

The re-creation of home in a foreign urban environment

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Abstract

This thesis addresses the challenges encountered when people have to face a shift in the physical location of their home, entailing social and cultural changes. It also wants to develop a reflection about conception of reliable places for contemporary urban “nomads”, as mobile workers, suitable for development of a feeling of home and considering social sustainability. The main outcome of the work is a toolbox of design strategies of use for design professions, considering different scales. Indeed, architects and designers in general are to deal with this topic because of their role in shaping environment and people living in it.

The first part of the work consists of research, with a theoretical formulation of the subject based on a literature review. This is then extended by more practical explorations, including architectural examples and other media references. This research results in a first set of criteria. In the second part of the thesis, a second set of more specific criteria is derived from the scenario of a mobile worker. Both sets are used as a basis to develop and discuss design strategies. Those strategies are relevant for creating favourable conditions to develop a home environment at different scales. They are compiled in a toolbox of use for design professions. The toolbox is organised in four scale levels (indoor building, outdoor building, neighbourhood and city), in order to fully address the issue of integration in a new environment. In fact, being at home is not only about the house’s walls: beyond the private sphere, people can also feel at home through social interactions in house’s common spaces as well as in their neighbourhood or city. A critical reflection is offered by giving an example of implementation of the toolbox’s components in Gothenburg. This proposal is about individual houseboats-units and common spaces along the canal between Grönsakstorget and Kungsparksplatsen, on Kungsparken’s side.

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1. Introduction

This thesis addresses the challenges encountered when people have to face a shift in the physical location of their home, entailing social and cultural changes. Loss of feeling of home and lack of bonds to the place often induce psychological challenges and need to be thought through. Tackling such issues appears to be particularly relevant in a context of globalisation, where communication and mobility between cities keep on increasing, allowing people to go further and further, more and more often. This is not only about mere leisure mobility, but also about working mobility. In such a context it is more likely that people have to change environment, becoming contemporary urban nomads facing social and cultural challenges. The question is to understand how to deal with people's mobility considering social sustainability. Indeed, social sustainability entails pertinent concepts in a context of social and cultural changes, such as social equity and maintenance of socio-cultural particularities. What is more, in such a context, people might need more reliable places. Indeed, one of the issues when changing environment is to find a new *home*, which actually means more than finding a new *house*. It is a lot about the ability to create new bonds with the new place, and even if it is a natural process, it might not necessarily happen anywhere or easily. It should be possible to accelerate this process necessary to one's personal stability, especially because mobile people do not have so much time to create bonds. The thesis focuses on home issues, and more specifically on recreating a feeling of home, because home can be considered as a catalyst for integrating in a new urban environment. Indeed integration is one of the challenges encountered when moving to a new place, as in the case of mobile workers developed in the thesis. That is why the thesis explores potential design strategies with the purpose of enabling people to integrate in their new environment, by creating places suitable for development of a feeling of home, at different scales.

1.1. Background to the topic

1.1.1. Personal interests and experience

The topic of this master's thesis takes its roots in several personal experiences and interests, that I have carried with me for a more or less long time. "Home", the living place and its social and psychological dimension, has been one of the incentives to start studying architecture for me and I have kept on thinking about this issue in various ways throughout my bachelor and master. A "Naval architecture" course I attended during my bachelor in France brought up the question of living and working in a small and mobile space. With my first semester at Chalmers, I started to become more familiar with the field of social sustainability within the Local context studio, with a project about mixed use apartments; the third semester gave me opportunities to start thinking about bringing the topic of home into my thesis in different ways.

Another topic of main importance for me is something that I would call the "in-between". I started to formulate it in my bachelor's report, which was about "nomadism", but became even more important with the trips made since finishing the bachelor (Indonesia, Kenya within the Reality studio, USA). *Travelling* far from home brings the question of the temporary but also of being, for once, the stranger. *Living* far from home (the original one), as an exchange student here in Sweden, further emphasized these questions and the fact that we definitely need, and recreate, another home wherever we are, even in the most unexpected places – which in my case turned out to be a floating house on the Göta älv.

1.1.2. Contextual relevance

GLOBAL TRENDS

When looking at the concept of home, I want to have a focus on increasing integration, which seems relevant in a context of social problems due to migration, entailing a risk of being rejected and tackling issues of cultural changes.

Indeed Easthope (2004) and Harvey (1996) report that cohesion and unity of communities has recently decreased in the context of globalisation and with the phenomenon of “time-space compression”. Easthope emphasizes this individualistic aspect brought by globalisation by pointing out its “volatile” character, with manifestations such as “people [spending] more and more money on improving the images of the houses and apartments where they live” (Easthope, 2004:9). Massey (1995) also asserts that our environment is getting more and more fluctuating and confused, which explains why people seek for more reliable places.

Thus thinking about home in the actual context of globalisation seems particularly relevant. With globalisation but also natural disasters, people move more often, faster and farther, which makes mobility an important issue that we have to deal with. From a communicative point of view, it seems kind of regressive to suppress mobility opportunities. Thus this phenomenon is something that we need to control in order to integrate it in a sustainable way of living, promoting human exchanges and interactions in a constructive way.

However, mobility brings the issue of migration, and it is actually relevant to consider obstacles such as intolerance, segregation, even racism. Relatively recent escalation of far right parties in Europe (Morice and Rodier, 2012) is especially a sign of those obstacles’ presence. Nevertheless, these are not problems that should be left exclusively to politicians’ interventions. Designers also have a role in proposing answers to those issues. Indeed, the built environment in which we live has a direct and great influence on us. It affects the way we evolve at a personal level, but also the way we interact with people with whom we share our environment.

POSITIONING IN RELATION TO PRECEDENT RESEARCH AND ARCHITECTURE

I think it is important, as an architect, to consider those issues of recreating a feeling of home and of integrating in a new context. Indeed, architects conceive and build *spaces* but also have at the same time to think those spaces as *places* that people will inhabit: it is both about physical and mental environment. Most of the material about mental mechanisms of home was available in the field of environmental psychology. Environmental psychology is a multidisciplinary-oriented subject, and one of the disciplines it relates to is architecture. Indeed, environmental psychology discusses issues relevant to architecture: it addresses architecture’s “context”, the human environment. On the other hand, architecture sources gave me more information about physical projects of nomadic structures. The selected projects were not always realised and could be only experimental but had a strong inspiration and reflection’s potential.

Finding material about environmental psychology was quite easy: there are quite many articles available online. Same goes for emergency and mobile architecture, several compilation of examples are available in books. But sometimes, it was more complicated to find stringent sources about specific examples I had in mind from personal interests (for example about the traditional typology of caravanserais).

It has to be notified that some of the references in environmental psychology were already quite old texts (1970s or 1980s). A decision was made to still use those references, however it might be necessary to look at them a bit more critically, for quite a lot has changed in our societies since then.

1.2. Terminology

Throughout the thesis, a few terms appear recurrently. First it seems important to look at what is meant by the terms of the title:

Environment will be referred to in two different ways:

Physical or material environment, which is considered here as a spatial context, the surroundings of the living place;

Social environment, as the social and cultural context and human relationships developed in this context.

An environment which is **foreign** to someone (a newcomer) is an environment which can feature unusual cultural, social and communication patterns, as well as an unaccustomed built and natural environment. This challenges the newcomer's own patterns and habits, and if the difficulties this situation presents are not overcome, "foreign" might even turn into "hostile".

Home in the thesis is, more than a physical dwelling, a place where feelings of belonging, identity, attachment and security are developed. A *house* alone is not enough to create a *home*. Focusing on mental rather than built aspect entails that home will be considered at different scales, beyond the physical borders of a dwelling's walls.

Re-creation of home refers to the processes and means someone uses to re-establish lost, altered or challenged feelings formerly supported by another home, in another place and context.

Some other recurrent concepts appear during the development of the thesis. They are worth being discussed and defined as well, for they might be used in a more specific sense here than in everyday life:

Sustainable development includes many aspects: ecological, economical, social, political, technological... However when referring to sustainability in the thesis, the social perspective will be mainly taken into account. Vallance et al. (2011) identify three main components in

social sustainability. One is about "development", which is, in a material perspective, about tackling fundamental human requirements, or in a more immaterial perspective, about generating social equity. Another point is about creating a "bridge" between the different sustainability aspects. This is about shifting people's attitudes, for example to make them aware of ecological sustainability's relevance and goals. The last point is about "maintenance" of social and cultural particularities when they are subject to changes, and to what extent they can be preserved, accepted or rejected.

Mobility is to be associated with nomadism, referring to something non permanent in time and space, implying cultural shifts and bringing social issues.

The term **nomad** in the thesis should not be understood as the very romantic stereotype of the Tuareg and his camels' caravan. Of course some references to traditional nomadism will be given, as research and inspiring elements, however the rest of the time nomadism will be used in a more contemporary sense. Then a nomad should be comprehended as someone mobile, migrating, more likely in an urban environment. Mobility here is considered as big scale mobility, the nomad being able to travel to points very far from each other.

Why then consider nomads in urban environments and travelling big scale distances? The reason is that it seemed particularly relevant in the actual context of **globalisation**. This alludes first to an economical trend: companies set up exchanges more and more at planetary level. Thus human exchanges and mobility developed more and more as well, supported by the increasingly democratised possibility to travel long distances. Those issues, which took significant proportions relatively recently in human history, have to be addressed.

Designers are considered here as any profession shaping the living environment at any scale, and who are then likely to help people in the process of feeling at home. They might not only be the ones shaping physically the environment (interior designers, architects, planners and so on) but also

the ones reflecting on it (policy makers for instance).

A **mental mechanism** is a conscious or maybe more likely unconscious thinking process developed by someone in order to answer a specific challenging situation, a process which can be replicated in other similar situations.

1.3. Aims

The thesis wants, through the filter of home, to address issues faced by people who come from far away to work in new places (and might leave again).

Even if they are permanent places, which goes a little bit out of the limits of the thesis, it is interesting to consider the examples of Miljonprogram in Sweden or Grands Ensembles in France, for instance. In those cases, migrants were rejected in suburbs which became segregated areas. Thinking about how to not make the same mistake, how to make nomads “visible” in the city in order to integrate them better, is another point that the thesis is aiming at.

Furthermore, it seems relevant to give solutions to the problems mentioned above while improving existing cities, for example by densifying them, in order to match the sustainable goal of not spreading endlessly.

In order to achieve those goals, looking at the concept of home is crucial. Everyone must have the right to have, more than a *house*, a *home*. Indeed, from a social perspective, home can be seen as a social value: home follows social shifts and needs (Silva and Coch, 2010). It can help people to create references in a new context, in order to not feel rejected and to integrate without being acculturated. That is why I want to look at the thesis’ issues from the social point of view of sustainability, dealing with issues of social balance, which is particularly relevant in a fluctuating environment. Apart from this approach and to complete the reflection, I also want to better understand which cognitive processes are at work in the way people create and recreate a feeling of home.

The thesis is mainly aimed at designers, its final

outcome being a toolbox of design strategies of use for design professions, even if it is possible to imagine that some principles could be applied directly by inhabitants themselves. Thus the toolbox features a constellation of design ideas and proposals, considered as “strategies”. Those strategies address the challenge of integrating in new urban contexts, by giving principles enabling residents to feel at home. Several scales are taken into account (indoor building, outdoor building, neighbourhood, city) in order to fully address the problem of integration in a new environment.

The choice to develop the thesis as theory-based, with the toolbox as the main outcome rather than a specific building design for a particular site, was consciously made from the start of the thesis. The goal is to be able to use the toolbox of strategies in different locations sharing the same type of challenges. I am aware of the fact that each context has its own characteristics; however it is also possible to find common points. In order to develop the toolbox’s concept further, I am proposing an implementation of the strategies in the context of Gothenburg. This is only an illustration of potential uses of the strategies, but the aim, when developing them in this context, is to show that they are applicable in similar urban contexts, and more especially European. Indeed, beyond their own particularities, European urban contexts have in some extent a common cultural background. They also present similarities in the way they developed: they are stratified, iterative, the result of successive additions, built over themselves. Often they were not created out of nothing, but instead come from the progressive growth of a small town, eventually swallowing and integrating its satellites.

More personal aims closely relate to the academic aims described above. As explained in the personal background section, I had an early interest in home and its social and psychological implications. I consider building the thesis upon this interest as an opportunity. It is a way to gain knowledge and skills in the field of home and social sustainability, and an opportunity for me to initiate personal and structured reflections about issues of being at home when being abroad (in different ways, in different scales). From these reflections I want to gain and develop principles that I could reuse in future professional practice.

What is more, I would like to develop further my artistic skills and include them in professional practice. That is why I decided to use sketches in order to illustrate the outcome of the thesis. I also decided to attend the course Digital Movie Making I at Gothenburg University, first with the idea to use movie making as a way to illustrate the thesis' outcome. However, as the course started only in the second half of the semester and would finish after the thesis' examination, I used it as a parallel project to give a poetic illustration of the thesis' theme. This took the form of a small animation movie about a nomad leaving his home and having to deal with its Genius Loci; the movie is available online at this address: <http://www.youtube.com/watch?v=uutNi6gtXyQ>. This project was an objective in itself for me, although secondary. I used it as a test in order to acquire knowledge for future professional use, either in a strictly architectural perspective, or in a more art-oriented field if I decide to go towards this later on.

1.4. Research questions

The thesis addresses challenges encountered by people when having to cope with a change in the physical location of their home. Therefore it is relevant to formulate the main research question as follows:

How can designers help people recreate a feeling of home in an unstable environment, as a first step to integrate in a new context?

In order to do that, an understanding of the mental mechanisms at work in the process of feeling at home seems necessary. Basic questions to be asked first could be:

- What makes a place a home and makes its inhabitants belong to it?
- What is conscious and unconscious in the process?

As we are looking at home in foreign environments, questions about mobility are also relevant:

- What does a nomadic way of life imply?
- How do people perceive the fact to migrate? How does migration affect them? What is it to "be the stranger"? Which kind of socio-cultural barriers do people encounter in a new environment?

Those sub-questions are theoretically-oriented, but feeling at home is not only something dealing with the realm of mental mechanisms and conceptual theories. In order to answer the main research question from a design perspective, I also need to formulate design research questions:

- How does scale affect design's role in the process of helping people feel at home?
- How can designers activate positive attitudes among *nomads* towards their place?
- How can temporary dwellers be integrated in the city through social interactions?
- At the same time, how do you save room for their individuality and personal identity? By which means can you maintain people's socio-cultural particularities?

1.5. Project layout

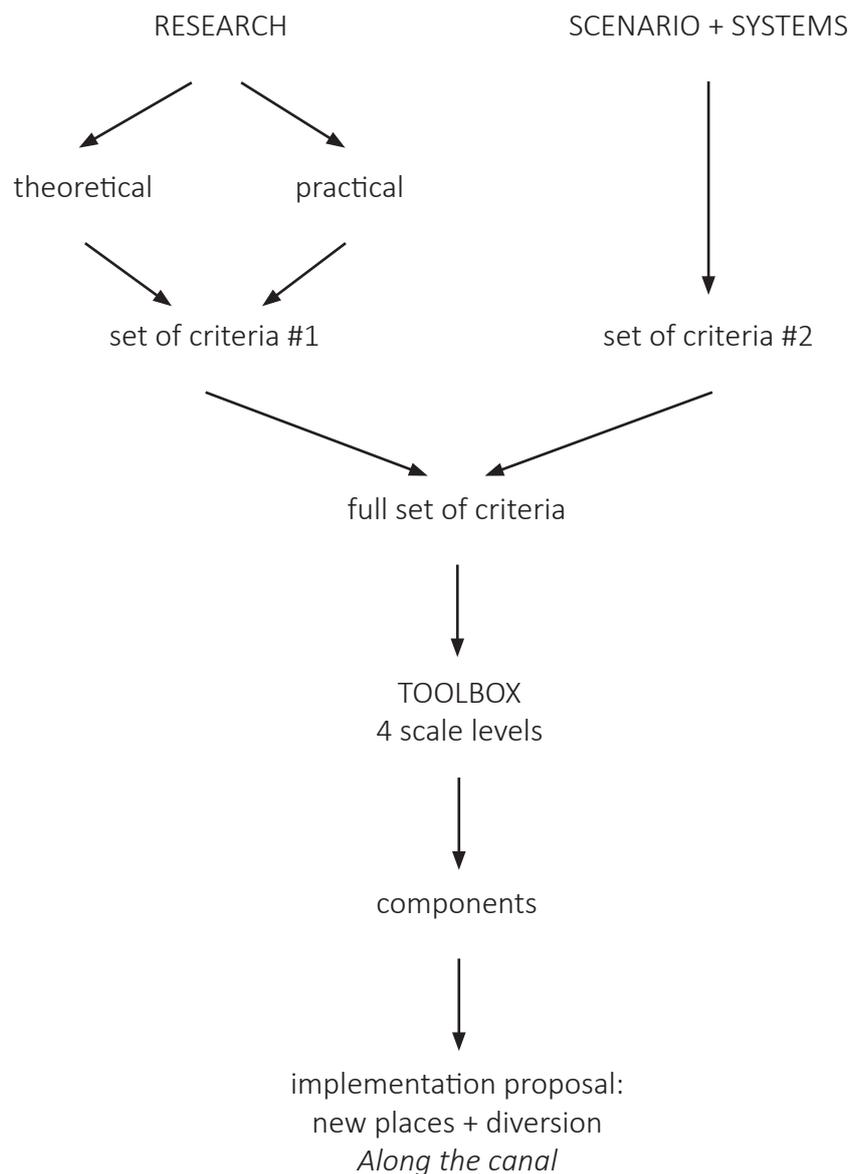
The thesis was carried out individually for one semester.

The first part consists of research, with both theoretical literature review and practical explorations organised as clusters of examples. A first set of criteria was obtained through this research.

The second part is about formulating design strategies. Because the thesis is theory-oriented, a type-scenario of a nomad was used as a basis for reflection to define design strategies. A “design

systems” approach was used to define a second set of criteria, specific to the chosen scenario. The full set of criteria, together with conceptual reflections and more examples, was the basis for developing the design strategies.

The result is a set of principles and sketched design proposals, organised in a toolbox of use for creating favourable conditions to home environments, divided in four scale levels. An example of implementation of the toolbox’s components in a real context is given, as an implementation proposal in Gothenburg. This proposal is about creating new places and diverting the city, and is set along the canal between Kungssportsplatsen and Grönsakstorget.



2. Methodology

Research has mainly been based on books available at Chalmers architecture library and online articles. Apart from finding images, I tried to limit the use of information coming from websites, as it is not always easy to assert the validity of this kind of information; the stringency of information I took from websites might actually need to be improved by adding other sources. In some cases, I also looked at representations of the topics I was researching about in movies, in order to get some kind of external view of the subject.

The choice to look extensively at environmental psychology came from the original idea of the thesis to explore mental mechanisms of home, idea which evolved during the semester and became a background research rather than the main focus. More generally, my literature choices came from a back and forth process between findings while reading and personal interests. I chose to not only look at contemporary examples, but also at traditional and vernacular structures and patterns, maybe not as solutions to be reused as such, but as sources of concepts.

The process of the thesis is also giving a systematic dimension to social sustainability. Throughout the research part and while developing the systems, I systematically translated the findings to criteria that were used as a tool to develop the toolbox's components.

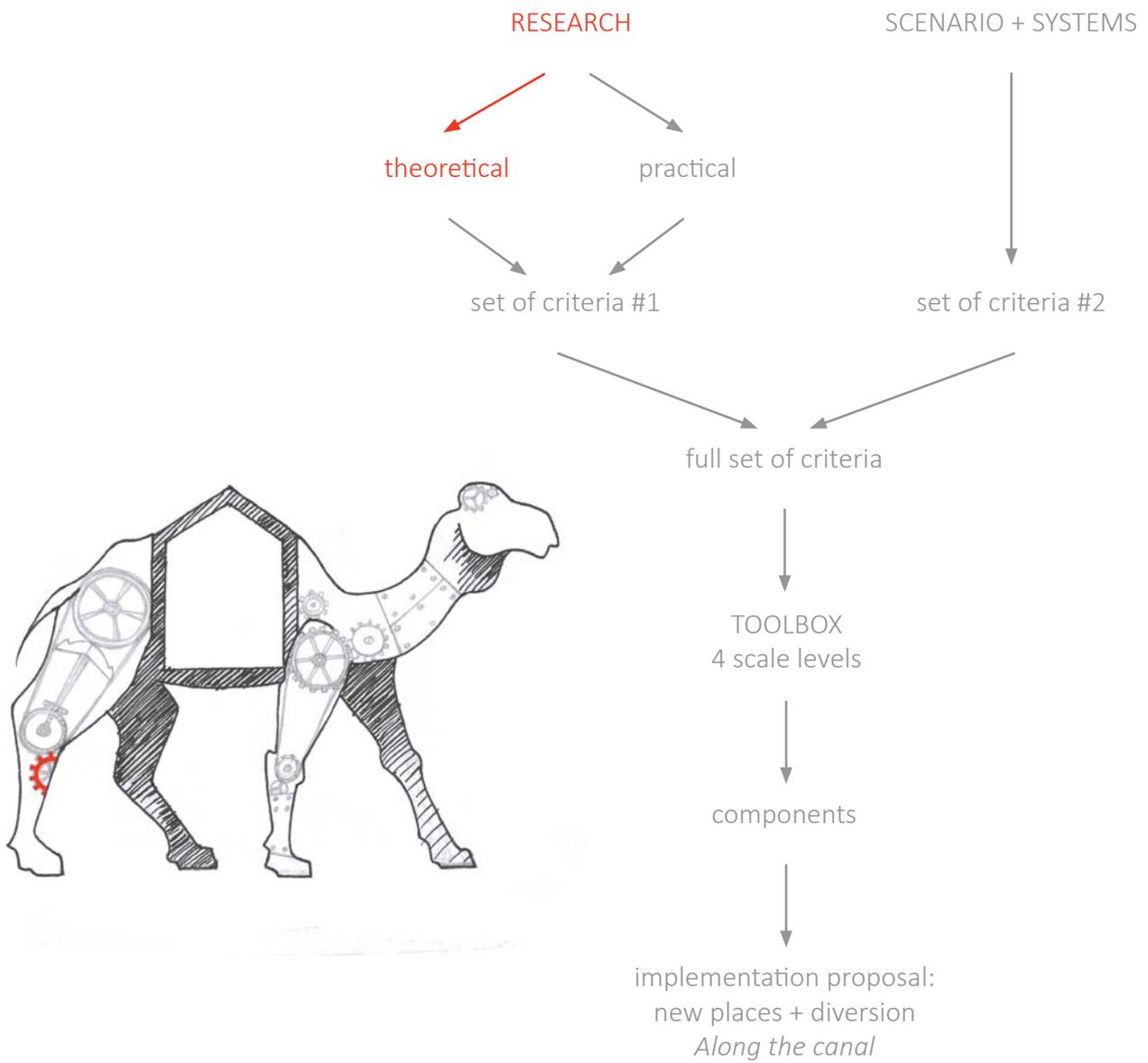
Throughout the thesis, a variety of specific methods are also used. They might not be familiar to every reader, therefore each of them will be given a short introduction in this report. Definitions of the methods are provided throughout the report, each time a new method is used. A reflection about the method is also given after it is explained. Those explanations and discussions are notified by this type of box:



Methods are only listed in this section, with their name and page's number:

LIST OF METHODS USED THROUGHOUT THE THESIS:

Autoethnography	p. 22
Design systems	p. 49
Giga-map	p. 49
System dynamics	p. 50



3. Research

3.1. Theory

3.1.1. Theme 1- What makes a place a home?

Before starting to consider how to recreate a home, it should be first understood what makes a home. Answering the question *what is a home?* within the limits of this thesis is probably impossible, or at least very complex, and I will only try to give a few answers, in an approach to grasp the concept of home.

From a linguistic perspective, *home* should not be confused with *house*, *place*, or even less the very general concept of *space*. Sime (1986) draws the separation between *place* and *space*, defining a *place* as something involving personal and affective bonds of someone with a specific *space*. Those bonds do not have a limited duration and can be more or less permanent, from something ephemeral to more enduring links. Moreover, they are constructive, rewarding and bring happiness and contentment. In fact, place is “space plus character”: this is the “spirit of a place”, which Romans defined as a guardian spirit, the “Genius Loci”.

HOME BOUNDARIES

MATERIAL OR IMMATERIAL? // If we were first to think about the shape of home, is it something that can really be defined? In a Western context, ask a kid to draw his home and he will most likely draw a squared shape topped by a triangle-roof. But beyond this very basic shelter image, does home really have to be considered as something physical? To Sime (1986), “creating places” is actually not about physically building them. It is more about a mental construction, or even reconstruction. What is more, he says that “designing spaces” cannot really be done by only considering the material aspect of the design, the architectural form in itself, the object. This is also about social life and personal activities taking place in this architectural form. Gieryn (2000) also agrees on this. To him, a majority of places are tangibly created in the physical environment. However

Key criteria

> Favour interactions with the environment.

they are both built in this very material aspect and in a less visible way. Places are also a matter of perception and interpretation, they are comprehended by each individual through his own particular experience and feelings.

SCALE // Rapoport (1975) gives an interesting approach about the scale of home based on animal studies. "Home range" is defined by ordinary travels, current activities and standard behaviours. More precise and part of the home range, "core areas" concentrate even more life activities. But feeling of ownership extends beyond the limits of the home range: this is the bigger scale of "territory", owned by a group or an individual who guards it, either by physical means or in virtue of *laws* or symbols defining the territory as belonging to this group/individual and not to someone else. Data of temporality might be added to scale with the case of "jurisdiction": an agreement is set so that a group/individual holds a territory for a defined time. Thus, home does not seem limited to a very specific spot: the possibility that we can belong to a place at bigger scale might be considered as well.

Larson (2012) reflects upon conception of home at city scale in the past and present. Before industrialisation, villages were around twenty minutes walk away from each other, to allow easy walking access. Urban contexts were at human scale. This is the same with cities that developed before cars and out of small villages. Larson gives the example of Paris and its "arrondissements", with an even distribution of services (shops, cafés, pharmacies) available by walking distance. However, newly developed cities tend to concentrate services in one point, losing the human scale.

Larson also considers home at small scale (the one located in a house). It seems that it went through a loop effect. Before industrialisation, it was the centre of life, ensuring multiple functions that were centralised out of the house after industrialisation (entertainment, energy production, work, healthcare, education and so on). This led to the development of networks. However, Larson notes that recently and because of new communication tools, home tends to become again a centre of life, with direct access within its walls to learning, healthcare, shopping. There are interactive qualities within the house.

PHYSICAL / PEOPLE / MEANINGS

Relph (1985) explains his point of view that a place is an entity resulting of the encounter of three components. One of them is the material world, a specific "space", either natural or subjected to man's intervention. Another

- > Consider home at different scales: building, neighbourhood, city.
- > Human scale and distances.
- > Home as a centre of life.

component is about the social aspect, with human activities related to the physical context's particularities, opportunities and threats. Finally, the last component of place is the meanings embedded in it, meanings which can be common to members of a society or specific to an individual. Maybe a place could also be seen as the following: the interlacing of physical elements that people can affect, of the social and cultural patterns related to this physical context (the common knowledge and identity), and of more personal systems. Which, simplified, would be the meeting of the individual, the group, and the physical environment.

Let us have a look at the "people"'s components, the social part. From a social point of view, Saunders and Williams (1988) think of home as an essential place featuring elementary and fundamental elements. Indeed, this is the place where primary social bonds, references and organisation carry on and are created. Those social patterns, specific to home, the "household", constitutes a structuring core for society.

What about the meanings? One way to give meaning to a place is actually to use symbols. Rapoport (1975) indeed sees symbols as one of the main components of a place. A dwelling is of course a shelter for the body, but it also has less tangible functions although maybe more essential, related to social and cultural issues. In fact, dwelling also characterises space, defines it, adds a symbolic layer to the material one. In that case, it is not even a matter that the environment is built or not: meanings already provide a place.

But what does a home give to its occupants? Porteous (1976) assesses that home gives "identity", "security" and "stimulation" to its inhabitants. *Security* relates to the home being an island of permanency and stability in the midst of our social and physical contemporary context, supporting everyday life activities and protecting jeopardised privacy. *Stimulation* refers to the fact that home supports people in managing their lives. *Identity* links with security, as the security of home is used as a foundation to build one's identity.

INHABITANTS' INVOLVEMENT

An interesting thought of Sime (1986:10) is that he has "the feeling that people have been left out of the design process". In the same way, Oliver (1975) thinks that designers should deal more with people's needs and wishes. People's "symbol-systems" are embedded in their dwelling, however it does not happen often enough

- > Take into account each new context's physical characteristics.
- > Take into account each new context's cultural patterns.
- > Find the balance between group and individual, in harmony with the physical environment.

- > Allow people to bring their own fundamental references into their place.

- > Allow people to bring their own symbols into the place.

- > Support daily life activities.
- > Protect privacy.
- > Provide a safe environment, basis to self-confidence, life management and self-awareness.

that they can really be part of the decision-making in the design process of their dwelling. Oliver wishes for an increased people's role in the design process, suggesting that designers should accept and even stimulate people to express their cultural identity, instead of restraining it on basis of laws and aesthetics. Relph (1985) was already tackling this issue, warning about the risk of designers not considering that someone's spirit of place cannot fit in someone's else's place so easily. How to avoid a blind design process ignoring that the "genius" will not dwell anywhere? How to help it to harmonize with the "loci"? How could we allow people to be more involved in their place's conception?

Sime suggests that the notion of flexibility would be relevant. By giving specific characteristics to the building, designers could allow the inhabitants, the "building users", to give visible modifications to the space corresponding to their own expectations and wishes. Potential adaptable use of the building allow the users to create their own "sense of place" in this pre-existent physical structure, and to turn *space* into their *home*. Indeed, Sime reckons that in the process of creating a place, people got to get involved in the physical building, both in a mental way and by acting on the space. They appropriate the space, customise it, for example through the "production, decoration, furnishing and maintenance of their environment" (Sime, 1986:9).

However, those personal processes such as appropriation, involvement, identification, have to deal with society's own mechanisms, such as industrialisation and globalisation and how it affects the material world. Thus, even if people wish to embellish and look after their place, they will most likely be "subordinated to the technological innovations of large-scale, mass-produced architectural schemes" (Sime, 1986:9). Which means, they are restricted in their choices by what is available, and more, what is actually accessible to them. Among the available resources, what is affordable is not always what is wanted most and a monetary aspect might be in conflict with a will for using adapted and sustainable resources.

3.1.2. Theme 2- What makes you belong to this place? Identity and attachment

ATTACHMENT

ATTACHMENT VS. OWNERSHIP // Windsong (2010) explores the concept of "place attachment". She emphasizes that

- > Involve inhabitants in the design process.
- > Allow spatial flexibility supporting inhabitants' wishes and habits.
- > Leave room for personal decoration and furnishing.
- > Make people feel responsible of their place through customisation and maintenance.
- > Look for alternatives to mass-production and standardised systems.

attachment is not reached through ownership but through use. As she points out, it is more about the experience environment gives and a feeling of connection, than about owning the land. This comforts the idea that a home, in a very physical perspective, is not necessarily made of four walls topped by a roof. Maybe a home is just a place, without any proprietary consideration, in which its inhabitants are involved through regular activities, and somehow connects them to the rest of the world. Indeed, Easthope (2004) understands places as specific spots where social links interlace.

In that case, even without considering extreme cases such as communes, rented apartments can definitely turn into homes, even if their inhabitants only have temporary rights on it. Besides, any place considered as inviting and familiar by its user could be considered as a home. Somehow, a library can be a home, as well as a café, a work place, a friend's home, and so on.

ATTACHMENT'S SUPPORT // But then, how it this "place attachment" supported? Seamon (1976), breaks up the concept of "at-homeness" in five parts: "rootedness", "warmth", "at-easeness", "regeneration" (referring to the restorative powers of home) and "appropriation" (entailing concepts such as control and privacy).

NEW ATTACHMENTS // Boğaç (2009) is also looking at place attachment, in the case of Turkish Cypriots relocated in abandoned Greek Cypriots houses after the 1974's war on Cyprus. She highlights the fact that disruption and stress is the result when losing attachments, before new attachments have been created. However, creating new attachments is not obvious and depends on diverse factors. Thus, having expectations, hopes and plans for the future is a condition to create bonds with a new place. It also has to be taken into consideration that creating those new bonds can be restrained by former bonds to a former environment. A home might then be an inspiring place, with a defined identity, a safe point of departure able to support people to project themselves in future activities.

- > Allow people to use their place in their own way.
- > Favour social links.

- > Feeling of safety.
- > Appropriation.
- > Privacy.
- > Allow people to have control of their place.

- > First connect "homes" to the present, the city life and its opportunities, in order to then look to the future.
- > Provide a "relaxed" environment.

IDENTITY

Yet it is important to keep the distinction between "place attachment" and "place identity". Place attachment is related to the meaning of place. Place identity is referring to the links created between people and their place (Boğaç, 2009). Prohansky et al. (1983) define those bonds as a mixing of memories, feelings and readings about the place. Identity of a place and an individual's own identity are indeed closely overlapped. As Prohansky

explains (1978), one's personal identity is determined by the physical context which instigates the development of adapted behaviours, values, tastes and so on, consciously or unconsciously. Identity is doubly created, mentally and with physical experiences in the environment (Easthope, 2004). Past references, experiences, personality – everything that defines one's identity – are part of the conditions that make it possible or not to give meaning to a place, that make the attachment to a place successful or not. However, for this link to be possible, the environment has to match its inhabitants' personalities in one way or another. Favouring this balance should be part of the designer's work.

ADAPTATION // Of course it is not possible that one's environment, physical as well as social and cultural, is directly in complete harmony with its inhabitants; some adaptation is needed. In fact, turning a mere dwelling into a *home* takes time and is nurtured by the process of adapting, at a bigger scale, to social and cultural shifts and to physical characteristics of the new environment. (Boğaç, 2009). Moreover, Giuliani and Feldman (1993) propose that giving identity to a place might entail some kind of mental cost to the dweller, a "psychological investment". Thus people are needed to wish for this transformation process, and once again designer's should help in the process, so that it becomes possible that "people put years of effort into transforming their houses into homes, which, in turn, reflect their individuality and/or identity" (Boğaç, 2009:3). And as explained by Easthope (2004), the more people will bond with their place, the more they will wish to transform it.

3.1.3. Theme 3- Conscious/ Unconscious

UNREFLEXIVE BONDS / AWARE LINKAGE

Tuan (1980) thinks about the reflexive/unreflexive aspects of our place. To him, "rootedness" is not the result of conscious thoughts but comes from the fact that we got accustomed over time to our place. If rootedness is related to unconscious familiarity, "sense of place", however, is achieved through consciousness. Then to what extent are we aware of our attachment to our place, to what extent do we control our linking with a place? How does awareness affect the process?

This differentiation between rootedness and sense of place

> Allow physical environment and inhabitants' personalities to be in harmony.

> Urge people to wish for investing efforts and time into the transformation process of their place. However the thesis deals with mobile people, then will they make this effort knowing that they have to leave again relatively soon? Thus maybe the criteria is more: Set places easy to appropriate, in order to decrease efforts and time people have to invest in the transformation process of their place.

> Provide security and at the same time favour discoveries and interactions with bigger scale.
> Leave room for people to make decisions about their place.

can be put in parallel with the “thick places” (dwelling) and the “thinned-out places” of Heidegger (1973) upon which reflects Easthope (2004). Being rooted in a familiar place, you are unconsciously “at home”; those are the “thick places”. Consciousness and self-awareness appear when being confronted to “thinned-out places” that are not familiar to us. Facing this new context engages a reflexive process of acting to create a sense of place and give meaning to it.

More, Tuan (2001) sees us human beings as a whole where two entities can be distinguished. Part of the self is physical, the “body”, and this part of us seeks for the unreflexive and familiar home, the “hearth”, furnishing “security”. The other part is mental and self-aware, the “mind”, longing for unknown and new places, the “cosmos”, which provides “adventure”. Both security and adventure pertain to define the self. Thus identity in the hearth does not come from a personal effort, which differs from the identity you have in the cosmos.

Another example of the duality between rootedness/sense of place is developed through Bourdieu’s theory of “habitus”. The “habitus” is the system of internalised trends orienting our social practices. In *La Distinction* (1979), Bourdieu explains that our choices and aesthetic tastes both reveal and hide our social status and our aspirations. However, social determinisms are not a mechanical programming of our behaviour: the habitus is a principle of invention, we reproduce our social conditions of existence but in a relatively unpredictable way (Hansen-Løve, 2000). Easthope (2004) explains that the concept of habitus is to be brought together with the unreflexive rootedness of home. She also underlines that habitus is connected to our sense of place: habitus is also reflexive. Even if habitus conditions our actions in some extent, we are still aware of our actions, and by means of this awareness we gain the ability to make conscious decisions about our place and to get a feeling of place.

What is more, Easthope (2004) points out that this ability to control our place appears to be even more necessary in the context of a fluctuating environment, especially with the phenomenon of globalisation. In such context, places supporting our habitus are subjected to strong changes, which implies a loss of familiarity and rootedness. In that case, there is need to recreate the permanence of home, the “security” of the “hearth”. Thus, as a compensation, the conscious process of developing a constant sense of place is more solicited, in order to overcome the challenged familiarity. Instability calls for more conscious processes, for the original and unconscious feeling of rootedness is not supported anymore by the familiarity of place.

BEHAVIOUR

HABITS // In the case of mobility, it is quite relevant to quote Verplanken and Woods (2006). They highlight the fact that when people move from one place to another, their habits are more likely to change. At this point, you can make what they call “downstream-plus-context-change” interventions. Indeed, habits are dependent on environmental signals, therefore habits are weakened when people change environment. It is relevant to set interventions at this point in order to change people’s habits.

ACTIVATION OF VALUES // When losing the stability of rootedness, in which way could people be helped in setting effective processes to create a sense of place? People might have already the means to succeed in it, but designers could push to activate the right behaviours.

One thing that has to be dealt with are values, as they are intrinsically part of one’s identity and influence behaviour. As Verplanken and Holland (2002) explains, values are considerably part of an individual’s self-awareness and sense of identity. To them, values indeed have the ability to give a goal to life, they are “motivational constructs” (2002:1). However it does not mean that one’s values all coexist in perfect harmony. There might be some conflicts and contradictions between them, as Verplanken and Holland highlight it. Then how is it possible to help choosing the most sustainable value for the nomad? What is more, values are not equal either and are subject to some kind of hierarchy in their ability to influence behaviour: “only a small subset of central values have the capacity of actually driving behavior” (Verplanken and Holland, 2002:2). Designers have then to identify which of these central values are relevant to activate, in order to give people incentive to recreate their home in a socially sustainable way.

INFLUENCE OF SOCIETY IN PERSONAL NORMS AND VALUES // Could it be possible to directly initiate a relevant value, instead of dealing with existing ones which might not be suitable in the context of unstable environment? In that case it is relevant to know from where values come from. In the same perspective as Bourdieu’s habitus, it appears that society, “parents, peer groups, professional milieus, and culture in general” (Verplanken and Holland, 2002:11), plays an important role in the formation of values. Biel and Thøgersen (2007) also emphasize this point: we are influenced by other’s behaviours and way of life, and thus develop “social rules” from them. So maybe this fact can be used as a leverage point by designers: it might be difficult to directly initiate relevant values, but by selecting

> Identify relevant central values to social sustainability and enhance them.

> Identify and select already existing relevant values and enhance them, to serve as future models.

and activating a *first generation's* values, they can serve as models for *next generations*.

FACTORS OF ACTIVATION // But then, how are values actually activated? On which factors does it depend? To Biel and Thøgersen, “both personal and situational factors are relevant for the activation of norms in social dilemmas” (2007:15). Personal factors being very specific to each individual, situational factors might be more relevant for designers to give general solutions to societal problems.

Mental cost is also a factor that should be thought of. Biel and Thøgersen (2007) say that the less a behaviour demands for an effort, the more attitudes and norms are likely to affect this behaviour. Thus the settled goal should not be incredibly high; rather, small goals should be settled to smoothly achieve the right behaviour. Another factor taking part in activation are defence mechanisms. They have to be dealt with in order to avoid positive behaviours to be blocked.

Furthermore, it should not be forgotten that activation is not the only data that should be taken into account to drive behaviours. It is not enough by itself: as explained above, the considered value has to be central to get a real repercussion on attitudes. Central values are the ones with the biggest motivation power (Verplanken and Holland, 2002).

3.1.4. Theme 4- Traditional nomadism

GOING FROM PLACE TO PLACE // The previous theoretical studies helped to better understand what is a home, however the thesis is also dealing with mobility. Let us have a look at traditional nomadic ways of living. Maybe the archetype of nomadism for occidental people is the one of camel's caravan. Though very romantic, it is not irrelevant to look at this example. A caravan was constituted of traders, pilgrims, travellers, providing defence to each other in unfriendly environments such as deserts (Times of Oman, 2012). Journeys were long and stages were needed. As existing villages were not enough, those stages took the architectural form of caravanserais, providing shelter, catering, care and security to travellers and their animals, without social or cultural distinctions (Times of Oman, 2012). Thus it appears that caravanserais were essential to bring travels to fruition, as some kind of nodal points (Times of Oman, 2012). They were peaceful and stable islands in their uncertain context.

- > Use situational factors to activate norms and values.
- > Try to activate attitudes which do not demand a lot of efforts from people, settle small goals.
- > Counter defence mechanisms: show people that they can make a difference, make them aware of their responsibilities.
- > Give people incentive to act, motivation.

- > Provide stable and peaceful stages.
- > Secure structures.
- > Provide easy food and healthcare access.
- > Take into account cultural differences to welcome everyone.
- > Community feeling.

RELATION TO ORIGINS // In the process of mobility, it seems indispensable to keep a link with origins, as a reference, an element of permanence in the foreign context. Keeping that link can be performed in different ways. It can be about conforming to economic and social factors determined by the group (Oliver, 2003). Those factors define in which way nomads anchor and for how long.

Another way for nomads to keep a link with origins is, as Oliver (1975) reports, to keep on using original rituals and symbols. A symbol originally carries a meaning which, transposed in another context, acts as a reminder of origins and brings an element of stability. However the meaning is not the most important: it is actually the symbol itself. As Oliver (1975) explains, meaningful elements might over time lose their meaning, only abstract symbols remaining. However, it does not mean that people will not keep on using those abstract symbols as decoration features.

One risk is that relationships kept with origins can be deformed, and even broken. In the case of migrants or nomads settling and facing different social patterns (for example going from a rural to an urban environment), they might have to define new social and personal structures (Oliver, 1975).

3.1.5. Theme 5- Migration issues

Migrations can be due to several events; they can be wished or necessary to the migrants, to find work, to get closer to relatives, to seek for better quality of life and so on. Migration can also be unwished, for example in the case of displacement due to wars or natural disasters. In any case, it always involves a change in people's environment. Which issues does migration bring, how do people perceive it and how does it affect them? What is it to "be the stranger"? Which kind of socio-cultural barriers do people encounter in a new environment?

