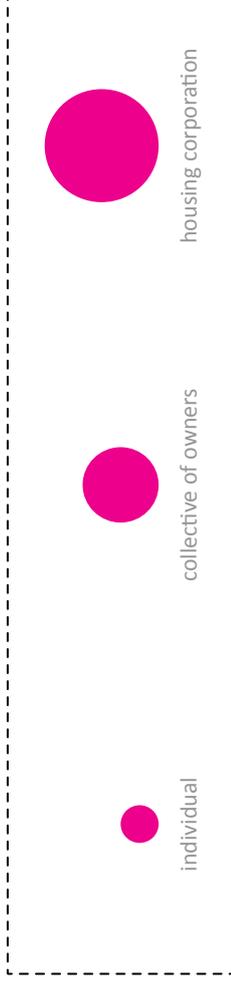
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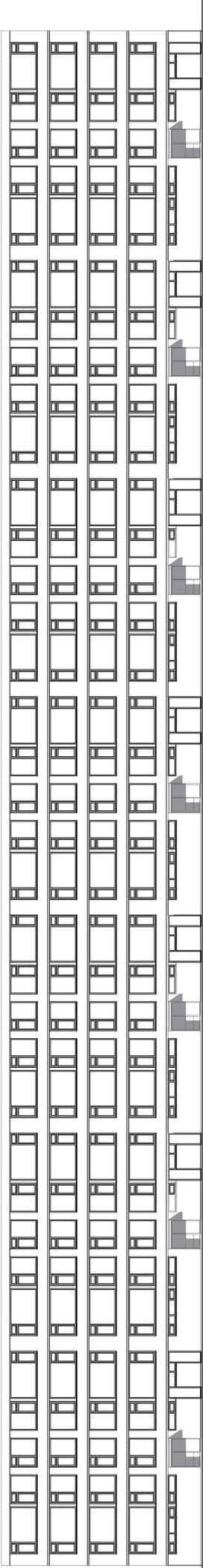
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> SOLUTION FOR

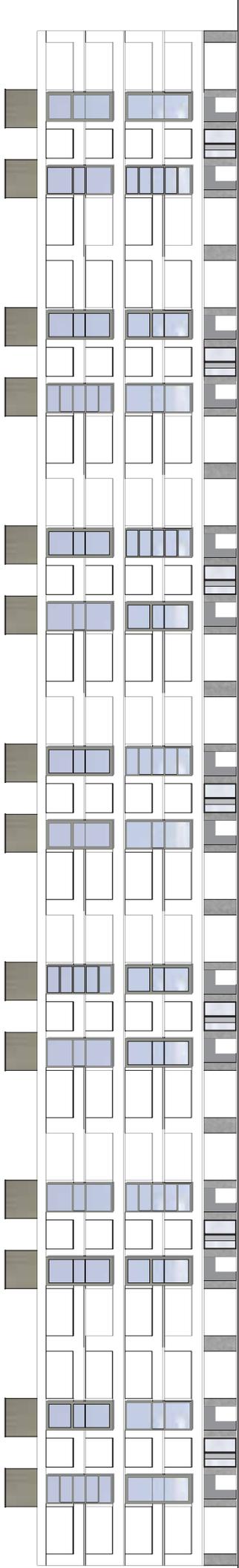


> RECOMMENDATIONS

This solution needs to be used in combination with a solution like 2.4.5 to have a better effect.



EXISTING



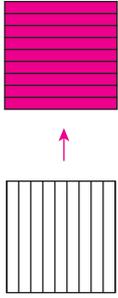
DESIGN



POSSIBLE DEVELOPMENT

2.4.4

APPLY CHANGEABLE FACADE MATERIALS



> PROBLEM

The apartment buildings look very rigid and anonymous. The individual value that owners have created in their apartments can hardly be seen from the outside.

> GOAL

Create a less anonymous and more diverse image on the outside of the building.

> PRINCIPLE

To show individual value on the outside of the building by breaking through the rigid and collective design of the building.

> APPLICATION IN CONTEXT

A wooden facade cladding has been applied on both the sheds and extensions on the roof. In time this cladding can be changed by the owners. In a longer time span this intervention will lead to a diverse image with a more individual expression.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- Changing the facade materials could bring damage to the detailing and physical structure of the building.

