XS>XL

SHARING IS CARING
Shared Housing in the Compact City

Ir. L.A. Rissik

Sharing is Caring
Programming Co-Living for the Compact City

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Abstract (200 words)

Preface

In front of you lies my initial proposal for the graduation research in the domain of Housing, written at the Faculty of Architecture, Urbanism and the Built Environment of the Technical University of Delft.

- Combining graduation and fascination in architecture together with conceptual future thinking
- Housing a key issue currently in the continuously growing cities
- Changing economic environment; can the housing issue be addressing the way new economies are addressed? [personal fascination]
- Personal goal of this research

Reading guide

To start off, an introduction is provided on the historical background and current context of the topic of dense housing. After an outline of the economic, social and environmental theory behind shared living a more practical analysis will be done, in researching several case studies in order to frame the actual designing of shared housing models.
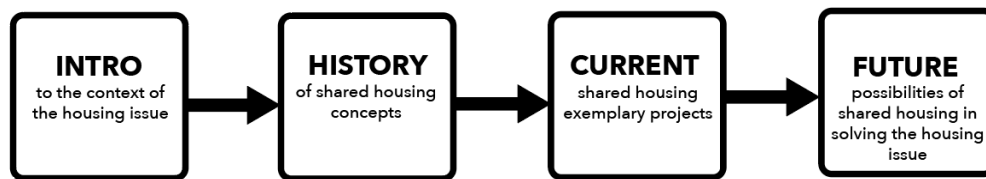

INTRO
to the context of the housing issue

HISTORY
of shared housing concepts

CURRENT
shared housing exemplary projects

FUTURE
possibilities of shared housing in solving the housing issue

Figure 1. Reading guide of proposed research (own ill.)

Table of Content

1   INTRODUCTION

1.1   Problem Statement

1.1.1   21st century urbanization: densifying cities

The 21st century introduces itself as an increasingly global and interconnected world, where over half of the world's population – 54 percent – resides in urban areas. (UN, 2014, p.2) It is expected that this urbanization will continue to grow towards almost 66 percent by 2050. Historically, this process of urbanization can be associated with important economic and social transformations within society. Here you can think of the introduction of the industrial age, as well as social factors like longer life expectancy. Cities have always been important drivers of development and poverty reduction, as they concentrate economic activity, government, commerce and transportation. Derived from these drivers, urban living is often associated with 'higher levels of literacy and education, better health, greater access to social services and enhanced opportunities for cultural and political participation.' (UN, 2014, p.3)

Nevertheless, rapid and unplanned urban growth often leads to unsustainable urban configurations. Social and financial inequity increasingly play a role in the opportunities these increasingly densifying cities have to offer. The design and government of the actual development of this densification is of great influence on a sustainable social and financial urban environment.
As this growth of cities could embody an actual physical expansion of the city, this is not the most desired way to expand: transportation and environmental pressure increases with this physical expansion. For this reason, intrinsic growth of cities is a newly valued option to reach a more sustainable urban densification. This sustainable intrinsic growth can also be acclaimed as aiming for a more *compact city*. 'A Compact City policy should, by regeneration and densification, contribute to a more sustainable development in its broadest sense, social, economic and environmental.' (Skovbro, 2002, p.1)
The Compact City concept dates back to the Dutch 80ies and now experiences new a renewed appreciation. The compact city promotes relatively high residential density with mixed land uses. It aims for an efficient public transport system and has an urban layout that encourages walking and cycling, low energy consumption and reduced pollution. With this, it advocates a sustainable urban environment within densifying areas.

1.1.2   The increasing housing issue

This rapid and mostly unsustainable growth of urban areas, results in the expectation that by 2025 a fifth of the world's population will lack access to secure, adequate, and affordable housing. (Florida, 2017) Also, the Netherlands, is currently facing a severe housing shortage with private housing prices rising rapidly. Currently the difference between demand and supply already reached the 200.000 dwellings (Moran, 2017). But not only the buying sector, also the rental sector suffers from vast shortages, with a difference between supply and demand around the 130.000 dwellings. A research into this Dutch housing shortage conducted by the Utrecht-based firm Capital Value, claims that in 2018 the housing shortage will reach its highpoint. (Capital Value. 2018) Especially the shortage of mid-level-rentals (€700-€950 a month) and the lower-level private properties (under €200.000) play a key role in the overall stagnation of the housing market. Capital Value even states that the number of rentals will decrease

instead of increase the coming years due to management of corporations and investors. (Capital Value, 2018)

The target groups that are affected the most by the severe housing shortage are starters on the housing market. These are people in their end-twenties and thirties that earn too much for the social-sector but not enough to be able to enter the housing market due to the rising housing prices. Also, elderly are affected that want to downsize their living environment. (Gijzel, 2018) As a result of this situation many people that work in the city, cannot find a proper dwelling in close proximity of their work, resulting in unsustainable urban networks with a vast pressure on transportation. Eventually, these unsustainable urban networks will but vast pressure on the economic viability and growth of the city and asks for a new insight in possible solutions for the housing issue.

1.1.3   A changing economic environment; sharing

The initial growth of the cities, is built upon a traditional economic landscape, where the economic relationship is based on a financial contract between the producer and the consumer. Nevertheless, it is this landscape, with its traditional economic structures that is undergoing a comprehensive change. With the emergence of peer-to peer, or in other words collaborative, collective or sharing businesses like Aibnb and Uber, a new economic landscape opened up. This *sharing economic landscape* breaks up the traditional relation between producer and consumer and, often through digital platforms, offers the consumer new accessibilities to the desired products: consumer to consumer, product to product, product to multiple consumers or consumer to multiple products.