MENTAL COST // Herzog and Schlottmann (1982) address the question of remigrating and how distance affects your perception on the migration. They state that distance is the main factor influencing negative perception of migration and thus a loss of motivation to migrate. But it is not only about the mental effort, the "psychic costs" migration costs us, it is also about our own past experiences and habits. Indeed, if people are used to move from one place to another, starting the process of moving will be facilitated. It is even easier if a factor of familiarity is added, when

- > Leave room for personal decoration, which is able to carry symbols.
- > Provide places adapted to the duration of stay and to nomads' income.

- > Provide a system which allows people to come back later on.

places people move to are always the same over time. What could be said is that the more people are used to moving and the more they know the place they are moving to, the less the mental cost is important and the easier it is to undertake the migration.

BEING THE STRANGER // Globalisation leads to more meetings and interactions between people from different cultures. When migrating, what is it to suddenly become the stranger? Being the foreigner is an important issue to deal with, and this brings the question of xenophobia. From the greek “xenos”, “foreigner, stranger”, and “phobos”, “rejection, fear”, it carries the idea of the stranger as a threat or a problem. Unlike racism, it is not only related to origins or skin colour, but also culture, gender, religion, ideology or whatever can define a “group”. This is a problem to consider, especially because of relatively recent increasing influence of far right parties in Europe. Indeed, those parties convey ideas such as migrants being partly responsible for economic crisis and “stealing” jobs and social healthcare system’s advantages. They also claim that migrants cannot integrate because of their culture and can even threaten national identity (Morice and Rodier, 2012).

Kakar (1996) talks about the negative effects of the group. When starting to create a barrier between itself, “the group”, and the rest, “the others”, there is a risk that the group considers itself as a superior reference, whereas “the others” are categorised as something negative.

In a more personal perspective, I used the method of autoethnography to reflect upon the concept of being a stranger and bring up questions.

> Create community feeling, but by mixing “groups”, not to end up with ghettos.

> Avoid conflation between the “group” people supposedly belong to and their individuality: get people to know each other beyond common knowledge and stereotypes.

> Value your identity, display it with both pride and respect (for example, with simple things as your name on the door or the mailbox).

> Provide international networks at city scale to stay in contact with origins’ culture, music, food and so on.

> Provide language support’s structure, to learn local languages and to speak your native language.

> Give the possibility to reproduce specific personal or cultural habits, as eating habits (tools, ingredients; grow specific plants/herbs/vegetables in an international garden?).

AUTOETHNOGRAPHY

Autoethnography is a method of ethnographic investigation in which the researcher uses autobiographic experiences, thoughts, attitudes and so on, as main material. This material is interpreted in a cultural perspective, keeping in mind that there is a connection between self and society (Chang, 2008).

This is an academic definition of autoethnography, but in next paragraphs I will explain more in detail how I actually did

it. I used written material from the journal I had to keep through the Reality studio Kisumu at Lake Victoria, as part of the studio’s assignment. This studio gave me the chance to spend seven weeks in Kenya during the spring term 2012 and was widely based on field studies lead during the stay in Kenya. We as students had the opportunity to interact with people from a different culture both in daily life or through interviews for the studio’s work. Thus this journal became a record of descriptions of significant events

that happened during the stay, and of personal reflections and thoughts.

The autoethnographer should not hesitate to write everything that comes to his mind. No selection should be done in this very first part of the process, and even events that seem minor can be recounted. Ordering the information only comes later on, once all material is collected. At this point, the autoethnographer should first read through the whole material again. Then he can select the most meaningful quotes. In the next step, this set of quotes is used to define which are the big themes emerging. Finally the set of quotes is refined, selecting only the most relevant quotes for each theme. The final quotes can then be analysed and explained in order to develop the different thematics.

Using autoethnography was an interesting tool to analyse previous experience and material that I had. However I do not know if the same results would have been achieved if I had been writing the journal with the idea that I would use it for autoethnography: at the time I wrote the journal, I did not know

I would use it out of the Reality studio, and I think this is quite important. It might be important to write without having in mind that the material will be used for an autoethnography. If the autoethnographer thinks too much about the fact that what he writes will be interpreted later on, he might already starts to formulate judgements and analyse the information, and therefore distort the raw autoethnographic material. But if he writes in a more spontaneous and descriptive way, the result will be closer to an interview with someone who does not know about the research.

It would also be interesting to use real interviews. This could be a way to complete, validate or invalidate the results of autoethnography. A challenge in that case would be to know how much the interview is planned, how much the questions are open. In the way I did my autoethnography, the results come from the analyse of unplanned material, possibly leading to unexpected results. Thus, in order to complete autoethnography, the same principle should be kept and questions to interviewees should stay open.

One of the issues when living far away from home is of course to deal with different cultural habits, especially if they are related to very basic human needs such as eating. A first step to integrate is to adopt local eating habits, but it is not always so natural:

“We had to eat everything with our hands, which was so unusual for me, with the ugali as a spoon.”
(2012-02-21)

Another thing is about communication, involving language but also how people perceive you. Not speaking your mother tongue anymore can be very tiring and become a barrier to express yourself and be understood by your interlocutor:

“It’s the first time I speak such a small amount of French per day, could it be something which affects me even unconsciously? Because in a way this is very frustrating to not have enough vocabulary to

express, and at the same time English becomes more and more important in my head (...)." (2012-02-28); "I feel that it's a bit hard to communicate sometimes. Maybe it's my accent but sometimes people don't answer my question, it is as if I had asked for something else." (2012-03-21)

Sometimes, it is even almost like you need to adapt yourself, your own identity, to the language:

"I also didn't realize before that my name could be difficult to pronounce. In the best case, it ends up with "Matilda", but sometimes it's only "Mati..." something. I start to say Matilda sometimes to make it easier to understand." (2012-03-21)

Besides the need to somehow "change" your name in order to be understood, there was also something else challenging identity during this trip. This was the very obvious fact that, as white people, we were perceived as different by most of Kenyans. We were called "Mzungus":

"Today again, there were children following us. Some didn't follow, but all were saying "Mzungus!" again." (2012-03-02)

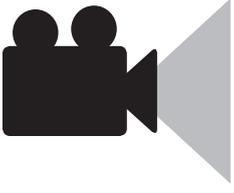
This actually did not imply animosity, but this was actually a perfect illustration of the feeling of "being the stranger". Before being individuals, we were mzungus, white (and therefore rich) people in the eyes of the others. We were, in a way, assimilated to stereotypes of where we come from. This is something that the Turkish author Shafak (2010) discusses in a TED talk. To her, there is a risk, when in a cosmopolitan context, to see people not as themselves but as representations of something bigger (their country, their religion and so on). This contributes to creating cultural ghettos: "The problem with today's cultural ghettos is not lack of knowledge; we know a lot about each other, or so we think, but knowledge that takes us not beyond ourselves: it makes us elitist, distant and disconnected."

One last issue encountered was how the relationship with the original home was evolving. When you are really far away from your original home and in a very different cultural context, how do you perceive remoteness?:

"Do we feel farther from family in that case, does it work like that, the farther geographically, the farther mentally you are?" (2012-02-28)

Do you also in a way need to connect more to your own culture, as a reminder of home?:

"I remember that one day a Peruvian friend said that she started to like the traditional music of her country when she left it. Maybe I have a bit of the same, maybe I like even more now the French songs that I liked before? Maybe I start to give them even more value than English songs?" (2012-03-21)



DERSU UZALA (Akira Kurosawa, 1975)

Dersu Uzala tells the story of the friendship between Dersu Uzala, a Siberian hunter, and Vladimir Arseniev, a Russian topographer. Towards the end of the movie Dersu, who is getting old, leaves the taiga to come to live in the city, at Vladimir's place. However, Dersu is not allowed to live in the way he always did: he cannot build a hut, hunt, chop wood or make fire within the city. Finally, he ends up deciding to leave the city, because the cultural gap was too big. The city could not allow him to reproduce any of his cultural habits and that is why he could not feel home in this new place.

3.1.6. Conclusions

Porteous (1976) states that a home provides "identity", "security" and "stimulation". But how do you get from a mere *space* to a *home*? *Space* turns into *place* when an individual has formed affective and rewarding bonds with this specific place: space gets character, the *Genius Loci*. What is more, places are both physically built and constructed in its inhabitants' mind through perception and interpretation. Not only are places also mentally built, but a home is not limited to the walls of a house: it is possible to have a feeling of home at a larger scale.

Then what are the components of a place? Place can be understood as an entity made of three components: a physical context and its particularities, patterns of activities conditioned by those environment's characteristics, and common and personal meanings assigned to this environment, for example through symbols.

But who is involved in the process of giving sense to a place? Designers' spaces are not enough and it is necessary to involve inhabitants in the process, by supporting appropriation and adaptability, so that they can turn a space into their home and start to belong to their place.

Feeling of belonging is fostered through identity and attachment. Attachment is about use of place and its meaning, not about land ownership. This feeling is supported by "rootedness", "warmth", "at-easeness", "regeneration" and "appropriation"

(Seamon, 1976). It should not be confused with place identity, which is more related to the links people create with their place through memories, feelings and interpretations of this place.

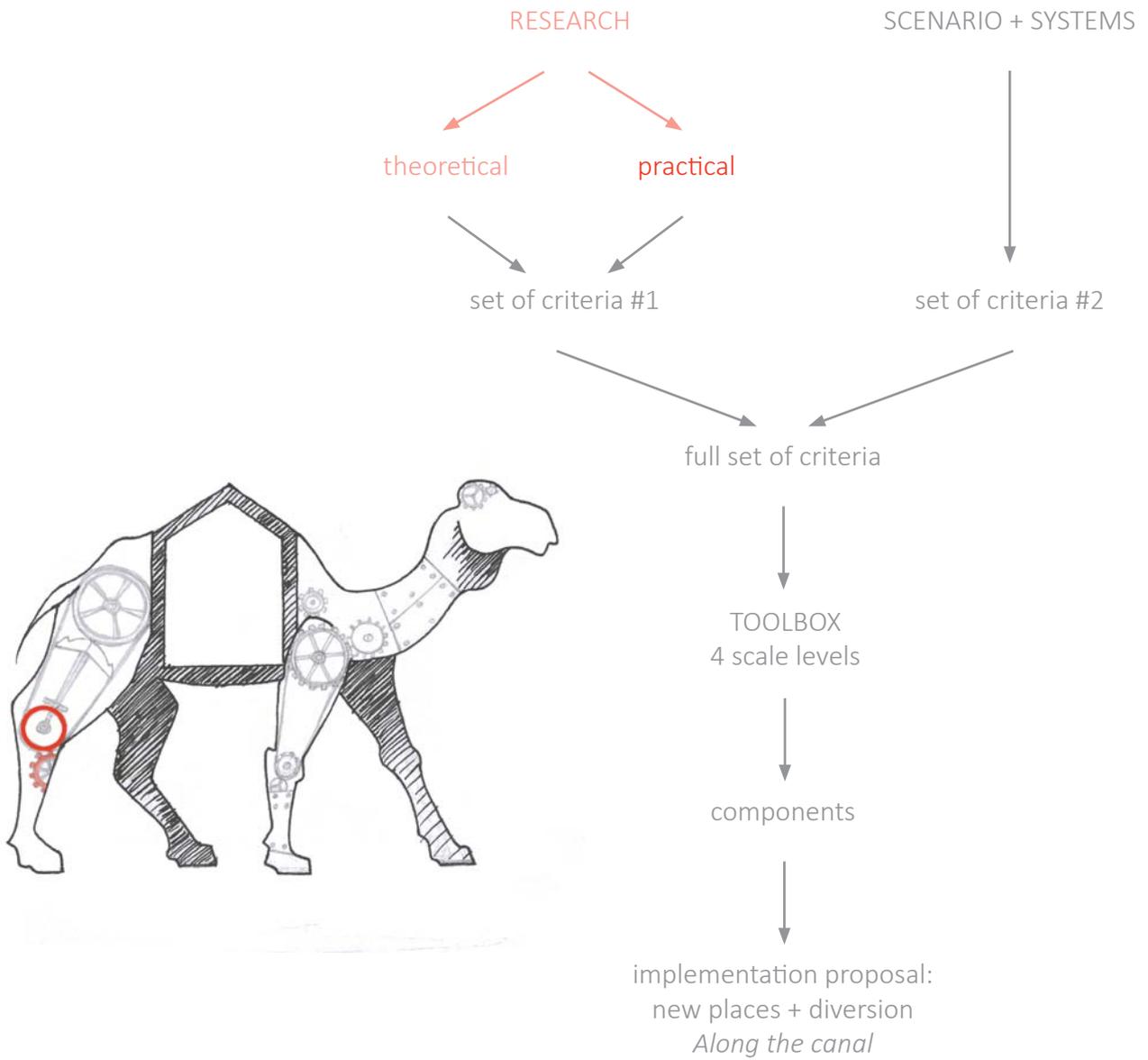
What about those bonds formed with our place? They can actually be unconscious, unreflexive, in the case of rootedness and familiarity with the place. However, when familiarity is challenged and people confronted to new environments, a need appears to recreate stability and security in another way. This is realised through an aware and conscious process of giving meaning to the place and of creating a sense of place. But how to push people to have the right attitudes when facing the challenge of a new environment? People might have the means to succeed, but designers could help in activating relevant behaviours. To do so, central values should be identified and activated in order to give motivation to inhabitants. Activation can be based on personal but also situational factors.

Apart from giving an understanding of what is a home and of a few mental mechanisms involved in home issues, the thesis explores mobility issues. The main question about nomads is how they anchor in their environment. First it is important to note that they will anchor in a different way according to what they need for the time of their stay, involving social and economic factors. About the way to travel, the most common travelling pattern is to go from settled place to settled place,

using those stages as stable islands in an uncertain environment. In order to keep a link with origins, nomads can use symbols and thus somehow personalise their place. This acts as an element of permanence that they always carry with them.

Another relevant point to look at, when researching about mobility, was migration. It brings a few interesting issues that must be considered in the scope of the thesis. One is the mental cost of migration, depending on how much people are used to move and on how much they know the place they are going to. Moreover it is important to consider the mental issue of suddenly “becoming the stranger” and the risk of then creating barriers between “the group” and “the others”. In such context, it seems even more important than usually to promote international networks and community feeling.

This first part was conducted as a theoretical research and allowed to define issues and themes relevant in the scope of the thesis. Those findings need to be explored in a more practical way. This will be investigated in next section and takes the form of clusters of practical examples.



3.2. Practical explorations

This section presents tangible examples dealing with the thesis' issues. They are organised as clusters of practical examples, structured in several themes. Selection of the themes was made based on, and in order to extend, the theoretical research part. In which way do nomads live on the road? How do they anchor? Do they carry their home with them or do they go from home to home?

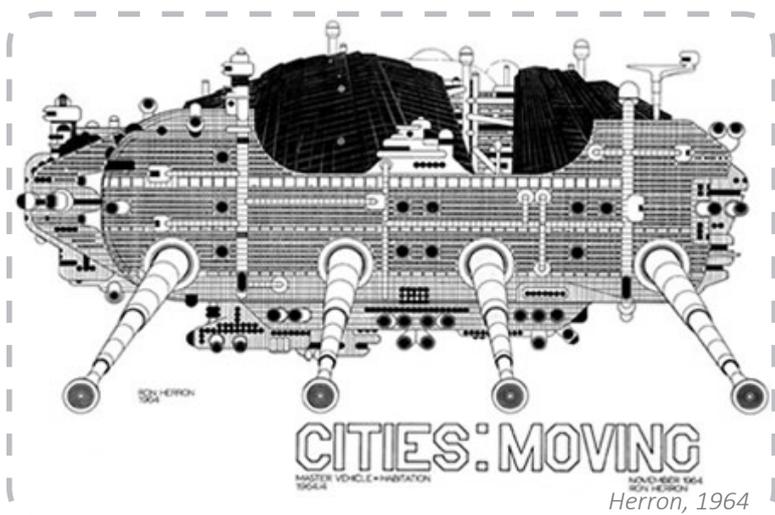
3.2.1. Exploration 1- Carry your home: mobile structures

Mobile structures have been used for a long time by nomads, from merchants to itinerant artists via travellers. However since the 20th century, designers tended to reflect upon and produce more that type of architecture than before, going from abstract to practical. As Ibelings (2003) points out, there has been two trends of mobile architecture during the 20th century. First projects stayed in the state of projects and were more abstract representations of mobility than representative of a will to change architecture. The second trend appeared later and those projects were built, showing more commitment from the designers than during the first period.

UTOPIAS

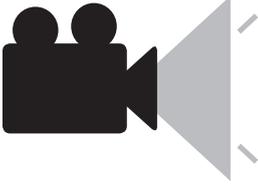
ARCHIGRAM'S WALKING CITY (Ron Herron, 1964)

This project was featuring mobile, nomad giant "robots", with possibilities of connections between each other. They could also plug in into stations, to exchange inhabitants or get resources.



> Connecting mobile units.

The concept of Walking City



HOWL'S MOVING CASTLE (Hayao Miyazaki, 2004)

Sophie is an 18-year-old girl, cursed by the Witch of the Waste to get the appearance of an old woman. Sophie happens to become cleaning lady in Howl's, a wizard, moving castle. The castle is portrayed as a fantastic moving structure made of mechanical and building pieces. This fairytale nomadic house is able, through a magic process, to go from one place to another, its door acting as a magic portal between four places. The castle is moving at will between four settled and anchored places. The hearth of the house is materialised by Calcifer, a fire demon which, apart from heating and being a stove, gives cohesion to the different parts of the house and gives it the ability to move from one place to another. It also has the power to transform the house, from an old and dirty place to an idyllic and stereotyped image of home (sort of dollhouse's appearance). In a way, the hearth is presented as the core of home, its origins and driving force, keeping home's unity in a constantly changing environment.

- > Provide places for nomads to settle their own structuring core,
- > or Provide a core to nomads, a warm place which recreates a family-feeling.

COMPACTNESS

Mobile architecture has been developing ideas of minimalism and compactness, of only using what is strictly necessary. Ibelings says: "Almost all the dreams inherent in the mobile architecture of architects and artists can be traced back to the idea that a life without possession is liberating" (2003:161).



The Nissan Chappo's seats can be folded to create a small living space.

NISSAN "CHAPPO", CONCEPT CAR (Shiro Nakamura, 2001)

This concept car develops the idea of transforming the inside into a small living unit (Kronenburg, 2002). Car seats can be folded and unfolded and turn into a sleeping place or "living-room" seats. Here, the car is also seen as a social potential: it can become a meeting place, especially for young people longing for new lifestyles (Car Design News, 2001).

- > Foldable.
- > Modular.
- > Adaptable.
- > Gathering mobile space.

SHORT-TIME OCCUPATION

Nio (2003), points out the potential of temporary mobile facilities, which can adapt to residents' demand or to seasons. Such facilities can be mobile shops, restaurants, libraries, healthcare structures, cinemas and so on. What is more, those kind of urban "parasites" hold stimulation's potential: "Occupants should be in a better position to create their own social and physical space. Parasites can stimulate and accommodate spontaneous processes and undertakings from the bottom up" (Nio, 2003:24).

- > Use the "temporary" and "unusual" aspect to generate more interactions.



Araya E., 2009

- A mobile library in Chile, which also supports cultural activities and events.

DIVERSION

Mobile architecture has also worked on turning existing elements into something else, changing their function. One example is container architecture: "(...) divested of its original purpose, [the sea container] steadily burgeoned in the 1970s and '80s into a symbol of flexible and mobile architecture" (Ibelings, 2003:154).

- > Reuse standard and modular industrial elements to create something new and flexible.

KEETWONEN, STUDENT HOUSING IN AMSTERDAM
(Tempohousing, 2005)

Keetwonen is the first shipping container student housing made in the Netherlands. Amsterdam lacks permanent building sites, therefore containers were an appropriate solution to the problem, allowing student housing to be temporary and giving the possibility to relocate it in the future. Keetwonen offers the possibility for students to have private kitchen and bathroom at a relatively affordable price. This type of housing actually became popular among students (Tempohousing website).



Keetwonen combines private units (the containers) as well as regular common spaces of student housings.

MOBILE HOMES

AIRSTREAM TRAILERS

Airstream is an American brand of luxury trailers, as praises the webpage for Airstream Classic trailers: “leave home without leaving behind the comforts of home”. A community spirit of “airstreamers” has even developed, with the Wally Byam Caravan Club founded in 1955 (Kendziorski, 2011).

- > Removable features.
- > Compact home functions.
- > Popular image.





Airstreams “Classic” kind of condense the bourgeois living space into a trailer.

TINY HOUSES

The tiny house movement promotes living in small houses with a simple lifestyle. Those houses are compact, with a small living surface comparing to standards, which reflects the choice of a different lifestyle, a kind of reject of consumerism. People can actually build it themselves. Tiny houses entail independency and autonomy as well as environmental sustainability, for example in term of energy (solar panels), or with systems as composting toilets. Mounted to wheels, they are mobile, kind of hybrids between trailer and house. This principle has pros: in term of cost for instance, as it is not permanently built, occupants do not have to pay any rent or at least it is cheap. But it has also cons: occupants do not get running water in the house and have to find alternative solutions (take showers somewhere else, water tank and so on) (*Need To Know*, 2010).

- > Autonomy. In the context of the thesis, this should not be understood as something that detached the place of its surroundings, but rather as a flexible quality with potential to integrate more easily in an environment.
- > Energy production.
- > Recycling, compost.
- > Alternative and consciously chosen way of life.
- > Small surface.
- > Cheap.
- > Pride of doing it yourself, special connection with the place.



The Tumbleweed Tiny House Company builds miniature homes on trailers.

HOUSEBOATS

Houseboats feature the same kind of characteristics as tiny houses. They are a way to “besiege” the city differently. Indeed, besides the fact that they are still exotic in European

cities, they have a special relationship with nature: because they float, inhabitants can feel the movement of water, the horizon line is unstable.

There are also more experimental projects than regular floating houses. The Anthenea aquasphere by Jean-Michel Ducancelle (2001) can change over time: the terrace can be storage, the table area can become a sleeping area and the whole “boat” can be put on earth with a system of inflatable cushions. The project also features environmentally sustainable systems: solar energy supply, rainwater purification, wastewater treatment plant. Water treatment is actually an issue for houseboats and has to be taken into account to avoid water contamination. Another big issue with water houses is thermal insulation; in this project, this is addressed by the spherical shape (Burchard and Flesche, 2005).



- > Adaptability.
- > Experience and be part of the city differently.
- > Catch attention by creating new landscapes in the city.
- > Relationship with nature in an urban environment, “feel” nature.

Anthenea aquasphere: a nomadic house on water.

PAKISTANI TRUCKS

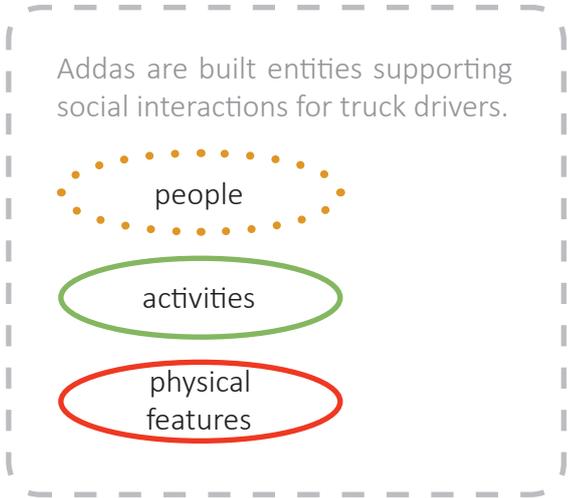
Khan (1975) looks at Pakistani trucks as “mobile shelters”. He explains that until 1935, goods in Pakistan were transported by train; then trucks started to be used as an alternative, but roads were actually quite bad and encountering thieves was not rare. Thus “with this came the embryo of a social network. For instance the drivers would drive mainly during the hours of daylight and in convoys of four or five. They would stop and rest at meal times in the villages along the routes which in turn created *addas*, or centres at which they would gather. It was the *caravanserai* of the Middle East (...), transported into the new milieu of the machine age” (Khan, 1975:184).

Thus Pakistani truck drivers seem to combine both typologies of “carrying your home” (the truck, moving shelter) and “going from home to home” (the *addas*, permanent places). Apart from the *adda*’s diagram based

- > Stable stages’ structures, social and supplies’ nodal points.
- > Stable and simple personal interior.
- > Allow to express and display identity, through symbols and patterns for example, not only in the private sphere but also in the “exterior”.

on Khan's essay, we will focus on the *mobile home* itself, the truck.

Truck drivers use symbols. Interior is a symbol of affluence, but the most important is the exterior. Identity of the truck corresponds to the signs and patterns covering it. It uses both personal and collective symbolism, the latest being the easiest to identify and understand due to its shared character. Identity is displayed on the road, which contrasts with the traditional simplicity of houses from where truckers come from. However, there is still a need to recreate a feeling of home's stability and to somehow have echoes of home.



3.2.2. Exploration 2- Go from stage to stage: your life in a backpack

CARAVANSERAI'S TYPOLOGY

In the theoretical theme 4, we talked about caravanserais, stages in nomads' travels. They were points of stability where nomads could rest, get food, lodging and healthcare. We will look here more closely at the architectural form itself.

First, they were enclosed structures, with one gate: "square or rectangular walled exterior, with a single portal wide enough to permit large or heavily laden beasts (...) to enter" (Times of Oman, 2012:1). It had thus the capacity to protect from natural dangers or repel human attacks, giving a feeling of security to its hosts.

Even if closed from the outside, it somehow opened again in the inside: "Open to the sky, the courtyard consisted of stalls, bays and niches or chambers to accommodate merchants and their servants, their animals and their merchandise" (Times of Oman, 2012:1). Not only the courtyard is physically opened, visually connecting to the sky, but it also has the ability to support meetings and interactions.

"Facilities for washing and ablution" were available, and "later caravanserais would have special rooms or suits, bakeries, mills, etc, which came to resemble small villages" (Times of Oman, 2012:1). Caravanserais could almost be seen as small bubbles of life in hostile environments, recreating at a smaller scale a human reference, the typology of the home-village and of its patterns of exchanges.

> Gate as a protection; but be careful with and aware of the potential gated communities' effect.
> Visual connection to nature.
> Support social interactions, human scale of villages or neighbourhoods providing services.



Niches around the courtyard used by nomads are visible in this caravanserai in Karaj, Iran.

AUSTRALIAN ABORIGINES

Looking at Australian aborigines gives some interesting elements of reflection about how traditional nomadic cultures anchor in their environment. Property does not seem to be the way, whereas symbols play a very important part in this anchoring, as Oliver explains: “Few cultures have simpler dwellings than did the Australian aborigines, but (...) the definition of place and location through its symbolic value determined their movements and the location of their camps” (1975:14).

Rapoport reports that “within the camp fires seem to be more important than huts”: fire is always going, even when not needed for very practical purposes such as heating or cooking; indeed, its role is to “[keep] spirits away” (1975:41). Thus, fire is not only used in a practical way and for its physical properties, it is before everything given a symbolic meaning to keep the camp secure in a spiritual way. And this is all about the camp, the temporary: as it is not possible to get security by a permanent dwelling, then it is given by symbols temporarily established in the landscape, as emphasizes Rapoport: “The symbolism of place seems more related to the site and directions, i.e. to the *land* rather than the dwelling” (1975:41).

How does this relationship with the land exactly work? It appears that Australian aborigines were literally superimposing their own symbolic world on the physical landscape: “Underlying the visible landscape there seemed to be a symbolic landscape which was more real and of which aborigines had a clear notion” (1975:43), and both of those landscapes “coincide at natural features” (1975:44). What is more, “Symbols (...) change the biological and geographical world of signals and signs into a human world of meanings” (1975:42-43). Tangible elements of the natural landscape are signs calling out travellers and holding the potential to be given a meaning and to become symbols, points of stability in the travellers’ landscape. By giving a meaning to the natural sign, nomads appropriate their environment, get the ability to belong and be connected to it. This is what explains Rapoport: “aborigines *humanize* their landscape, that is take possession of it conceptually, through symbols – as we do” (1975:43). Aborigines’ environment is hostile, therefore they use this appropriation process to allow them to turn their environment into something hearty: “The harsh environment is personalised through ritual and myth bringing its natural features into the realm of the familiar and friendly” (1975:45).

In his 1975’s essay, Rapoport also gives an interesting comment, questioning the relationship between

> Provide tangible elements that people can appropriate and give meaning to through their own symbols, in order to connect to the whole environment.

architecture and place: “If architecture is the mode of creating virtual space, making visible an ethnic domain and setting up a sphere of influence, the aborigines create place by giving meaning to sites in terms of their culture – their ethnic domain. They do what architecture does in all the ways described but without the architecture” (1975:49). It is definitely possible to create place without designers, then would it be better to see designers as *catalysts* supporting place’s creation? Thus on which criteria can the catalysis’ process be based?



Uluru, also known as Ayers Rock, is one of the main Aborigines landmarks, holding great cultural meaning.

“BACKPACKS”

Travellers going from stage to stage need to carry their personal items. But can their “backpack” be more than a mere luggage? In the middle of the 19th century, Louis Vuitton started to develop the concept of the famous Vuitton’s trunks. Those trunks feature foldable and sliding elements, allowing the trunks to be a real storage unit (wardrobe, drawers) or even a piece of furniture (desk, bookcase).

- > Foldable.
- > Multifunctional.



Vuitton’s trunks featuring a writing desk (Stokowski design, 1930).

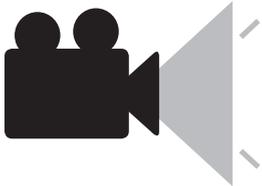
HOTELS

Hotels are a quite regular accommodation solution for travellers, and there are as many different types of “hotels” as there is of travellers. The range goes from very luxurious hotels to extremely minimalist rooms, via inns and motels. Luxurious options actually praise the new “global nomadism”, as shown in this excerpt of the exhibition catalogue of “New Hotels for Global Nomads” (2002): “The world is on the move: geographic borders have broken down as people can increasingly travel anywhere, anytime, for business and pleasure. The modern hotel accommodates and even encourages this new international nomadism, not only offering a place to sleep, but through its design, amenities and sense of theatre, providing its guests with the ultimate escapist experience”.

LUXURIOUS HOTELS

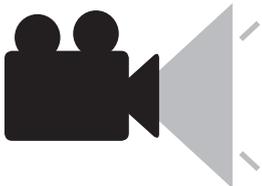
In some cases, luxurious hotels can become some kind of permanent residence. A few hotels are notable for this, like the Chelsea Hotel in New York. It has been the residence of famous artists, writers, actors and musicians, sometimes staying for years.

- > Personal spaces clipped onto common cores.
- > Give privacy-feeling in common spaces.
- > Living place as a point of departure for networking and connection to the city.



SOMEWHERE, Sofia Coppola (2010)

The action is set at the Chateau Marmont Hotel in California, where the main character is literally living. An interesting scene in the movie happens at the hotel’s swimming-pool. Both the main character and his young daughter are sunbathing. First the camera films them in close-up, giving the impression that they are alone and in a private sphere. But then, the camera zooms out and it appears that there are other people around. This suggests that it is possible to feel together and safe, in a cocoon, even while being in a public place.



THE ILLUSIONIST, Sylvain Chomet (2010)

In the late fifties, Tatischeff, an illusionist on the decline and searching for jobs, travels around with a young woman, Alice. They end up living for a while in an old guest house in Edinburgh. Here this temporary place, more than a shelter, is also a link to the exterior and a catalyst for new meetings and social interactions. Indeed, this is there that the illusionist meets an acrobats’ trio who gives him a job offer. This is also there that Alice first “meets” her future boyfriend: they see each other through their respective windows, her from her room and him from the nearby library. This meeting is possible only because Alice’s living place was integrated in the city through visual connections.

CAPSULE HOTELS

The concept of capsule hotels appeared in Japan in the 1970s. In 1972, Kisho Kurokawa designed the Nakagin capsule tower in Tokyo, with capsules for one person clipped onto a circulation core. Nowadays, the concept has also spread in other parts of the world, but stays something typically Japanese.

The rooms basically have the dimensions of a bed, with a height allowing occupants to sit. Usually, they were rented only for one night by drunk men or who had missed the last train. But a few years ago, Japanese capsules have started to be rented for weeks or months by jobless and homeless people (Tabuchi, 2010).



Sasaki, 2010

Capsule hotels provide a minimum place to sleep, with a light, a small TV and hooks to hang clothes. Personal items can be stored in a locker outside.

3.2.3. Exploration 3- Unwanted mobility

Ibelings draws the difference between the “nomadic haves” and “have-nots” (2003:162): those who have means and wish to be *nomads*, and the others. We are touching here upon the field of refugees, displaced people, and homelessness.

REFUGEE CAMPS

LIGHTWEIGHT EMERGENCY TENT, United Nations High Commissioner for Refugees (2002-present)

UNHCR has been developing tents for refugee camps for over ten years. The principle is very basic, with structure and sheeting. As an emergency structure, it only addresses very simple issues, as maximisation of space: the tunnel shape makes the usable space as big as possible and the

- > Recycling.
- > Pride, be visible and accepted in the city.
- > Maximize space.
- > Functional core's system.
- > Plugged elements.

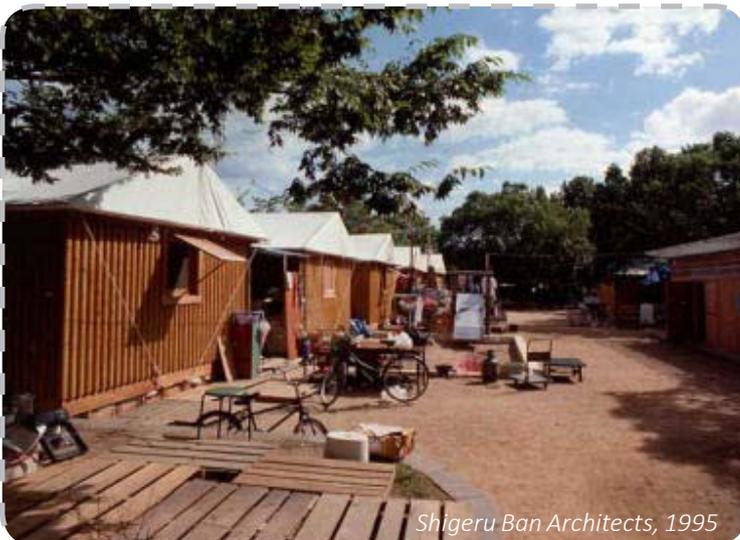
absence of ropes on the side allows to have tents closer to each other. However there are also other issues to tackle, as the survival mentality in refugee camps. This entails a need for privacy, for example with partition of the shelter space, according to gender, age, level of privacy and so on (Architecture for Humanity, 2006).



UNHCR emergency tents provide very basic shelter.

PAPER LOG HOUSES, Shigeru Ban Architects (1995)

After the Great Hanshin-Awaji Earthquake, Shigeru Ban developed transitional housing in Kobe. Houses were made of recycled, disposable and donated materials. Paper tubes were used as walls and donated plastic beer crates stuffed with sandbags as a base. Spongy adhesive tape and tubes filled with shredded wastepaper provided insulation. To reduce cost even more, builders were volunteers and student workers. Houses were built in the city to allow people to stay close to their jobs and the idea was to make them “visibly acceptable”. They had to avoid the impersonal aspect of refugee camps and their layout as a group helped to support normal social organisation (Ban and Miyake, 2009).

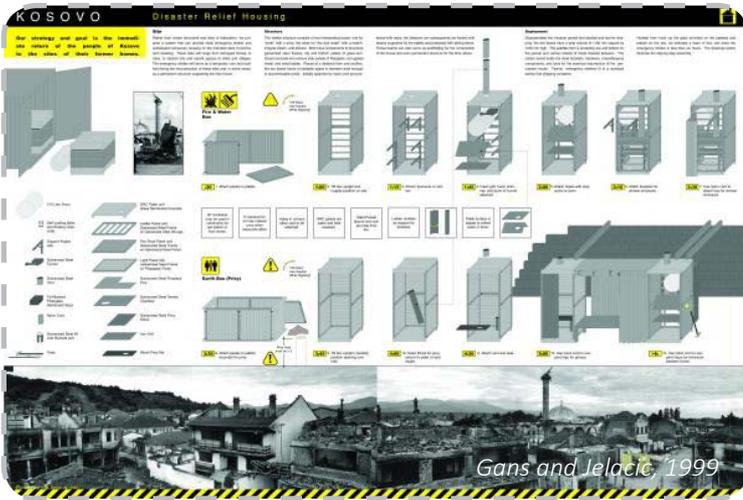


Paper Log Houses managed to be more than mere emergency shelters and to recreate a neighbourhood feeling.

EXTREME HOUSING, Gans & Jelacic (1999-present)

Gans & Jelacic have been developing a concept of core system for Architecture for Humanity since 1999. This core is made of two freestanding boxes, one including toilets and the other one a hearth, an internal cistern and a shower.

Beams connect the two boxes, creating space for a bed. This can become the core for a permanent structure or can be plugged into a damaged house. Indeed, it provides a functional core to inhabitants (plumbing, electricity...), which can be a basis to build upon with local materials (Architecture for Humanity, 2006).



The core system of the project was meant to give the opportunity to Kosovo war refugees to rebuild a home from a damaged house.

HOMELESSNESS

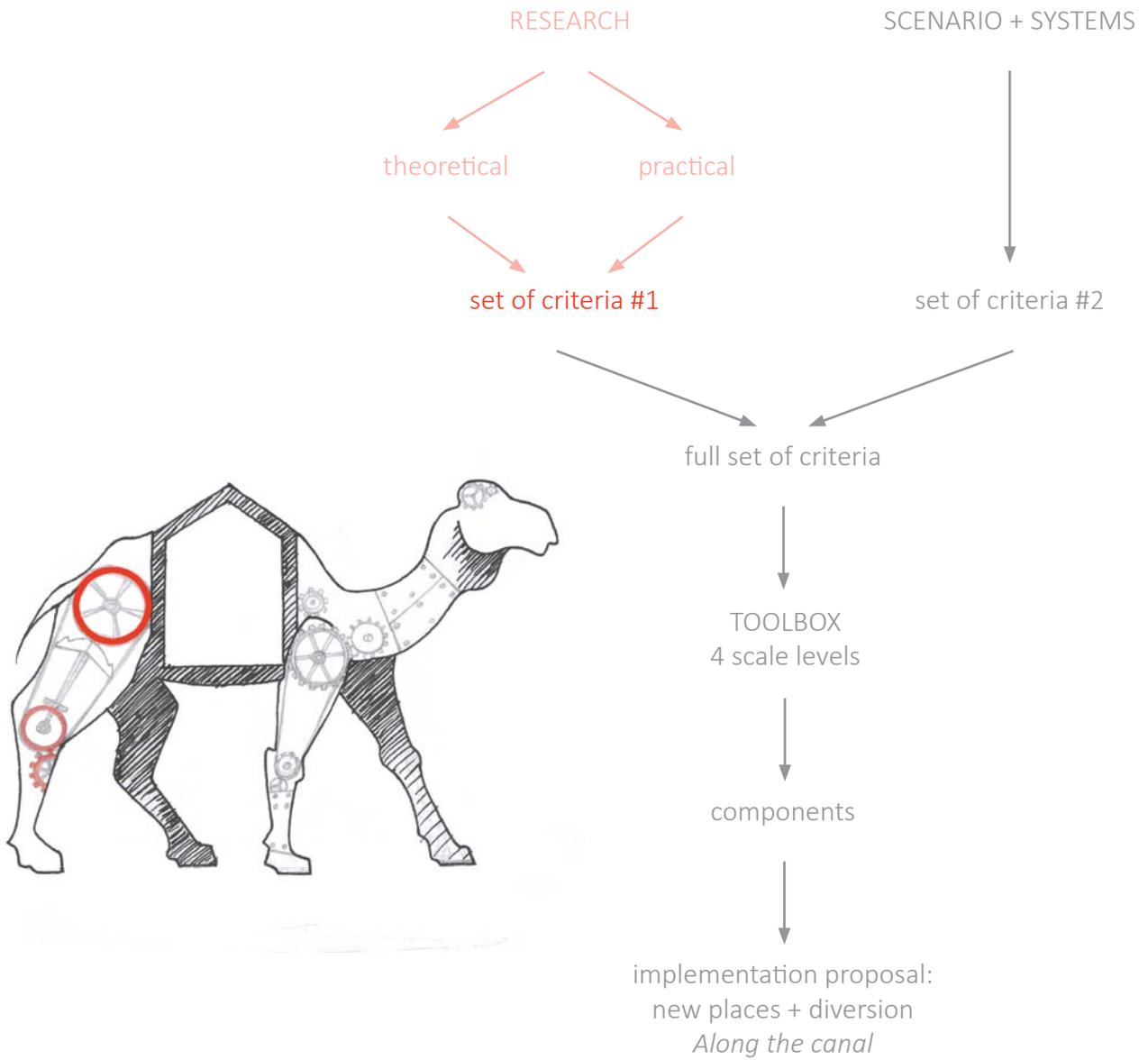
PARASITE, Michael Rakowitz

Michael Rakowitz has been developing inflatable plastic structures for homeless (Ibelings, 2003). They inflate when connected to buildings' air ducts, which also provides heating to the dweller.

> Use of existing infrastructures.
> Arouse interactions by making visible what is not supposed to be according to regular social standards.



ParaSITE provides shelter to homeless and makes them visible in the city.



3.3. Research conclusions – Set of criteria #1

As an intermediary conclusion, a first set of criteria concerning re-creation of home by and for urban nomads can be drawn. This set was created by combining criteria established in the research (grey boxes on the right) and by defining where they overlapped. It will be used as one of the point of departure for the design part of the work, to develop the toolbox of design strategies.

FUNCTIONAL PRINCIPLES

PRIVACY // Protect privacy. Give potential to have a privacy-feeling in common spaces.

SAFETY // Provide a safe environment, basis to self-confidence, life management and self-awareness. Provide stable, secure and peaceful physical structures, “cores”.

ADAPTATION TO CULTURES // Take into account cultural differences to welcome everyone and support daily life activities. Provide places for nomads to settle their own structuring core.

TIME // Provide places adapted to the duration of stay. Provide a system which allows people to come back later on.

COST // Provide affordable places, adapted to nomads’ income.

PHYSICAL SHAPING/FEATURES

PLUG // Possibility to connect mobile units, plug elements, clip personal spaces onto common cores.

FLEXIBILITY // Foldable, modular, adaptable, removable features. Reuse standard and modular industrial elements to create something else and flexible.

DENSITY // Compact multiple home functions in a small surface. Maximize space.

AUTONOMY // Energy production, recycling, compost, functional core’s system. Look for alternatives to mass-production and standardised systems.

ENTER // Gate as a protection; but be careful with and aware of the risk of creating gated communities.

CONNECTION TO EXISTENT // Use of existing infrastructures.

NETWORKING AND INTERACTIONS

HOME AS A NODAL POINT // Home as a centre of life, a social nodal point. Living place as a point of departure for networking and connection to the city.