> EVALUATION

SOCIAL



safety
responsibility

FUNCTIONAL



use
accessibility

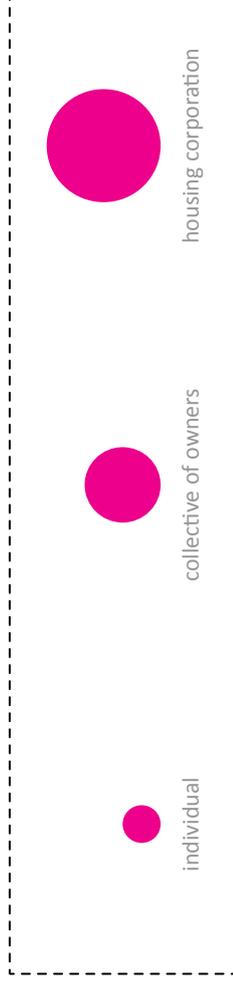
ARCHITECTURAL



expression
spatial quality

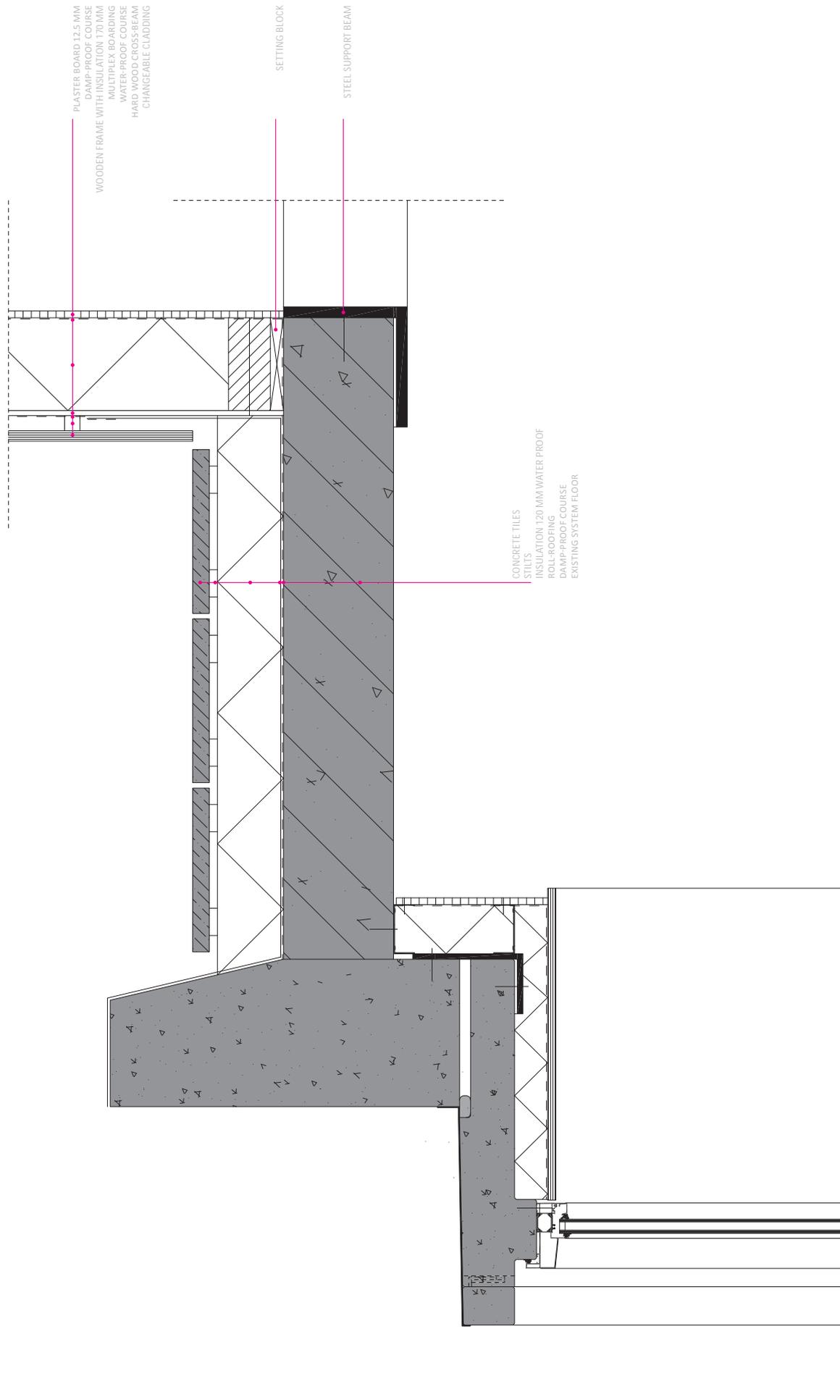
INDIVIDUAL	COLLECTIVE
○	○
+	○
○	○
○	○
+	○
○	○

> SOLUTION FOR



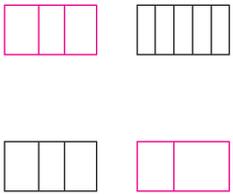
> RECOMMENDATIONS

The structure has to be designed and detailed in a way that it won't be compromised by changing the cladding. Changing the cladding should have no effect on the physical performance of the structure.



2.4.5

> EVALUATION



DESIGN "SHOPPING WINDOWS"



safety
responsibility

> PROBLEM

The apartment buildings look very rigid and anonymous. The individual value that owners have created in their apartments can hardly be seen from the outside.

> GOAL

Create a less anonymous and more diverse image on the outside of the building.

> PRINCIPLE

To show individual value on the outside of the building by breaking through the rigid and collective design of the building.

> APPLICATION IN CONTEXT

Solutions 2.4.1 - 2.4.4 have the weakness that they hardly break through the rigid brick original architecture. Designing architectural elements as a layer in front of this rigid architecture is essential. In this context rigid concrete frames have been placed at the location of the new staircases that link the merged floors of the apartments. Four different frames have been composed over the facade.

> CONCESSIONS/WEAKNESSES IN CONTEXT

- This intervention is collectively designed and not necessarily the wish of the individual owners.