*more text about sharing economy

According to Nielson, a global information and measurement company, there's high demand for the sharing economy – especially in emerging markets, where it's tipped to accelerate growth by giving consumers access to services they could not traditionally afford. (French, 2015) This is where the sharing economy presents its financial incentive. Not only financial but also environmental and social incentives are presented. Advocates claim the sharing economy is creating a stronger sense of community while reducing waste and pollution. (French, 2015) Altogether the sharing economy 'focusses on the sharing of underutilized assets, monetized or not, in ways that improve efficiency, sustainability and community'. This is closely aligned with the term collaborative economy that 'focusses on collaborative forms of consumption, production, finance and learning. (Rinne, 2017)

As the housing sector is an intrinsic part of the general economy, it simultaneously with the emergence of the sharing economy, shows examples of shared housing. Herein, collaborative, communal, collective, cooperative and shared housing are all alternatives of sharing living environments. (Vestbro & Horelli, 2012, p.315) Nevertheless, the question remains whether these shared living models also advocate the financial, environmental and social incentives the general sharing economy does.

1.2   Literature & Market Studies

Introduction
With the rise of a new economic environment, a sharing economic landscape, new alternatives to urban housing present themselves simultaneously. The question arises whether these new sharing alternatives can actually address the presented housing issue in increasingly compact cities.

1.2.1   Housing in the compact city
With the current and still rising housing shortage in densifying cities, new solutions occur towards the supply of dwellings. Micro-housing together with shared housing are seen as the new solution for the large demand in inner cities.

The first micro housing initiatives occurred in dense cities like New York City and Tokyo, where housing prices have, already for years, been rising rapidly. The overall definition that is advocated comprises of 'any residential structure, foundation built or on wheels, with full utilities (electric/water/sewer) and living facilities (kitchen/bed/bath/commode) designed for full time occupancy that accommodates occupants at less than 27 m^2'. (Microshowcase, 2018) Here it is a fundamental combination between livability versus living density. As the micro dwellings are less than 27 m^2, smart interior design solutions play an important role in reaching for this livability. Five main drivers behind micro dwelling that can be acknowledged.

First of all, the *economic driver* of the lower cost of living on the dweller side. On the commercial side, developers of micro housing apartment units experience the upside from adding more units in a given building footprint. Secondly, the demographic driver. In the last 35 years, in the Netherlands, the number of one-persons households has risen with over the 230% (CBS, 2015). It is expected that by 2050, almost 3,5 million inhabitants will be part of a one-person household, which represents 40% of the total against the 30% in 2006. (CBS, 2007) A person household is, because of the lack of space, the main target group for micro dwellings. This coincides with the increasing individualistic urban society.
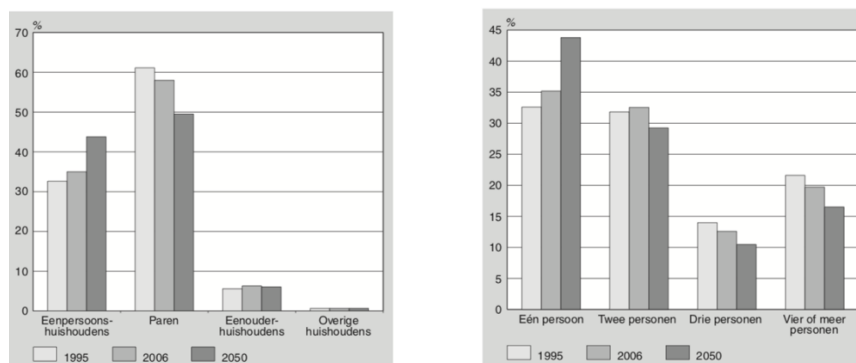

Figure 2. Demographic Trends (CBS, 2007)

Thirdly, many dwellers are motivated for micro living due to lower ecological footprint. Still it is believed, that this is never the main driver. This driver correlates with the fourth driver, that represents a growing urge for more simpler living, which represents a more sustainable life on a more ecological and personal level. This is where the *micro housing movement* finds its position (Microshowcase, 2018) The final driver, presents new technological innovations that provide elements that were first part of a

dwelling and can now be outsourced. Think of transportation like Uber, laundry facilities or the delivery of food.

Although the same drivers can be acclaimed for shared housing, one main difference is set in the social incentive for shared living. With this it could be stated, that shared housing is a more socially evolved alternative to micro living. Where micro housing comprises of smart tiny apartment units, shared housing embodies tiny private housing units together with collective facilities. Because of the possibilities the sharing of facilities provides, this housing typology can actually provide a solution not only for one-persons households, but also for multi-person households like small families.

Thus, where micro housing facilitates the increasing individualistic society, it does not tackle the social issues of loneliness or economic and environmental issues arising from a densifying city. Therefore, as earlier stated by Skovbro (2002), shared housing can be seen as a more economic, environmental and social sustainable approach towards the housing issue. The entrepreneur behind London start-up The Collective has said home ownership will become a thing of the past, while other say co-living could solve the housing crisis in many cities like London. (Gibson, 2017)

1.2.2   Concept of co-housing
The widely acknowledged term for shared housing, representing the general concept of sharing within living environments is *co-housing*. Co-housing embodies the collection of the variations in sharing concepts ranging from collaboration, cooperation, community and collectivity.

1.2.2.1 Concept of Collaborative, Communal, Collective & Cooperative, Housing
There are several concepts that have been used to denote the same phenomenon of housing with common spaces and shared facilities. It ranges from collaboration between residents to the promotion of a sense of community or just the rational organization of a housing block.

The term "*collaborative housing* refers specifically to housing that is oriented towards collaboration among residents" (Vestbro & Horelli, 2012, p.315) It comprises often out of some sort of collaborative activities where people act together, collaborative, towards a certain goal. Co-building is an example of collaborative housing. 'Communal housing' on the other hand, "is used when referring to housing designed to create a community". (Vestbro & Horelli, 2012, p.315). 'Collective housing' emphasizes on the collective organization of housing and services within a building or area. Finally, 'cooperative housing' does not imply any shared living situations but only relates to cooperative ownership of housing. (Vestbro & Horelli, 2012, p.316)

History of sharing

1.2.3   History of shared living (incentives, examples)
Shared living is not a phenomenon of the 21st century and today's ideas about co-housing have been influenced by historical examples. (Vestbro & Horelli, 2012, p.318). Sharing environments that give shelter date back to the beginning of mankind. Since the middle ages the incentives for shared living range from religious ones to social and even utopian incentives.