INTERNATIONAL COMMUNITY // Provide international networks at city scale to stay in contact with origins' culture, music, food...). Create a community feeling, but by mixing "groups", especially "natives" and "strangers", not to end up with ghettos.

CATCH ATTENTION // Arouse interactions by making visible what is not supposed to be according to regular social standards. For example, use temporary, unusual structures to generate more interactions.

CULTURAL INTEGRATION IN THE NEW CONTEXT

CONTEXT'S CHARACTERISTICS // Take into account each new context's physical characteristics and cultural patterns.

LANGUAGE AND COMMUNICATION // Provide structures to support learning of local language.

OPEN-MINDED COMMUNITIES // Get people to know each other beyond common knowledge and stereotypes.

CONNECTING SCALES: BUILDING, NEIGHBOURHOOD, CITY

HUMAN SCALE // Think distances at human scale. Support social interactions through the traditional human scale's conception of villages or neighbourhoods, providing close distance services. Provide easy food and healthcare's access for example.

OPPORTUNITIES' NETWORKING // Living place as a point of departure for a social network in the neighbourhood or the city. Connect "homes" to the present, the city life and its opportunities, in order to then look towards the future.

"LANDMARKS" // Provide security and at the same time favour discoveries and interactions at bigger scale. Provide tangible elements that people can appropriate in order to connect to the whole environment.

BALANCE // Find the balance between group and individuals' personalities, in harmony with the physical environment.

URBAN/NATURE // Sensory connection with nature (visual or more), feel its presence even in an urban environment. Experience the city differently.

INDIVIDUALITY AND IDENTITY

KEEP INDIVIDUALITY // Avoid conflation between the "group" people supposedly belong to and their individuality.

PERSONAL SYMBOLS // Provide tangible elements that people can appropriate and give meaning to through their own symbols.

CUSTOMISATION // Leave room for personal decoration and furnishing, which is able to carry symbols. Allow spatial flexibility supporting inhabitants' wishes and habits. Allow people to use their place in their own way, to bring their own fundamental references and symbols into their place.

PRIDE // Be visible and accepted in the city. Allow to express and display identity, through symbols and patterns for example, not only in the private sphere but also in the "exterior". Value your identity, display it with both pride and respect (for example, with simple things as your name on the door or the mailbox). Provide language support's structure, to keep on speaking your native language. Give the possibility to reproduce personal eating habits (tools, ingredients; grow specific plants/herbs/vegetables in an international garden?).

SELF INVOLVEMENT

INVESTMENT // Involve inhabitants in the design process, by minimising time and efforts that people have to invest to transform their place in a satisfactory way.

APPROPRIATION // Make people feel responsible of their place through customisation. Leave room for people to make decisions about their place, pride of doing things yourself, which creates a special connection with the place.

MAINTENANCE // Make people feel responsible of their place through maintenance. Allow people to have control of their place.

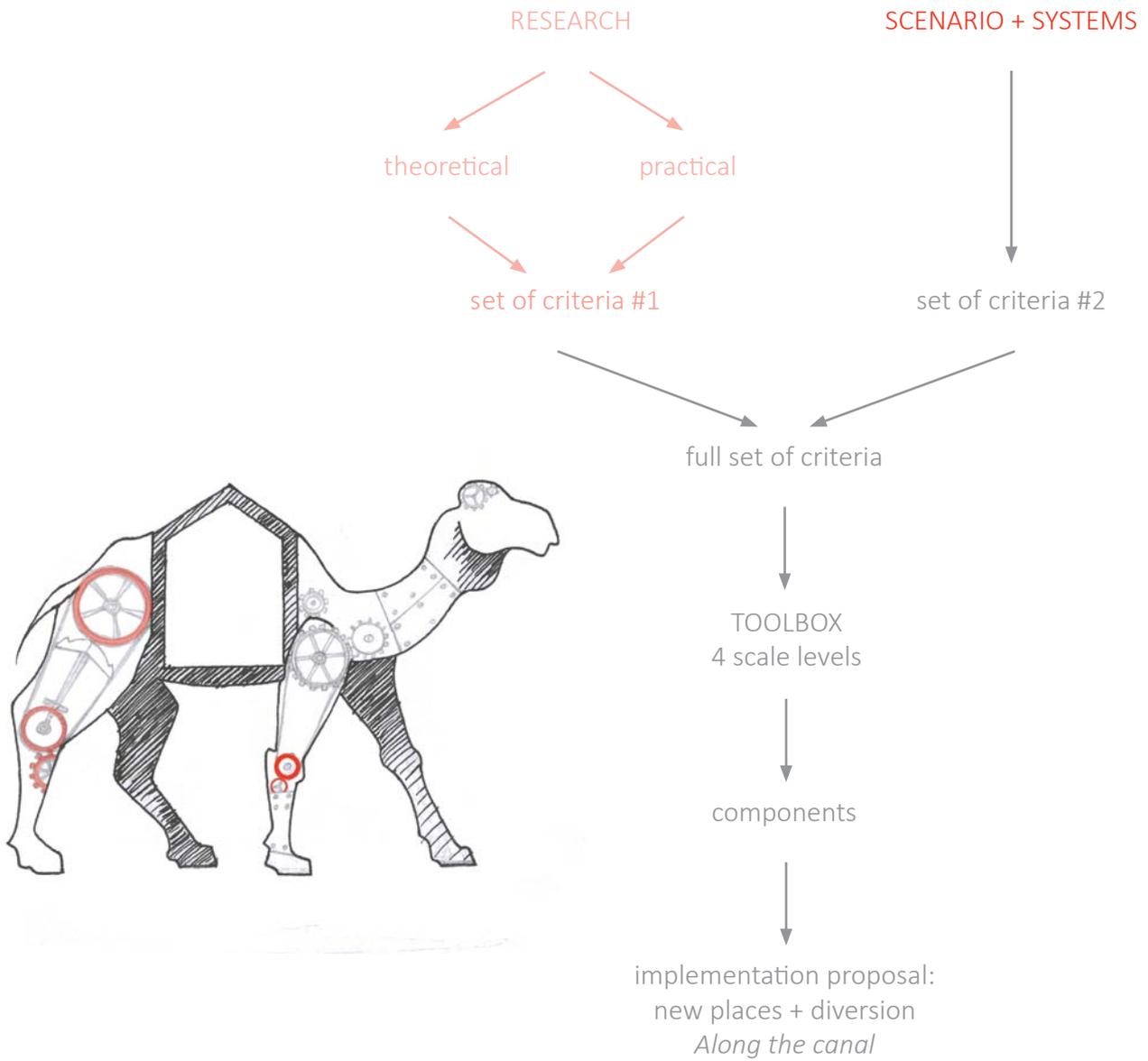
ACTIVATING ATTITUDES

FUTURE MODELS // Identify and select already existing relevant central values to social sustainability and enhance them, to serve as future models.

SET SITUATIONAL FACTORS // Use situational factors to activate norms and values. Set specific situations calling people to act: for example, highlight specific needs and their relevancy, or send them positive signals in order to get positive attitudes in return.

MENTAL COST // Try to activate attitudes which do not demand a lot of efforts from people, settle small goals. Give people incentive to act, motivation.

COUNTER DEFENCE MECHANISMS // Show people that they can make a difference, make them aware of their responsibilities.



4. Application: Strategies

Nowadays, a “nomad” could be more or less anyone. A tourist, an artist, a businessman, a homeless, a war or climate refugee, all of them are potential mobile dwellers. In order to develop design proposals, I needed to know more precisely which group I was targeting, and I first brainstormed about three possible scenarios: “free spirit”, war refugee and mobile worker. I decided to use the scenario of a mobile worker, because it seemed to be the most relevant in an European urban context (preliminary research about “free spirit” and war refugee is available in the Appendices’ section “Scenarios’ preliminary research”).

Based on this scenario, an attempt in helping people re-create a feeling of home in a foreign environment will be given, through development of several strategies (principles and design proposals). They will try to answer the main research questions as well as the design research questions:

- How can designers help people re-create a feeling of home in a foreign environment, as a first step to integrate in a new context?
- How does scale affect design’s role in the process of helping people feel at home?
- How can designers activate positive attitudes among *nomads* towards their place?
- How can temporary dwellers be integrated in the city through social interactions?
- At the same time, how do you save room for their individuality and personal identity? By which means can you maintain people’s socio-cultural particularities?

Strategies were developed in relation with the set of criteria established from the research, and with other criteria ascertained from a “design systems” approach of the scenario (see explanation of this method in next section). All criteria were used to initiate a constellation of sketched design proposals, compiled as a toolbox of design strategies. Each strategy is explained through text, discussed using the set of criteria and pros and cons are identified. Strategies are illustrated through inspirations (concrete examples, pictures and personal

conceptual explorations), sketches, diagrams and technical principles. Finally, an implementation in Gothenburg’s context is suggested as a concrete example for implementation in European urban contexts.

4.1. Scenario: mobile worker

PROFILE

Mobile workers of the thesis have a low or average income (high income is not targeted in the scope of the thesis). The reason why they have moved can be the lack of jobs in their own country; they could also have moved because they wanted to live in another specific country. In both cases, the most important is that, recently arrived, they are most likely still searching for a job. Of course, they also could have moved because they got a job abroad. Their time of stay is at least one year.

CHALLENGES

If mobile workers have a family (husband/wife or even kids) in their home country, how do they deal with that? Does the family have to be mobile as well? In the same perspective, what if the mobile worker starts a relationship or family on the way? Does he/she have to move again? What happens in the case of future migrations?

Leaving family and friends, on whom can they rely? How can they create anew a social network?

Can mobile workers keep a permanent residence in their home country? What can they bring of their “sedentary” life with them?

How can they deal with changes in their environment, potentially including new climate, buildings, culture, social patterns, language, food and so on?

4.1.1. Zoom in: systems

DESIGN SYSTEMS

Systems propose a method to map, structure and get ideas. Concepts, represented by words, are connected by lines, and those connections should be given a meaning. This can be notified by the thickness of the line, showing the importance of the connection. Lines can also be associated with a symbol, or be given a direction with an arrow indicating a causal relationship. Several mapping methods can be used:

GIGA-MAP // A giga-map could be defined as a “brainstorm” mapping, including as many elements as possible. The ideas mapped in the thesis came from the research conclusions.

The concepts need to be classified; they can be ordered in concepts’ families. Here I used two families, the “people”’s component (“stakeholders”) and the environment, potential homes (“places”). All concepts do not have to belong to a family.

I started to map from the topic of the system: the mobile worker. Then I began to define the initial state of the scenario, mainly using the concept’s families. From this point of departure, I introduced the disruption element of the scenario (mobility) and continued mapping using the concepts’ families. From there, I developed the giga-map adding other concepts.

Once the “brainstorm” is done, more order must be given to it. Having families of concepts is not enough. Concepts should be hierarchised (the bigger the font is, the more important the concept is considered), as well as the connections between them (thickness of lines). Other qualities

can also be given to concepts. Some can be defined as “black boxes”, which means entities of which it is not possible to understand the functioning and in which you will not dig more with a sub-system (this type of qualification was not used in the mobile worker’s scenario). Finally, “innovations”, “potentials” or “zoom points” are identified within the concepts. A zoom point is a concept which can become another system in itself. Innovations and potentials are useful to develop zoom systems.

Maybe it would have been interesting to define more concepts’ families in the giga-map I developed, or to develop another giga-map but with different concept’s families. In this second case, the different giga-maps could be compared in order to define overlapping points. A third option could be to do other giga-maps based on semi-structured interviews. In the case of the thesis, interviewees should be mobile workers, if possible with different profiles (gender, age, education, nationality and so on). Results could then be compared in order to add complexity to the system, or be used as a test against my own giga-map to possibly reassess it.

Zoom points identified in the giga-map are used as topics to develop further, as points of departure for new systems. Those zoom systems use system dynamics or more intuitive mapping. “Leverage points” are identified within those new systems. “Leverage points” are concepts with the ability to change a whole system if you influence them. Once defined, leverage

points are developed as new systems, tackling more precise issues. They allow to identify design criteria giving solutions to the problems found in previous analyses. Design criteria can then be used to formulate concrete design proposals.

SYSTEM DYNAMICS // Those systems involve a variable of time in the relations between its different elements. This is marked by the way arrows linking the different elements are drawn. Each arrow is qualified by a “+” or a “-“. We can explain both cases by examples: if the element “restrictive policies” points at the element “informal occupation” by a “-“ arrow, it means that the more restrictive policies you have, the less informal occupation you get. If the element “informal occupation” points at the element “catch attention” with a “+” arrow, it means that the more informal occupation you have, the more you catch the attention. Sometimes, arrows will create a loop. If they are all qualified by the same sign, this is a reinforcing loop, highlighting that the phenomenon is reinforced. If they are qualified by opposite signs, this is a balancing loop: the phenomenon is balanced.

As systems can look quite complex to read if you are not used to it, I provided intermediary explanations and broke down the complete systems in several steps. Each system is presented as follow. First a small text introduces the system. Then a very simplified system features the complete system’s most important ideas, as well as the different steps in which the system is presented; the steps are circled and associated with a number. Then the different steps are mapped and clarified by a brief text. Once every step has been explained, further reflection about the topic can possibly be given, based on literature research. Finally, the complete system is presented.

Legend used for systems is provided below.

Stakeholder

Place

Blackbox

Ⓩ Zoom

Ⓟ Potential

Ⓡ Innovation

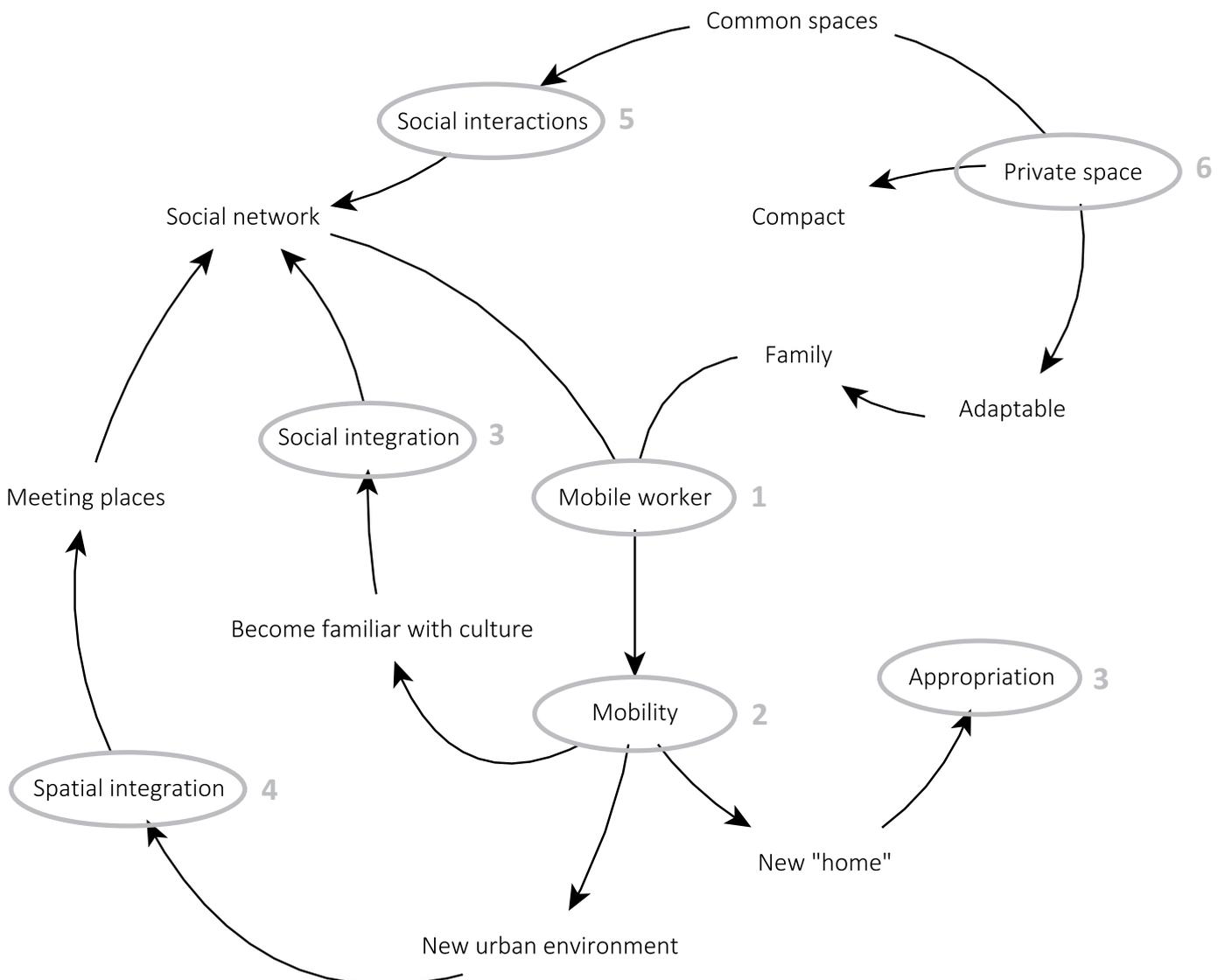
Leverage point

Ⓡ Reinforcing loop

Ⓟ Balancing loop

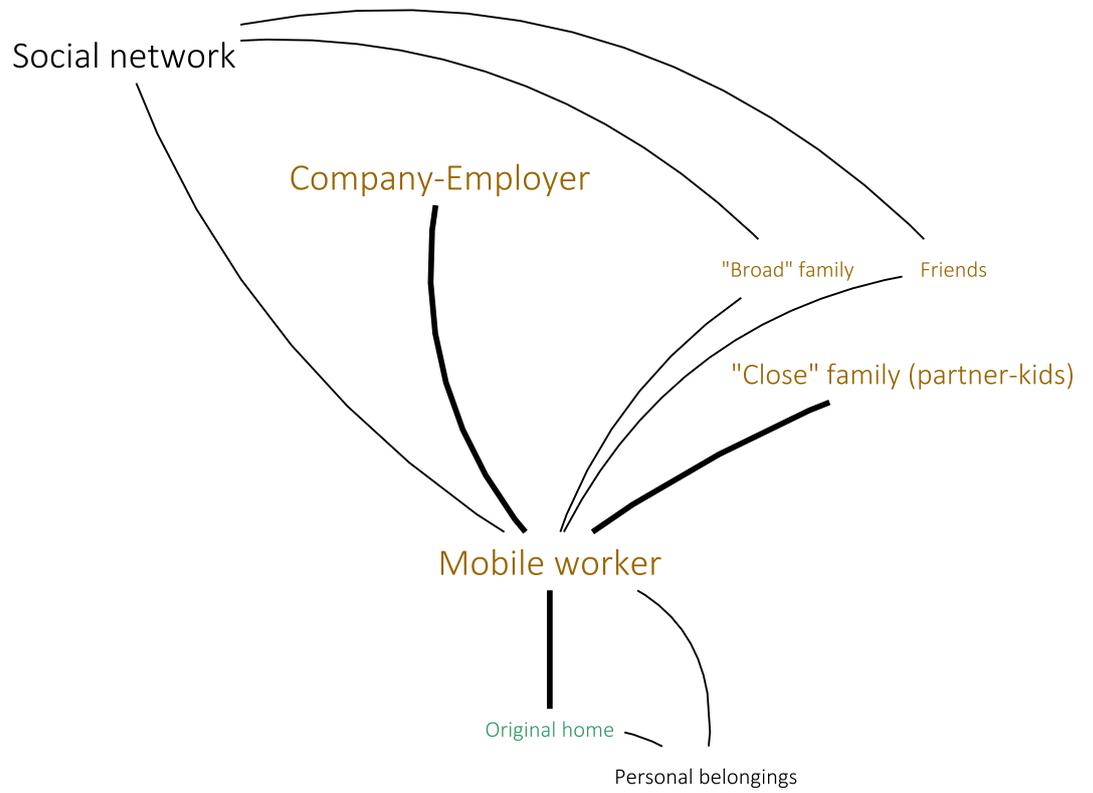
The giga-map addresses issues raised by the challenges identified above (cultural changes, family, personal belongings). It also tackles which are the potential dwellings where a mobile worker usually lives. It can of course be mere rented apartments. However it could also be more cooperative types of living places, allowing temporary and settled dwellers to share common spaces in order to create a community feeling. Social interactions are also generated at city scale with meeting places, potentially mobile or temporary. They can be catalysts for social integration. Thus people can develop a social network from their house (shared spaces) and from the city (meeting places).

In any case, at an individual level appropriation of the place seems to be a key to create attachment to the place, by personal symbols for example. This is enhanced by allowing adaptability and arrangements. Adaptability in terms of expandability is also a potential for having your family with you. However home is not only about physical dwellings, but about the whole new urban environment, its inhabitants, cultural settings and physical characteristics. This raises the question of integration in the city, physically by acquiring references for example, but also as explained above, through socialisation.



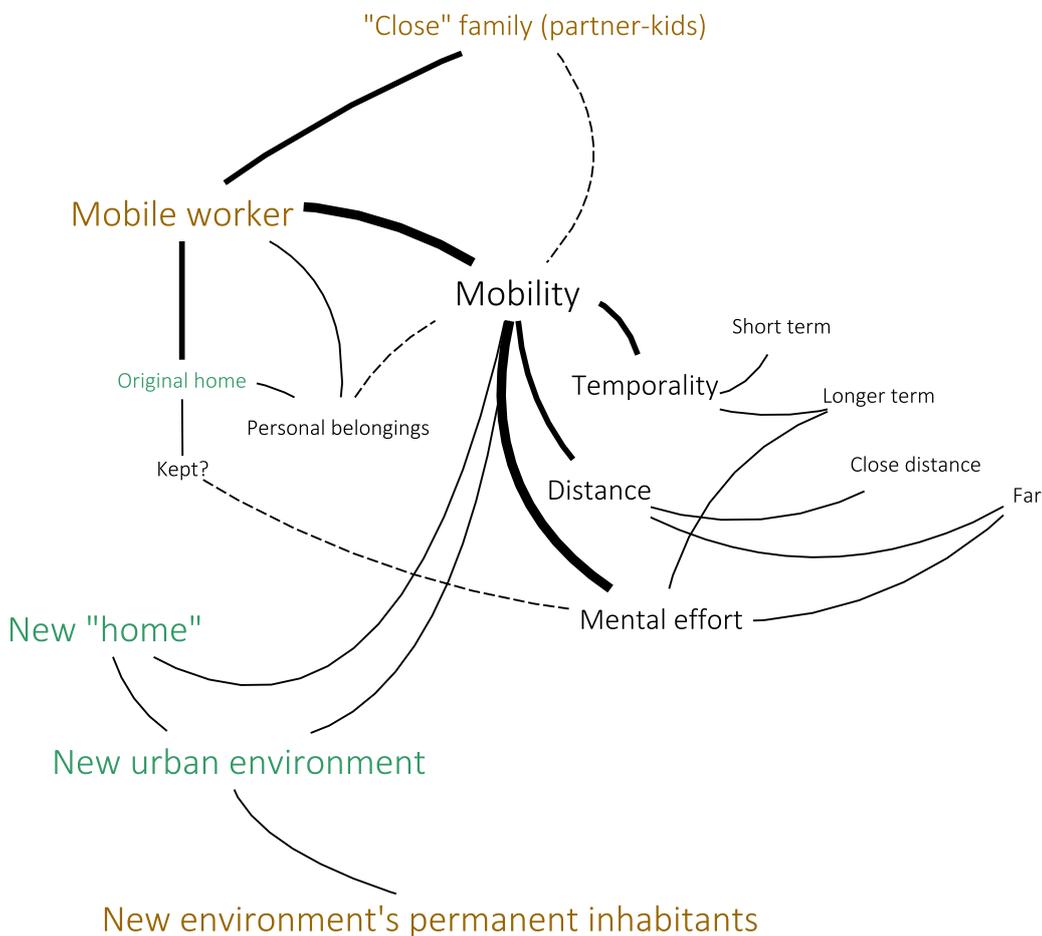
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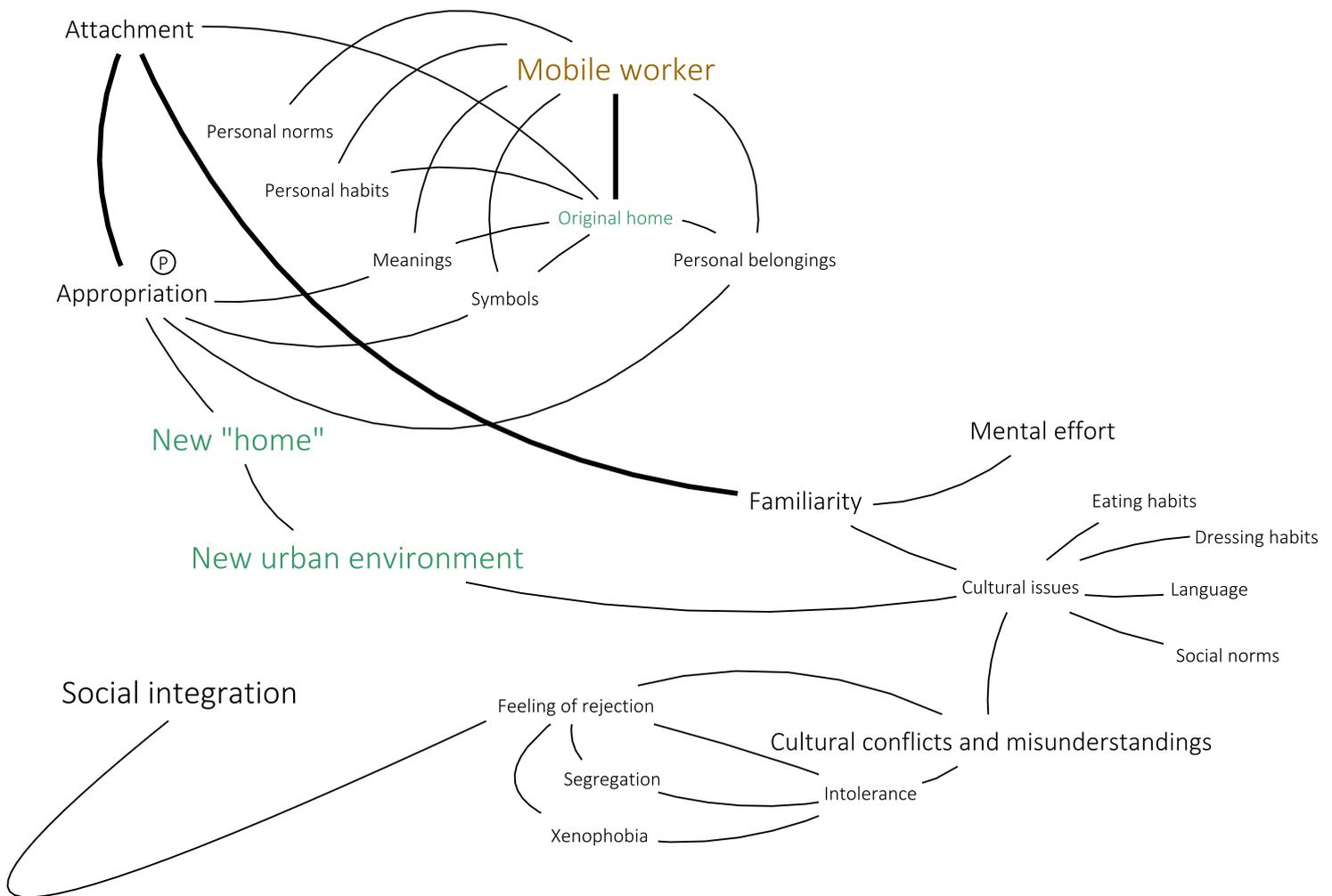
In his original home-town or country, apart from his original house and personal belongings, a mobile worker has a social network, made up of family, friends and working environment.



2

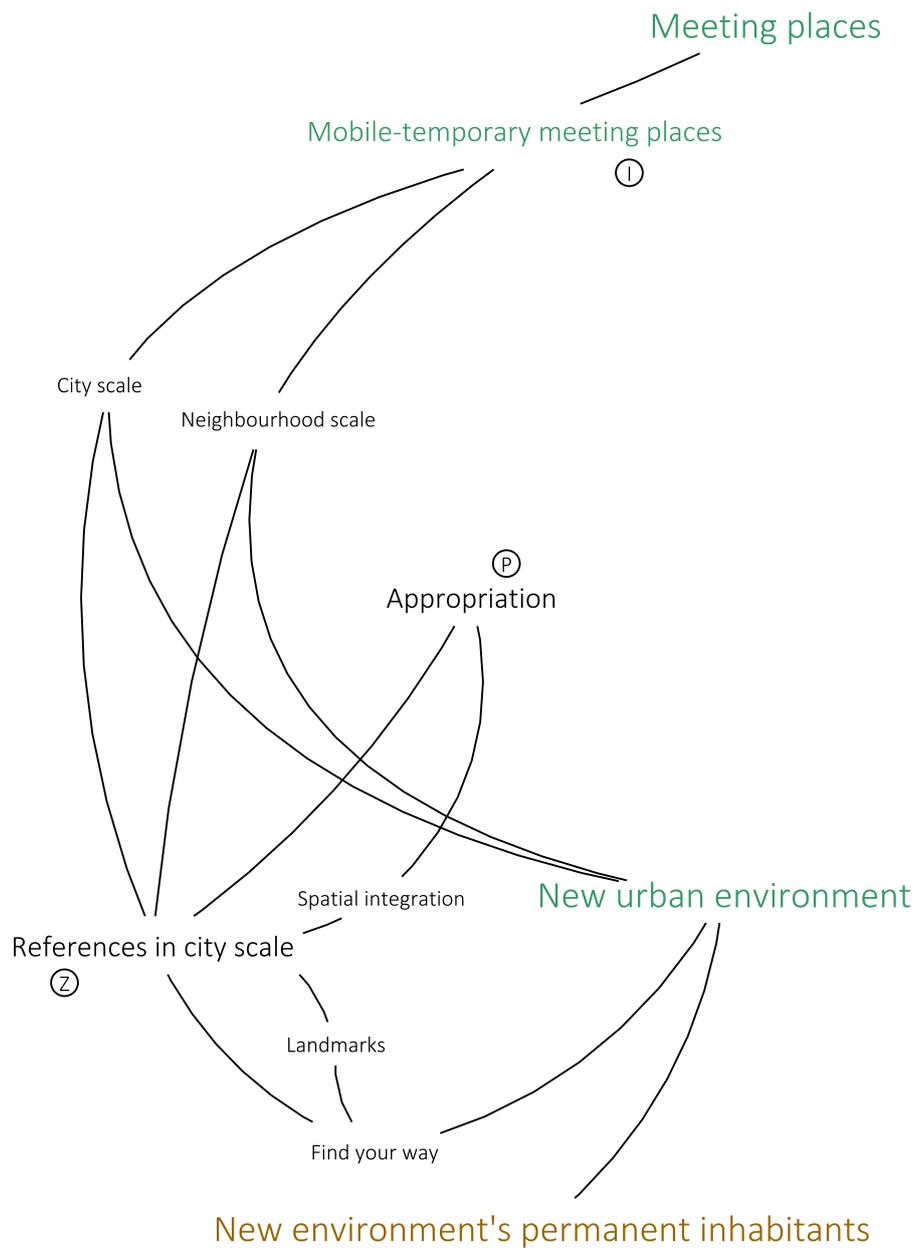
But this is challenged by mobility: the mobile worker experiences a new home-building, a new urban environment and new people.





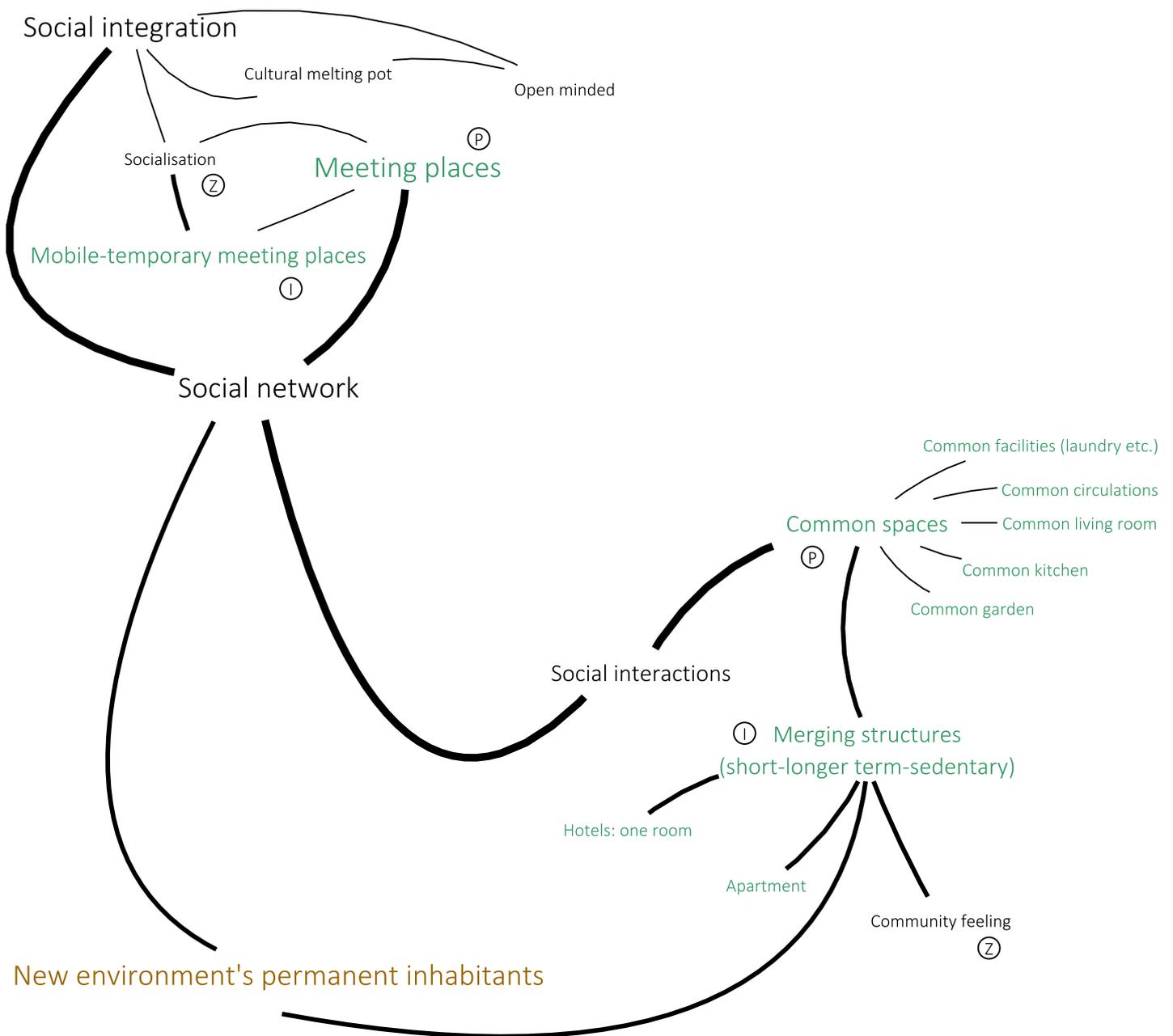
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Thus the mobile worker needs to appropriate the place through personal symbols, habits and so on, to eventually become attached to the place. He also needs to become familiar with the new cultural context in order to socially integrate.



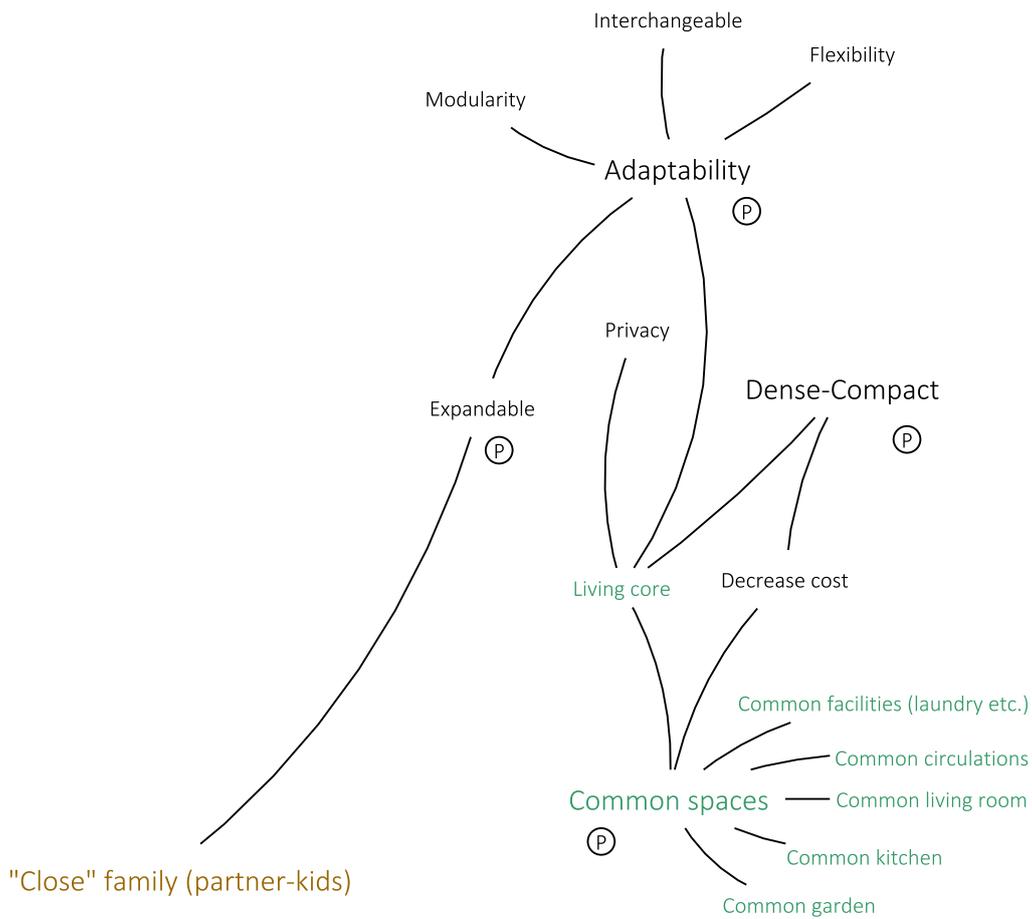
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But this is also about spatial integration: there is a need to get references in the new urban environment, for example with meeting places.



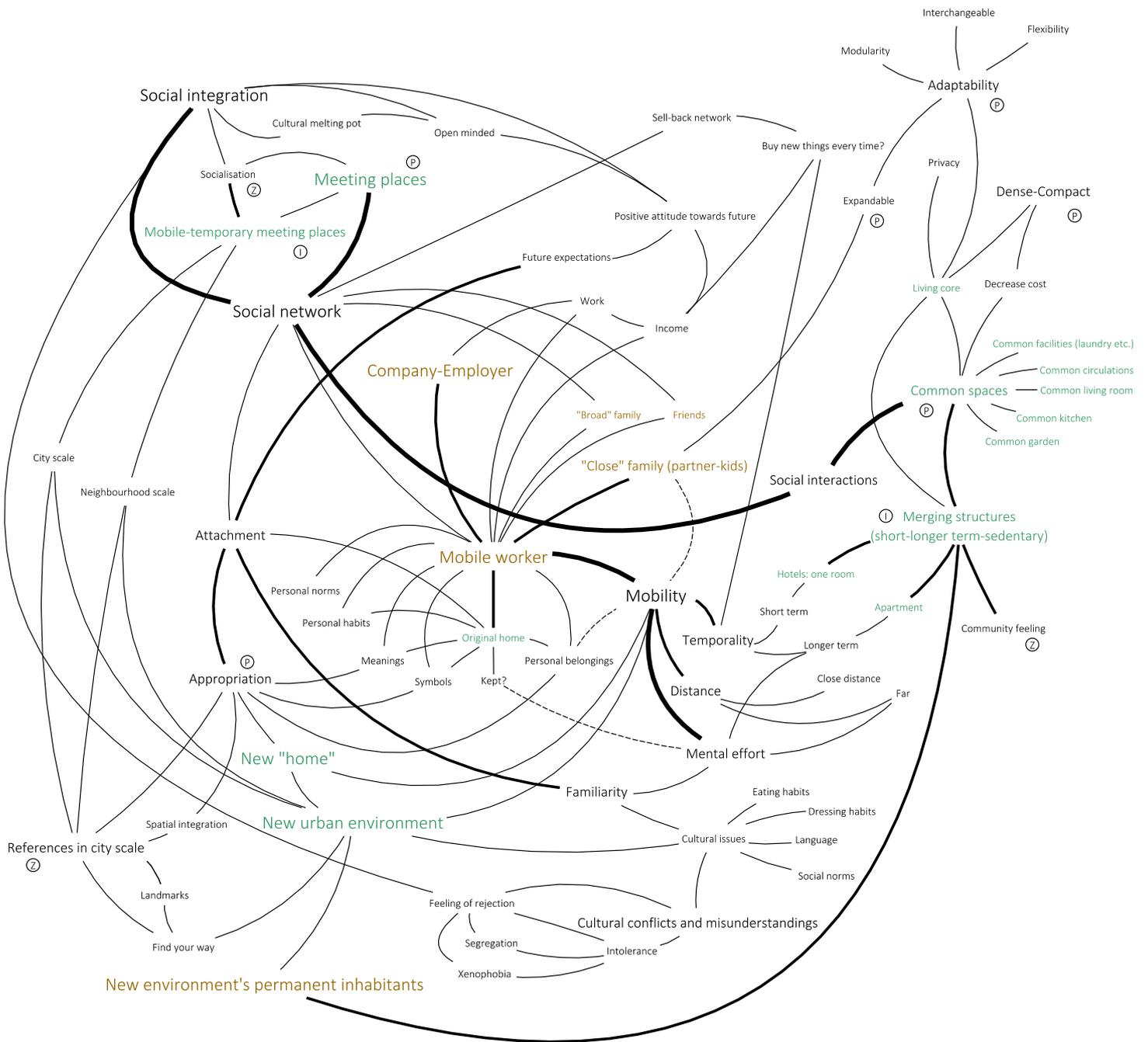
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Meeting places are an opportunity to redevelop a social network at city scale. But social interactions within the home-building are also possible in common spaces. Buildings could even gather sedentary and mobile people in order to create a community feeling and to get to know the new environment's permanent inhabitants.