> FUNCTIONAL



use
accessibility

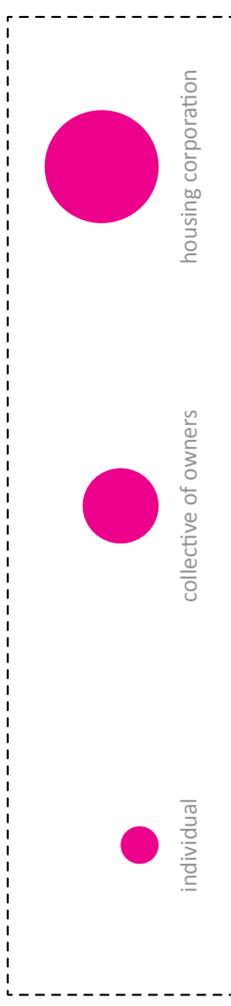
> ARCHITECTURAL



expression
spatial quality

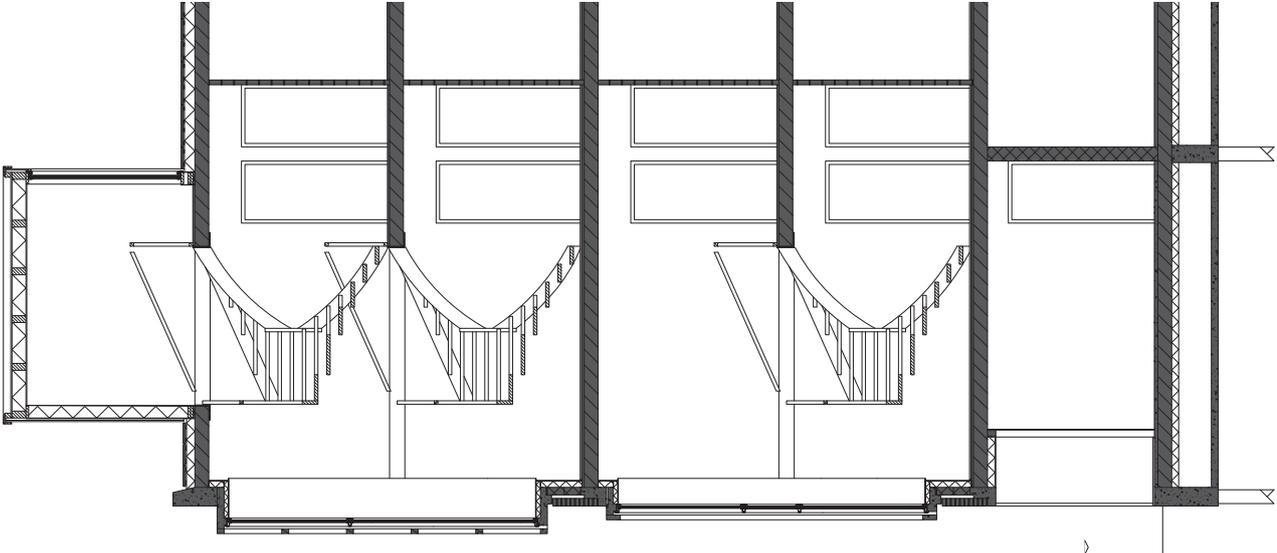
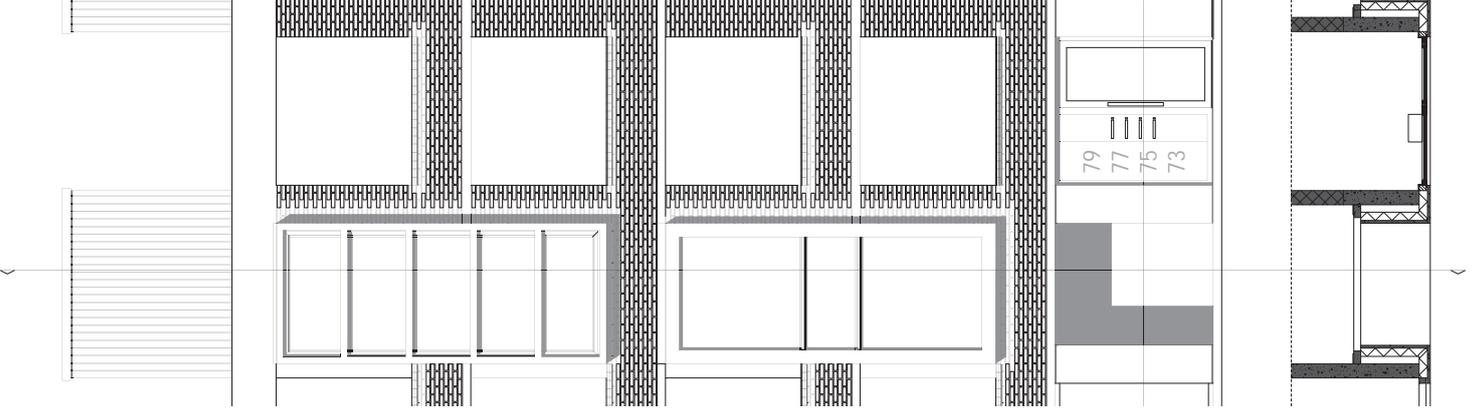
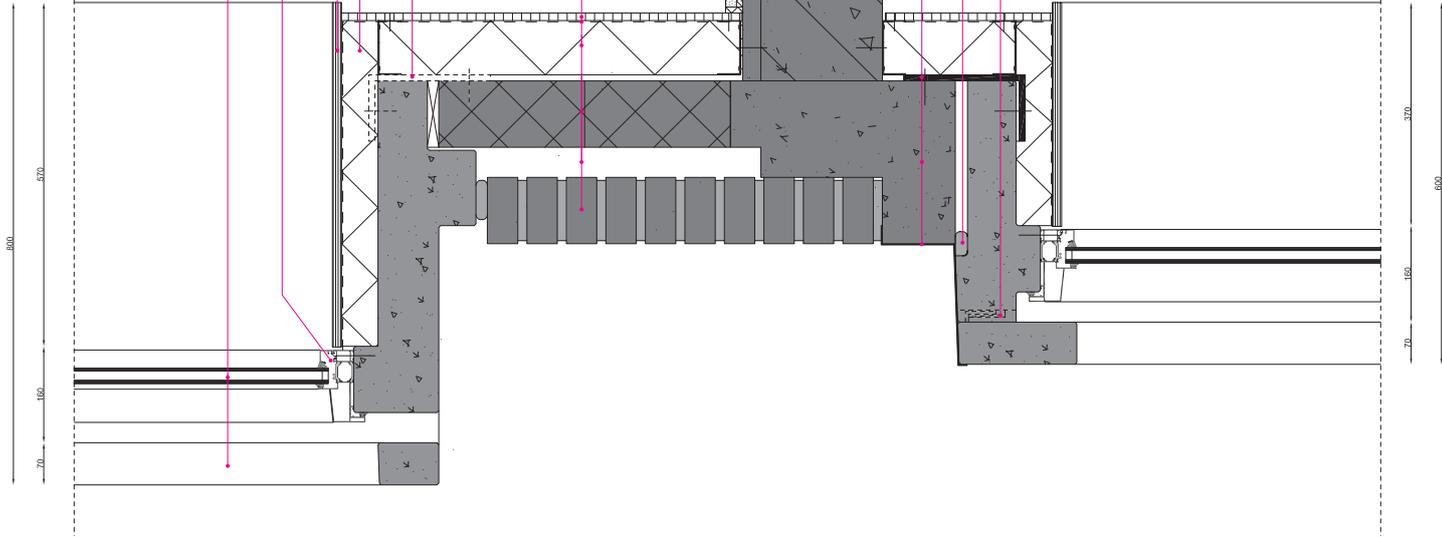
INDIVIDUAL	COLLECTIVE
0	0
+	0
+	0
0	0
+	+
+	0

> SOLUTION FOR



> RECOMMENDATIONS

The frames should be made of a rigid material like concrete in this case to protect them from being removed.