Religious incentives for sharing

In the middle ages the first organized shared living concepts arose with the increasing influence of the church, where there was religious reasoning for living in a commune.
*more text about religious background

Utopian and social incentives for sharing

A well-known influential thinker in the middle ages, was statesman and humanist scholar Thomas More. In his book 'Utopia, a place nowhere' (1516), "he describes a society in perfect order, with equal education for men and woman, and without private property." (Vestbro & Horelli, 2012, p.318) He continues with the task of every citizen to work part of his/her life for communal purpose and communal meals are consumed in large collective dining spaces. About three hundred years later, other utopian socialist advocated similar ideas about a utopian society. "Communal ownership, order and productivity instead of chaos and parasitism that was the result of the European means of production -the industrial age-" was advocated by Charles Fourier. (Vestbro & Horelli, 2012, p.318) Same as More, Fourier suggests smaller cities of a maximum of 1800 inhabitants, where everybody engaged in household shores, agriculture and small-scale industrial production. He called these settlements the 'Phalanstère's'. Communal spaces for everybody ranged from dining halls, schools, kindergartens, libraries, lecture halls, a theatre and other collective facilities. (Vestbro & Horelli, 2012, p.318)

Image 1. Fourier's Phalanstere by Charels Daubigny. "The arcade stretching through the whole building complex connects individual dwellings with communal spaces." (Vestbro & Horelli, 2012, p.319)

Disciples of Fourier, took their European utopian ideas to the United States of America. Here Dolores Hayden, analyzed the US communitarian settlements from 1790 to 1930, of which she established certain design solutions based on the wish to establish self-sufficient settlements. Within these settlements both, again, industry and agriculture were incorporated. She categorized the different designs into three main motives. (Vestbro & Horelli, 2012, p.318)

First of all, *the garden ideal*, wherein placement in an idealized landscape with an emphasis on horticulture and agricultural productivity. Secondly *the machine ideal*, characterized by industrial productivity and political inventiveness. Finally, *the model home idea*, wherein focus on good design and new lifestyles were center of attention. (Vestbro & Horelli, 2012, p.319) As coinciding with that period in time, in all these motives, the equality between men and woman is an important driver.

"At the end of the nineteenth century a public debate took place in some European countries about the need of the growing middle-class to find solutions to the problem of hiring domestic servants at an affordable price." (Vestbro & Horelli, 2012, p.321) One of the ideas that were introduced was to 'collectivize the household help', by actually producing urban residential complexed in such a way that many households could share meal production for example. These buildings, called *one-kitchen buildings*, were first seen in Copenhagen around 1903, and later in Stockholm, London, Berlin, Zurich and Vienna. The main incentive was to save costs, as the domestic servants "kept demanding for higher wages and shorter working hours." (Vestbro & Horelli, 2012, p.321)
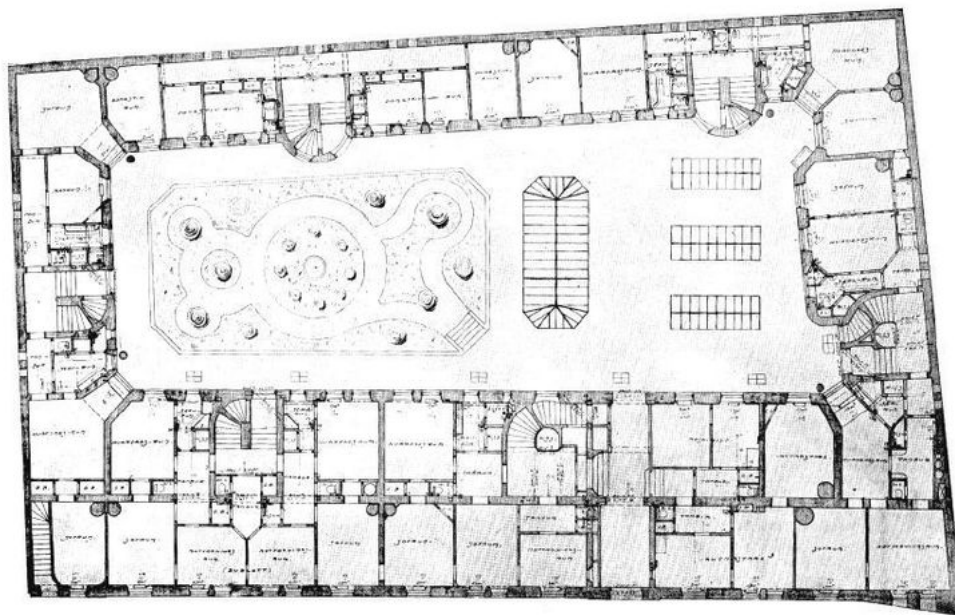

Image 2. Floorplan of Hemgården in Stockholm. All sixty apartments lack private kitchens and maids' rooms. The central kitchen is found below the glass roofs in the yard. Meals were sent to the apartments by food lifts. (Vestbro & Horelli, 2012, p.321)

In Hemgården, a one-kitchen building in Stockholm, the apartments were deprived from spaces like the kitchen, the maid's room and some storage space. A central kitchen and a bakery replaced the private kitchens and were positioned in the basement of the complex. Food lifts made sure the ordered meals were delivered to the apartments three times a day. Although experiments with one-kitchen houses were brought to a halt around 1922, the debate about new house forms was continued, and was soon dominated by the modernistic ideologies. Within these thoughts, the *kollektivhus* (collective house) was introduced in Sweden. The social driver behind the collective house was to enable women to combine housework with paid employment, in order to achieve female emancipation. (Vestbro & Horelli, 2012, p.322) These first collective houses were not based upon cooperation, but on the division of collective labour. As in Sweden the public debate promoted collective housing but without public financial support, it was the private housing company Olle Engkvist, who produced five collective houses in

Sweden. A well-known and last collective housing project the company realized in the mid-fifties was the Hässelby Family Hotel. The complex comprised out of 328 private apartments, all in connection to collective facilities like a restaurant, cafeteria, big party room, a day-care center for children, a gymnastic hall, a small shop, a reception, a hair-dresser, a laundry and a meditation room. (Vestbro & Horelli, 2012, p.324) It has been inhabited by first wealthy inhabitants and followed by young families open for alternative living environments.