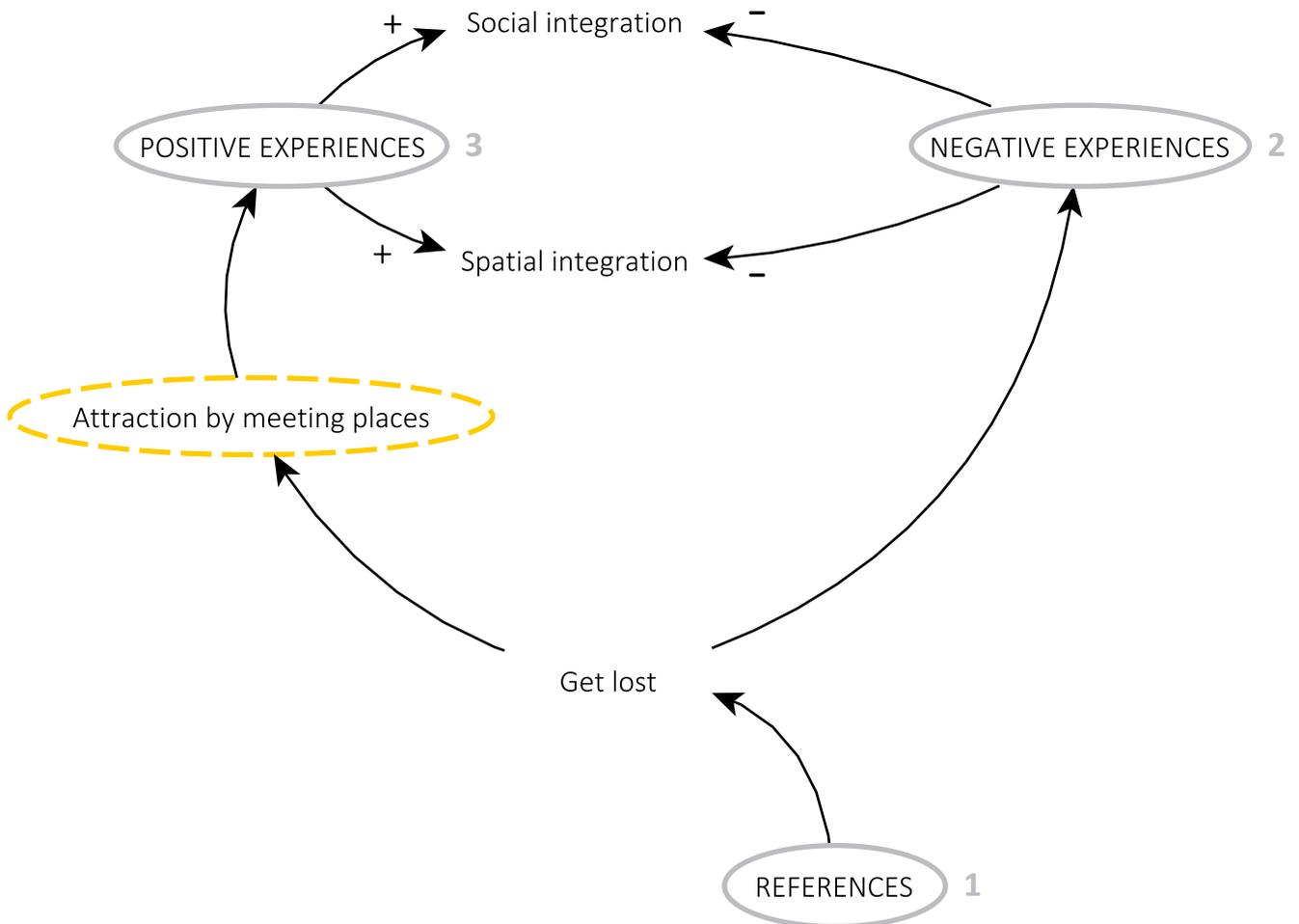


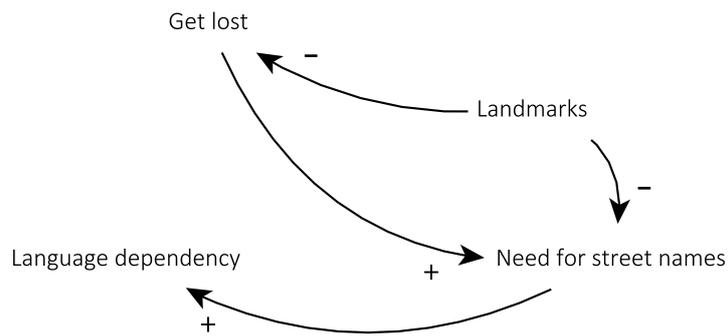
6

But what about the private living core? By combining it with common spaces, the private unit can become more compact, which allows to decrease the renting cost of the place. Features such as adaptability and expandability are also to be taken into account, and are particularly relevant if the mobile worker came with his family and if this one evolves over time.



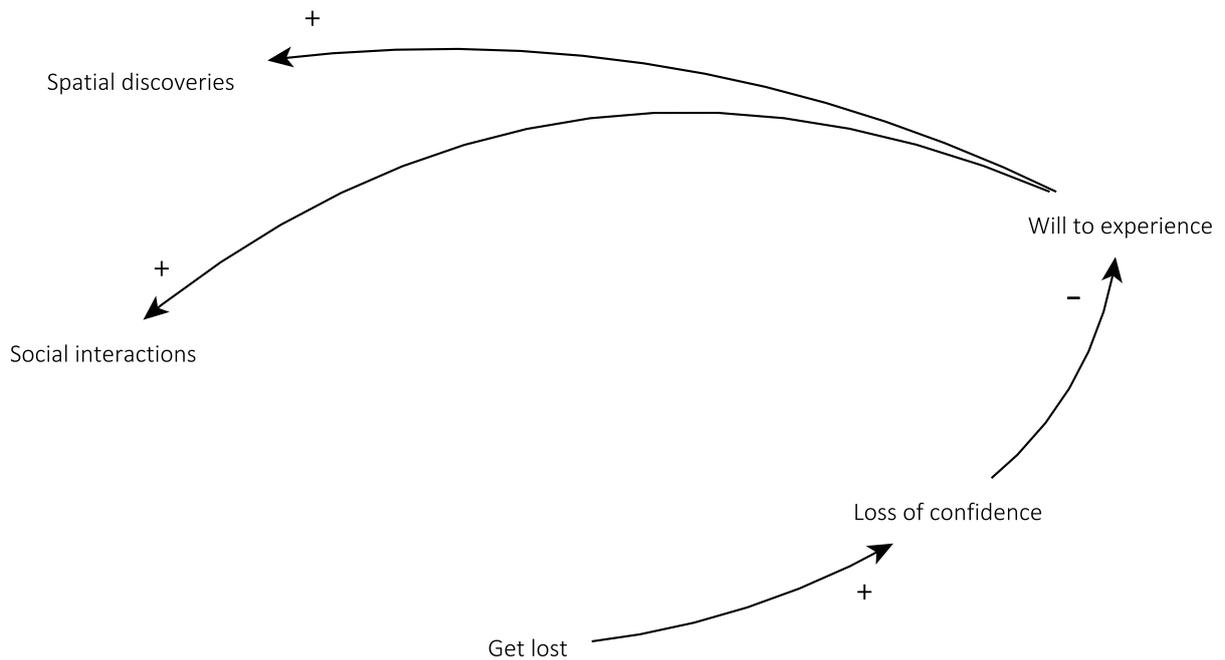
When arriving in a new urban environment, it is more likely that the newcomer will get lost. There are two possible scenarios in that case. One option is that people get very negative experiences, lose confidence and their will to explore the city, preventing them from integrating in the city. The other option is more positive. Specific spots, as meeting places, have the power to attract people, and it is more likely that people have unexpected experiences, discover new places and meet new people in such spaces. Being attracted by meeting places then appears as a leverage point for spatial and social integration.





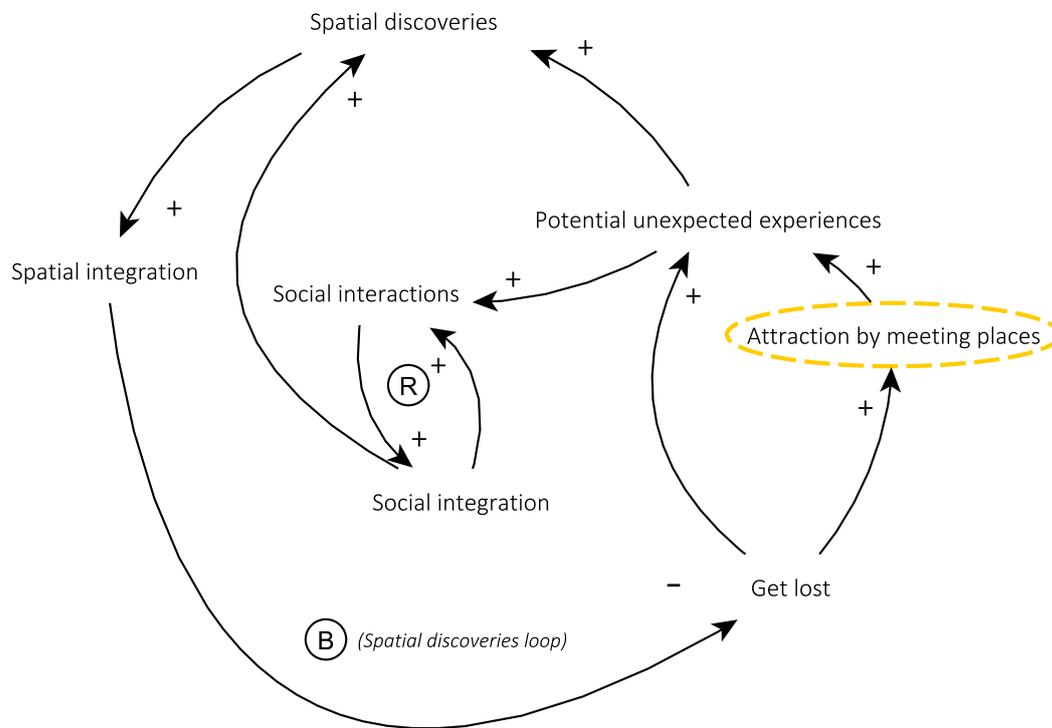
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The more landmarks a newcomer has, the less he gets lost and the less he needs language depending signs as street names.



2

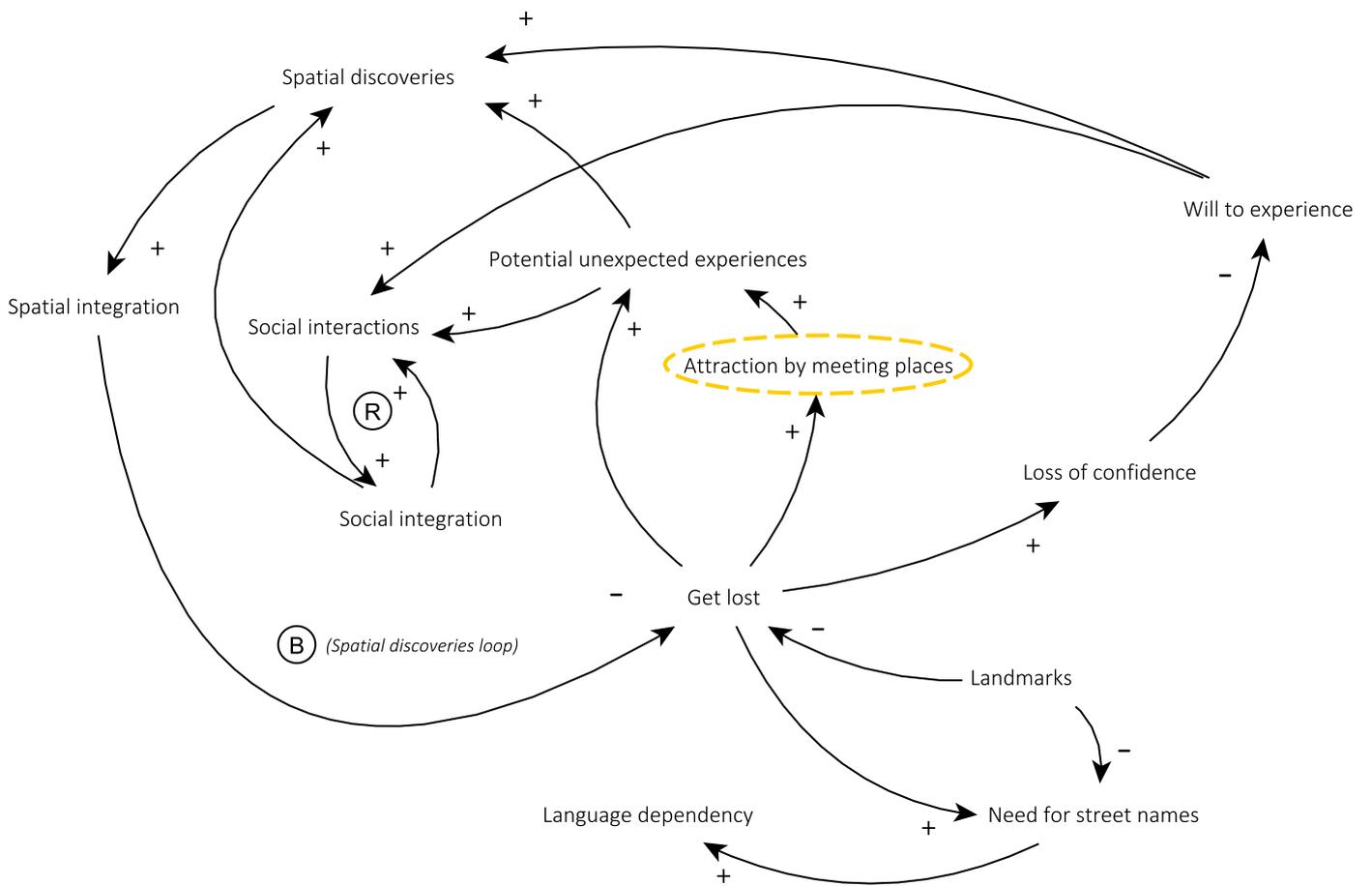
Getting lost can be experienced in a very negative way. In that case, the newcomer lose confidence, and the more this happen the less he will wish to explore the city, leading to less spatial discoveries and social interactions.



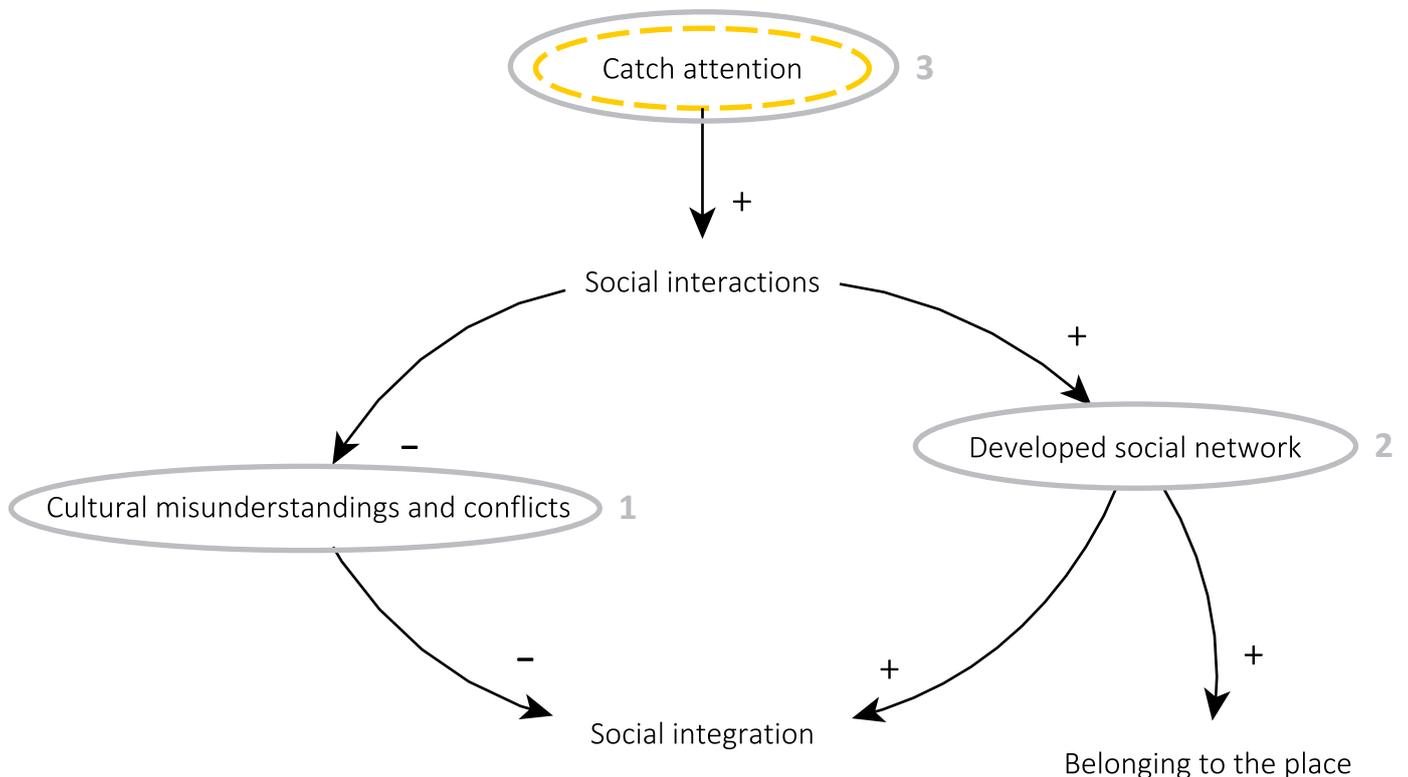
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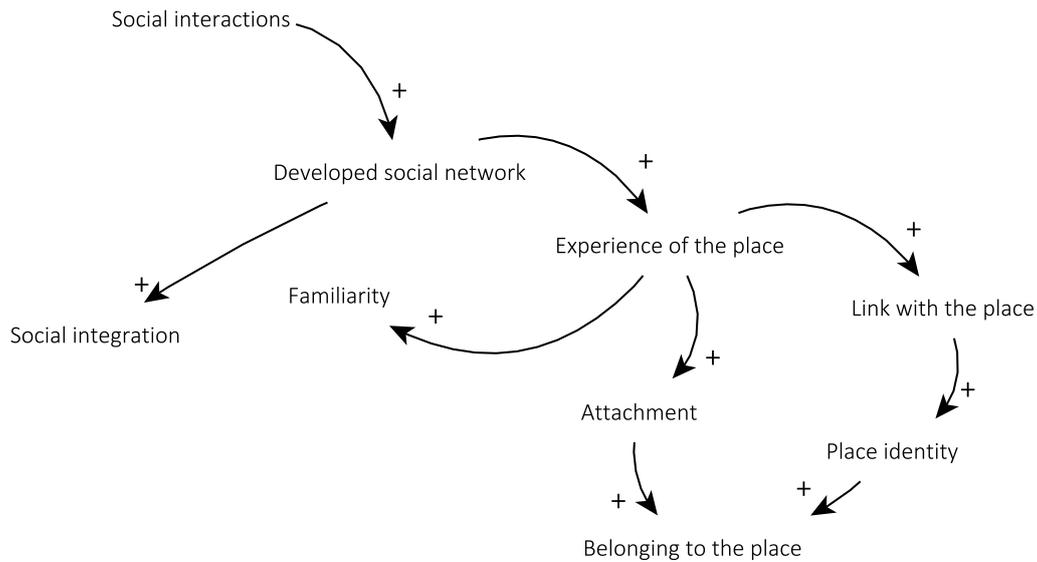
But when getting lost, people might also be more attracted by meeting places, potentially leading them to get more unexpected experiences. This allows them to integrate spatially more, balancing the “getting lost” effect that started the process. What is more, the more unexpected experiences happen, the more social interactions are possible, leading to more social integration and creating a reinforcing loop of interactions and integration. Here, “attraction by meeting places” is identified as a leverage point able to enhance spatial and social integration.

Walking distance accessibility is a parameter to take into account in order to favour experience of the city. Larson (2012) points out the importance of this parameter with his project of “compact urban cells”. He tries to conceive new cities in the old perspective of human scale instead of car scale. His project features series of neighbourhoods providing everything needed for daily life, even energy production; those “urban cells” are then connected together with mass-transit.



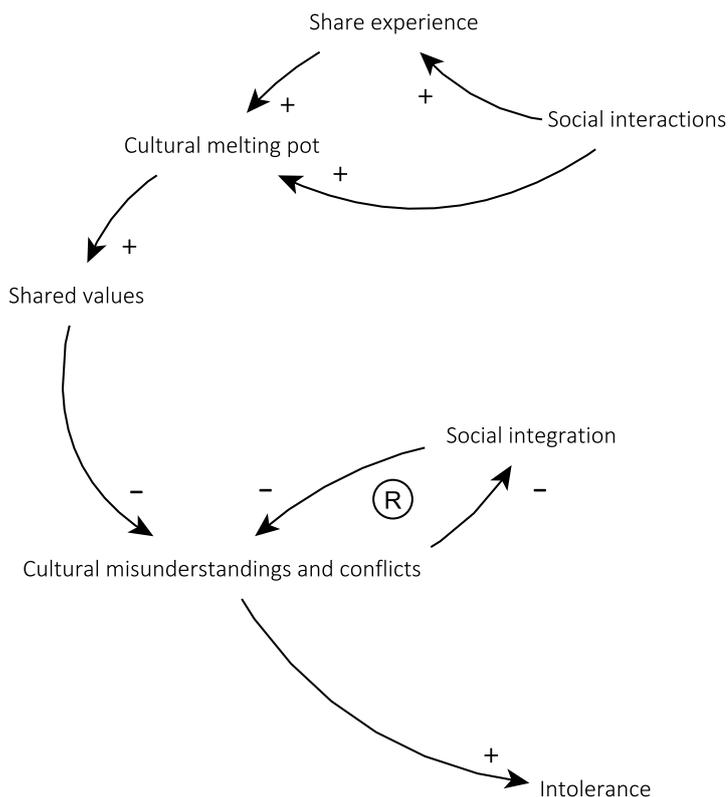
Social interactions are a mean of decreasing cultural conflicts and misunderstandings and are an opportunity to develop social networks. Therefore they can enhance social integration and increase possibilities of belonging to the place. But how can you initiate social interactions? One way is to catch attention by occupying spaces for a short time or in an informal way, or to divert the space from its original purpose. However, one obstacle in those cases could come from regulations and policies.





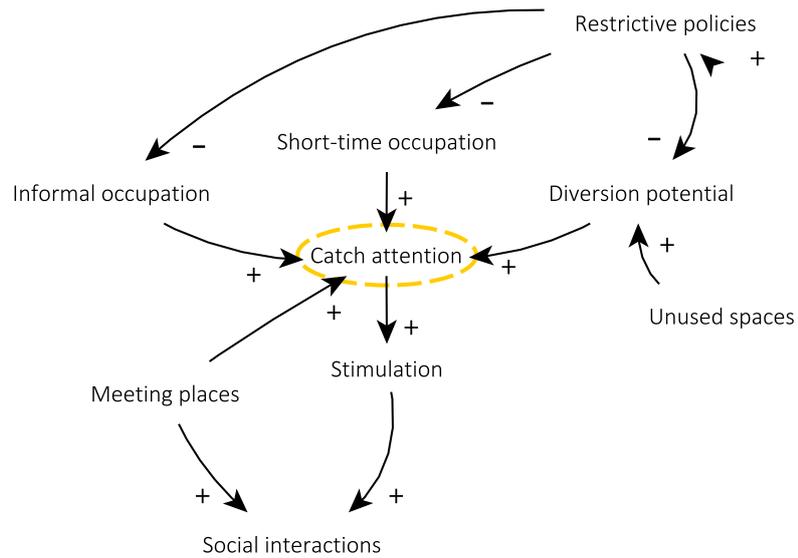
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The more people perform social interactions, the more they develop their social network. Thus they become more integrated socially. They also get more experience of the place, and the more they experience it, the more they become familiar with it and belong to it.



2

The more social interactions happen, the more people share experiences, producing a cultural melting pot effect. Then there are less cultural misunderstandings and conflicts, thus less intolerance and more social integration, which reinforces the decrease of cultural misunderstandings and conflicts.

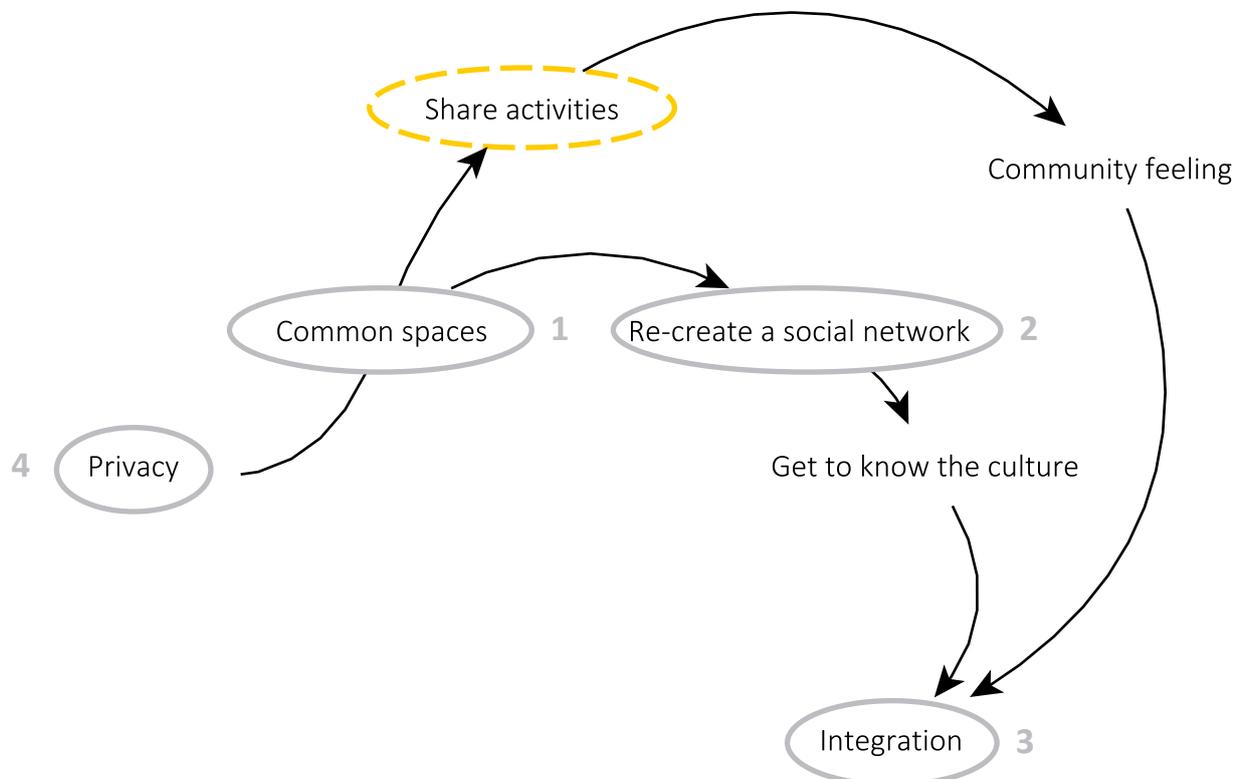


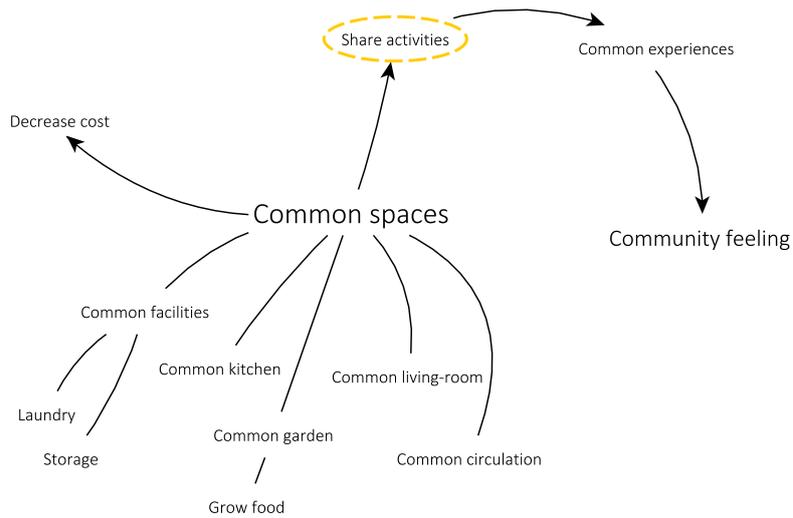
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The more polcices are restrictive, the less it is possible to set up informal or short-time occupations or diversion interventions in the city. Though the more you can set up those kind of interventions, the more it is possible to catch attention on those specific spots, to generate more stimulation and social interactions. Thus catching attention can be considered as a leverage point for social interactions.

Common spaces (kitchen, living-room, facilities and so on) can support shared activities, which gets people to meet and know each other and to have common experiences. Common experiences can help to create a community feeling, which can act as a springboard for small scale integration, eventually leading to integration at larger scale (city).

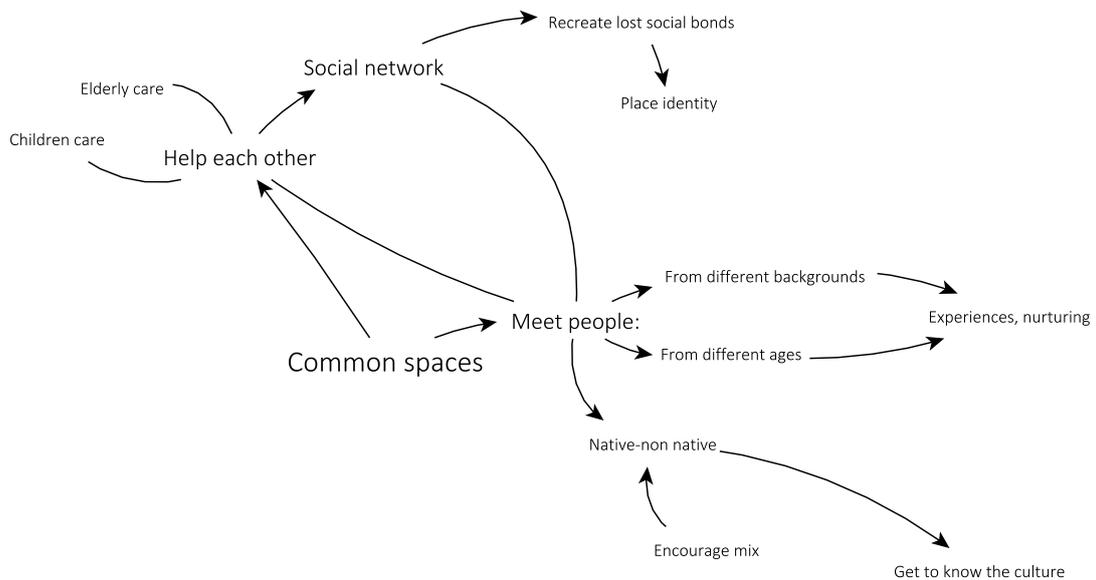
One limitation of community feeling that has to be taken into account is the risk of creating gated communities of nomads. Maybe a simple way to avoid this kind of phenomenon is to physically integrate their living structures directly in the city (shops and so on).





1

Having common spaces can be a good opportunity to decrease the cost of a living place. What is more, they can support shared activities, which can themselves be a leverage point to create a community feeling.

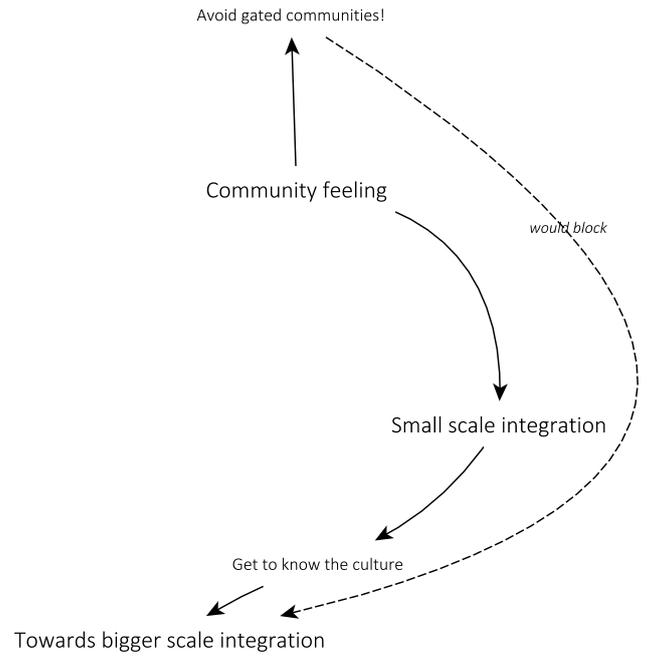


2

Common spaces can support mutual assistance and help develop a social network anew. They are places providing opportunities to meet different people and therefore get to know the local culture.

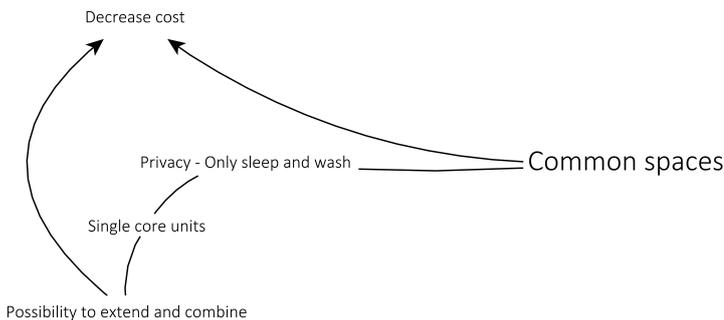
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Community feeling can be seen as a first step towards small scale integration (building and neighbourhood) which, when enhanced by knowledge of the culture, leads to bigger scale integration (city). However this process can be completely distorted if the community feeling evolves into gated communities.

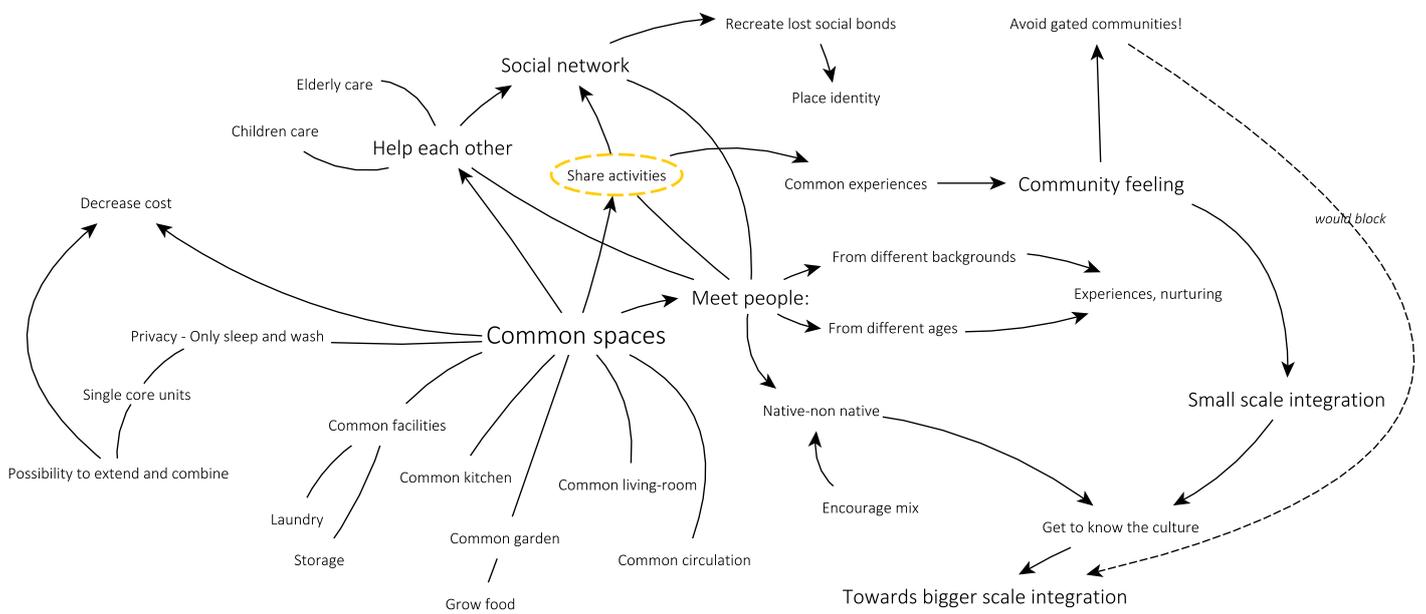


4

However home cannot only be about sharing: it is a lot about privacy. Considering private spaces as core units with possibility to combine and extend them is another opportunity to decrease renting cost.



However it should not be forgotten that being at home is more often about privacy than about socialising. Indeed, the prevailing conception of home nowadays in Western countries is one of the Bourgeois home, entailing privacy and technological comfort (Hagbert, 2010). Sharing spaces are considered here as a way to recreate lost social links for mobile workers, but privacy issues will be considered in next system.

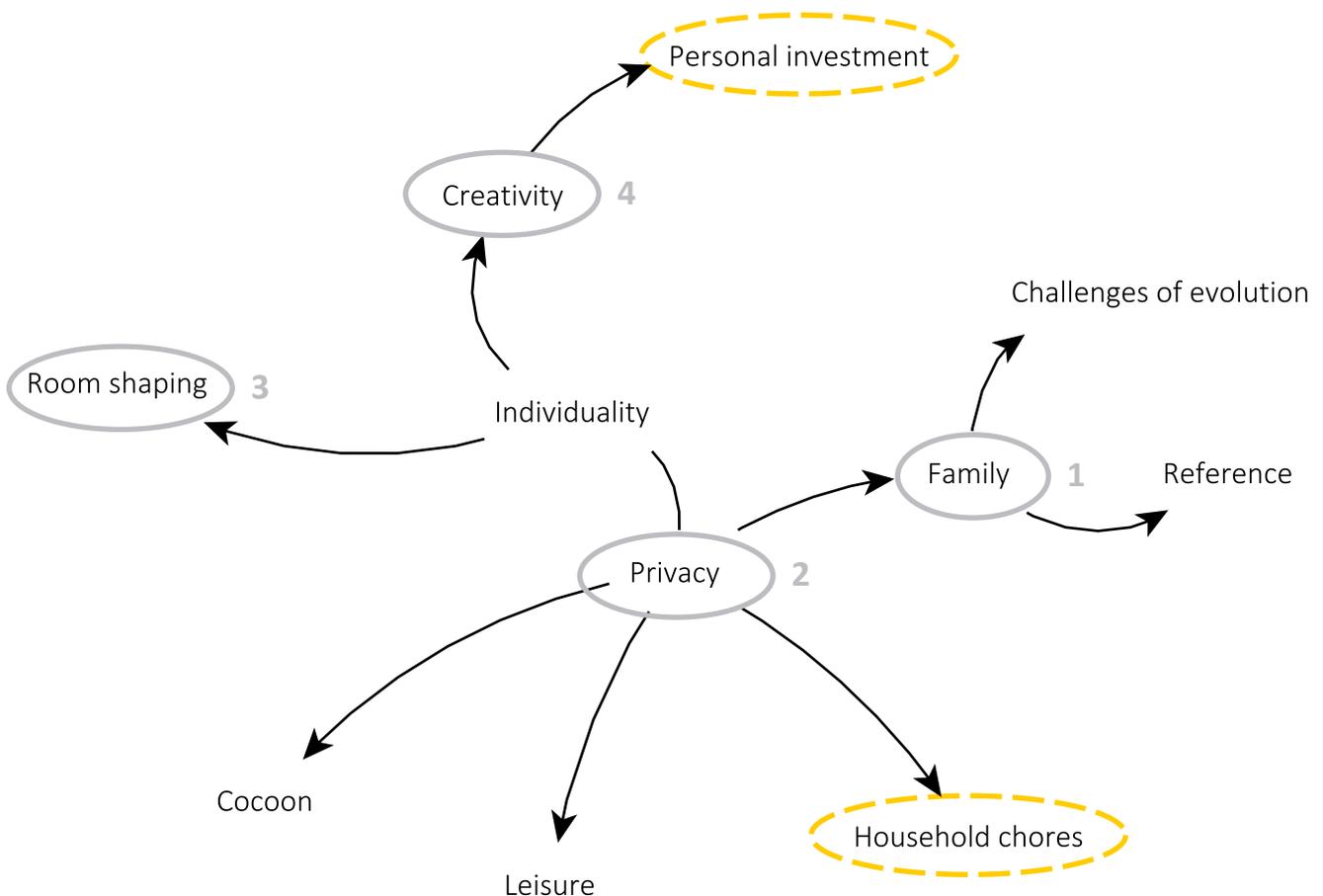


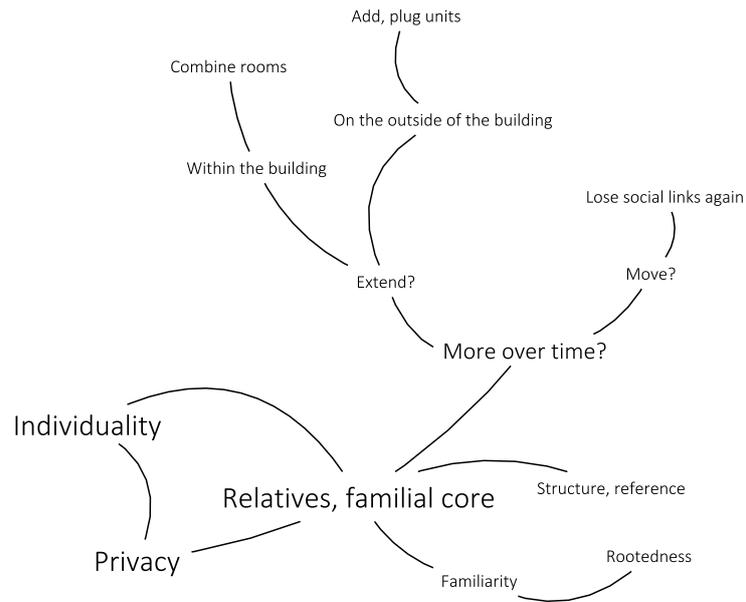
As mentioned above, being at home is more often about privacy, individuality. Thus it was interesting to reverse the concept of community feeling and look into individualisation.

How do you keep your individuality at home? This has to do with privacy, with being in a “cocoon”, or with carrying habitual tasks as household chores. Another issue is about habits and the way you shape and set-up your room in order to feel at home. One

interesting thing would be to think about in what extent you can involve people’s creativity (and therefore, personal identity) in this process. Maybe it is an option for people to sometimes build their own things, so that they personally invest in their place and appropriate it.

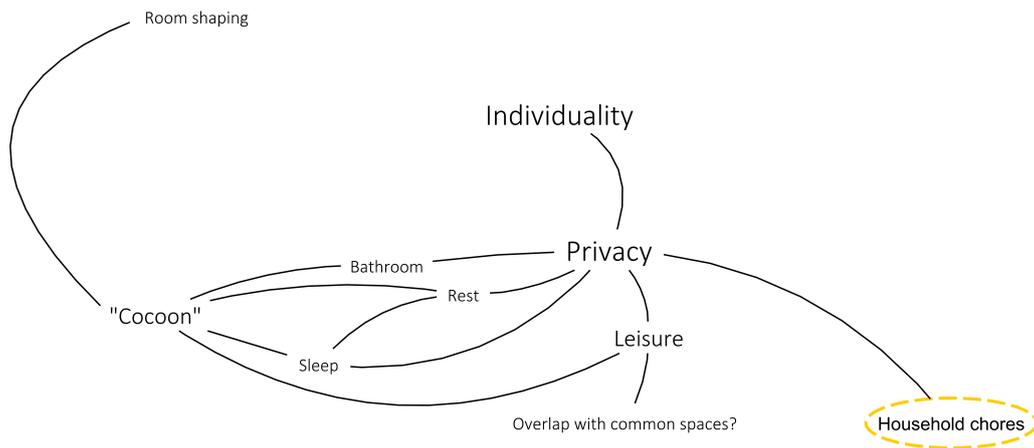
In the private circle, the familial core might be included as well. This is a data that can evolve over time, which can entail a need for extension and flexibility of dwelling.