> INFLUENCE ON COLLECTIVE SPACE

	2.1	2.2	2.3	2.4.1	2.4.2	2.4.3	2.4.4	2.4.5
SOCIAL 	0	0	+	0	0	0	0	0
safety responsibility	0	0	-	0	0	0	0	0
FUNCTIONAL 	0	+	+	0	+	0	0	0
use accessibility	0	+	+	0	0	0	0	0
ARCHITECTURAL 	0	-	-	-	-	0	0	+
expression spatial quality	0	-	-	0	0	0	0	0

> INFLUENCE ON INDIVIDUAL SPACE

	2.1	2.2	2.3	2.4.1	2.4.2	2.4.3	2.4.4	2.4.5
SOCIAL 	+	-	+	0	0	+	0	0
safety responsibility	+	+	0	+	+	+	+	+
FUNCTIONAL 	+	+	0	0	+	0	0	+
use accessibility	+	+	+	0	0	0	0	0
ARCHITECTURAL 	0	+	0	+	+	+	+	+
expression spatial quality	+	+	0	0	+	+	0	+

> Experiment 2; evaluation

The second experiment had the goal to take away the problems in the collective space, not by solving them directly but by improving the individual space. When we look at the evaluation of the influence on the individual space, we can see that the solutions have had a positive influence. Especially the individual expression and spatial quality have been improved, as well as the individual responsibility which is triggered by the individual expression. The individual accessibility has not improved much as a result of the very rigid typology.

The influence on the collective space is much less. The individual improvements have hardly any effect on the collective safety and responsibility, some positive effect on the use and accessibility and a negative effect on the spatial quality and especially the collective expression. This negative effect on the collective expression could weaken the block as an element in the neighborhood. The block now, together with the other apartment buildings, offers a stable framework in which the family houses are kept from falling apart. If the apartment block itself is also going to fall apart, this would have a negative influence on the neighborhood as a whole.

Although the solutions are mainly designed for individual owners to apply, they are almost all also applicable by collectives of owners and housing corporations. Big improvements of the individual space, like merging and the building of new houses in the collective garden, can not be applied by individual but can be very suitable for housing corporations.

In conclusion we can say that the improvements in the individual space can be good solutions, but can only be applied when improvements in the collective space are also made. Only then a healthy and sustainable neighborhood can be obtained.