Another initiative, evolved from the Hässelby Family Hotel concept, was the BIG Group. They "rejected the idea of separating productive and reproductive work nor did they agree that housework should minimized. (…) It was argued that the disadvantage with traditional housework was that it was carried out in isolation by a small household." They claimed that combining shores like cooking and child-care within a larger group, the shores eventually becomes more enjoyable. The BIG Group considered a complex for fifteen to fifty households an appropriate size for this new type of co-housing. They claimed that if each house would be abstaining only 10 per cent of the normal apartment space, the collective space would get a substantial amount of communal facilities without increasing costs. The new model was called "the small collective housing unit based on togetherness through common work' or the 'self-work model. (Vestbro & Horelli, 2012, p.325)

Analyzing these historical examples of co-housing, it is clear that programming of collective spaces, are all derived from the incentive of affordability. Equality in possibilities in daily life plays an important role in the utopian and social ideas about sharing and reaching this equality requires certain collective solution for the posed problem. Projecting this sense and urge of equality to the current market, it could be advocated that equality in terms of available facilities and space is the new form of urban equality people are aiming for. 'You have the right to live in the increasingly expensive city center and sharing spaces will provide you that possibility.' On the other hand, the sharing of labour as seen in the utopian models of More and Fourier, is hardly presented in the 21st century examples of co-housing.

Where collaborative and shared housing embodies a long history of ideological, social and even religious incentives (Krokfors, 2002, p. 309), the same housing models currently embody a changing incentive in addressing housing issues in the 21st century densifying city. The motive for shared living or micro living in dense cities is of a financial character opposed to the earlier 19th and 20th century utopian and idealistic incentives for community living. The question remains if 21st century co-housing can not only address its financial motives but also provide for a sense of social collectiveness.

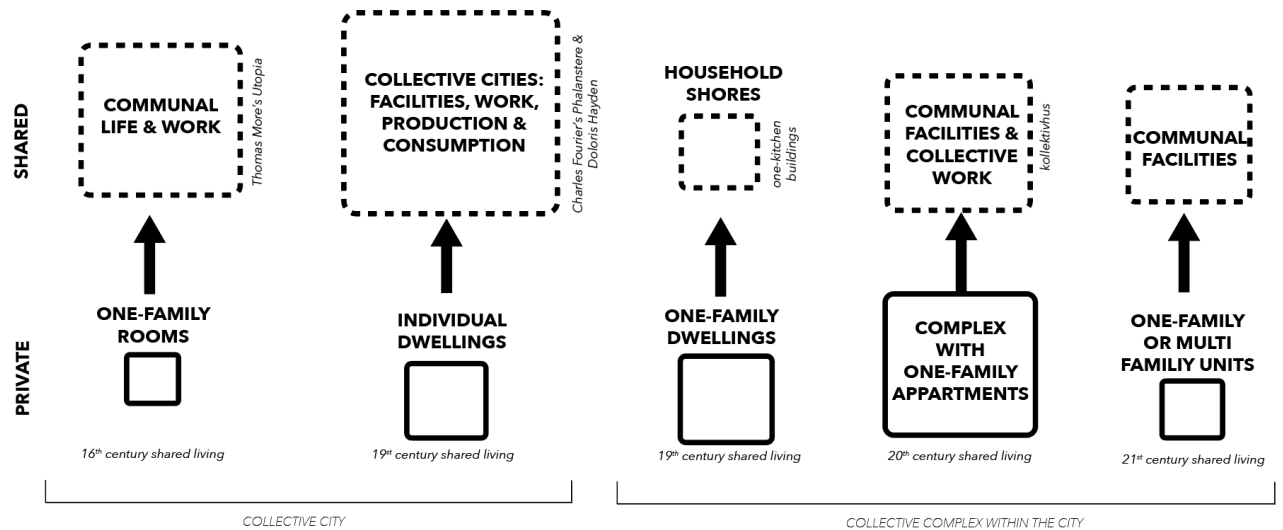*rewrite this conclusion; be more precise, with what is the next question.

Figure 3. Historical programming of shared living (own illustration)

Contemporary sharing

1.2.4   21st century shared living (ideology versus economy)

1.2.4.1   Economic climate and expectancies
- Current economic climate is doing well and it is expected to continue this economic growth in the coming years. This will keep putting pressure on the demand for proper housing.

1.2.4.2   Economic incentive for shared housing
"Co-living is currently growing in popularity in major cities such as London and New York, where increasing housing prices are forcing residents to look at a new and adaptive ways to rent in the city." (Overstreet, 2018) Although even in 2016, the contemporary concept of co-living was in its early, more experimental stages, its ambitions and inspirations were already widely discussed. Only two years later, the concept of co-living has refined its mission and is finding success through the collection of common themes: "a yearning for social connection, participation in an increasingly shared economy, and the affordability of a convenient housing solution." (Overstreet, 2018) Herein it is clear, the social, environmental and financial incentives are intertwined.

1.2.4.3   The Hong Kong divided apartments
- Disastrous example of how people, without proper management, start to share their living spaces on their own, with horrible living conditions as a result.

1.2.4.4   The individualistic society: the social incentive for shared housing
- More and more people, in the bigger cities, live an individualistic life with urban loneliness as a result.

Kaley Overstreet (2018) is describing modern-day co-living as apartments that "are more than just a place to live." Co-living functions as a catalyst for social interactions while removing "everyday tedious tasks of cleaning, paying bills, and buying furnishings."

1.2.4.5 The environmental incentive for shared housing
- Putting less pressure on the environment through the sharing of space, facilities and consumption.

1.2.5   21st century examples of shared living

Since the 2010s, co-working and co-living has become a new topic within the debate about use of urban space. With mostly social incentives, slowly new initiatives are developed around the world.