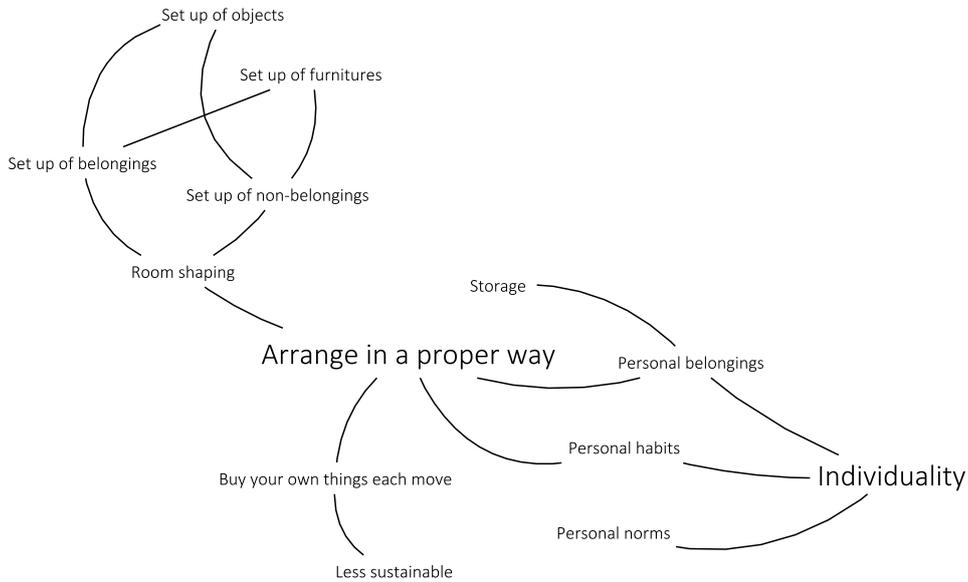
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Individuality relates to privacy and the familial core. Relatives give a reference in the new environment, a sense of familiarity and rootedness. But the family's size can evolve over time, which brings challenges of space adaptability.



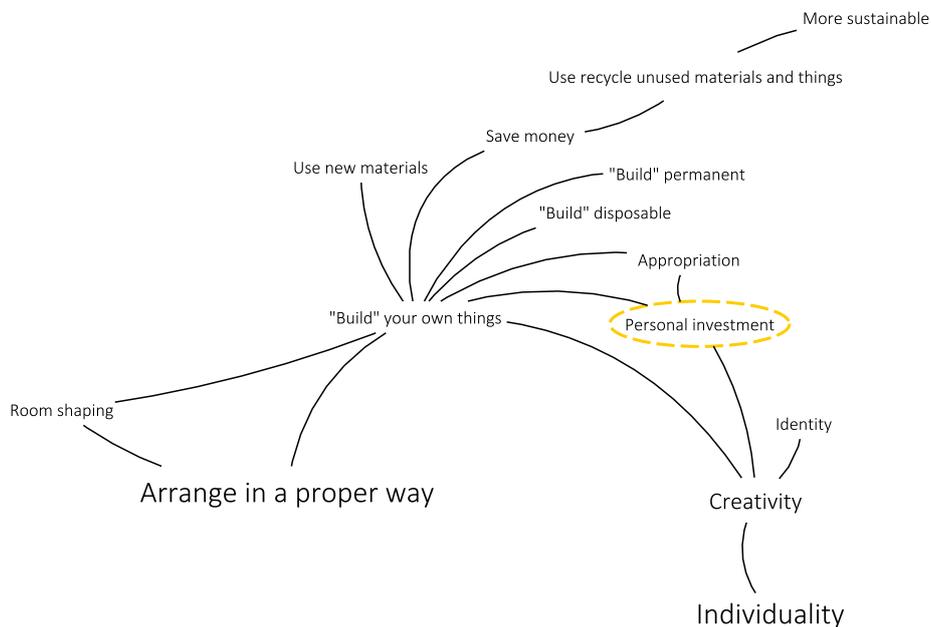
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Privacy is about performing a range of varied activities. It can be very individual (washing, resting), about being in a "cocoon". It can be about leisure activities. But it can also be about performing household chores. Household chores were defined as a leverage point because of their interactive potential.



3

Individuality is also about reproducing personal habits, norms and keeping personal belongings. This entails to arrange, set up the place and belongings according to those norms and habits.



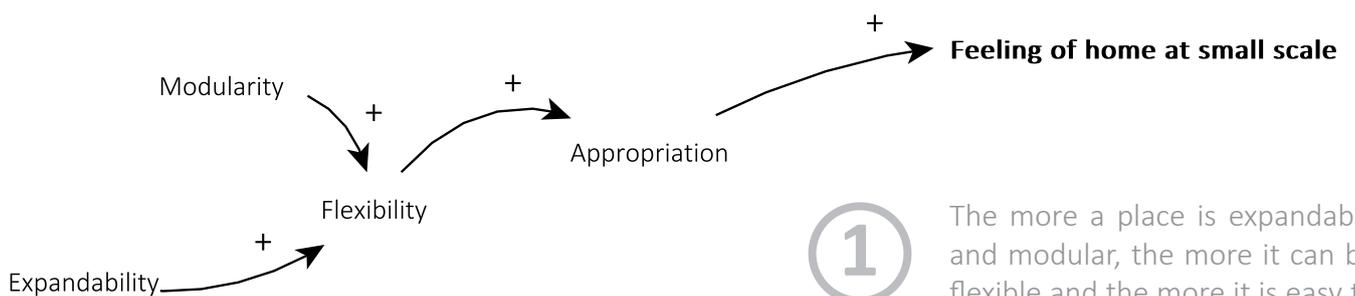
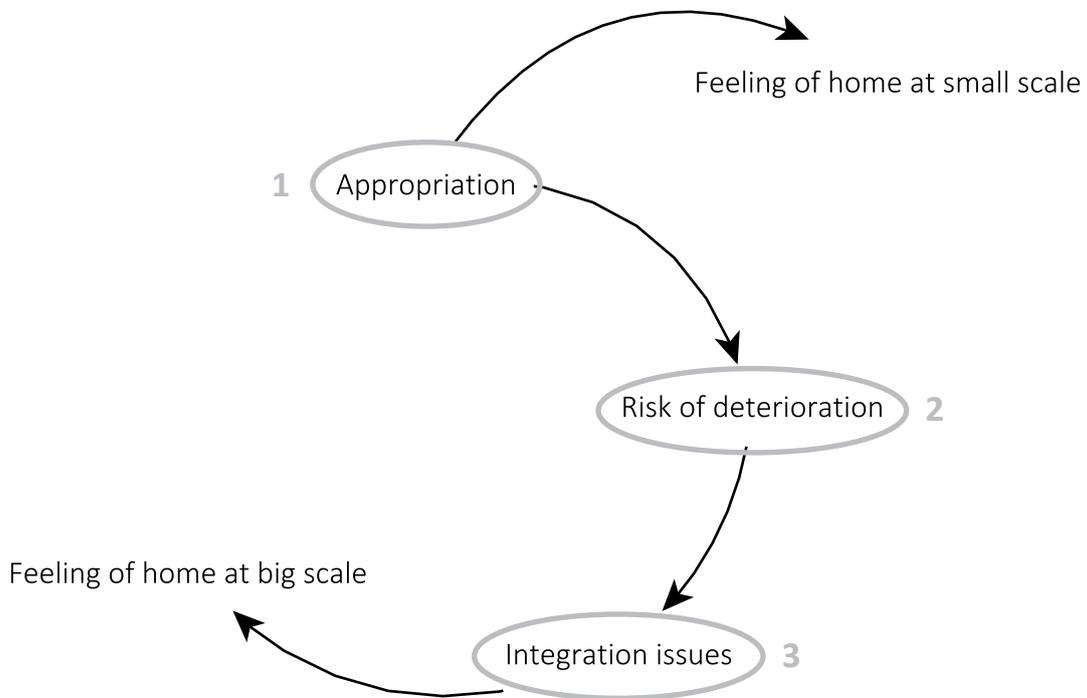
4

Individuality can be enhanced by creativity, as a mean of expressing identity and of personally investing yourself in your place in order to appropriate it. "Build" things in order to shape your room according to personal criteria is a way to invest personally in your place. Thus personal investment was defined as a leverage point for appropriation, room shaping and support of identity. But how to "build" it? Is it permanent? Disposable? Considering the fact that mobile workers might need to save money, an interesting option to consider is to use recycle unused materials and things, which is also more sustainable.



In order to feel at home at small scale (the house scale), appropriation is very necessary. However, it might be in conflict with community's interests. More appropriation can also mean faster deterioration, leading to a loss of trust from the community towards the individual who

appropriated the space. In such a case, integration is threatened, as well as feeling of home at big scale. In a way, appropriation supports feeling of home at small scale but can be a threat for feeling at home at big scale.

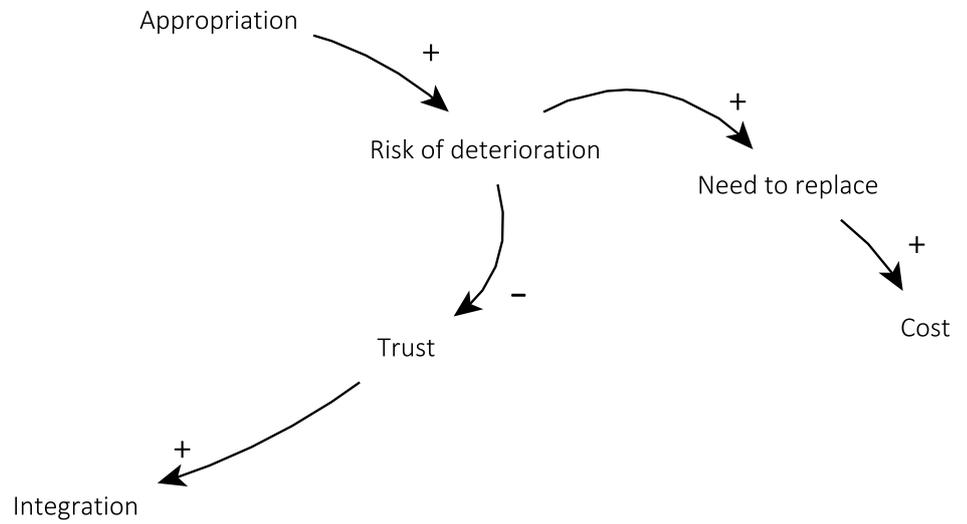


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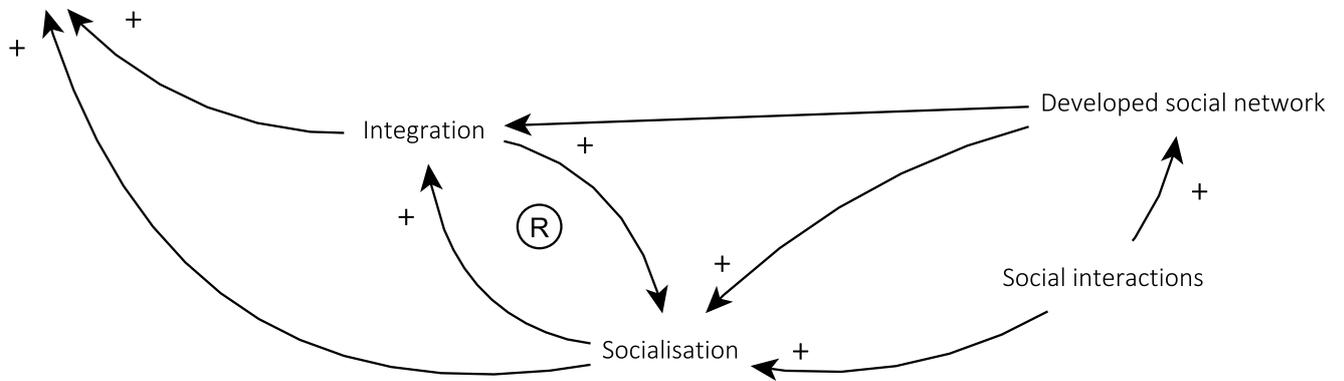
The more a place is expandable and modular, the more it can be flexible and the more it is easy to appropriate it and feel at home at small scale (building).

2

However, the more you appropriate, the more there is a risk of deterioration of the place. This can lead to a need to replace things, which has a cost, and to less trust from other people, and therefore to less integration.



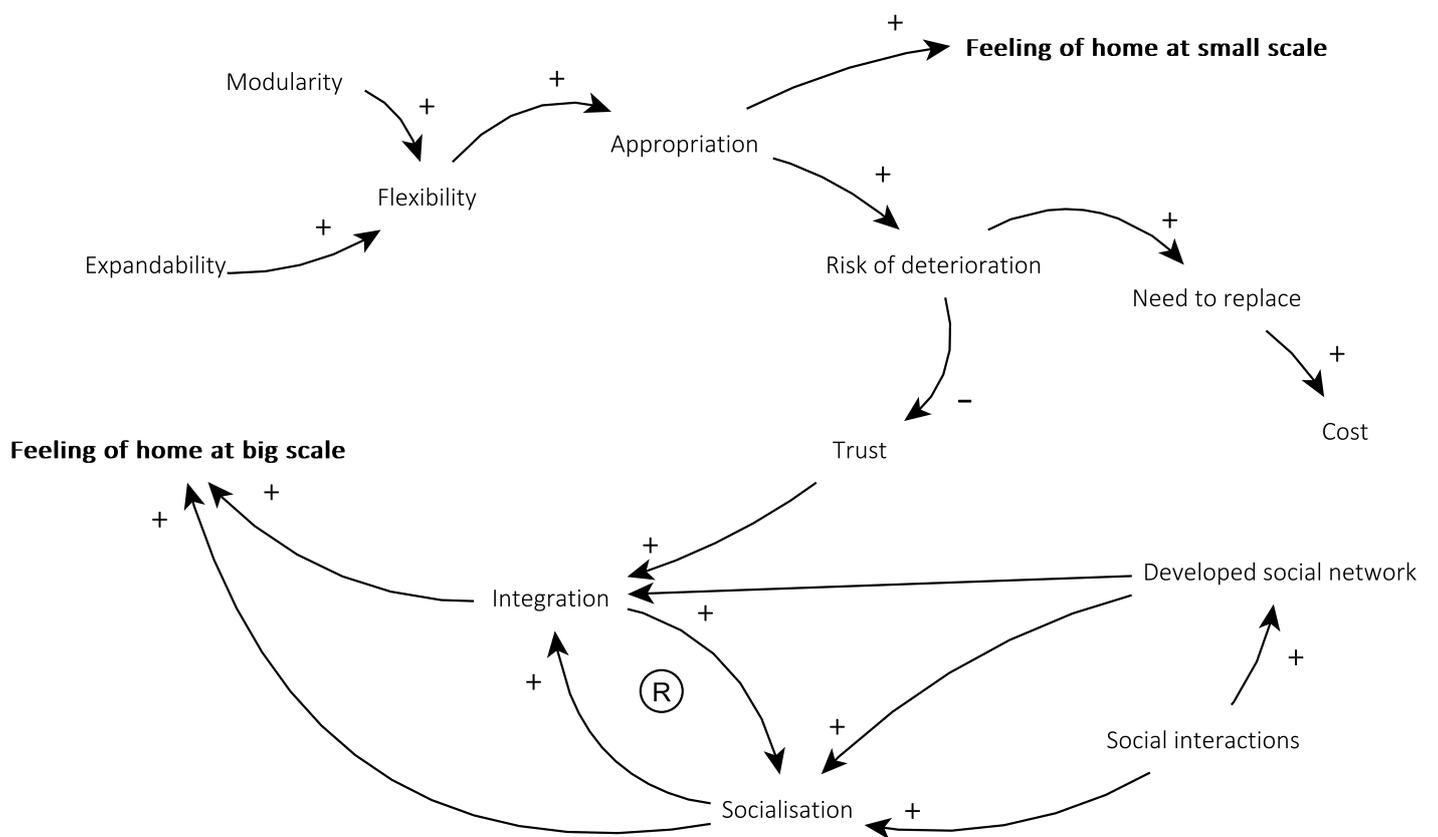
Feeling of home at big scale

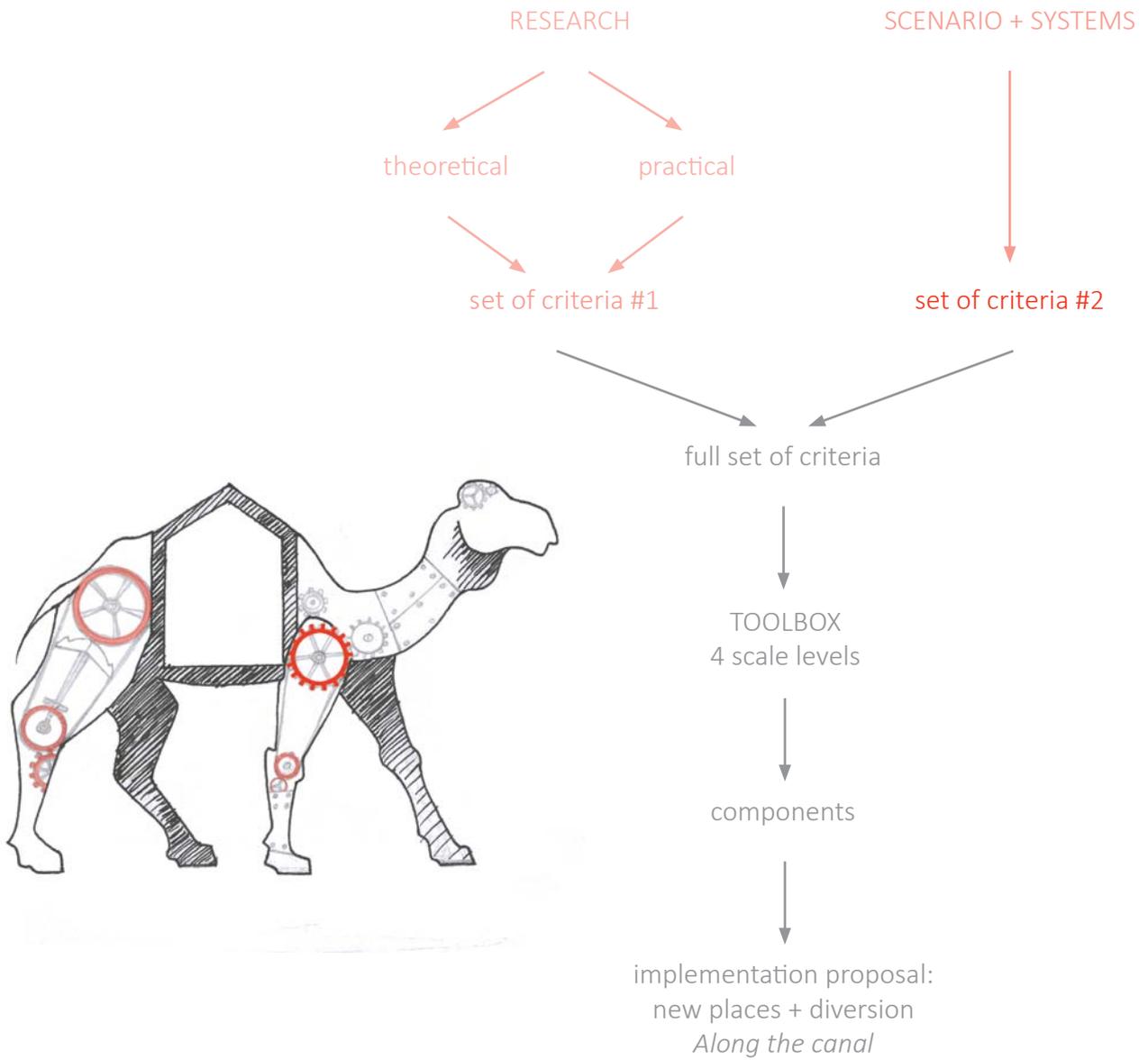


3

This would affect the whole process of socialisation. Indeed, the more integration there is, the more people socialise, and vice versa. What is more, integration and socialisation directly influence the ability to feel at home at big scale (city), thus appropriation issues should really be thought through.

To get examples of actual projects based on appropriation, Larson's (2012) is quite relevant to look at. He is using advanced technology in apartments with a chassis' principle. It is possible to fold things, change functions, with the basis of wall-chassis personalised with what people put inside the wall. People are actually involved in the process: they are asked to define their needs, activities, values. Then an algorithm is used to decide upon an assemblage of components, this solution being possibly refined by people afterwards. Maybe in the scope of the thesis, the toolbox could be considered as some kind of algorithm.





4.1.2. Set of criteria #2: design criteria out of leverage points

In the “zoom systems”, five leverage points were identified:

- Attraction by meeting places
- Catch attention
- Share activities
- Personal investment
- Household chores

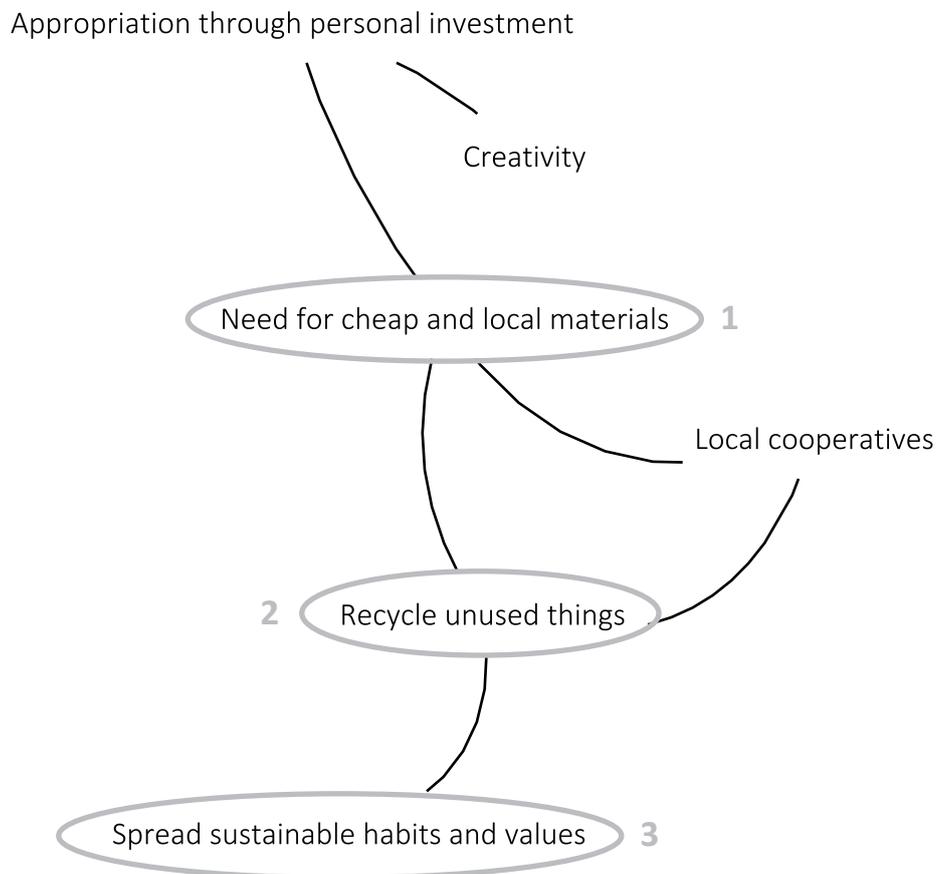
Those leverage points were mapped in order to define design criteria, additionally to the set of criteria developed from the research part of the thesis.

Criteria

People can appropriate their place through personal investment, for instance by building their own things. This involves people's creativity, and doing things yourself can be a way to save money. But how do you get materials? To make it even cheaper, recycled unused things could be used. They could be provided by some kind of local cooperatives furnishing different kind of items, including materials. They could also provide books, which could be a point of departure for international libraries.

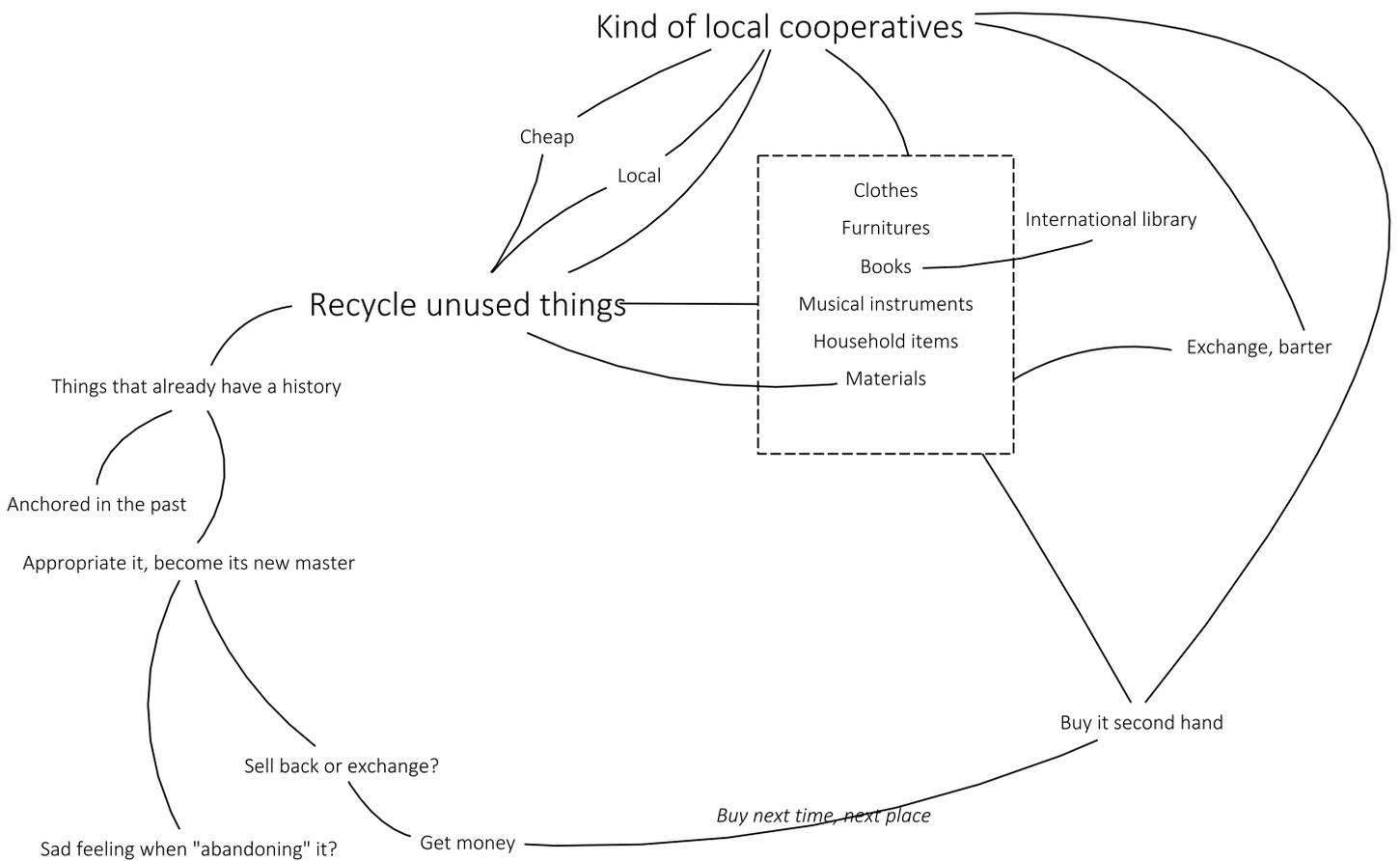
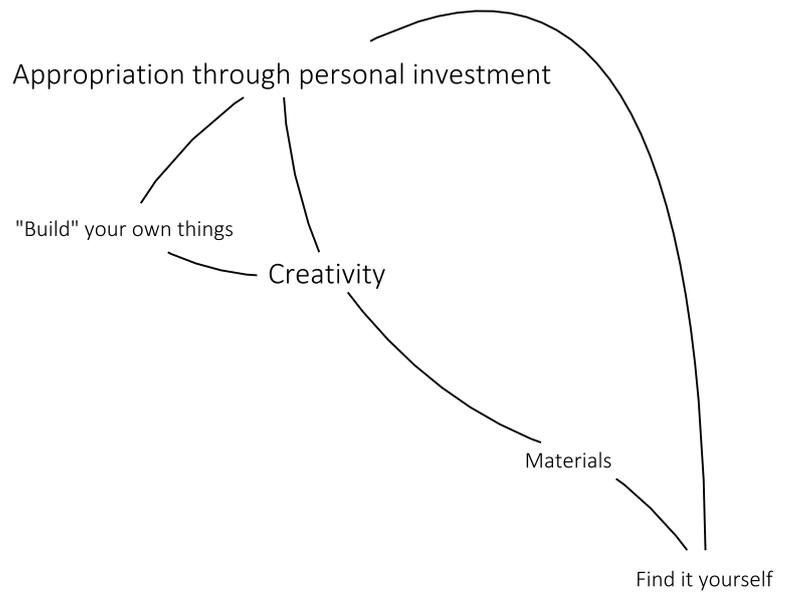
Moreover, recycling unused things is also a bridge towards environmental sustainability: nomads can spread sustainable habits in future migrations and promote recycling as something valuable and not low-quality.

- > Collection of recycled unused things.
- > Encourage creativity.
- > Use pattern's principle.
- > International libraries.



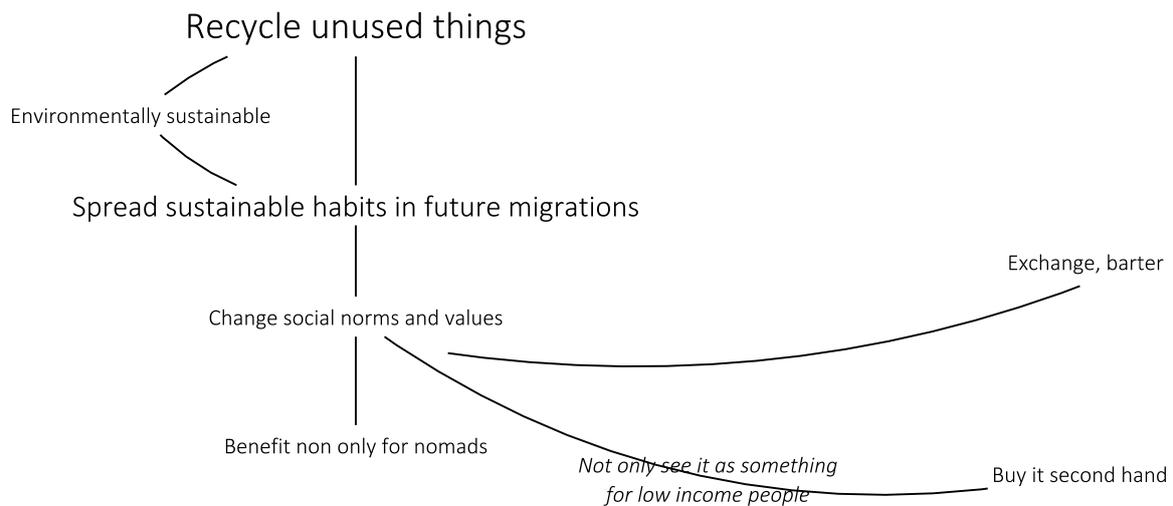
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Appropriation of the place through personal investment can be achieved by building your own things, involving creativity skills. Then materials need to be found, which is another way of investing yourself in the process.



2

Materials could be found in some kind of local cooperatives, providing cheap and local items, the cost issue being particularly relevant in the case of mobile workers. Featuring recycle unused things seems like an interesting option to provide cheap and local items. Items could be bought second hand or bartered, and even sold back to the cooperative.



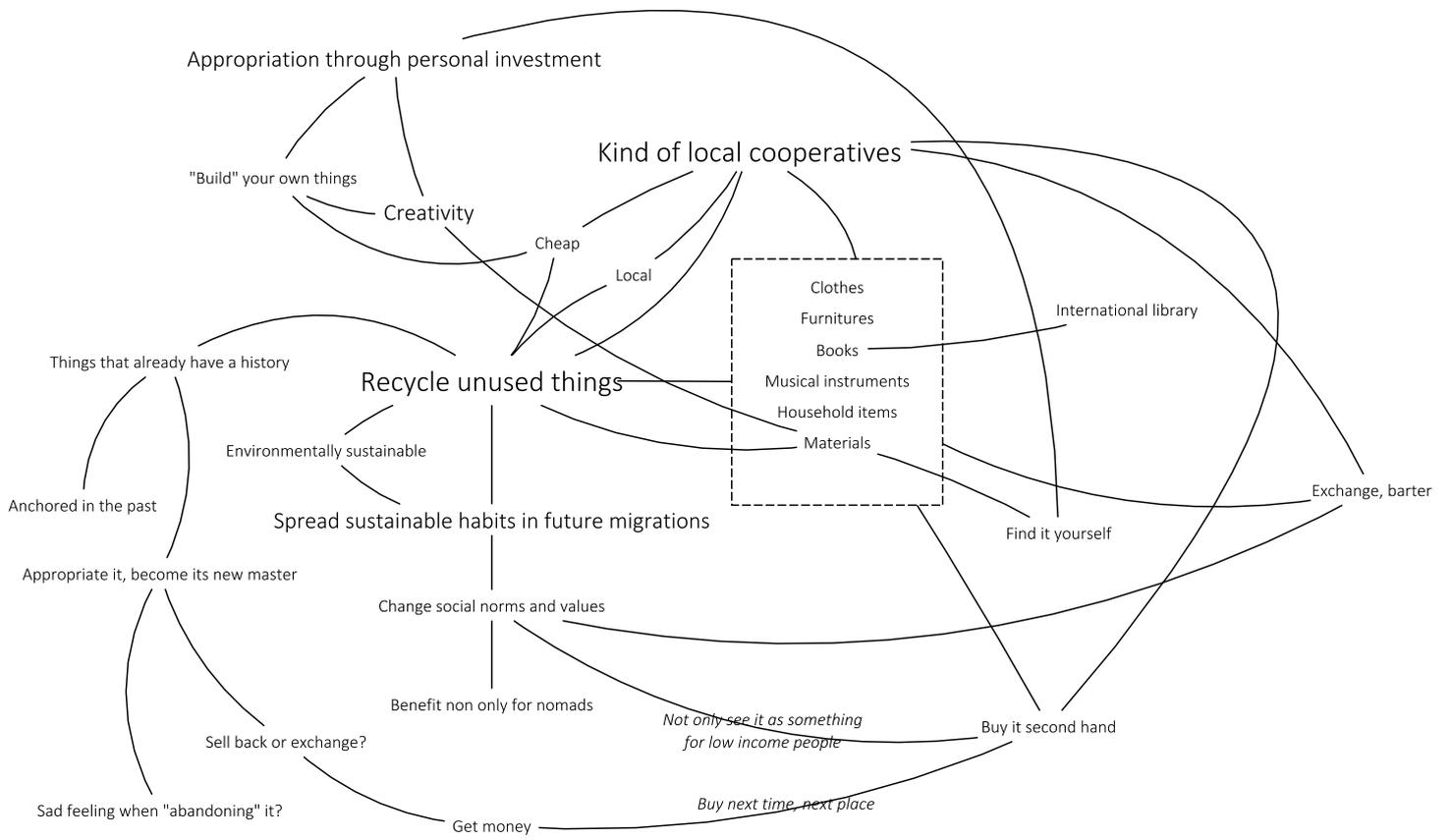
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Promoting the use of recycled unused things is a way to spread environmentally sustainable habits in future migrations and thus to change social norms and values, not only for nomads. This is about shifting people’s mind about second hand and barter, which is often associated with low income and value.

Phillips (2010) addresses the issue of shifting people’s mind and changing behaviour towards reuse of unused things. One of the problem that might be encountered when reusing things is the widespread idea that when something is a little bit broken, you have to throw it away. Phillips is trying to get round this problem with the principle of “patterns”. Based on Gestalt Psychology, he maintains that it does not matter which element is repeating, as long as a pattern is created. He takes the example of a cracked pane; in that case, the most common attitude is to throw it away and replace it. However, it would be different if you would crack several ones, which would then create a pattern on the house. It is all about Nietzsche’s Apollonian and Dionysian personalities Phillips refers to. Apollonian is about perfection, which to Phillips is responsible for waste produced in building industry, whereas Dionysian is connected to intuition. The problem, in this waste perspective,

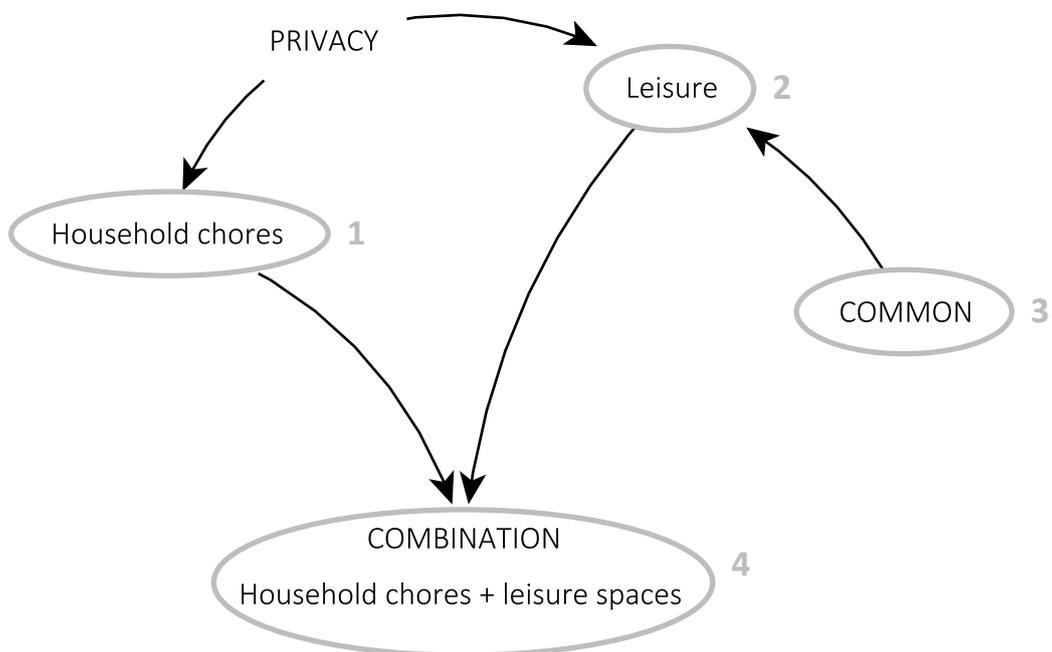
is also coming from peer pressure. Phillips refers to Sartre’s *Being and Nothingness* and the “divided self”: people have a different behaviour when they know they are alone and when they know they are not. In that second case, people will tend to do what they are expected to do by others – by society. What Phillips is urging to do is actually to re-establish balance in Maslow’s (1954) hierarchy of needs, which presents basic needs as shelter and food at the bottom of the pyramid, and status and self-esteem at its top. However to Phillips, the top of this pyramid has become its bottom, leading to the fact that we perceive our homes as “a commodity”.

Thus maybe the idea of creating patterns with recycled, “broken” things, can be a way to make people integrate better the idea of recycling in their lifestyle. This could be a principle used by people when building their own things with recycled materials.



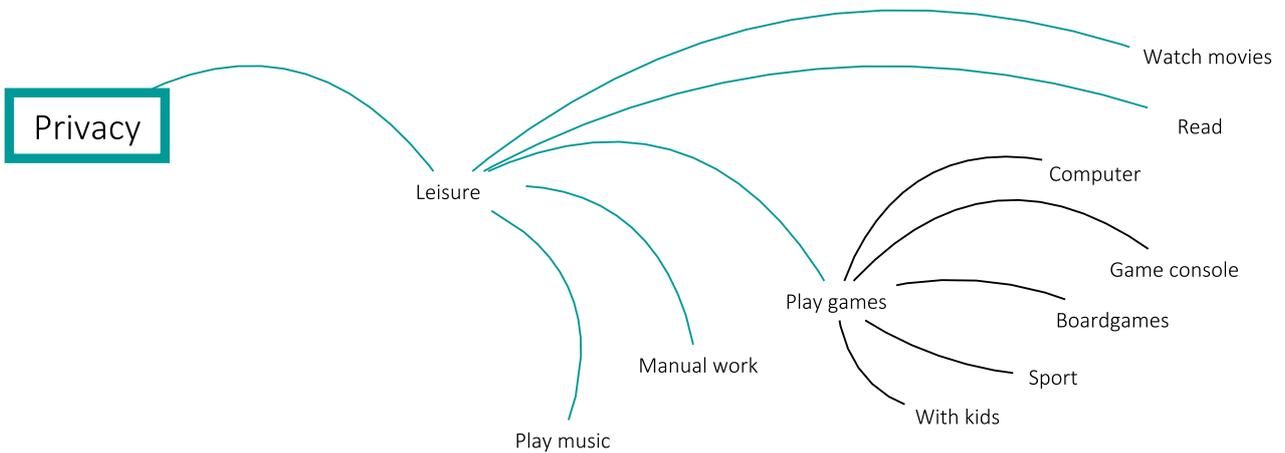
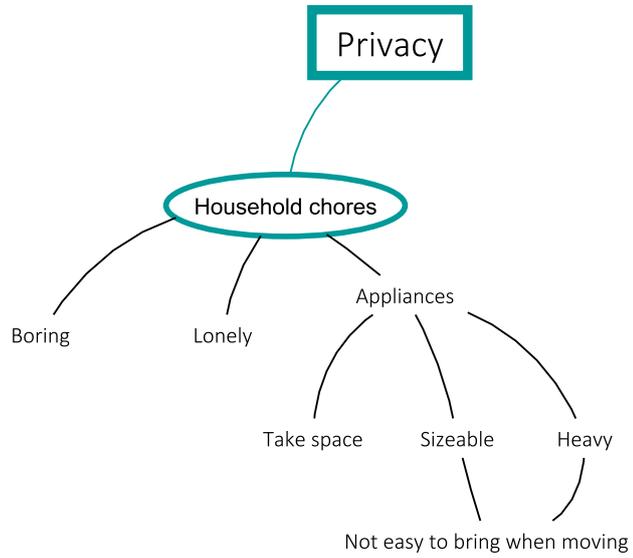
Private sphere stages different kind of activities, from "boring" ones, like household chores, to leisure. However leisure can also be part of the realm of common spaces. Those spaces could feature workshops or acoustic insulation depending on the type of activities, and they are potentially intergenerational. Combining those shared leisure spaces with household chores could be a way to make chores less boring, save space and above all create social link.