SOCIAL



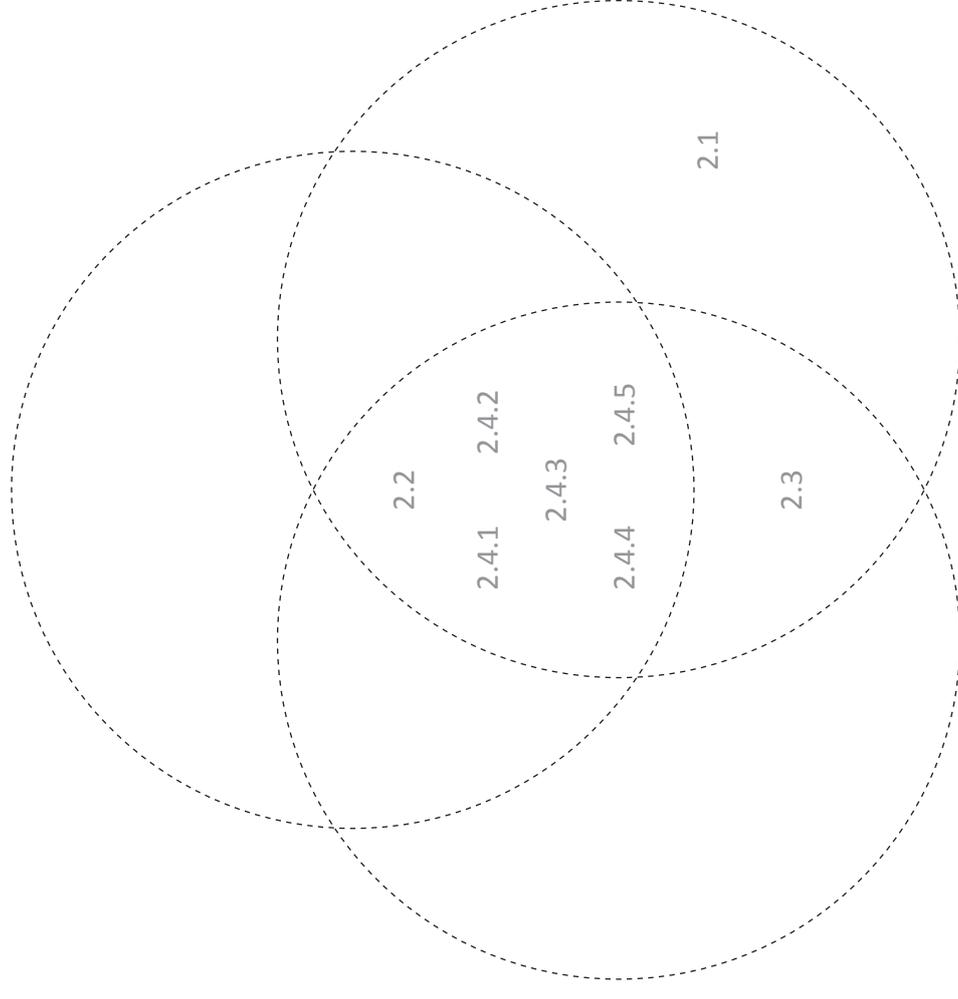
FUNCTIONAL



ARCHITECTURAL



individual



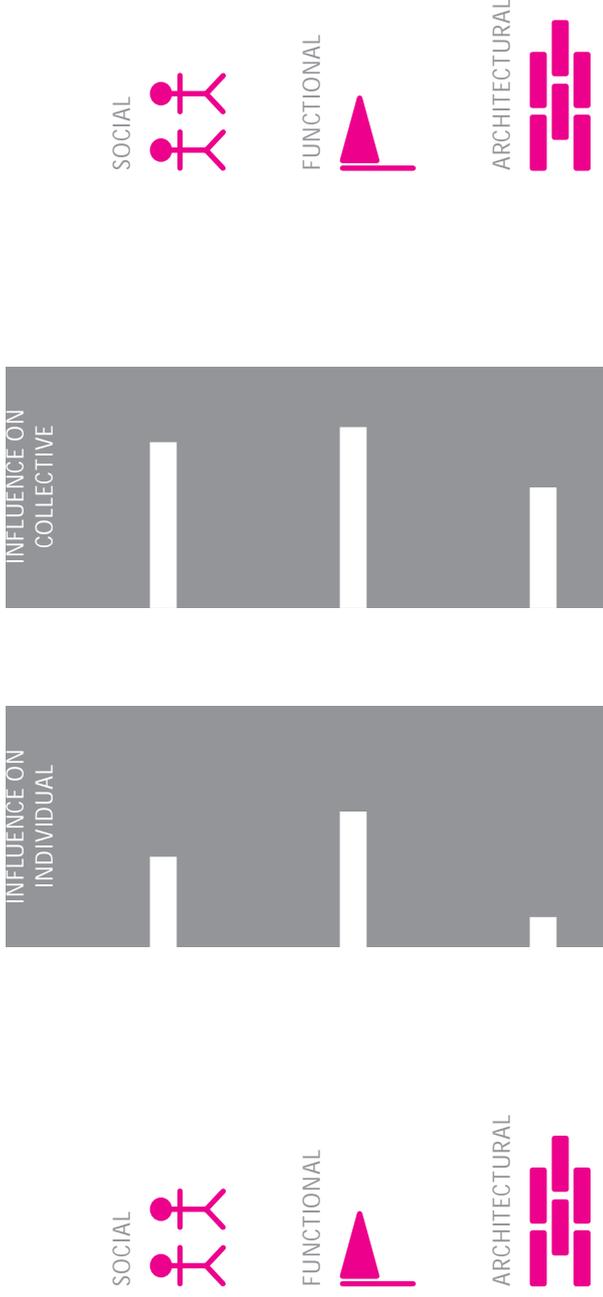
collective of owners

housing corporation

- 2.1 MERGE APARTMENTS
- 2.2 ADD PRIVATE OUTSIDE SPACES
- 2.3 FILL THE COLLECTIVE GARDEN WITH HOUSING
- 2.4.1 OWNERS CHOOSE OWN WINDOW FRAMES
- 2.4.2 OPEN PARTS FACADES FILLED BY OWNERS
- 2.4.3 OWNERS CHOOSE THEIR FENCES
- 2.4.4 APPLY CHANGEABLE FACADE MATERIALS
- 2.4.5 DESIGN "SHOPPING WINDOWS"

HANDBOOK

> QUICK OVERVIEW

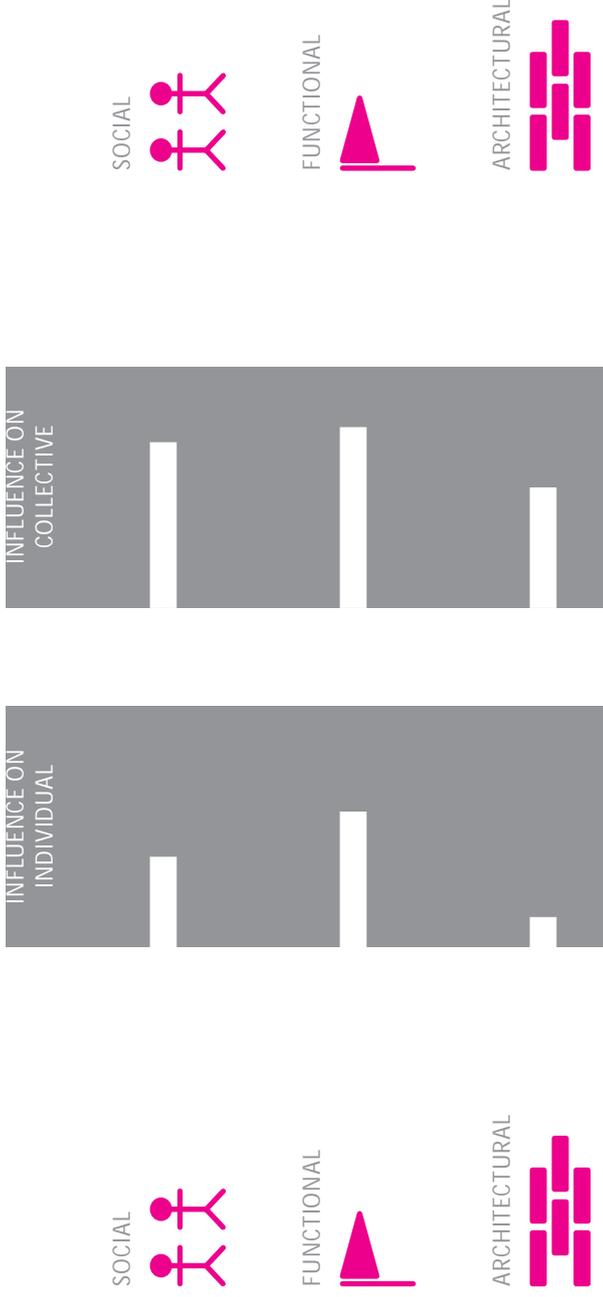


There are some differences between the outcomes of the first and the second experiment. Whereas the first experiment mainly has a positive influence on the social and functional problems of the collective space, the second experiment mainly has a positive influence on the architectural problems in the individual space.