1.2.5.1 WeLive, New York & WeLive, Seattle

The WeLive initiative was an evolution from the earlier initiated concept of WeWork, of which the first buildings were developed in 2010 and now own 171 locations over 18 countries. (WeWork, 2018) With WeLive, two complexes are developed in New York and in Seattle. Their mission statement is as follows: "WeLive is a new way of living built upon community, flexibility, and a fundamental belief that we are only as good as the people we surround ourselves with. (…) WeLive challenges traditional apartment living through physical spaces that foster meaningful relationships. Life is better when we are part of something greater than ourselves." (WeLive, 2018)

With the possibility to move in for months, or just stay for a few nights, WeLive actually represents more of a hotel concept. (WeLive, 2018) The private unit possibilities range from studio units to 1, 2 or 3+ bedroom units. Each private unit is outfitted with living and sleeping areas, a kitchen and a bathroom. The collective facilities comprise out of fitness spaces, laundrette, workspaces and access to the WeWork buildings, communal chef kitchens and other "dynamic common areas". Besides private and collective facilities, many household shores are taken away and part of the service of the WeLive concept. (WeLive, 2018) Pricing ranges from $3.050 a month for a private studio to $7600 a month for a four-bedroom unit.

1.2.5.2 The Old Oak Collective, London

The Collective Old Oak is an initiative of The Collective, a company that focusses on creating "ground-breaking spaces". (The Collective, 2018) Their first initiative was The Collective Old Oak in the city of London – and two projects currently in development - with the clear mission to "build a connected and more inspired world that's more alive, more together and more collaborative." (The Collective, 2018) From the believe that people are most alive when they are together, The Collective designed homes and workspaces that "inspire and bring people together, unlocking a new lifestyle for the curious and ambitious." Starting with a variety of private spaces, a vast collection of communal facilities is serving the entire complex together with a complete structure of service to reduce household shores and administrative hassle. The private possibilities range from a studio apartment with or without ensuite bathroom, a shared ensuite unit or a share ensuite with kitchenette. The collective spaces comprise out of a library, cinema, garden and roof

terrace, laundrette, gym, spa, coffee shop, communal kitchens, dining rooms, lounge areas, a games room and another restaurant and bar.

1.2.5.3 Room, Bali
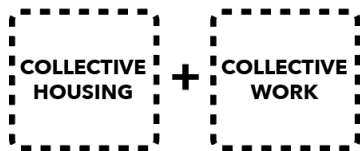
Mission:

1.2.5.4 The Fizz Concept | Amsterdam, Vienna, Berlin

Mission:

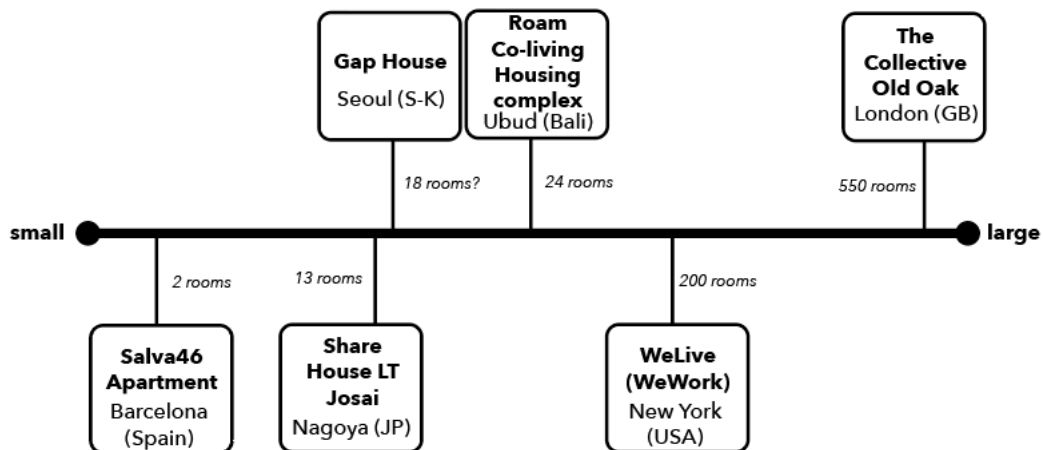### 1.2.5.5 Ollie | Queens, New York

Figure 2. International well-known examples of shared housing (own Ill.)

Future possibilities of sharing

1.3   Identification of problems that remain to be solved
- Can these historical and contemporary shared housing models be projected towards the future? Can shared housing be seen as a solution for the housing shortage in urban areas? Can developers be stimulated in the development of shared living?

1.3.1   Shared living for affordability

- Shared housing program as affordable solution for different target groups
- Existing examples for young single professionals
- Is it also possible for other target groups?
- Affordability for the mid-segment rental sector (700-1000€ a month)

1.3.2   Shared living for profitability

- Existing examples with the incentive of communal living; now from social incentive
- Can it also be an interesting alternative for commercial developers?
- Can developers be triggered to invest in shared living concepts in order to serve more house seekers?

1.3.3   Willingness for shared living

Interesting is to look into the conducted research of the research lab of IKEA called SPACE10, where they, together with digital designers Anton & Irene launched One Shared House 2030. Herein they, through a survey presented to 7.000 people from over 150 countries, learned about what people think about the concept of co-living. (Overstreet, 2018)

1. **Most people would prefer to live in the smallest possible community–no more than 4-10 people**
2. People would prefer to live with a different mix of backgrounds and ages
3. **The most popular members to participate would be couples without children, and single women**
4. The least favorable would be babies and teenagers–and single dads if you live in Asia
5. **People would prefer to live in the city, even when self-driving cars make it easier to commute**
6. The main reason people say they'd want to co-live is to socialize with others
7. **They'd also want their own private space that's off limits to others**
8. A lack of privacy would be the biggest concern for most people
9. **For residents over 60 the greatest concern would be having arguments and other people's mess**
10. People would be most willing to share the internet, garden, kitchen, utilities, and workspaces
11. **But they would rather share cleaning responsibilities than groceries**
12. Sharing bedrooms would definitely be off limits
13. **And most people would prefer to have their own bathroom, too**
14. Democratic principles would run strong in the shared house
15. **People would prefer to vote on new members, rather than have the decision taken for them**
16. And most would prefer to have equal ownership of their shared house
17. **The most important qualities of housemates are cleanliness, honesty, and being considerate**
18. The least important qualities are being handy, funny, and attractive
19. **Most people would be willing to pay for extra services, like having healthy food delivered often**
20. People would prefer to furnish their own space–and let designers furnish the common areas
21. **People may disagree about many things, but pets will be very welcome in the shared house**