- > Combine leisure and household chores.
- > Acoustic, olfactory insulation of combined common spaces.



1

Household chores usually belong to the private sphere of home. However, they can be quite boring, performed alone and require appliances which are not easy to bring when moving to a new place.

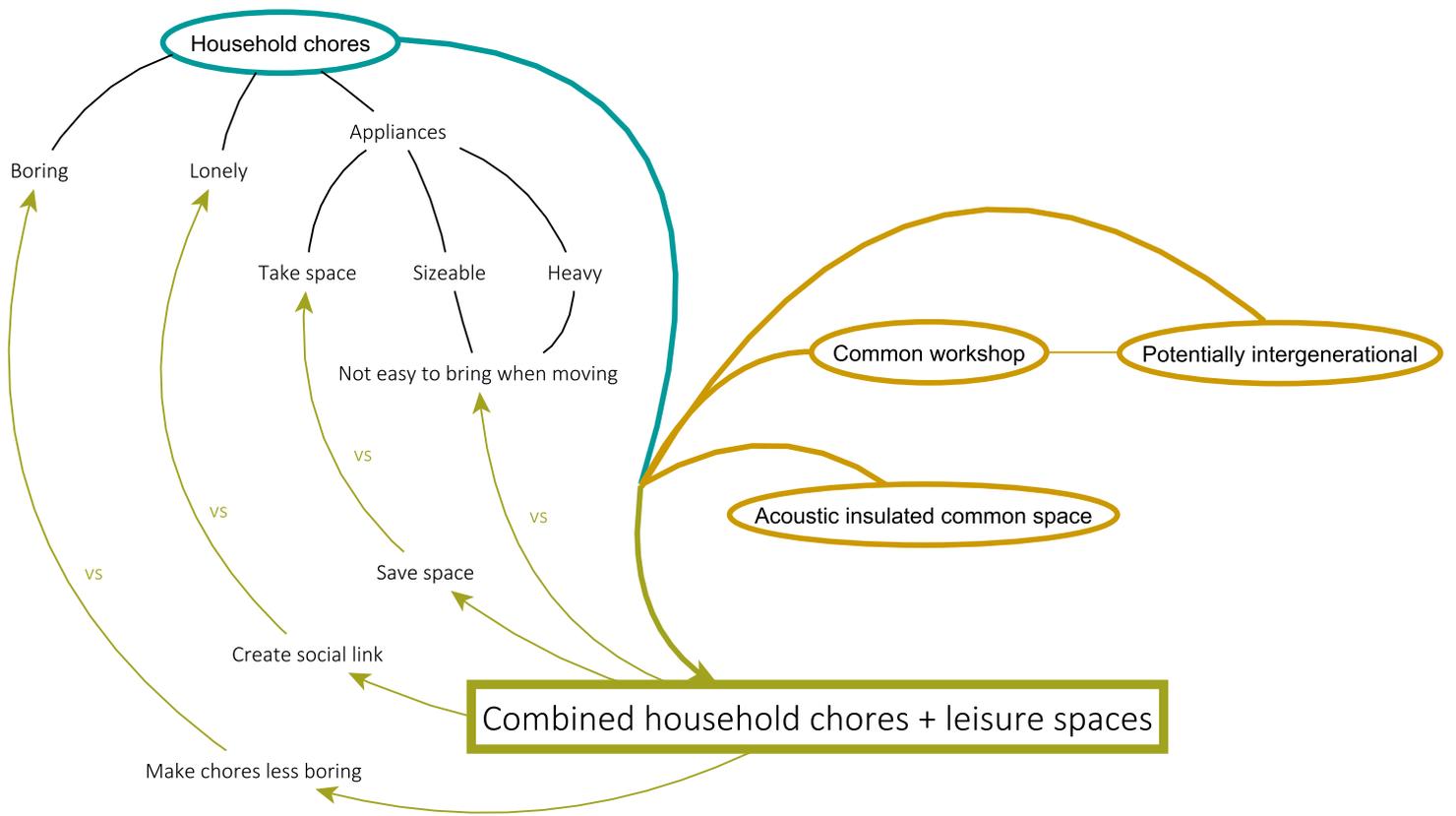
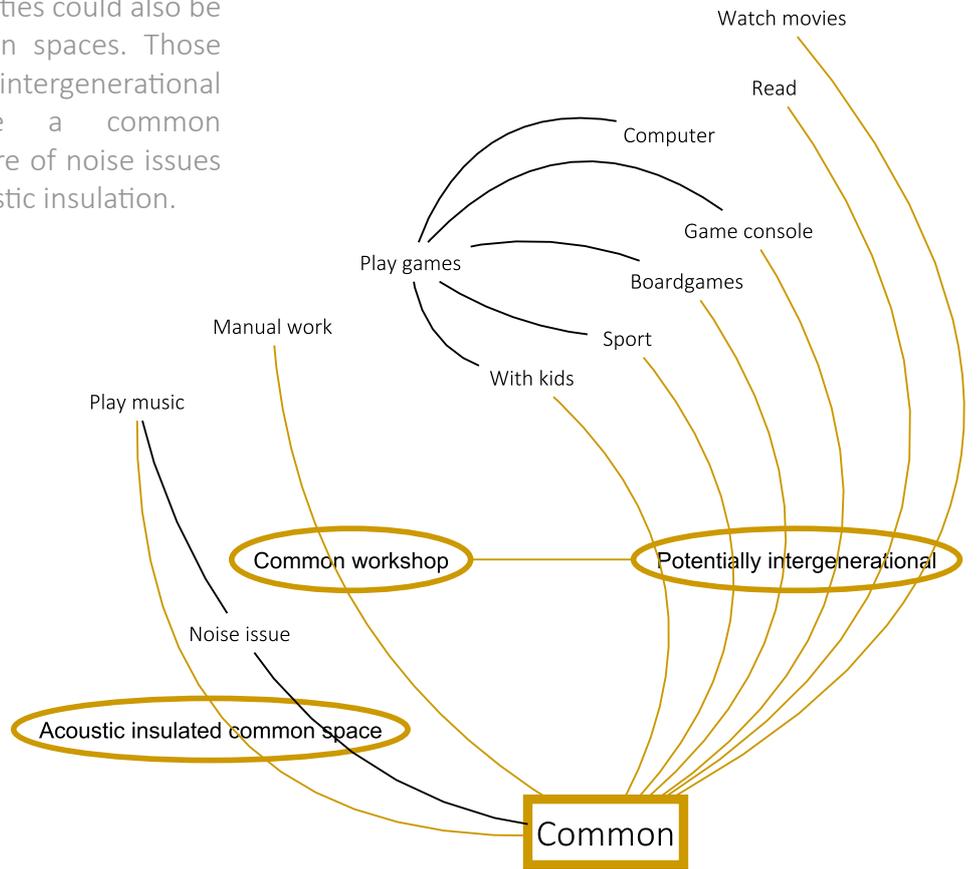


2

Private sphere also supports leisure activities, as playing music, games, watching movies and so on.

3

But those leisure activities could also be performed in common spaces. Those spaces could support intergenerational interactions, feature a common workshop and take care of noise issues with appropriate acoustic insulation.

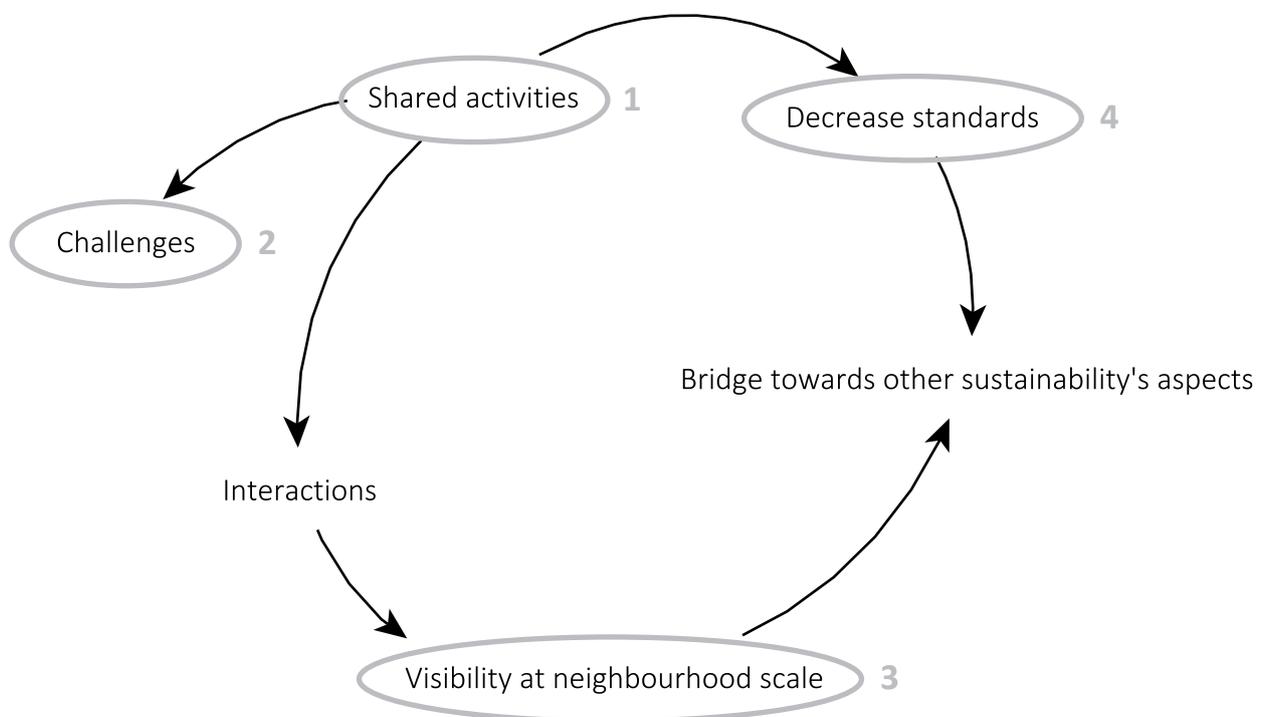


4

Thus combining household chores with common leisure spaces could be a way to make chores less boring, create social link, save space and allow people to avoid buying their own appliances.

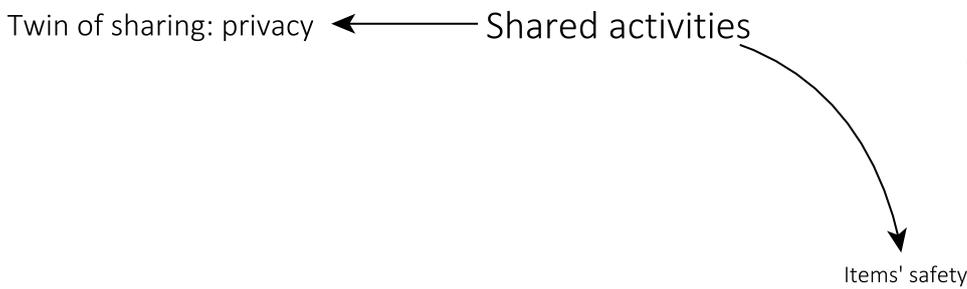
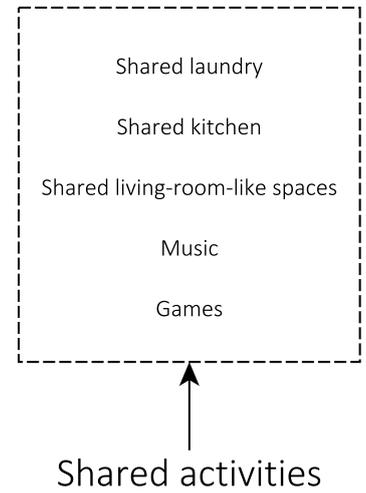
In a living place, there are a few activities that do not really have to take place in a private space. They could become shared activities in common spaces, for example common laundry, kitchen and so on. Sharing spaces is an opportunity to decrease people's standards and surface they occupied, which creates a bridge with environmental sustainability. Sharing activities is also a way to meet people and to generate interactions at small scale. Those interactions can be a first step towards bigger scale integration, by being visible at neighbourhood scale. This display of sharing can help to change people's attitudes and decrease standards in a more global perspective. However sharing also raises issues such as items' safety and the fact that people still need their private sphere somewhere.

- > Decrease personal space to what is necessary.
- > Support small scale interactions by sharing activities.
- > Visibility at neighbourhood scale.



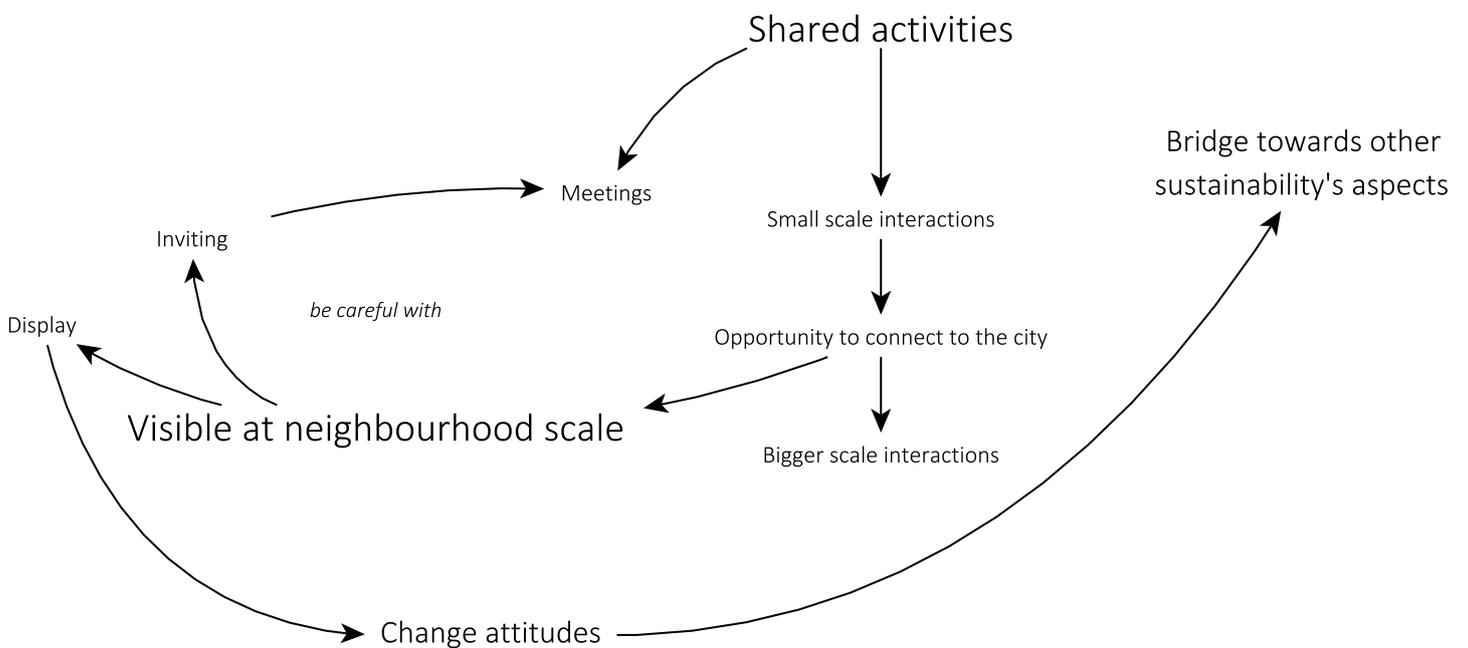
1

There is a wide range of potentially shared activities, from cooking to playing games via doing the laundry.



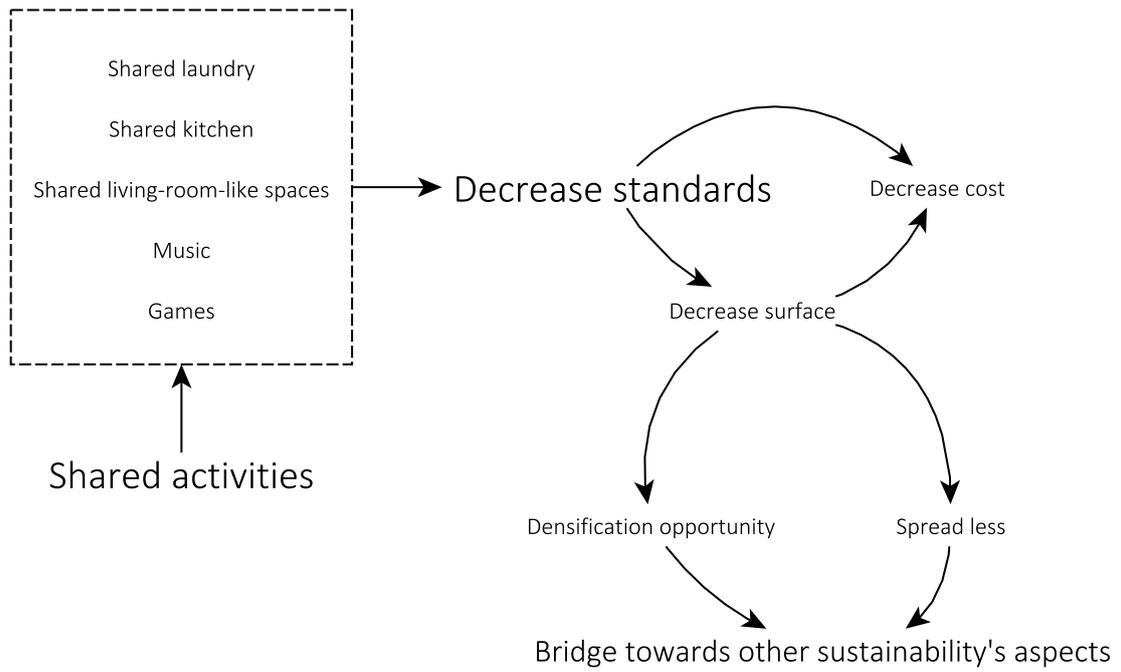
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Sharing spaces and activities can bring challenges related to need for privacy and item's safety.



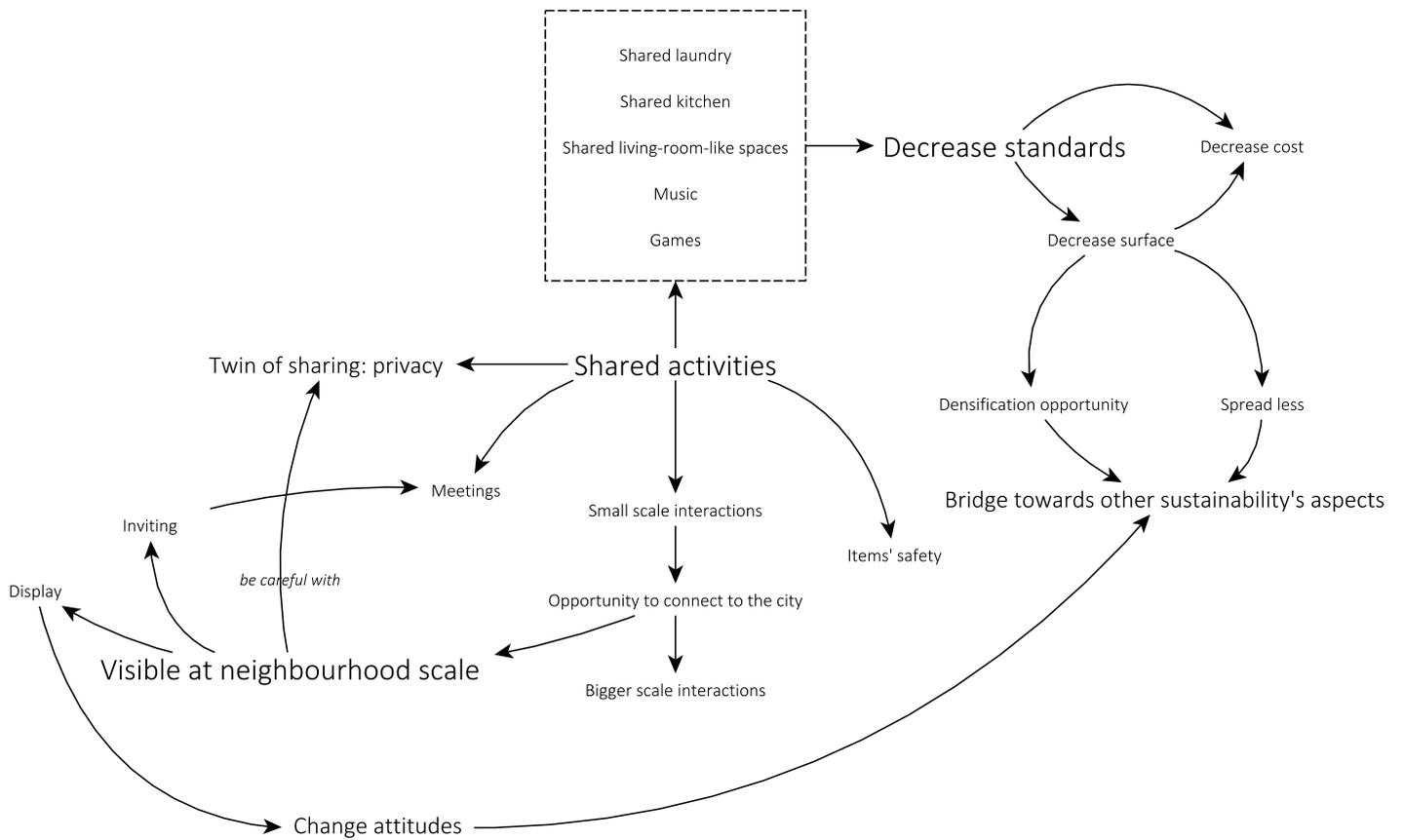
3

Sharing activities can generate small scale interactions. This is an opportunity to connect to the city and create bigger scale interactions, as well as giving the chance to be visible at neighbourhood scale. Making sharing visible can be a way to change attitudes and create a bridge with other sustainability's aspects.



4

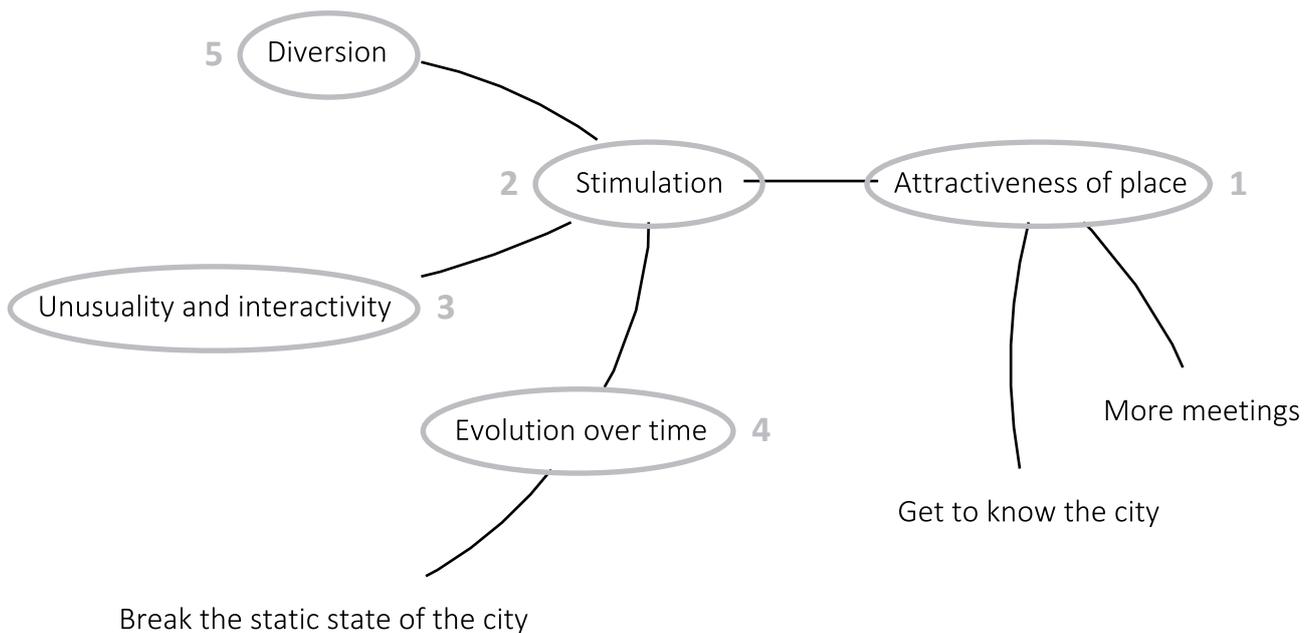
Sharing activities and thus spaces is an opportunity to decrease standards in term of cost but also surface, which gives densification's opportunities and relates to environmental sustainability.



Decision was made to merge two leverage points in a same system, as both "Attraction by meeting places" and "Catch attention" were overlapping on concepts of attractiveness and stimulation's powers.

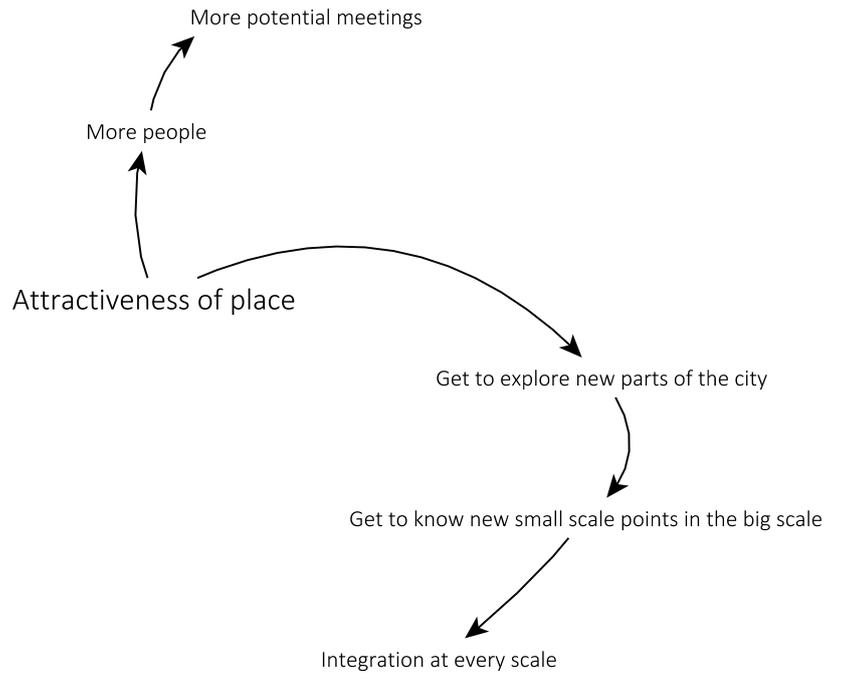
An attractive place is more likely to gather people together and can be a point of departure for exploration of other places. Such places can therefore be a factor of integration. One way to make a place attractive is to make it stimulating. This could be done by using unusual or interactive elements. Diverting a space from its original use can also be a powerful way of arousing people's attention, and if it is about reusing a leftover space in the city, it even tackles issues of densification and environmental sustainability. Finally, something that evolves over time can also be effective in catching people's attention. It can evolve according to seasons or people's demand, for instance; thus the city's landscape changes, its structure is not static anymore and becomes more stimulating.

- > Use of leftover spaces.
- > Evolution according to seasons.
- > Evolution according to people's demand.



1

If a place is attractive, more people will gather in it, providing more meetings' opportunities. Being attracted also gets people to explore the city and to integrate at every scale.



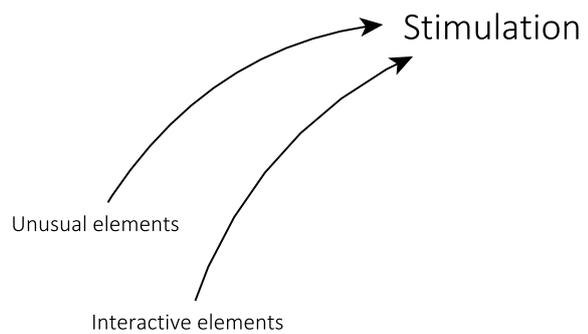
Stimulation → Attractiveness of place

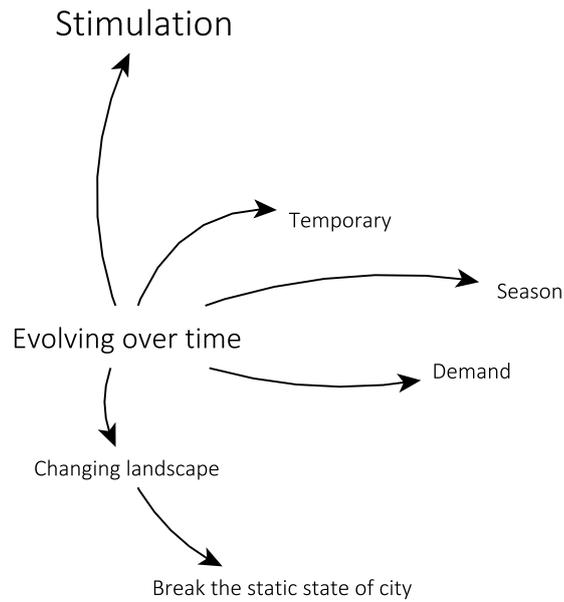
2

But how is a place attractive? One of this type of place's qualities is to provide stimulation.

3

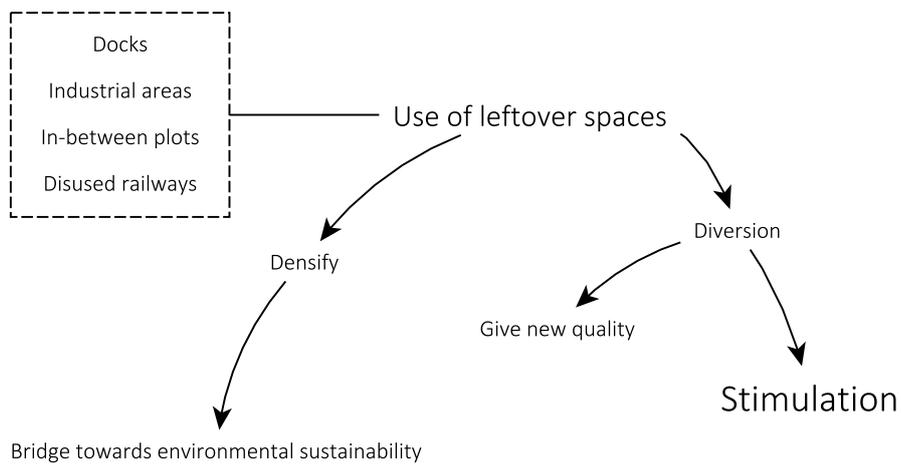
Featuring unusual or interactive elements is a way to stimulate people.





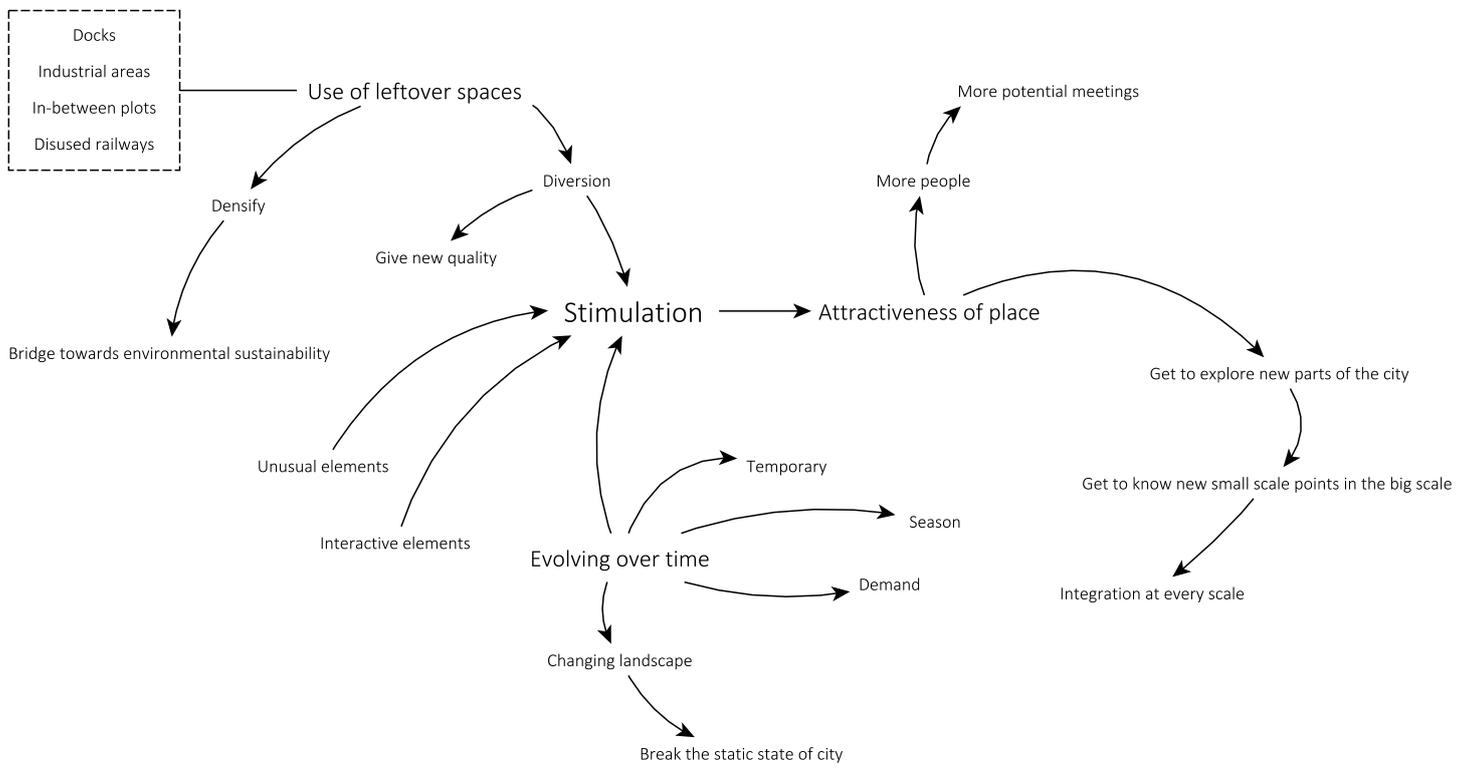
4

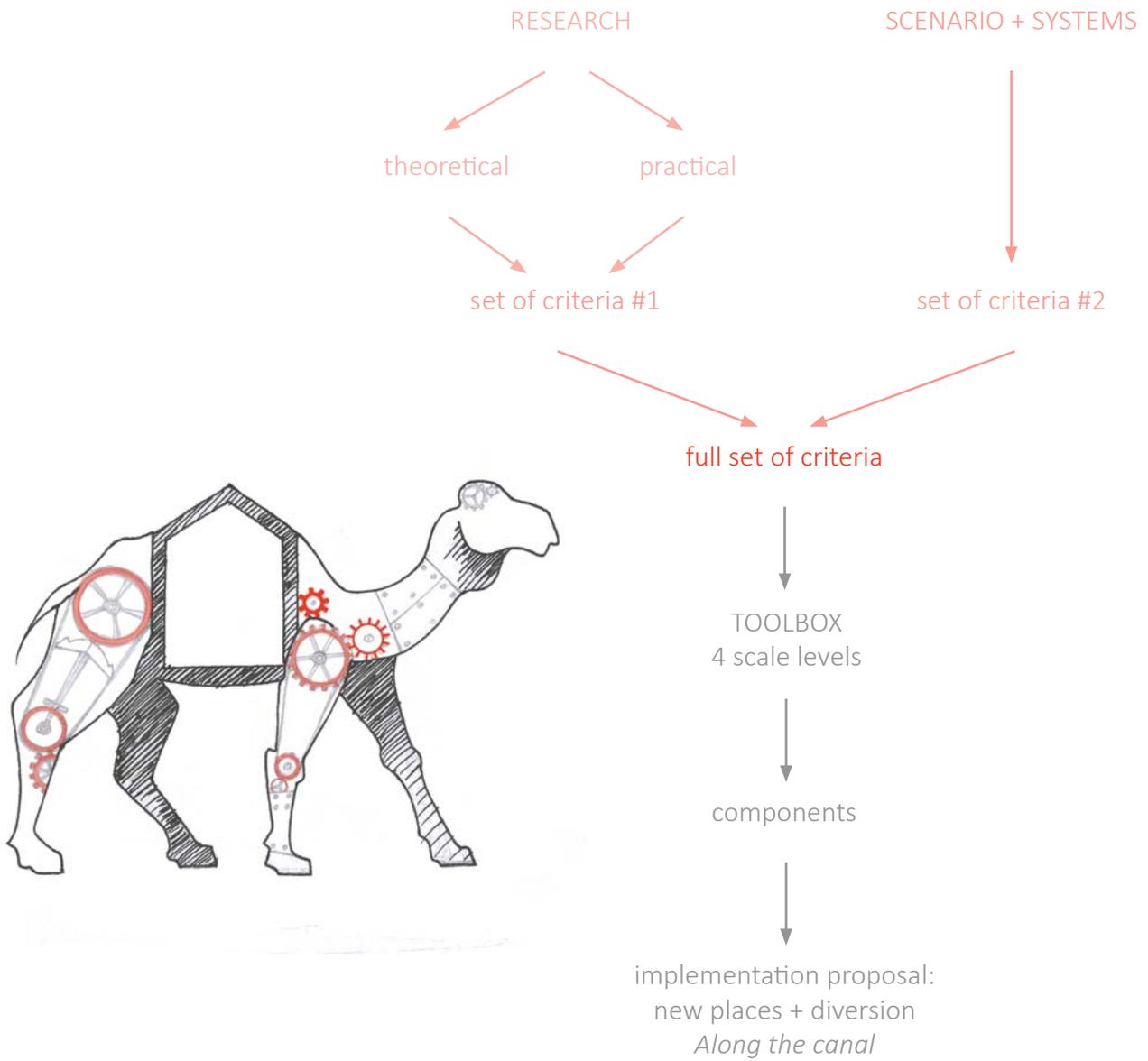
Another way is to have places that evolve over time, according to the season or people's demand for example. This allows to change the city's landscape and breaks the static state of the city.



5

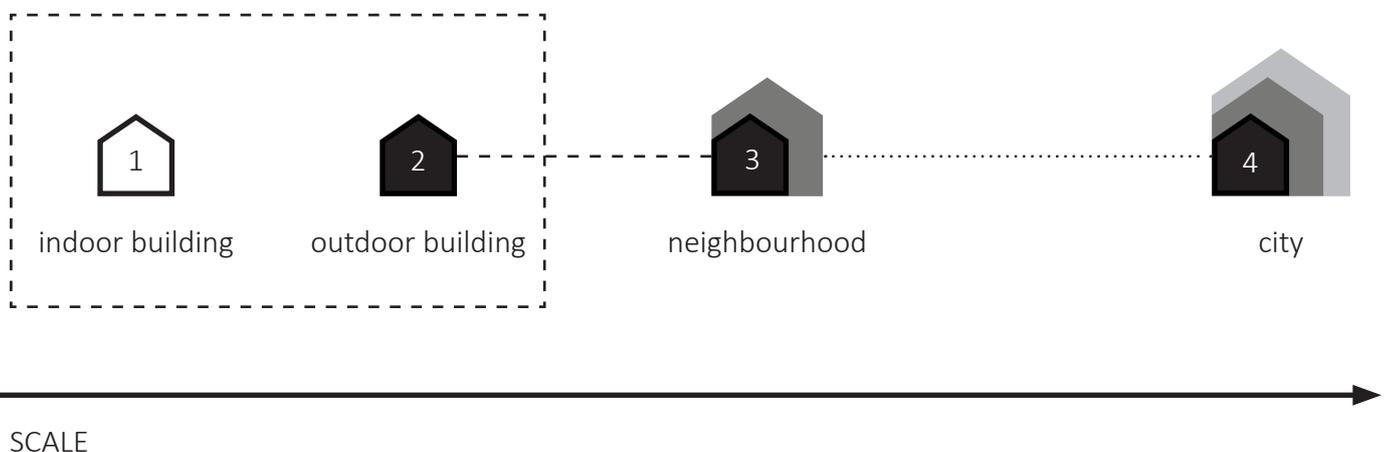
A last way is to divert the place from its original purpose and give it a new quality. For example, leftover spaces can be used, which also allows to densify the city and is a bridge towards environmental sustainability.





4.2. Categorisation of strategies: Toolbox for design professions

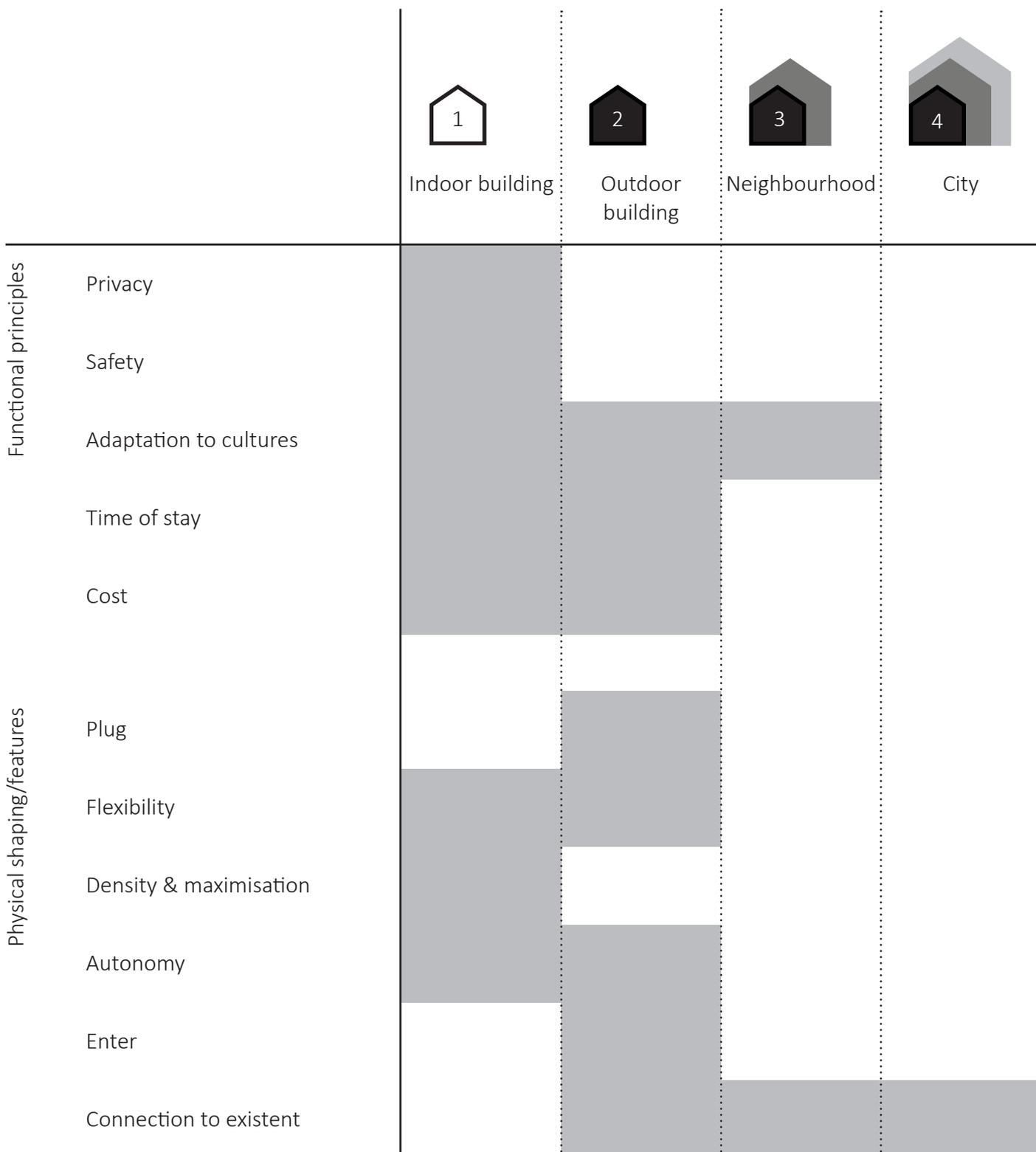
It would have been possible to structure the toolbox in different ways, however a decision was made to organise it according to different scales of intervention. Indeed, throughout the thesis' process, it appeared that there is somehow two ways to be at home: the private way, being in an individual cocoon, and the social way, the one where you interact with fellow people and the outside. Therefore, each individual lives in different levels of home, and it seemed quite relevant to take those different homes into consideration and connect them together. Four "scale levels" are used in the toolbox: indoor building, outdoor building, neighbourhood and city. Indoor and outdoor building are separated because indoor is more likely to be related with individuality, whereas outdoor is already about displaying and connecting to the next scale, the neighbourhood.