In the first experiment, the goal was to improve the collective space and see the influence on the individual space. As we can see, this influence on the individual space is positive, mainly on the functional level.

In the second experiment, the individual space was improved to take away the problems in the collective space. The solutions in this experiment have had little or no positive influence on the collective space, even a negative influence on the collective expression and spatial quality.

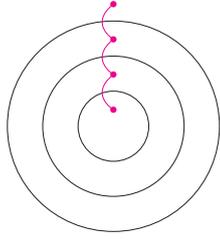
A conclusion we can draw from this is that improving the collective space has most influence on the neighborhood. Only improving the individual does not help the collective space and can even lead to new problems. A smart combination of both collective and individual measures will have the best effect.



> COMPARISON

MAKE READABLE TERRITORIES

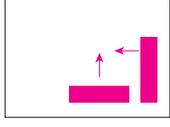
1.1



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

INVOLVE FAMILY HOUSES IN THE TERRITORY

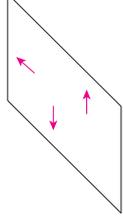
1.2



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

MOVE ENTRANCES TO THE INSIDE

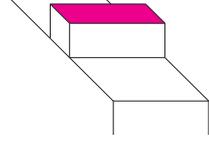
1.5



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

CREATE NEW STAIRCASES

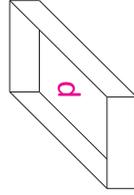
1.6



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

MOVE PARKING SPACES INTO THE TERRITORY

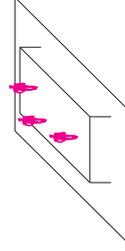
1.3



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

MAKE A COMMUNITY DECK ABOVE PARKING

1.4

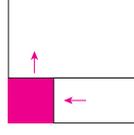


ONLY WITH 1.3

SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

MAKE BUFFER BETWEEN PORCH AND APARTMENT

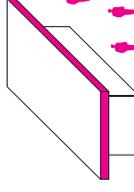
1.7



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

CREATE A COMMUNITY BUILDING

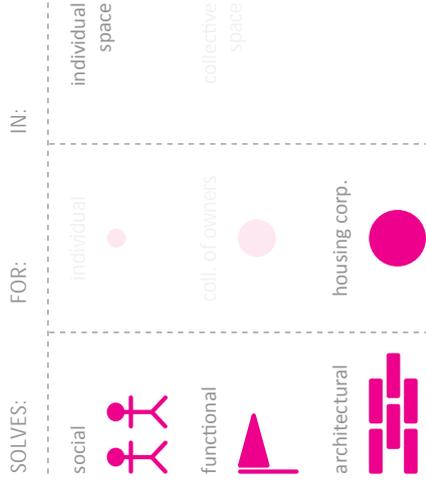
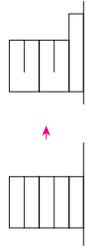
1.8



SOLVES:	social 	functional 	architectural
FOR:	individual 	coll. of owners 	housing corp.
IN:	individual space	collective space	

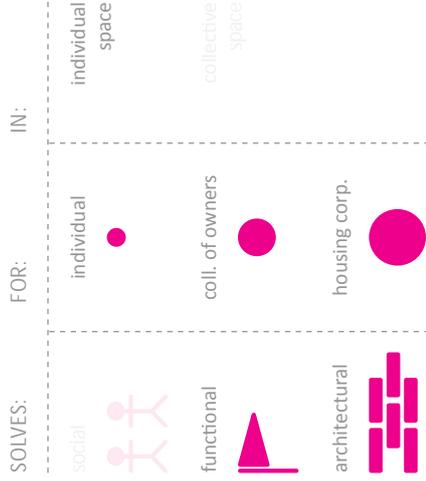
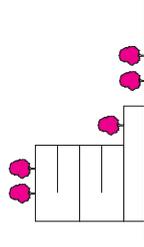
MERGE APARTMENTS