Figure 4. Result of the One Shared House 2030 survey (Own illustration based on Overstreet, 2018)

What is striking about these results, is that it contradicts the output initiatives WeLive or the Collective present in their first co-living complexes. Where the research of Space10, concludes with the wish to live in smaller communities, the WeLive and Collective buildings more represent the character of a large-scale hotel with 200 to even 500 units. This balance between large-scale housing and the wish for intimate human interaction is one that had not yet been developed in a way that it represents the ideal

living situation within the shared-living concept. It could be argued that the survey was conducted on people all over the world and from all ages, while the current target groups of these co-living projects are focusing on young, one-person households and that this is not an equal comparison. (Overstreet, 2018)

1.3.4   The Concept of XS>XL Housing
- Framing XS>XL Housing: small housing, elaborate ways of living

1.4   Sharing is Caring: Societal and scientific relevance of these problems and of the subject in general
- Environmental relevance: reducing work traffic, compact city is a sustainable city
- Social relevance: working and living together, social mix in cities
- Economic relevance: affordable housing
- Scientific relevance: providing possible answers to the housing issue, interesting for housing corporations, developers and municipalities to widen the idea about possibilities.

2   RESEARCH QUESTIONS

2.1   Main research question

How can shared living [XS>XL Housing models] provide an affordable and yet profitable solution for the housing issue in increasingly compact cities?

2.2   Research sub-questions

Introduction
- What is the incentive for the research into new housing models/typologies for the densifying, compact city?
- Why can shared housing be seen as a possible solution for the housing issue?
- How can shared housing be identified? [introducing XS>XL housing model)

History of sharing
- When did the first shared housing models occur/arise?
- What is the historical background of unconventional living forms like shared housing?
- What are the historical incentives for shared housing?
- What was the target group of these collective houses?
- What are examples of historical shared housing projects?

Contemporary sharing
- What are nowadays incentives for shared housing?
- What are existing examples of shared housing projects? (introduction to case studies)
- What are the differences between ideological and commercial shared housing?
- What elements of impact (variables) can be identified in regards of programming shared housing?
- How can a model provide insight in the elements influencing the configuration of co-housing models?
- How can these elements of impact be framed into a research model in order to be able to compare programmatic relations?

Future possibilities of sharing
- How can these programmatic frameworks be translated into future housing concepts?
- How do expected trends influence the variables of the shared housing model?
- How can the shared housing model provide insight in the possibilities for XS>XL Housing in densifying compact cities of the future?
- Can these concepts be projected into realistic solutions for the Dutch housing market?
- What are the programmatic and financial requirements for affordable shared housing?
- What are the programmatic and financial requirements of profitability of shared housing?
- What are the programmatic requirements of social shared housing?
- Can these affordable, profitable and social requirements of social housing be translated into actual design & business concepts?

3   RESEARCH METHODS

3.1 Type of study

The research will embody first an explorative research within the history and incentives of shared housing concepts. Using this as an underlay, a more quantitative research is done into the programming for shared housing framing this into various shared housing models serving different target groups and locations. The quantitative research is conducted through case study research upon the programming of shared living aligned with its financial implications.
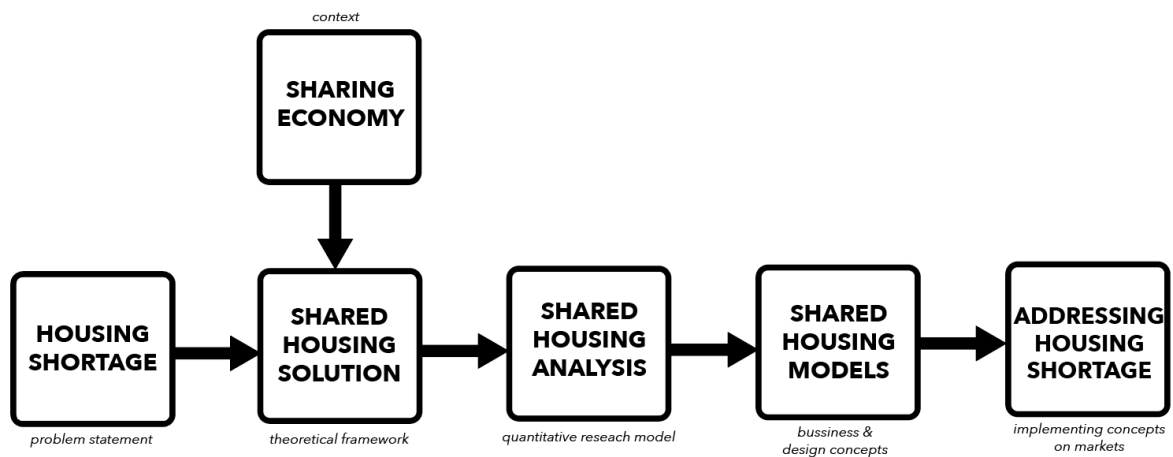

Figure 3. Research proposal (own ill.)