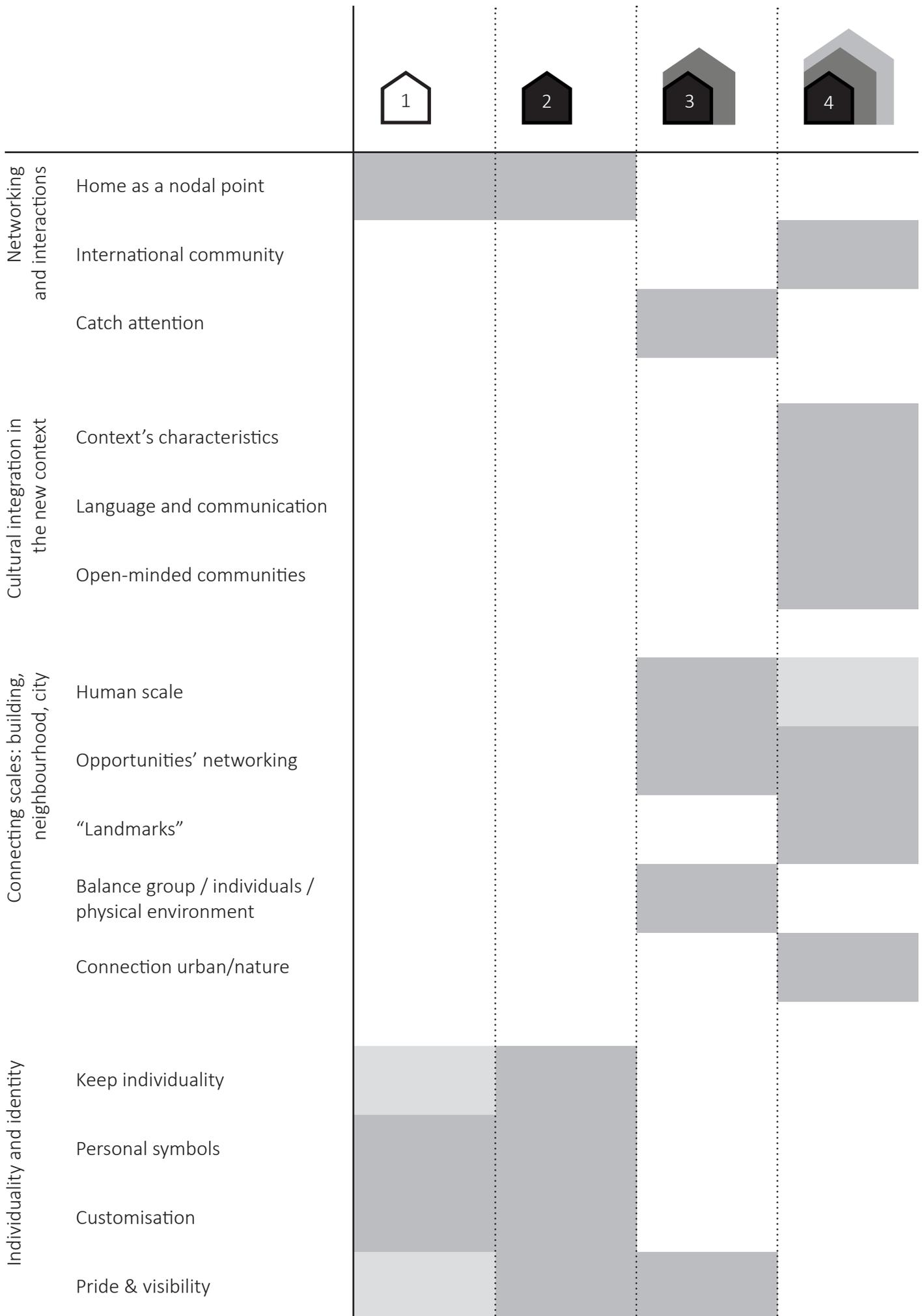


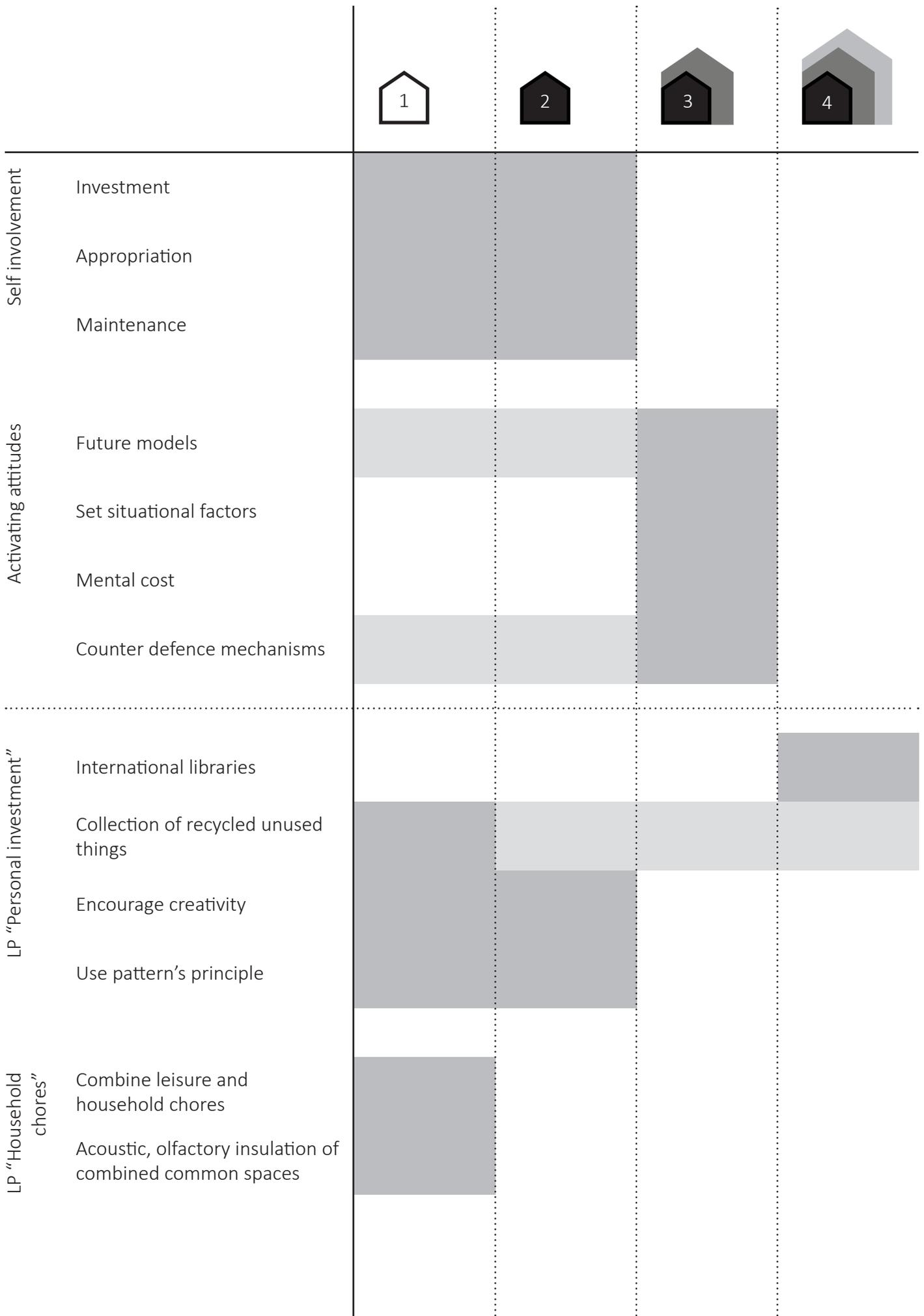
4.2.1. Full set of criteria

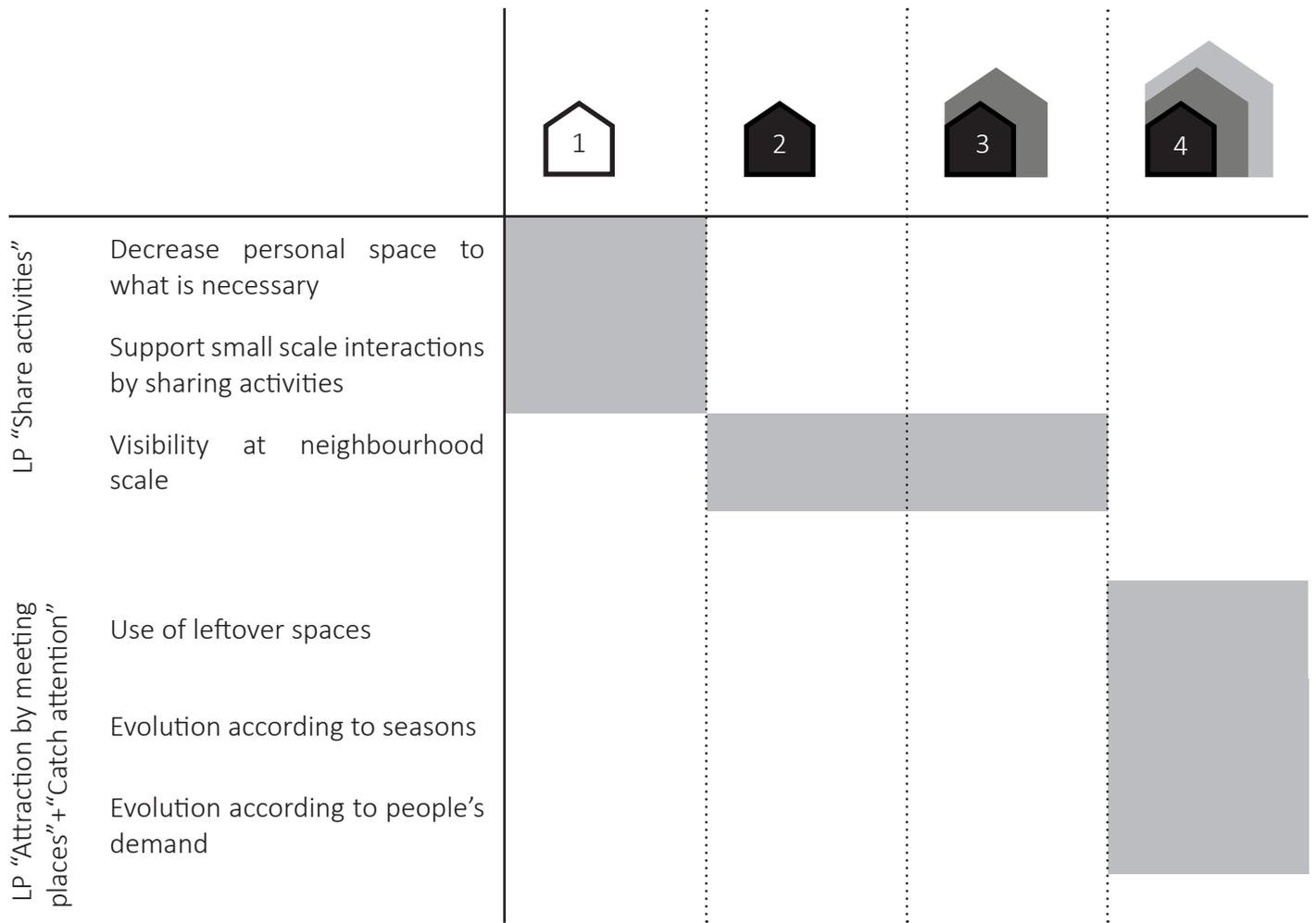
As the toolbox is structured according to scales, it seemed relevant to propose an alternative organisation of both set of criteria (the one concluding research and the one concluding systems based on scenario). The full set of criteria is organised from the four identified scale levels, in the following chart. It is used as an engine to define

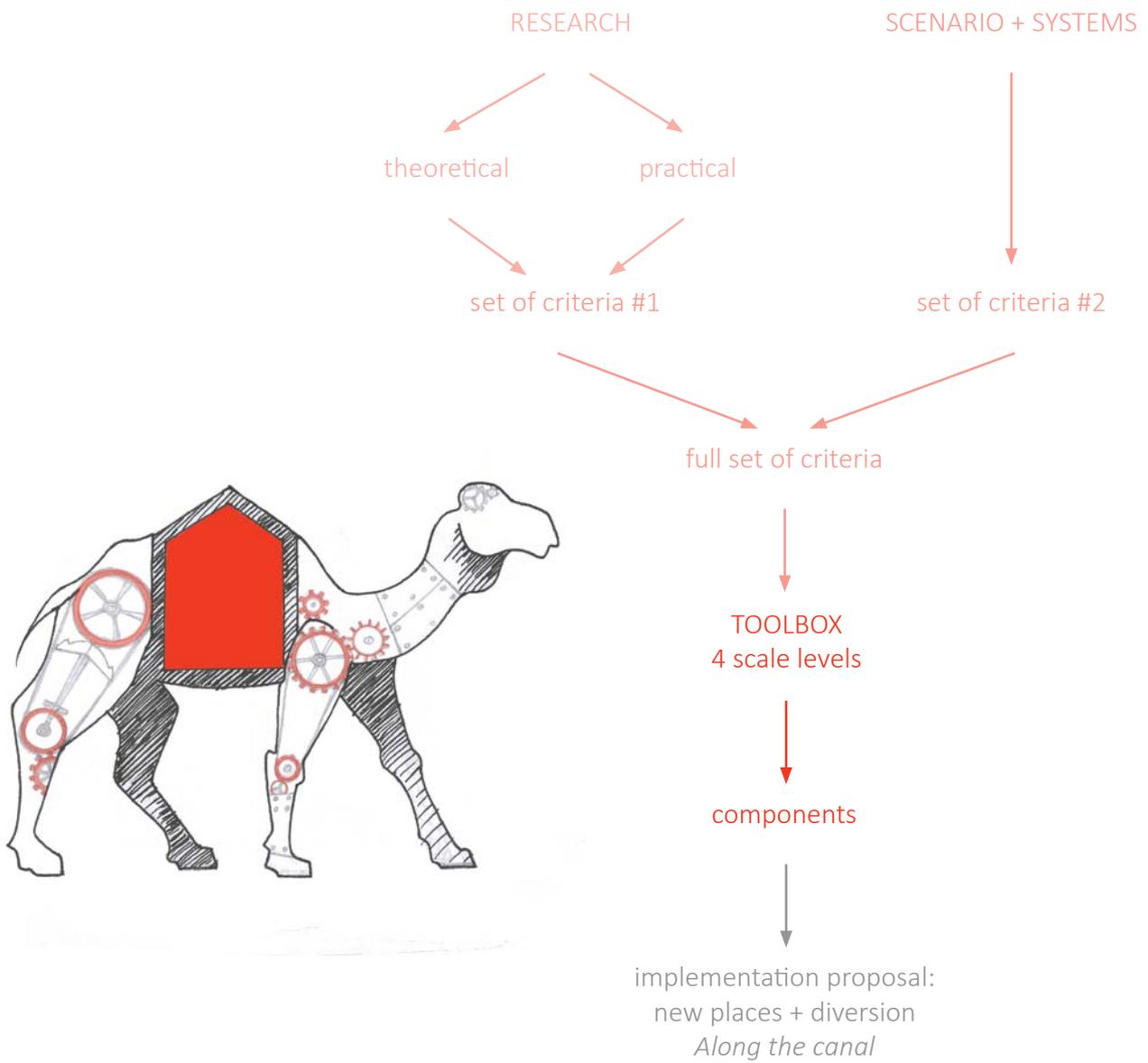
the principle of the toolbox's components, and as a comparison tool to discuss each of them (criteria are identified in grey in the discussion texts). The grey rectangles in the chart indicate if the corresponding criteria is practicable to this or that scale. Lighter grey means that the criteria might be practicable, but that it is not the main option.





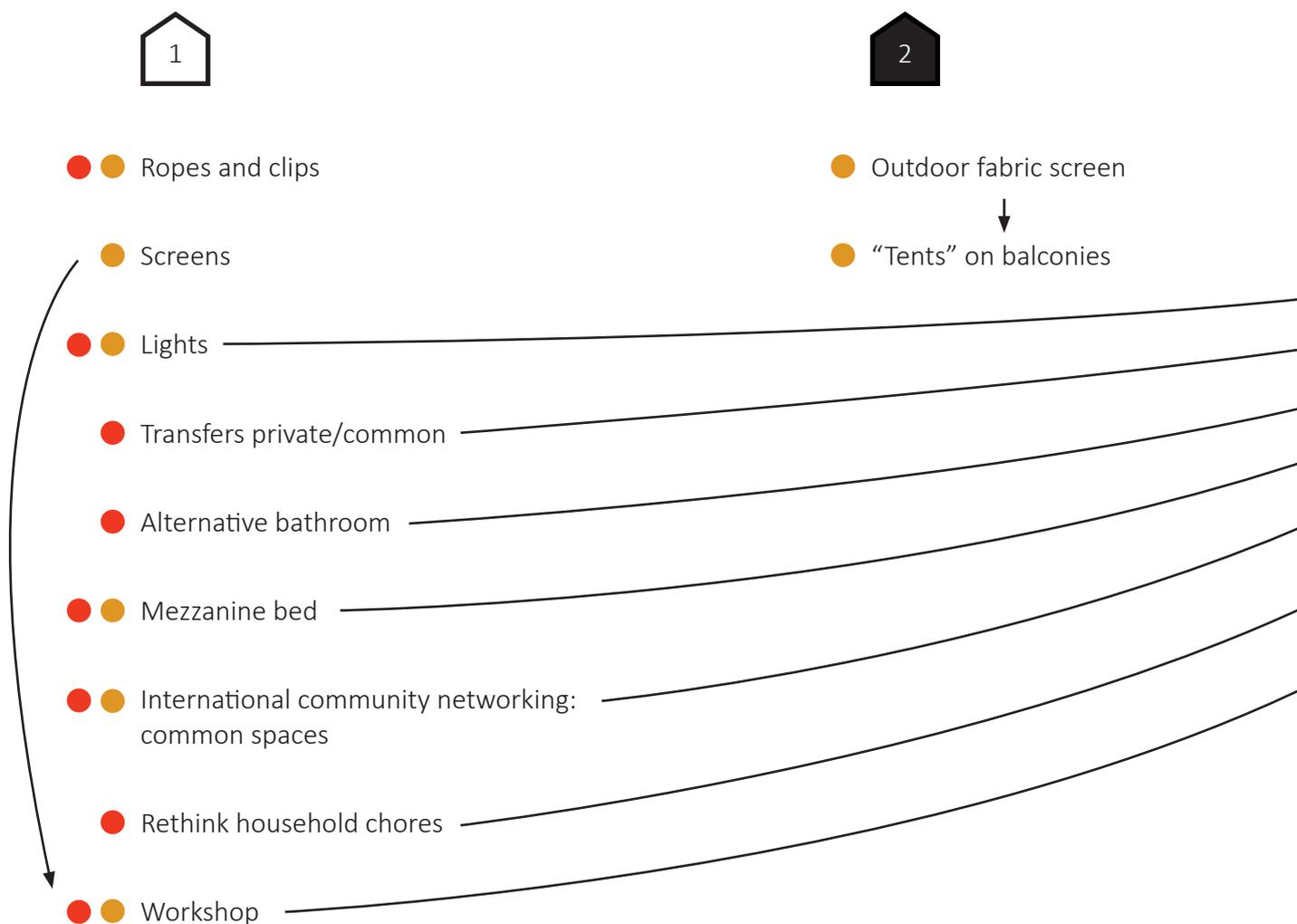






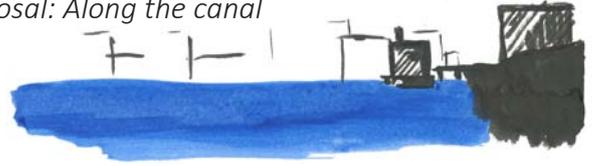
Apart from the set of criteria, the components have been defined from personal inspirations, architecture or more general design examples. Inspirations are illustrated by pictures, personal drawings or diagrams. Then the concept of the component is explained and discussed with text, and illustrated by drawings or diagrams.

Even if the toolbox is organised in four scale levels, there is an alternative way to read it. Each component, without considering its scale, could be used in one or both of two cases. One case is about using existing building stock of apartments. The other case is explored in the implementation proposal developed after the toolbox. This proposal is located downtown Gothenburg, along the Vallgraven canal between Kungssportsplatsen and Grönsakstorget, on Kungsparken's side. It is about new living places and uses the principle of diversion (here, the canal and the park). It especially develops the component "houseboats", based on individual units (the houseboats themselves) and common spaces. Indeed, I realised when developing it that the principle of this component allowed to integrate other principles from other components, especially for the common spaces part. Therefore it appeared as holding potential and as particularly interesting to go further with.





● Case #1:
new places + diversion.
Implementation proposal: Along the canal



● Case #2:
use of existing building stock.
Apartments

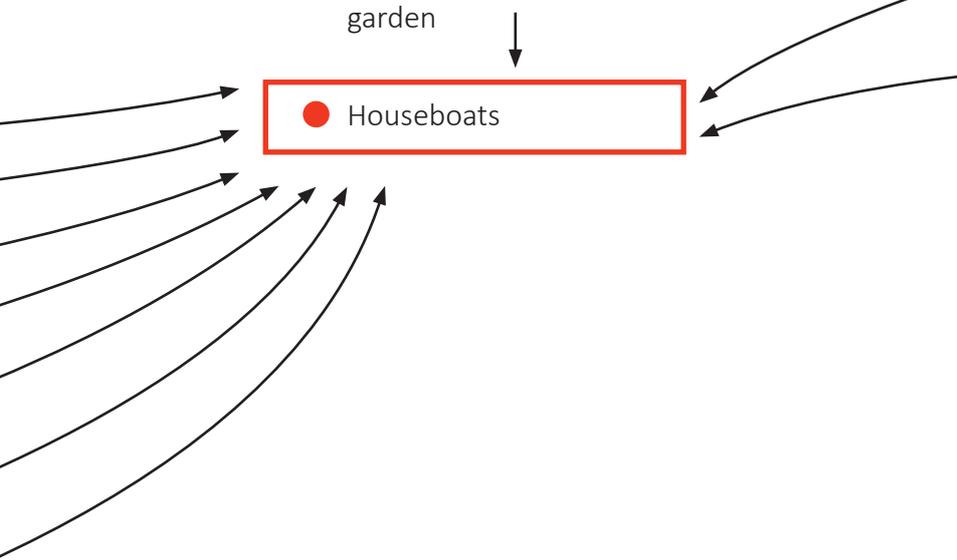


● ● International community garden

● ● Language support

● Houseboats

● ● International itinerant library





4.2.2. Scale level 1: Indoor building



CHAPTER 1: IN WHICH I GET TO LIVE IN A HOUSEBOAT COMMUNITY



CHAPTER 1: IN WHICH I FIND AN APARTMENT





Ropes and clips

Inspirations



A homemade “ropes and clips” principle I developed in my room in Gothenburg, using ropes, bulldog clips and brass fasteners.

PRINCIPLE

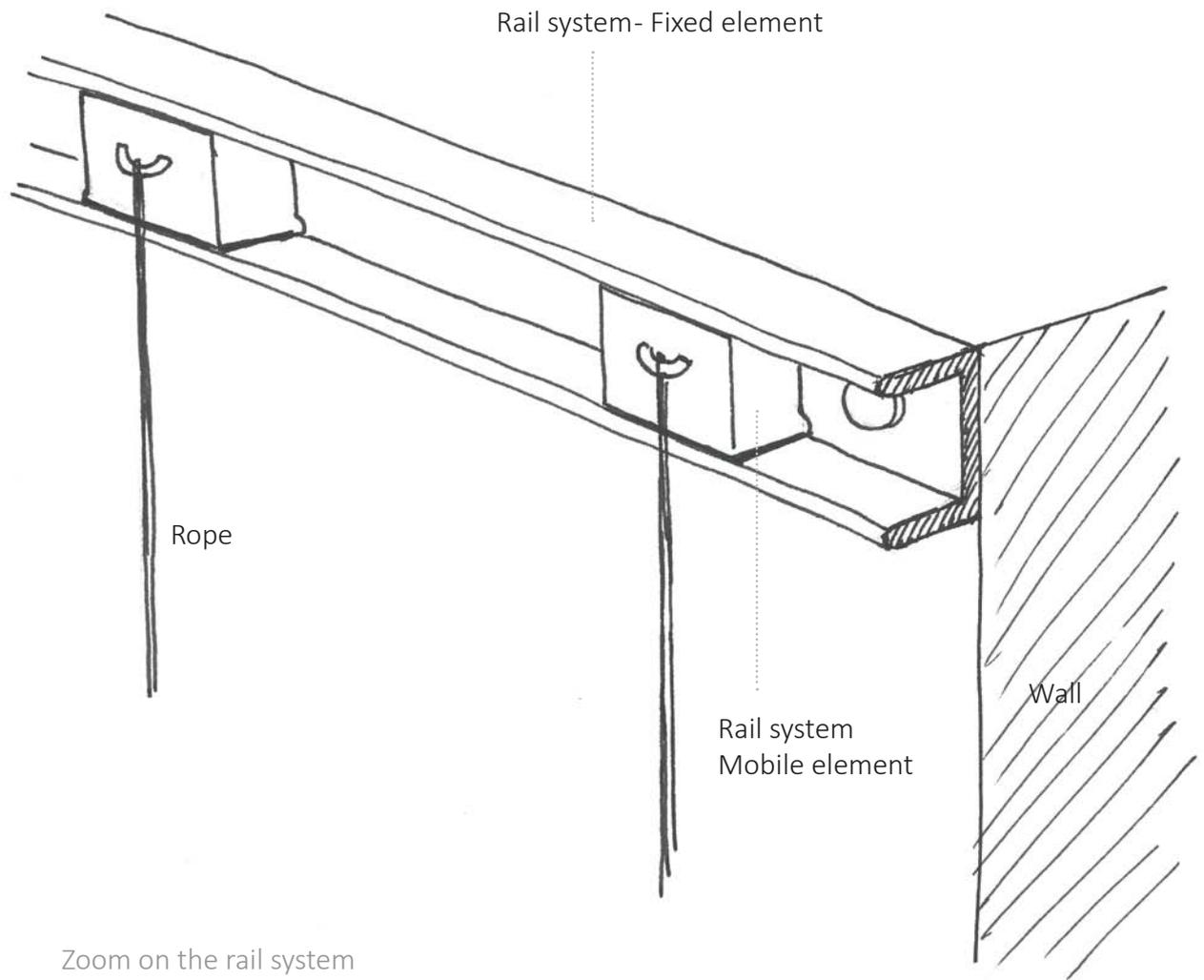
When renting a place, it is necessary to limit deteriorations of the space for next renter. As explained in the system “Appropriation”, there is some kind of conflict between the wish to appropriate the space and the risk of deteriorating it. A very simple example of this conflict could be putting pictures on a wall using nails or drawing pins, which would leave marks on the wall. Maybe a solution could be to propose small systems allowing people to appropriate walls without physically marking them. Those systems would be directly provided in apartments.

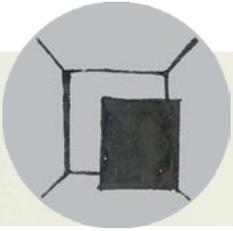
The design principle is to use a rail system, to which are connected strings of adaptable length, with clips at their extremity. Pictures, posters and so on can be hang using the clips. Position is adapted horizontally with the rail system and vertically with the strings.

DISCUSSION

Flexibility, adaptation to cultures, personal symbols, customisation, appropriation are addressed here. Thus this principle is more about home as a cocoon, a private bubble of individuality and privacy, some kind of personal small scale unit. This is one of the necessary aspects of home but it does not deal at all with criteria such as interactions with the outside, that have to be taken into account in other principles.







● Screens



In his Unités d'habitation, Le Corbusier used the idea of flexible space with screens principle. In the children room, space could be partitioned differently during day and night to support different activities. A sliding screen could be closed at night to separate beds and allow privacy. During the day, the screen could open and allow the two parts of the bedroom to be connected and the children to play. Screens could be used as blackboards (Lauzeral, 2012).

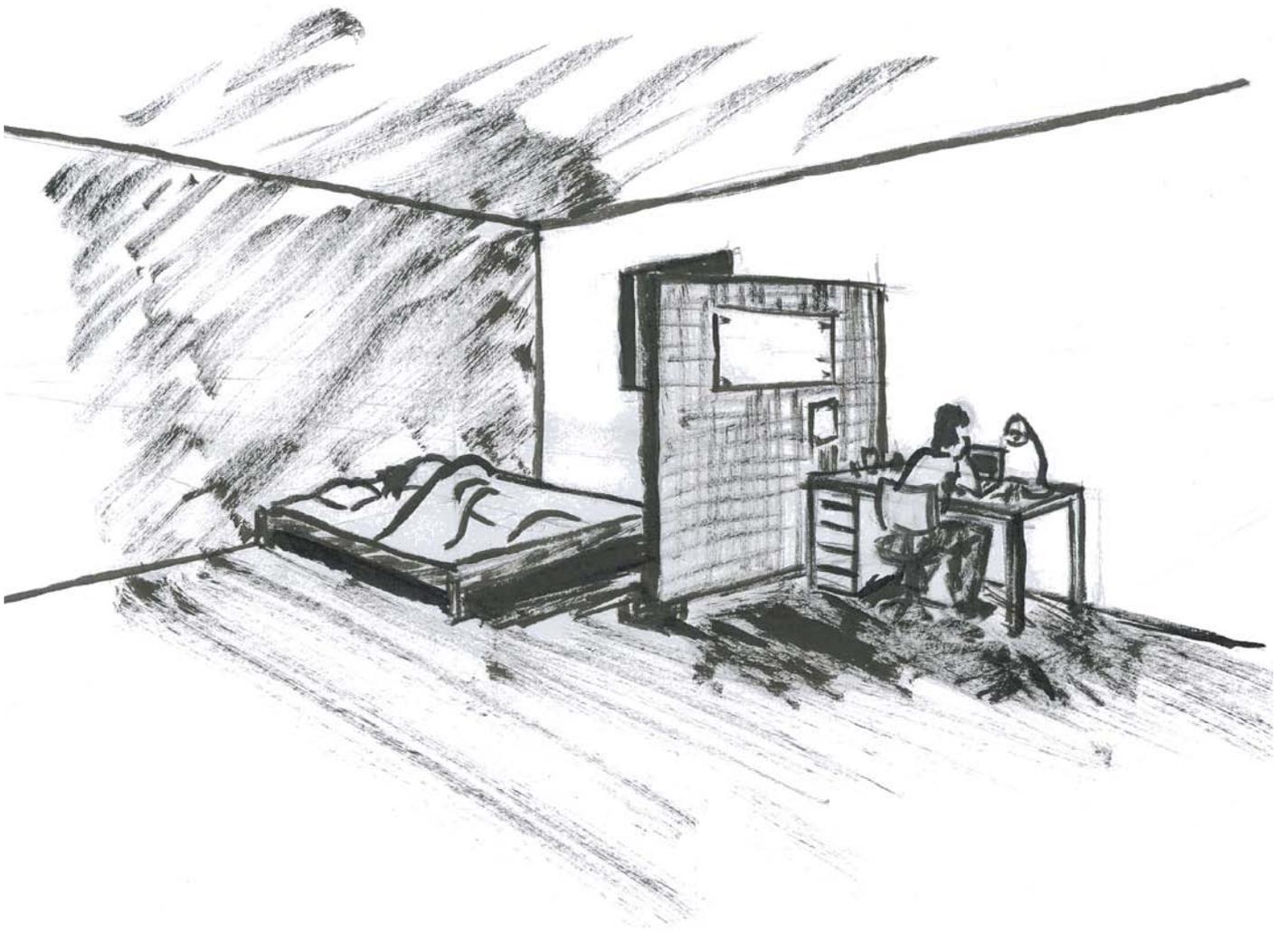
PRINCIPLE

According to personal needs and culture, our dwelling's walls are sometimes not enough and more partition would be needed. It happens that subspaces are required, because of specific activities, privacy or cultural patterns. However maybe those subspaces are not needed permanently. In that case they could be set up by inhabitants themselves out of moveable elements, as screens. At the same time, screens can be a good opportunity to pin things without damaging permanent features (walls).

DISCUSSION

Use of screens matches criteria of privacy and adaptation to cultures. It also relates to flexibility as well as appropriation and customisation. So here, as for "ropes and clips", this is more about the very private sphere of home, and this needs to be completed by other approaches oriented towards social interactions.

The cons for this principle is about what happens when people do not need subspaces and do not have to use the screens for a given time. In that case, how to make the screens "disappear"? What is more, screens only give a sense of partition, but does not prevent noise or smell interferences.





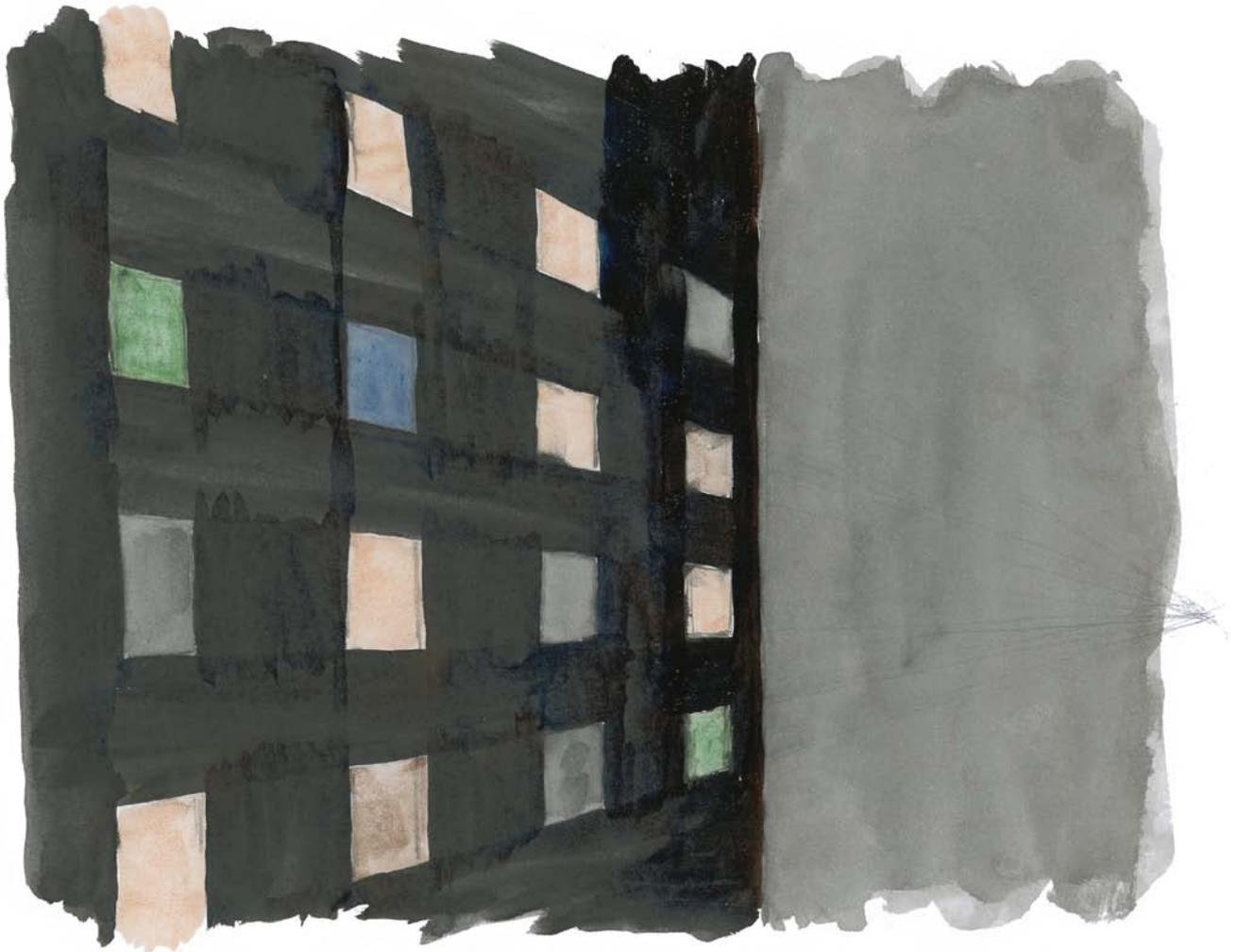
Lights

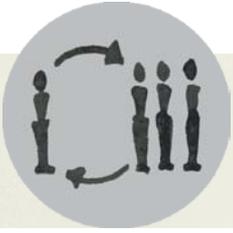
PRINCIPLE

Artificial lights, when renting a place, are usually already provided. However is it really the right way to do it? What if people could choose light bulbs and lampshades from an offered set from the beginning, so that it can suit better their needs, activities and culture?

DISCUSSION

As seen in the research, habits are weakened when people change environment (Verplanken and Woods, 2006). Thus maybe it is possible to take advantage of this to propose something slightly different from what people are used to. Maybe different light options could be proposed, but only with low-energy bulbs. This acts as a bridge towards environmental sustainability and matches the criterion of being a model for the future and spreading ecologically sustainable habits. What is more, choosing your light is also a form of personal involvement into your place. It can even be about displaying your identity and being visible as a particular individual from the outside.





● Transfers private/common

PRINCIPLE

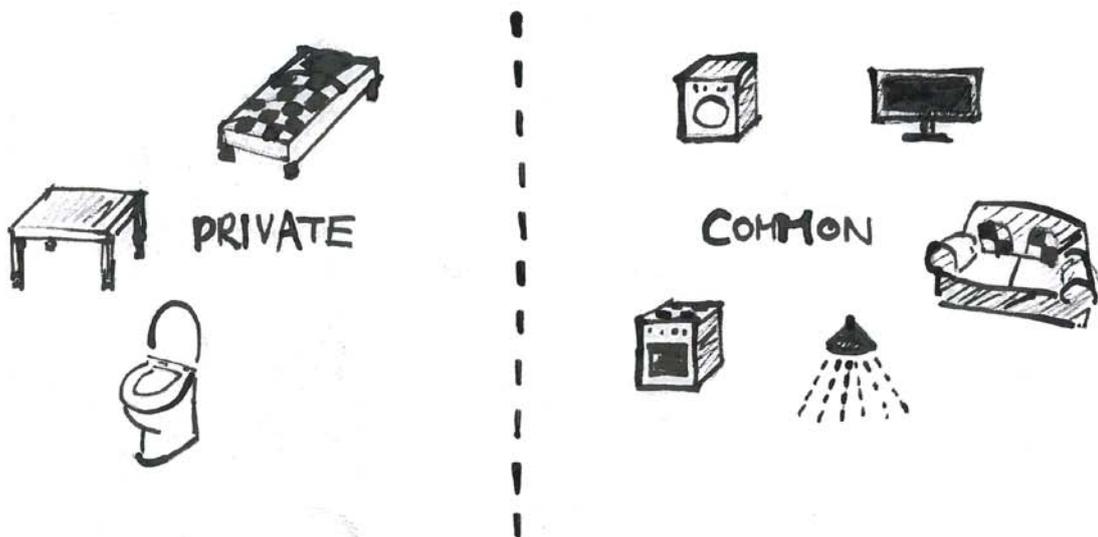
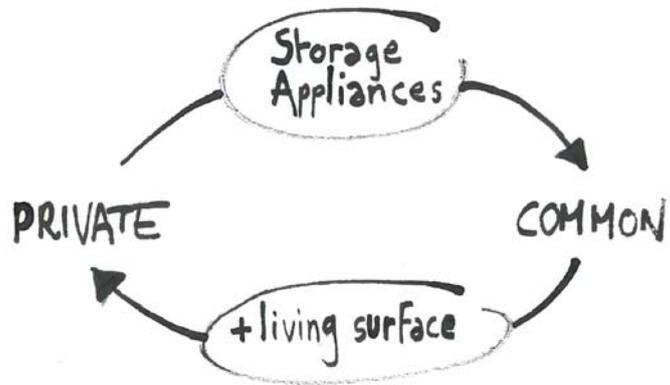
The ideal way of living in our Western societies is closely related to personal property. Sharing bathroom, kitchen or laundry is often seen as a last resort or associated with flatshare and student way of living. However, transferring features from private to common could actually allow to increase quality of private spaces. For example, transferring some storage from private spaces to common areas would allow to save space for personal living surface. And what if, more generally, private space would be reduced to what is strictly necessary to individual basic needs? What if the private units were reduced to sleeping/resting area, personal recreation, potential working place and minimum bathroom (sink and toilet), other home functions being shared?

DISCUSSION

As seen before, mobile workers can be a target group ready to change their habits. They might be more open to share spaces if this also means having good quality of private spaces.