2.1



ADD PRIVATE OUTSIDE SPACES

2.2

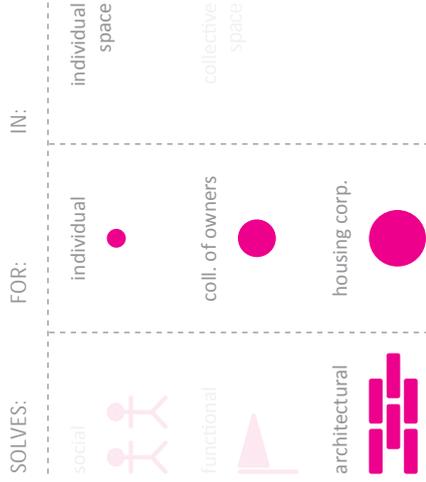


OPEN PARTS FACADES FILLED BY OWNERS

2.4.2

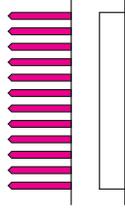


BEST WITH 2.4.5

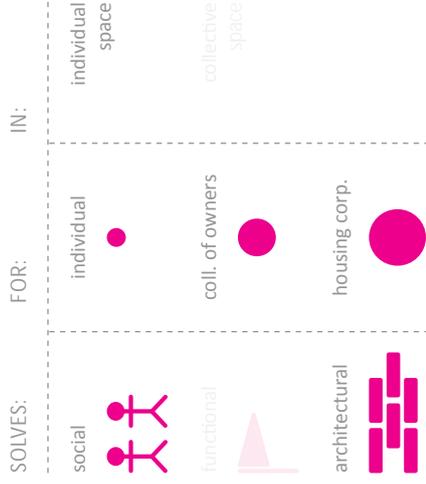


OWNERS CHOOSE THEIR FENCES

2.4.3

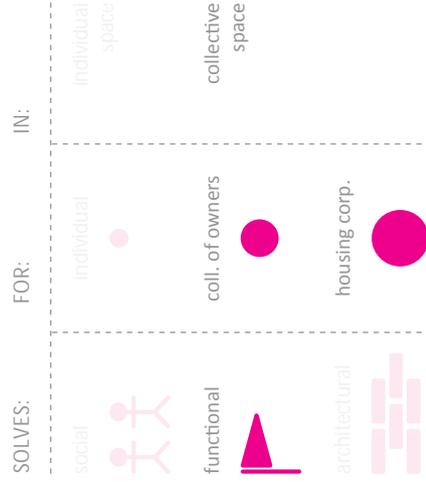


BEST WITH 2.4.5



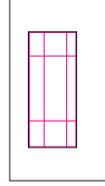
FILL THE COLLECTIVE GARDEN WITH HOUSING

2.3

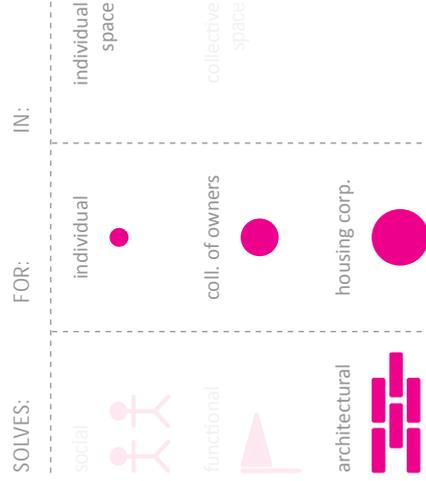


OWNERS CHOOSE OWN WINDOW FRAMES

2.4.1

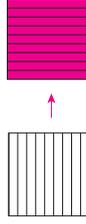


BEST WITH 2.4.5

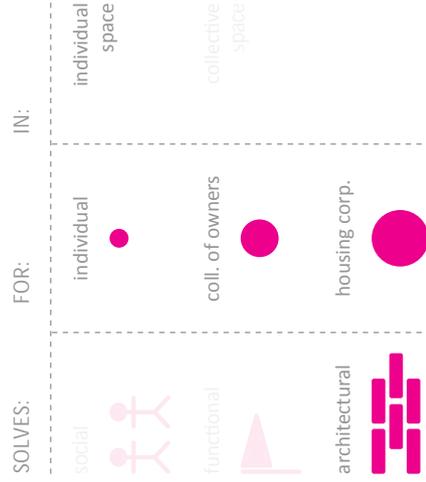


APPLY CHANGEABLE FACADE MATERIALS

2.4.4

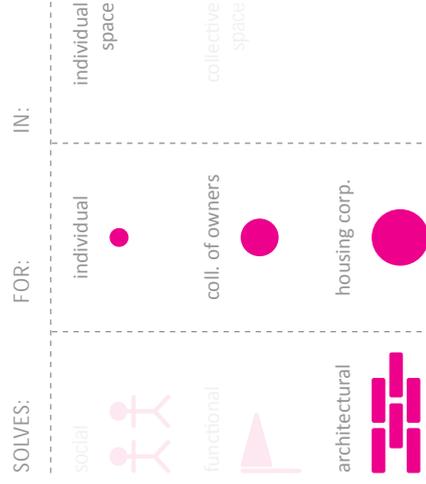
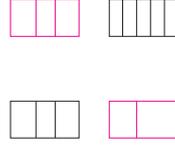


BEST WITH 2.4.5



DESIGN "SHOPPING WINDOWS"

2.4.5



> I AM A:

> I WANT TO SOLVE:

> I WANT TO IMPROVE THE:

> SOLUTION(S):

INDIVIDUAL

SAFETY/RESPONSIBILITY



| 1.7 | 2.4.3 |

USE/ACCESSIBILITY



| 1.7 | 2.2 |

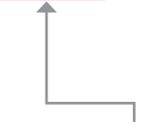
EXPRESSION/SPATIAL QUALITY



| 1.7 | 2.2 | 2.4.1 - 2.4.4 + 2.4.5 |

COLLECTIVE OF OWNERS

SAFETY/RESPONSIBILITY



INDIVIDUAL SPACE

| 1.7 | 2.4.3 |

COLLECTIVE SPACE

| 1.1 | 1.6 |

USE/ACCESSIBILITY



| 1.5 | 1.7 | 2.2 |

EXPRESSION/SPATIAL QUALITY



| 1.3 + 1.4 | 1.5 | 1.6 | 1.8 | 2.3 |

HOUSING CORPORATION

SAFETY/RESPONSIBILITY



INDIVIDUAL SPACE

| 1.7 | 2.1 | 2.4.3 |

COLLECTIVE SPACE

| 1.1 | 1.2 | 1.6 |

USE/ACCESSIBILITY



| 1.5 | 1.7 | 2.1 | 2.2 |

EXPRESSION/SPATIAL QUALITY



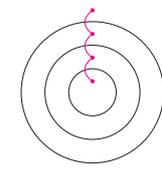
| 1.2 | 1.3 + 1.4 | 1.5 | 1.6 | 2.3 |

INDIVIDUAL SPACE

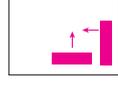
| 1.7 | 2.1 | 2.2 | 2.4.1 - 2.4.4 + 2.4.5 |

COLLECTIVE SPACE

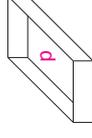
| 1.1 | 1.2 | 1.6 |



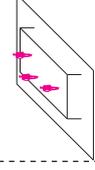
1.1



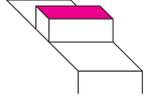
1.2



1.3



1.4



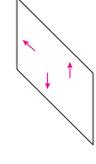
1.6



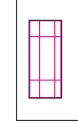
1.7



1.8



1.5



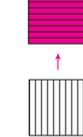
2.4.1



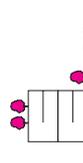
2.4.3



2.4.2



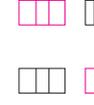
2.4.4



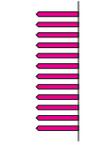
2.2



2.3



2.4.5



2.4.3

> **From generic solutions to a better living environment**

This new kind of expandable “toolbox” for housing transformation for different clients has as a main goal to ultimately improve the living environment in a sustainable way. The big advantage of this way of thinking is the bottom up approach: Instead of large masterplans imposed by developers or governments, the initiative for transformation can come from the owners. If they are supplied with an overview of solutions like proposed, the step to do interventions can become more attractive and easier.