3.2 Methods and techniques
- Literature study
- Case studies [desk research & possibly interview]
- Designing programmatic framework

3.3 Data collection
- Archival collecting for literature study and case studies

3.4 Data plan
- Framing a separate data document where the information per project is collected

3.5 Ethical considerations
- Framing a separate data document where the information per project is collected

4 RESEARCH OUTPUT

4.1   Goals and objectives
- Providing an affordable housing solution for all target groups in the densifying city
- Providing a feasibility quick scan for developers, municipalities & housing-cooperations in regards of shared housing
- Providing insight in the possibilities shared housing can serve in a changing economical, social and environmental society
- Providing a/several design concept(s) for shared housing

4.2   Deliverables
- Insight into possible ways (housing models) of addressing the housing issue through the development of shared housing
- Model with variables of impact in relation to each other, which can be translated into programming models in respect to target group, project size or location

4.3   Disseminations and audiences
This research will be of great value, firstly, for the municipalities addressing the housing issues in their city. Not only the municipalities will get a better grip on the possibilities in certain areas of the city to address the housing issue in an affordable way, but also project developers and housing cooperation's will, with the output model, get a first conceptual idea about the business opportunities of investing in affordable housing.

5   PERSONAL STUDY TARGETS
- Translating a business model into design concepts
- Designing possible typologies for shared housing developments

6   RESEARCH PLAN

6.1 Main tasks

In order to get a grip on the demand of the posed research, a personal planning is put forward. See figure 4.
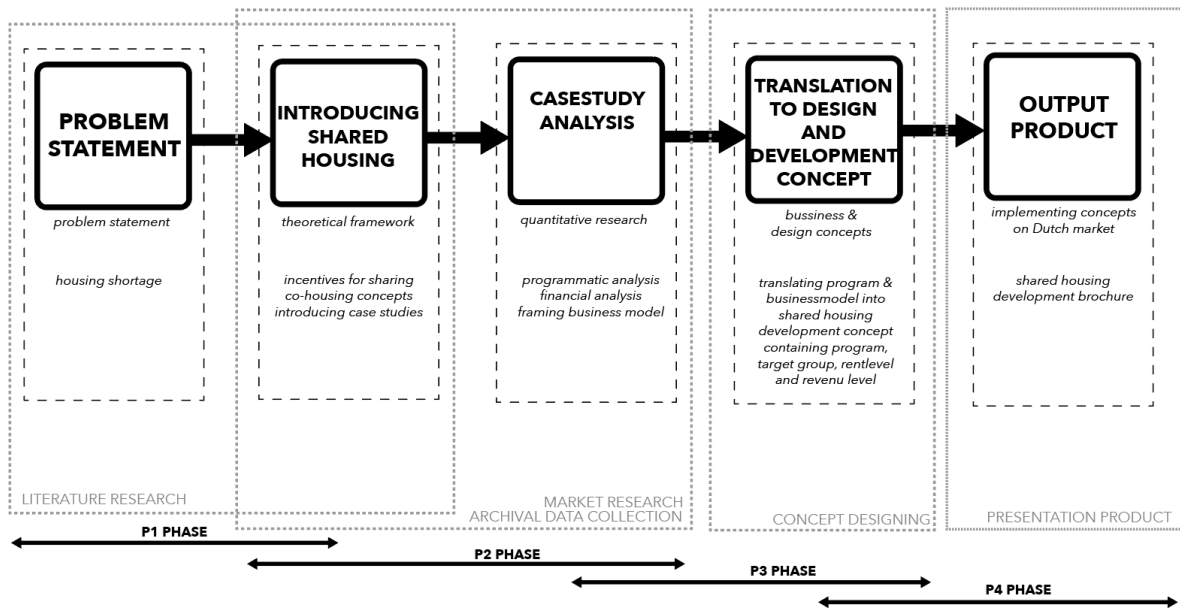
RESEARCH METHOD /WORKPLAN

Figure 4. Research plan (own ill.)

6.2 Main milestones (including deliverables)

6.3 Interdependencies between tasks and milestones

7 REFLECTION

8   SHARED HOUSING GLOSSARY

Affordability

Shared Housing

Compact City

Communal housing

Collaborative housing

Collective housing

Shared housing

Cooperative housing

Middle-segment housing	€700-950€ rent per month (http://middensegment.woningmarktbeleid.nl)
Peer economy	focus on peer-to-peer (P2P) networks in the creation of products, delivery of services, funding and more.
Sharing economy	focus on sharing of underutilized assets, monetized or not, in ways that improve efficiency, sustainability and community
Collaborative economy	focus on collaborative forms of consumption, production, finance and learning ("collaborative consumption" is closest to the orthodox sharing economy definition)

9   BIBLIOGRAPHY [ANNOTATED]

Journals

Hamari, J., Sjöklint, M., & Ukkonen, A. (2015). The sharing economy: Why people participate in collaborative consumption. Journal of the Association for Information Science and Technology. Volume 67, Issue 9, p 2047-2059.

Krokfors, K. [2012] Co-Housing in the Making. Built Environment. Volume 38, Nr. 3, July 2012, pp. 309-314(6). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.309

Descriptive overview of the input of the other articles in this issue of the Built § Environment. Short introduction of the concept of Co-Housing and finalizing with the potential it has to become a new dominant housing typology in cities around the world.

Vestbro, D.U. & Horelli, L. [2012] Design for Gender Equality: The History of Co-Housing Ideas and Realities. Built Environment. Volume 38, Nr. 3, July 2012, pp. 315-335(21) Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.315

First, Vestbro and Horelli make an effort to clear up any misunderstanding about the several terms regarding shared housing. Collaborative, cooperative, collective and communal housing types are distinguished from each other in terms of ways of living and social structures of the inhabitants. Vestbro and Horelli focus on the relation between physical design of co-housing and its social content. They discuss the work of Caldenby (1992) who has analyzed the typologies of co-housing structures as well as the work of Williams (2005) who has collected the design factors regarding social interaction in co-housing models. The article furthermore, besides design factors for successful co-housing, discusses the influences over time on the co-housing models.