The government can add to these solutions by for instance making specific permits for specific solutions, making the process easier and more attractive. Instead of controlling a large masterplan, the government could control the different solutions instead, giving the initiative to the owners, but controlling the solutions supplied. Also manufacturers and contractors could think and produce from this specific solution perspective. They could offer ready made designs, which can easily be constructed and could even lower the prices.

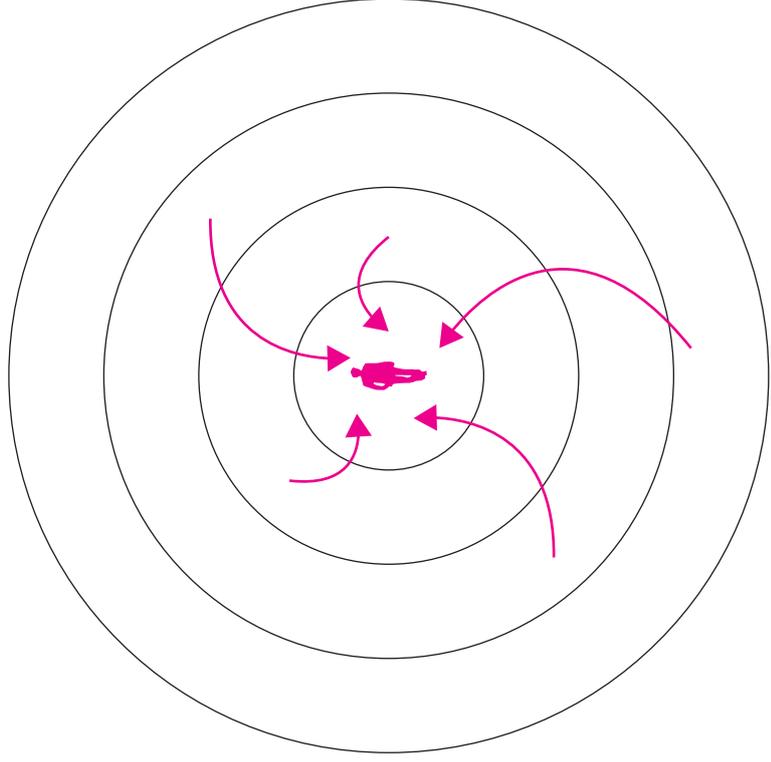
Eventually, during the course of time, more and more solutions will be applied in the neighborhoods, according to the demands of the time and owners. Step by step the living environment will improve as a result, growing with the time and owners.

> **Possible next research steps**

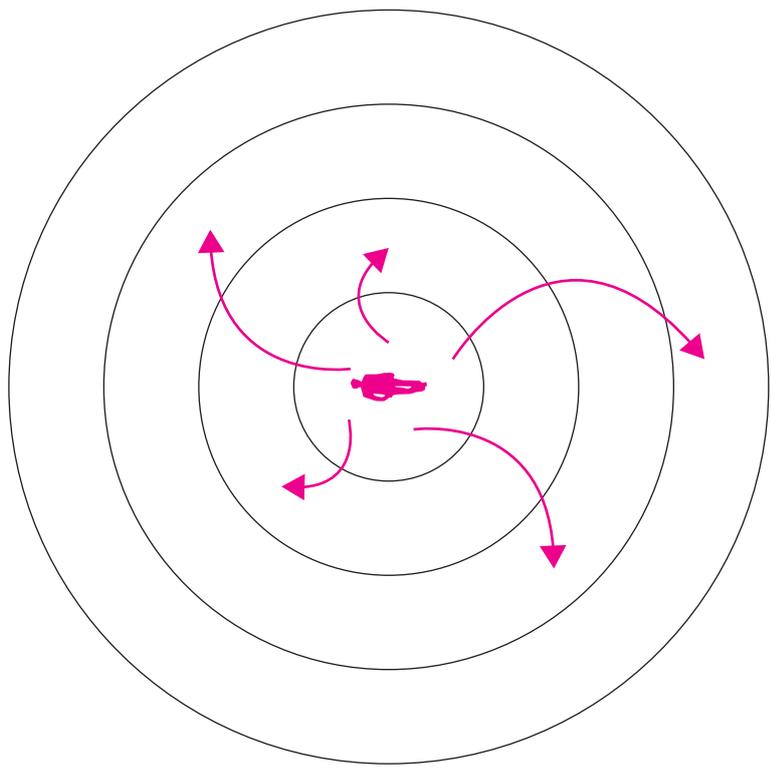
The solutions as tested in this context are only a handful of the total amount of possible solutions. Another context can bring up different ideas and therefor different solutions that could also be generic. By designing on different locations, in very different contexts, the booklet of solutions for housing transformations can expand and the tree of solutions and combinations of solutions can become more detailed and specific. Researching these kind of solutions in a designing way can therefor be very valuable and illustrative.

Another approach of research can be to really assess the actual costs and benefits of solutions in a more detailed way by including experts. This can include social, economic and physical aspects. A good reality check can then add to the value of the collection of solutions.

1960; COLLECTIVE FORCED UPON INDIVIDUAL



2012; COLLECTIVE COLORED BY INDIVIDUAL



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