Korpela, S. [2012] Casa Malta: A Case Study of a Contemporary Co-Housing Project in Helsinki. Built Environment. Volume 38, Nr. 3, July 2012, pp. 336-344(9). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.336

Glass, A.P. [2012] Elder Co-Housing in the United States: Three Case Studies. Built Environment. Volume 38, Nr. 3, July 2012, pp. 334-363(19). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.345

Fromm, D. [2012] Seeding Community: Collaborative Housing as a Strategy for Social and Neighbourhood Repair. Built Environment. Volume 38, Nr. 3, July 2012, pp. 364-394(31). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.364

Ache, P. & Fedrowitz, M. [2012] The Development of Co-Housing Initiatives in Germany. Built Environment. Volume 38, Nr. 3, July 2012, pp. 395-412(18). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.395

Marckmann, B. e.a. [2012] Sustainable Living and Co-Housing: Evidence from a Case Study of Eco-Villages. Built Environment. Volume 38, Nr. 3, July 2012, pp. 413-429(17). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.413

Delgado, G. [2012] Towards Dialectic Utopias: Links and Disjunctions between Collaborative Housing and Squatting in the Netherlands. Built Environment. Volume 38, Nr. 3, July 2012, pp. 430-442(13). Alexandrine Press. DOI: https://doi-org.tudelft.idm.oclc.org/10.2148/benv.38.3.430

Books

Ma, D., Wang, S., Fung, R. & Leung, A. (2017) Bridging the housing gap. Is co-living an affordable alternative for Hong Kong's millennials? Hong Kong: Jones Lang LaSalle.

Skovbro, A. (2002) Urban densification – a sustainable urban policy? Southhampton: WIT Press

United Nations (UN) , Department of Economic and Social Affairs, Popoulation Division (2014) *World Urbanization Prospects: The 2014 Revision, Highlights* (ST/ESA/SER.A/352)

Websites

http://www.kollektivhus.nu/english/index_eng.html

Gibson, E. (2017) IKEA lab Space10 launches website to "revamp" co-living for 2030 retrieved from Dezeen on 27th of March 2018,
Dezeen (2017) https://www.dezeen.com/2017/11/14/one-shared-house-2030-ikea-space10-lab-anton-irene-co-living-website-platform/

https://www.thecollective.co.uk/coliving/old-oak#coliving-rooms

Dezeen (2016) Six best Co-living Develpments Around the World, retrieved on 27th of March 2018 at https://www.dezeen.com/2016/07/08/six-best-co-living-developments-around-the-world/

Florida, R. (2017) How Cities Are Making the Global Housing Crisis Worse; retrieved 4th of May 2018 at https://www.citylab.com/equity/2017/07/solving-the-global-housing-crisis/533592/

Moran, T. (2017) The Netherlands's Looming Housing Crisies; retrieved the 4th of may 2018 at. https://www.ozy.com/fast-forward/the-netherlands-looming-housing-crisis/76272

Retrieved the 4th of May 2018 at: https://www.capitalvalue.nl/nl/nieuws/woningtekort-bereikt-hoogtepunt-in-2018-1

Gijzel, R. (2018) Retrieved the 4th of May 2018 at: http://middensegment.woningmarktbeleid.nl

French, L. (2015) Sharing economy shakes up traditional business models. Retrieved the 10th of may 2018 at: https://www.theneweconomy.com/business/the-sharing-economy-shakes-up-traditional-business-models

Rinne, A. (13 dec, 2017) What exactly is the sharing economy? Retrieved 10th of May 2018 at: https://www.weforum.org/agenda/2017/12/when-is-sharing-not-really-sharing/

https://microshowcase.com/microdwell/microhousing-an-overview/

Overstreet, K. (27th of March 2018) Sharing Your Home with Strangers: What does the Future hold of the Co-Living Craze? Retrieved 13th of May 2018 at https://www.archdaily.com/890685/sharing-your-home-with-strangers-what-does-the-future-hold-for-the-co-living-craze

10 APPENDICES

Bevolkingsomvang en aantal huishoudens
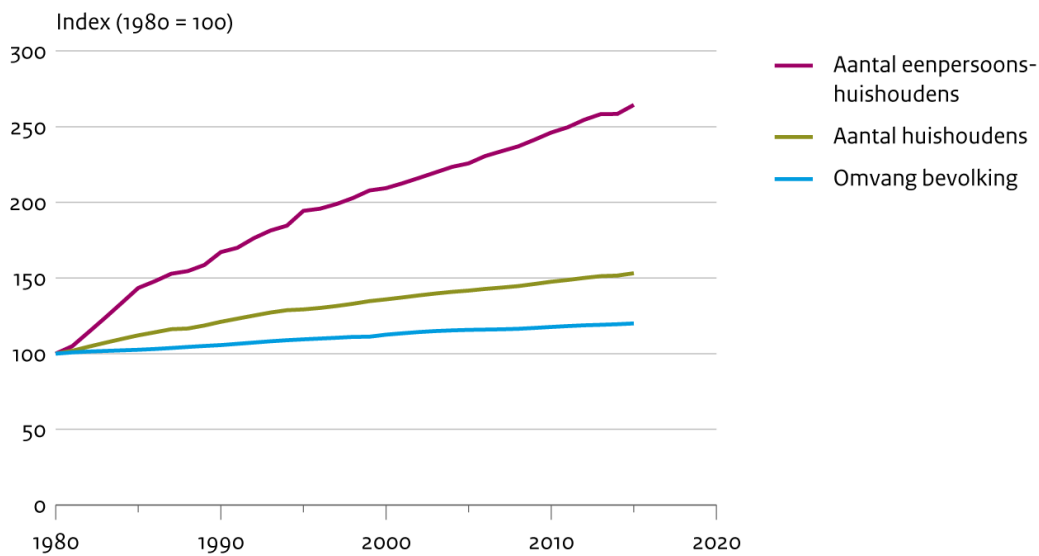
Bron: CBS

CBS/dec15
www.clo.nl/nl000116

11 PERSONAL PLANNING

Vrijdag 4 mei   naar 3000 woorden

Donderdag 10 mei   naar 4000 woorden
Vrijdag 11 mei   naar 5000 woorden

Zondag 13 mei	naar 6000 woorden	*Hand in for tutoring*
Vrijdag 18 mei	naar 7000 woorden	
Maandag 21 mei	naar 8000 woorden	
Vrijdag 25 mei	naar 9000 woorden	*Hand in concept*
Zaterdag 2 juni	adjusting text	

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