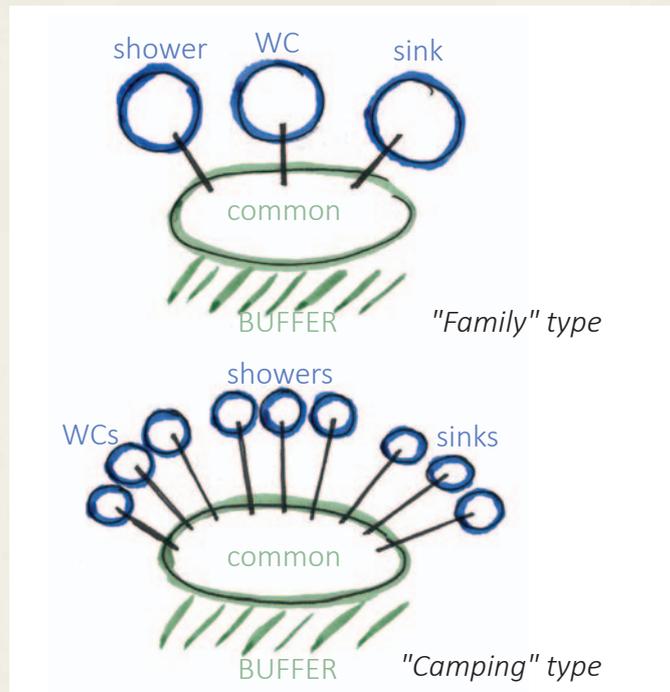
Criteria of cost is matched here: renting cost can be decreased if there is less personal space, laundry, kitchen, bathroom being relocated in common areas. What is more, transferring some home functions from private to common is an opportunity to support small scale interactions, by sharing activities. The “bridge” aspect of social sustainability is also addressed: transfers between private and common tackle the issue of density and minimising spreading of cities.

However, there are some cons as well in this approach. Criteria of privacy, safety and maintenance can especially be challenged in the case of common spaces. How to make sure that maintenance tasks are fairly distributed? Will people trust each other and leave personal items in shared spaces? How do you deal with different habits and cultures, about food and hygiene for example?





● Alternative bathrooms



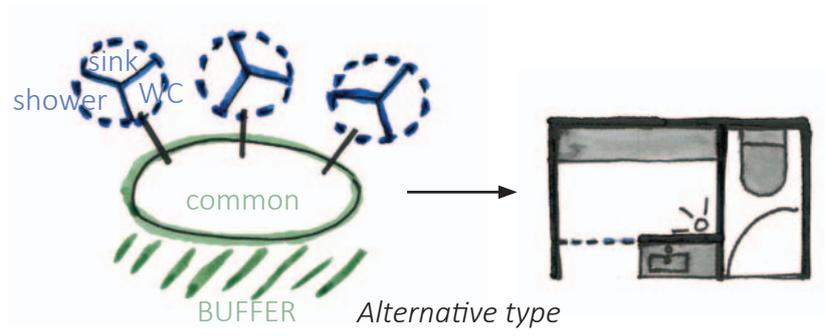
PRINCIPLE

Bathrooms are potential shared spaces. However a shared bathroom cannot really be like the typical family bathroom, for you share it with unknown people. It cannot be a mere camping sanitary facility either.

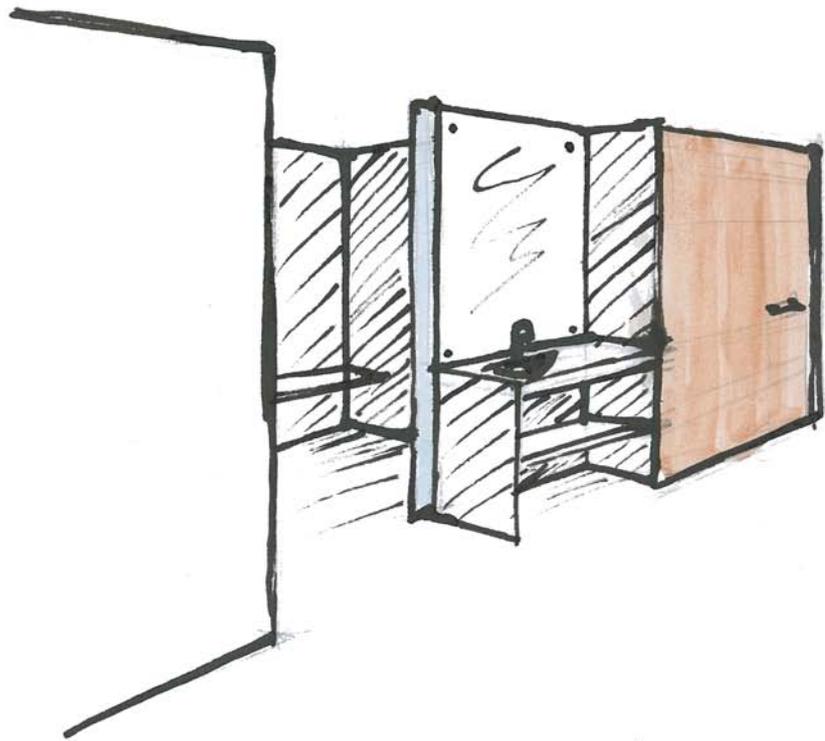
DISCUSSION

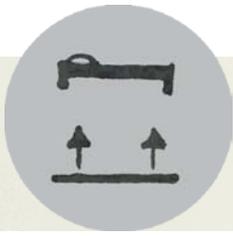
The main issue is that privacy is challenged. How do you keep autonomy of each bathroom's component, so that people still get a privacy feeling and that there is less overlap's risk in the morning, when everyone needs access to the bathroom? Will people leave their soap, toothbrush and so on instead of bringing it back to their safe personal unit?

Adaptation to cultures is also especially challenged. Relationships to hygiene and privacy can vary a lot, for example taking into account gender. Therefore alternative bathrooms need to be flexible and propose different configurations.



Alternative type





Same surface more space: Mezzanine-beds

Box-beds are a traditional furniture of Brittany (west of France), though not used since the XXth century. The bed is above the ground in a kind of cupboard with sliding doors. Initially, it was a way to avoid humidity coming from the ground. The doors provided some intimacy at a time when the whole family was living in the same room (*Old & Interesting*, 2007). Furthermore, it helped to keep warmth in winter. A chest-bench was used as a step to go inside (Trollope, 1840).



Loïc, 2005

PRINCIPLE

As seen before, transfers from private to common allow to decrease the surface of the actual private space. It could actually be possible to decrease this surface even more, by maximising use of space with specific apparatuses. The one proposed here is a design of a furniture, a mezzanine-bed. The bed is put on an upper level, freeing surface on the floor for other purposes (personal storage or desk for instance). A sliding door allows to close the sleeping area and get privacy, which is particularly relevant in the case of a shared room.

DISCUSSION

This furniture proposal addresses the criteria of density and maximisation and of decreasing personal space to what is necessary. Those criteria themselves allow to decrease renting cost. What is more, the door's principle is a way to tackle the issue of keeping individuality, even in an already private sphere. Finally, as explained in the box-bed's inspiration, the door system offers the advantage of keeping the sleeper warm, even if it is colder outside. Maybe this is an opportunity to decrease indoor temperature's standards in winter and thus heating; this would be a bridge towards environmental sustainability.





International community networking: common spaces

PRINCIPLE

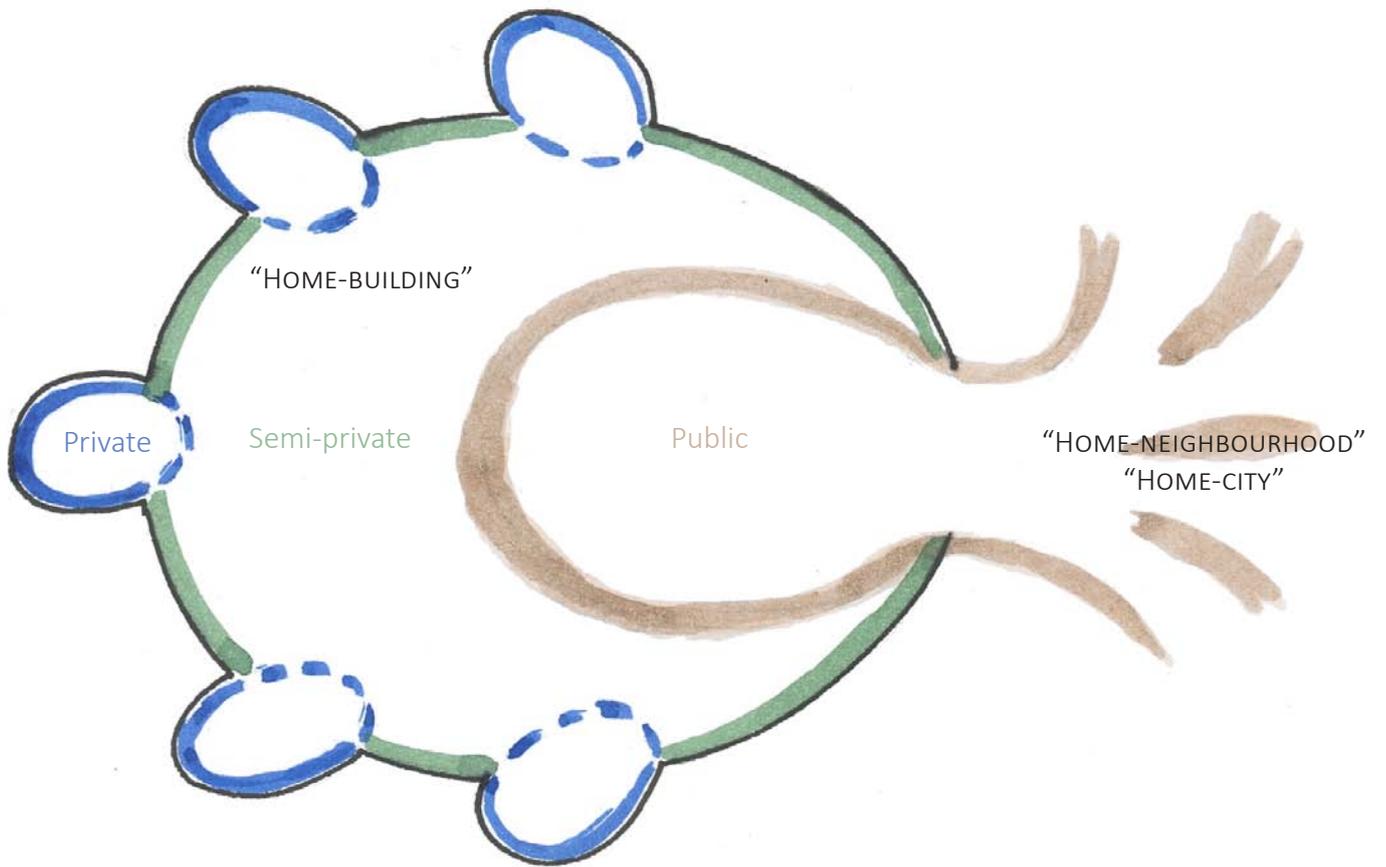
Previous components in the toolbox's list were more about the cocoon-home. This is necessary to an individual but does not create social links, which means, does not help in being at home once out of the building's physical boundaries. Common spaces, already mentioned above, have the potential to catalyse social interactions.

Mobile workers, coming from different countries, need to develop a new social network. The home-building can be a point of departure for this. The home-building dwells home-cocoons, personal private bubbles. Those private spaces are connected to semi-private spaces of the building: those are spaces shared by the building's inhabitants, featuring relocated home-functions (kitchen, bathroom, laundry). This already creates a social network within the dweller's community.

But this is not enough: if it stays at that stage, it will become a kind of gated community. There is a need to connect to the outside, the neighbourhood and city, so that it actually becomes home-neighbourhood and home-city. A solution could be to insert a public space into the building, accessible to external people. This could be like a neighbourhood meeting place, for example for cinema, games, music, diners, dance and so on. This would favour meetings between local and new people. But above all, by setting the frame of those meetings as something positive, related to leisure, there is a bigger chance that new people are perceived positively and integrate more easily.

DISCUSSION

This principle tackles the issues of home as a nodal point, of catching attention on this point, as well as favouring international and open-minded communities. However it also brings challenges: how do you enter as an inhabitant or as an external person? Is it the same entrance or not? Security issue is also raised: how porous is the limit between public and semi-private?





● Rethink household chores

With those diagrams, I investigated the potentials of interaction with other people when performing different home activities. This can be a point of departure to define which activities can connect to each other. Bubbles named with an activity represent someone performing this activity. Arrows define the area of potential interaction.



PRINCIPLE

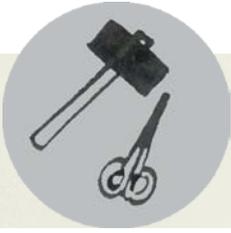
Rethinking household chores connects to the community networking's principle. If private spaces are reduced to effective minimum, household chores have to be relocated in common spaces. This is an opportunity to create social link through something which is usually perceived as boring. Chores spaces can be combined with places of leisure and meeting, in order to turn chores themselves into generators of social interactions. For example, common laundries could be open on the city (interaction with scale level 3), ironing equipment could be provided in living-room-like spaces and therefore connect to activities such as talking or listening to music.

DISCUSSION

Rethinking household chores can be a way to support small scale interactions by sharing activities. In some cases, visibility at neighbourhood scale can be used as a mean to start generating interactions at larger scale. What is more, the cost issue can be addressed: if appliances are shared and already provided, people will not have to invest in it for the relatively "short" time they will live there. However, this also brings the issue of maintenance, which can be challenging in term of organisation when done in common.



Chores: ironing + Leisure: music and talking
+ Visual connection to the neighbourhood



Workshop for doing it yourself



A guitar stand made of cardboard (recycled from an Ikea furniture's packaging), brass fasteners, blister wrap and rope. This is an example of building something yourself with cheap materials, in order to organize your space better and avoid the cost of buying something that will not be used in future migrations.

PRINCIPLE

This principle is especially based on the “Personal investment” LP system, which was exploring the potentials of enhancing people’s creativity. A physical structure to support this could be a workshop space giving people the possibility to “build” things themselves. As shown in the systems approach, there is also a potential to connect this structure with second-hand and recycling supply in order to get materials. Second-hand materials could be bought at affordable cost and recycled materials could be given for free. Tools would be available in the workshop as a common resource. Mobile workers leaving for another destination could be part of the recycling system and donate old items when leaving.

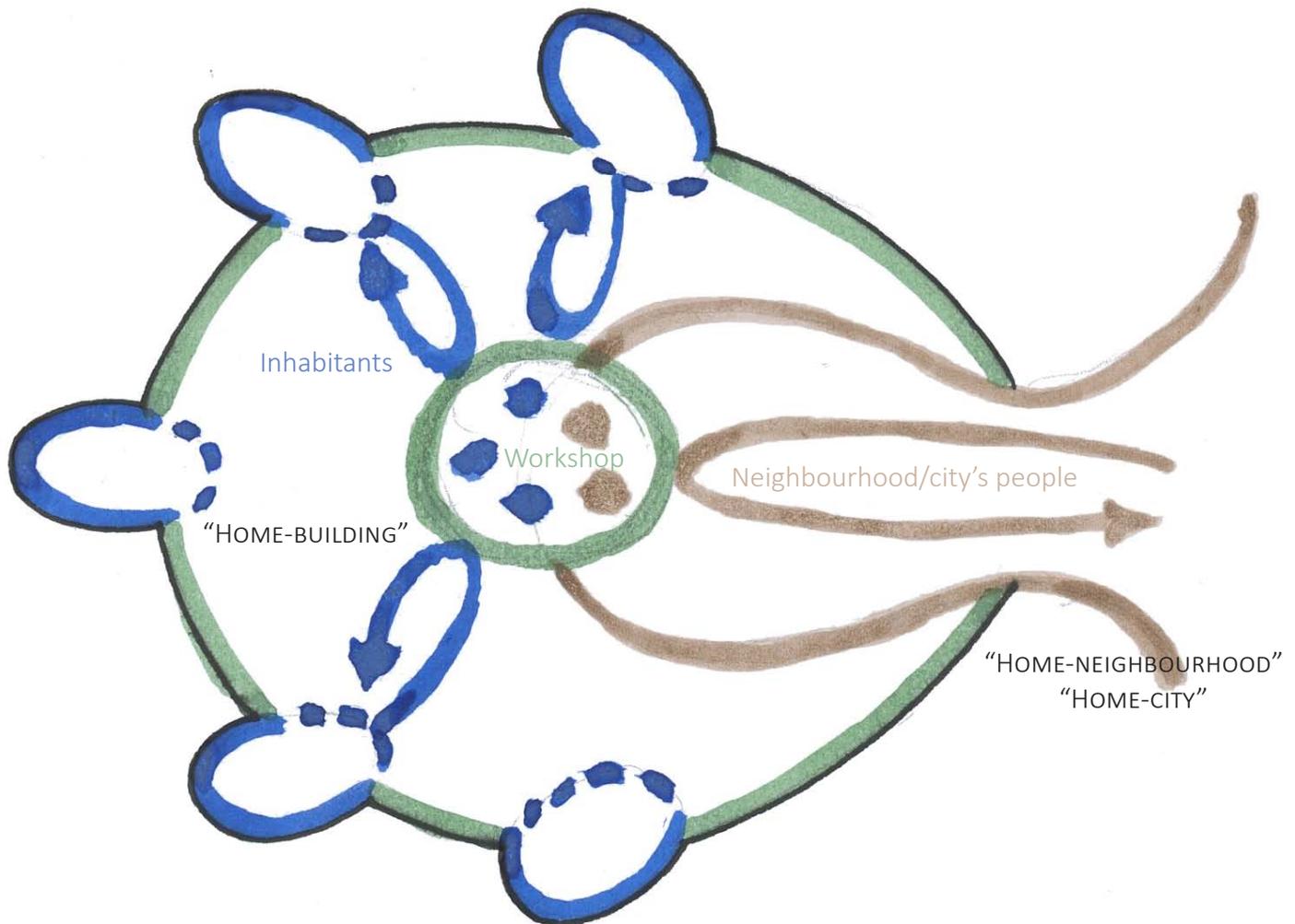
DISCUSSION

This principle connects to individuality, identity, customisation, investment and appropriation. This is very much about the pride of doing it yourself, and this concept is definitely relevant in the context of home: Ikea's concept of assembling furniture yourself has been part of its success. Cost issue is also addressed: doing things yourself can make them cheaper, as well as using recycled materials. Besides, recycling is also a bridge with environmental sustainability.

There are also challenges to this workshop idea. First, this is a common space, thus can this be an obstacle to the personal creativity it is supposed to enhance? Maybe it could be relevant to be able

to partition space (for instance with the "screens" component of the toolbox).

What is more, recycled things can be perceived as something low value, like a homeless thing. How can people's mind be shifted? Is the disruption of habits' phenomenon enough? Maybe an option could be to make the workshop not as a semi-private space but as a public space, involving artistic activities? Then using recycled materials would turn from something low to high value, from a poor material to the high position of art in society. What is more, this would generate even more social interactions, at neighbourhood and even city scale. However, with the art aspect, there might be a risk of gentrification.





4.2.3. Scale level 2: Outdoor building



CHAPTER 2: IN WHICH I START TO INTERACT WITH THE SURROUNDINGS





● Outdoor fabric screens



A “fabric” advertisement on the Centre Pompidou’s façade, from behind. It is still possible to see the neighbourhood through it.

A graffiti wall in a sport playground, Parc Eole, Paris.

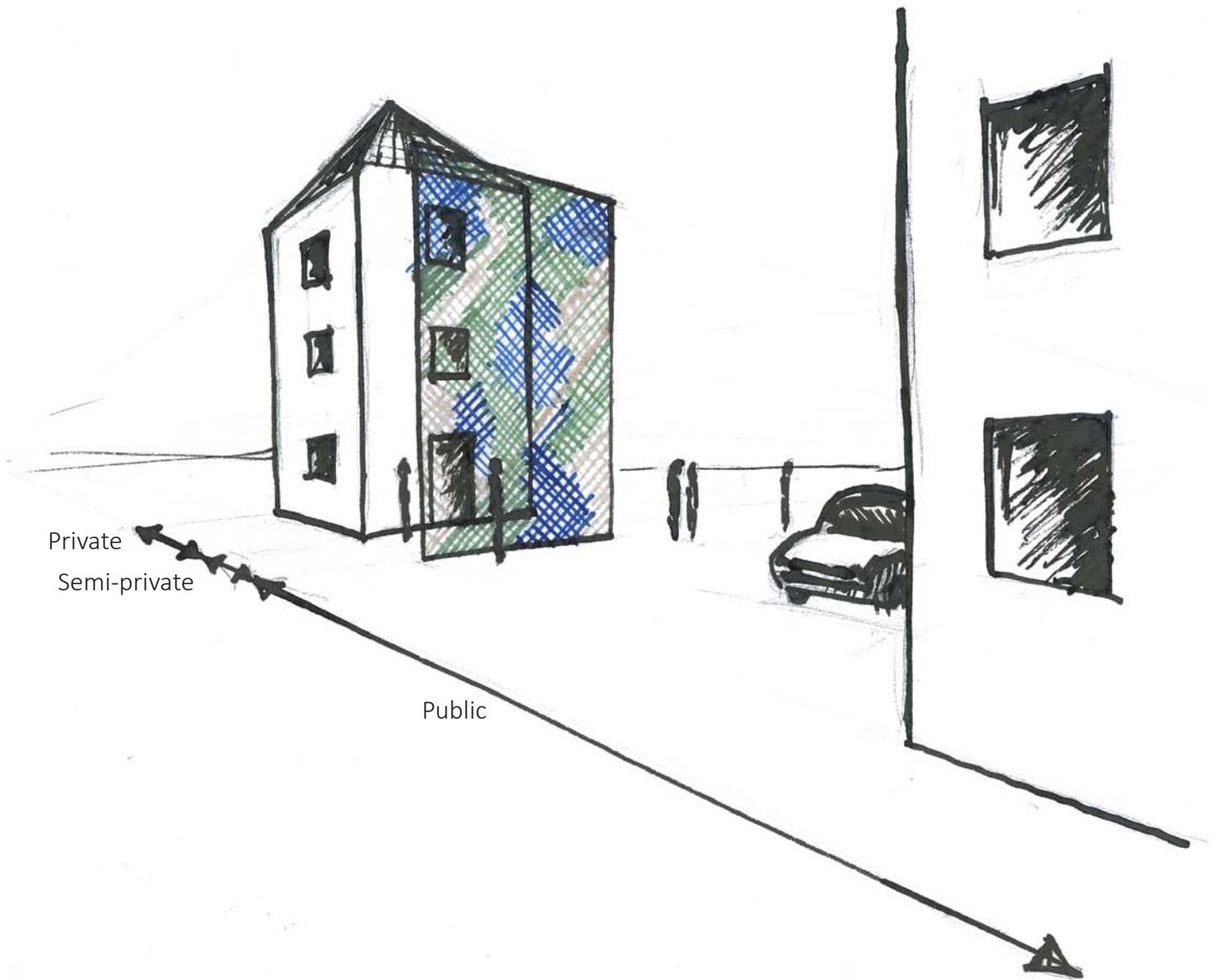


PRINCIPLE

This component reuses the principle of the fabric seen in the Centre Pompidou’s inspiration example. However, in the museum’s example the fabric comes with the message already printed on it. But what if it would come blank? In that case, it could combine with the second inspiration: the graffiti wall. Outdoor fabric screens could be like semi-transparent graffiti walls. They could even be temporary: when full of drawings, the screen could be moved and displayed in another part of the city, and inhabitants could start over with a new one. What is more, the “fabric” aspect gives the possibility to see through it: you can still have a visual connection with the neighbourhood from the inside, but without really being seen.

DISCUSSION

This relates to concepts of pride and visibility, displaying identity and expressing creativity. The feature of seeing without being seen addresses issues of privacy and safety. However it might also create a threat of breaking social interactions.



Private

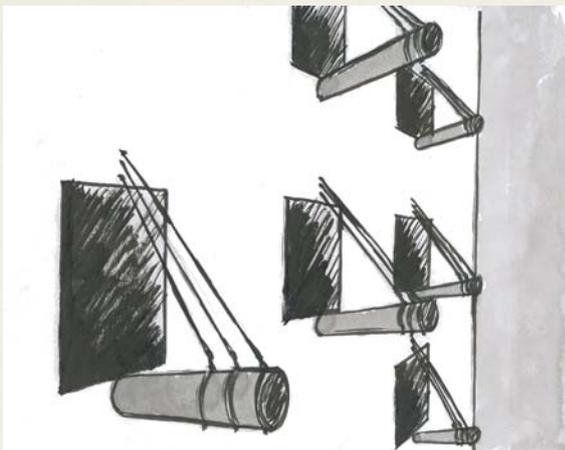
Semi-private

Public

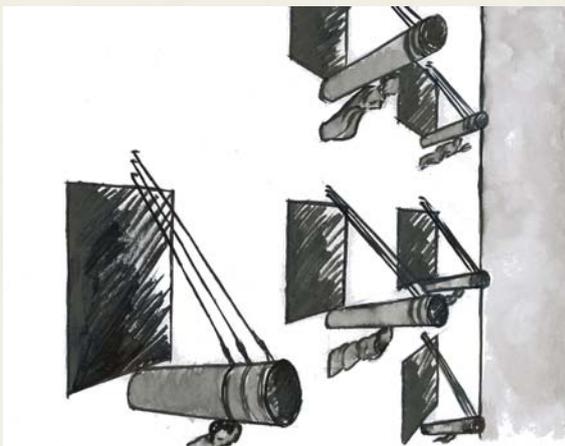


“Tents” on balconies – extension + interact with neighbours + display identity

The transformation project of the Tour Bois le Prêtre (Paris, France) by Druot, Lacaton & Vassal in 2011 is an interesting example to look at. Balconies have been extended and can be closed by sliding glass doors, giving the possibility to extend living rooms. Inhabitants have been involved in the design process.



Thus balconies are a way to extend indoor living spaces. They can also be a socialisation catalyst. This idea especially came from personal childhood holidays' memories in Corsica (south of France). Old people were talking to each other from their balcony, above the street and car traffic. In this perspective, balconies are not only physical extensions of the indoor space, but also physical extensions connecting to the outdoor space, holding interactions and socialisation's potential.



If the interaction's idea is pushed further, balconies could even be seen as displays of identity. This is the last inspiration, using some kind of naval metaphor. If balconies are simply considered as physical extensions, then they remain mere ship bows. But what if they have something particular, figureheads? In this case, they distinguish themselves, acquire an identity and display it.

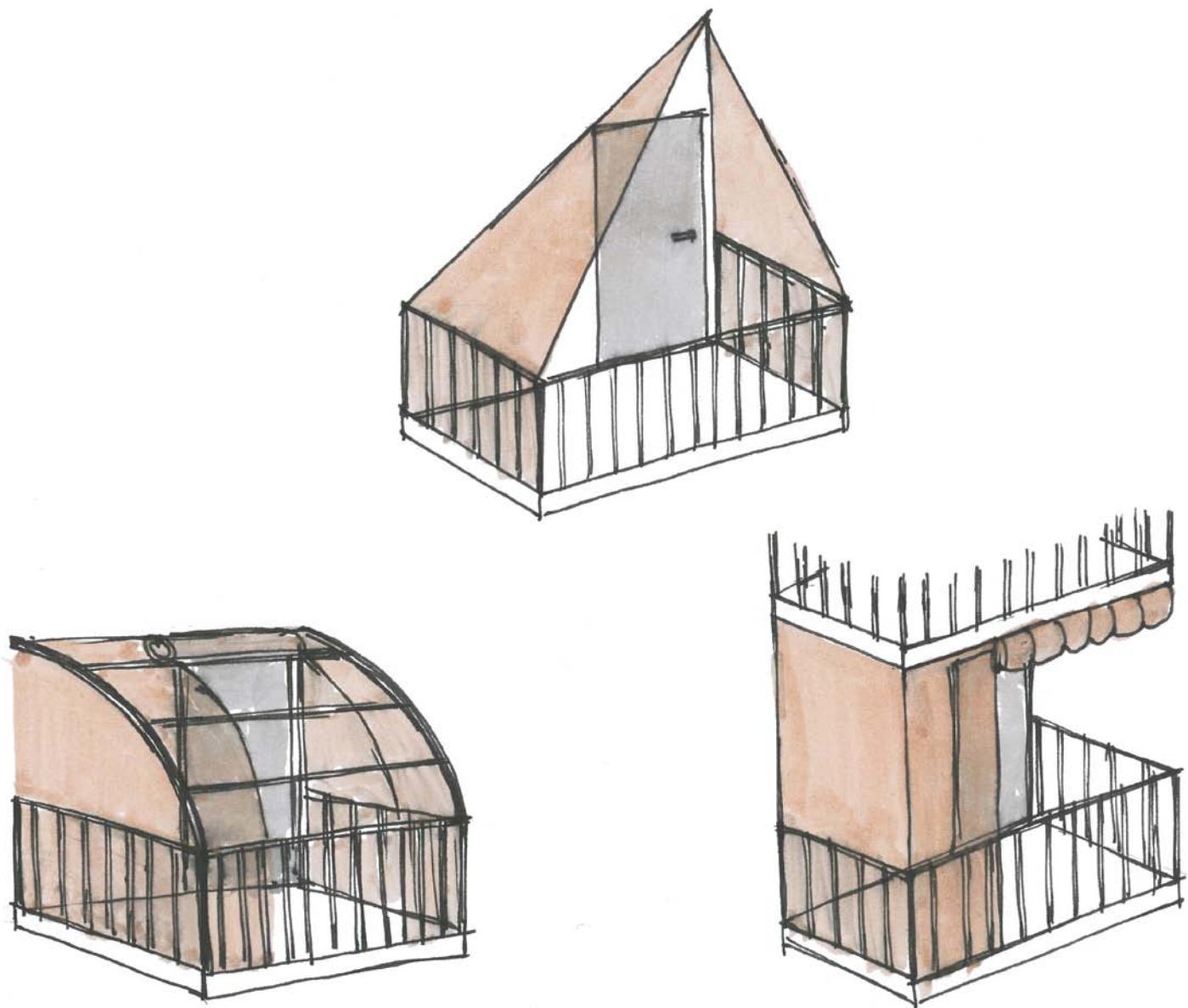
PRINCIPLE

Balconies can be considered as valuable spaces to use, even in winter. They are also potential interactions' areas between a building's inhabitants. Finally, they can support inhabitants in displaying their identity. The principle of this component is to use a tent system. In winter or when the weather is windy or rainy, it can be used as a protection and allow to use the balcony anyway; when the weather is sunny, it can provide shade. The advantage with this system is that it is possible to take it away completely if people want to use it as a normal balcony. It adapts to seasons as well as inhabitants' desires. What is more, the "outdoor fabric" component mentioned above could be used. Blank panels making up the tent could be provided to inhabitants, and they could decide to personalize it and maybe reuse it in future migrations.

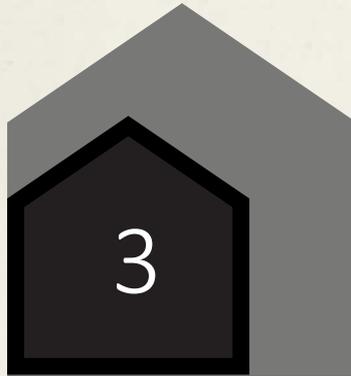
DISCUSSION

A choice was made to not use something permanent because inhabitants themselves are temporary. Identity and visibility at neighbourhood scale are addressed. Small scale interactions are considered too, but only if the tent is not completely closed or allows porosity in term of visibility; otherwise, the system is only about privacy. That can be a choice up to inhabitants as well: when they don't want to interact with neighbours, they can switch or close panels.

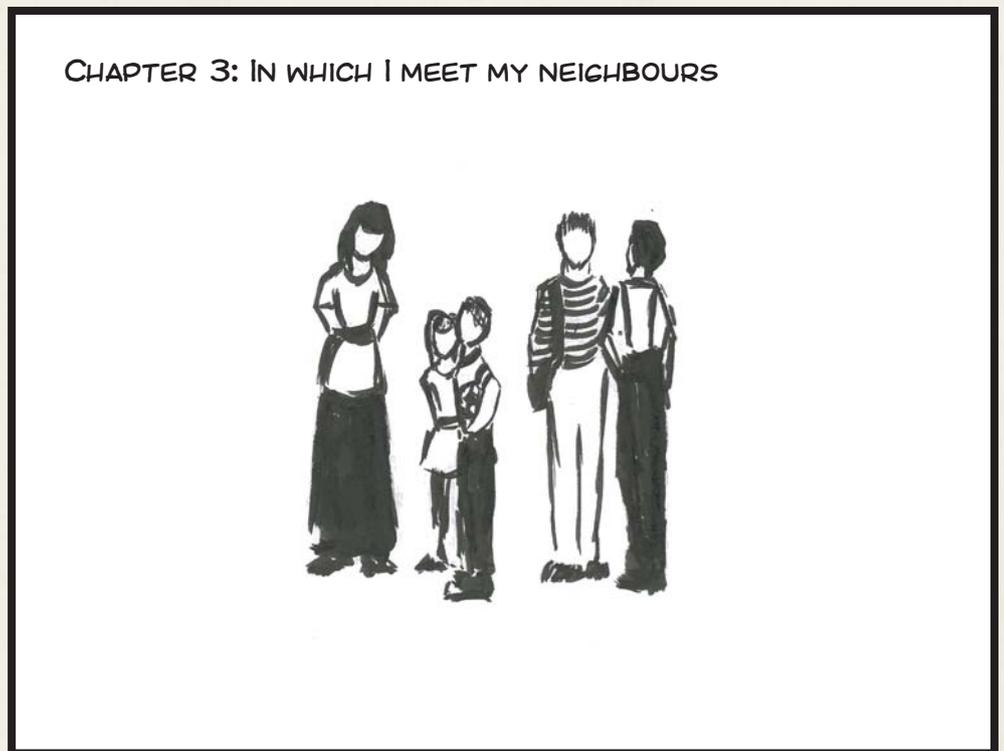




Three potential tent's system for balconies



4.2.4. Scale level 3: Neighbourhood





International community gardens



Michael Rakowitz's paraSITE: an inflatable structure plugged on buildings' air ducts. Disrupting the usual city's landscape, it has a quite strong "catching attention" power.

PRINCIPLE

The international community garden principle could use inflatable structures as some kind of greenhouses. Those structures would be connected to buildings' air duct in the city, to get heat and be able to grow plants. International species would be featured, either ornamental plants or eatable species (plants, vegetables, fruits).

DISCUSSION

This strategy uses criteria of connection to existent as well as generating pride and visibility. It can also be a future model: growing food in the city is a bridge with environmental sustainability. However there are also challenges of maintenance (who is responsible for it?) as well as security (with such light structures, how to prevent thefts and degradations?). Another problem is about location: such structures besiege the city where they were not supposed to be in the first place, thus how to deal with policies and regulations?



If the common garden is not right next to the building, maybe it is easier for external people from the neighbourhood to feel free to use it as well. This distance must stay short, so that inhabitants can still go there spontaneously.





● Houseboats



Houseboats already exist in Gothenburg. However, they are not really visible in the city; for example, this one is situated in Ringön, an industrial area.

If private units (personal home) can move, maybe common spaces (shared home) could be potentially mobile too, like snails “carrying their home” on their back.



PRINCIPLE

Houseboats could be a solution to densify the city and create new building stocks. However, as they are usually designed, they are what their name means: floating houses, with all home facilities included. The strategy proposed here is to have houseboats organised as clusters of relatively small floating private units, decreased to a minimal “cocoon”, with home facilities decentralized as explained in the component “transfers private/common”.

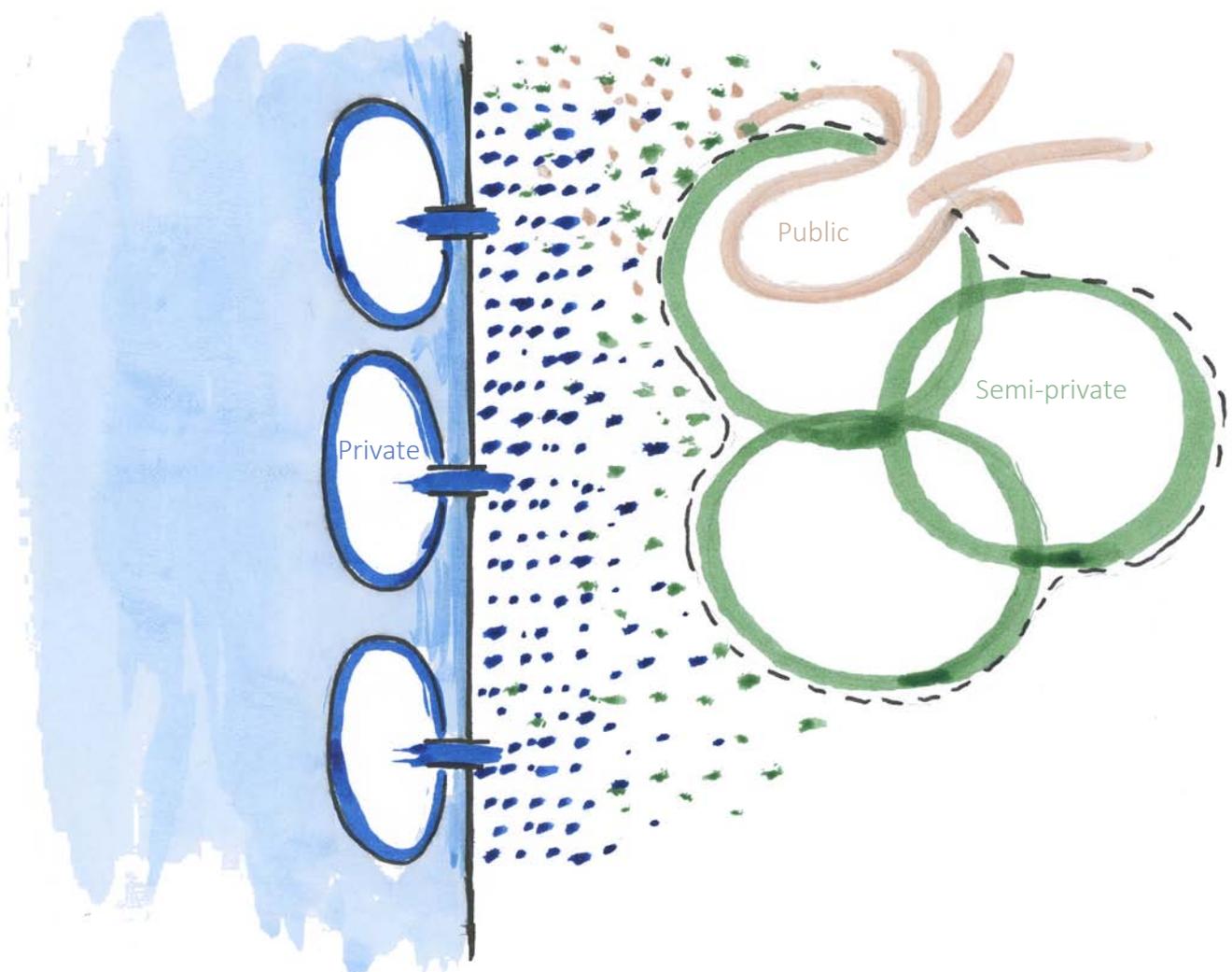
DISCUSSION

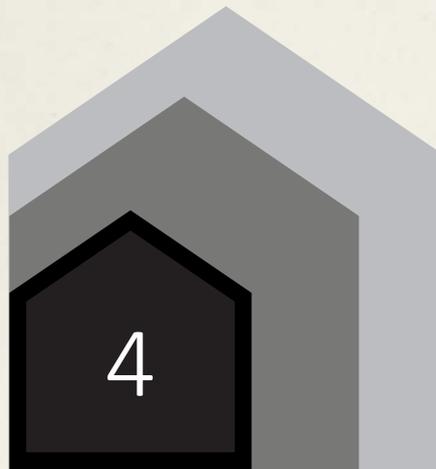
Houseboats address the criterion of connecting urban environment and nature because of its special sensory connection with nature through movement of water. By investing rivers, canals, harbour areas and so on, they are also a way to densify and use leftover spaces. They have flexible qualities in terms of location. This allows to adapt the building stock to the demand and makes the city’s landscape evolve overtime, a good way to catch attention at city scale. At smaller scale, the

unusual aspect of houseboats is also a way to catch attention. From my own and my “boatmates” experience, I know that when you say that you live on a houseboat, people are often very enthusiastic and want to come visit. They will remember you for that, which is a way to develop a social network. Houseboats also have cons. Thermal insulation is an issue that comes across with living on water. Another problem is that houseboats can be a source of water contamination because they cannot be connected to the regular city water grid and treatment plants. Of course, as seen in the Anthenea Aquasphere example in the research part, there are wastewater treatment systems for boats. But maybe the easiest solution is to have facilities using water in common spaces “on earth” so that they are connected to the regular water grid. In that case, maybe houseboats themselves just need a tap, and toilets can be dry toilets. This solution has another practical advantage: in order to get water in a houseboat, occupants need to

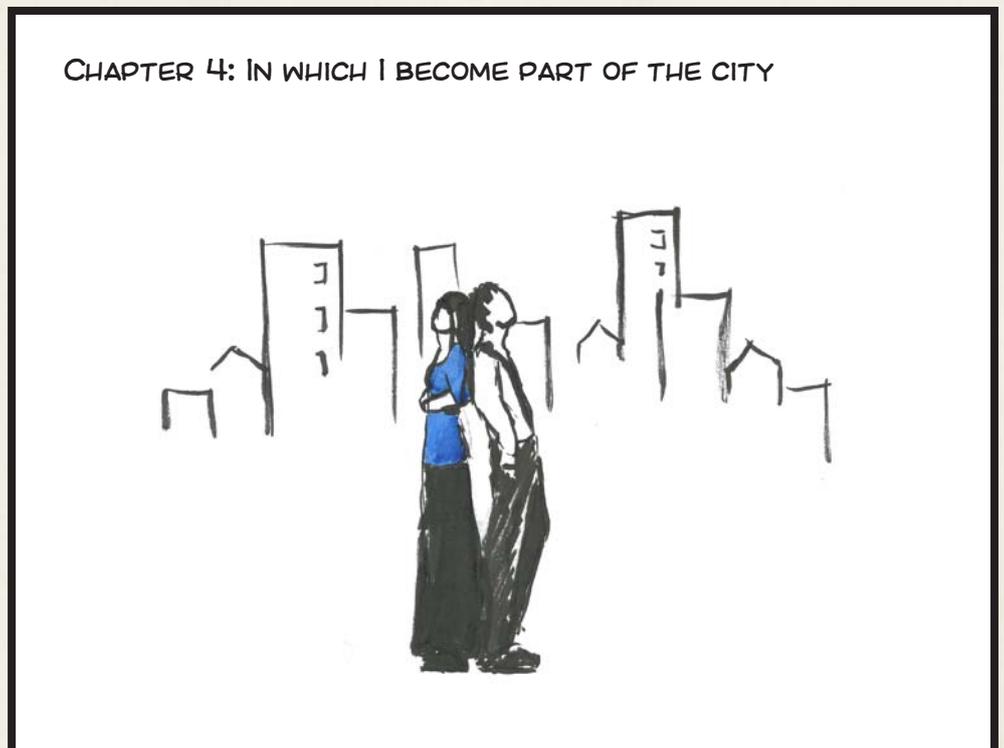
refill a water tank, most likely with pipes. If people only need a bit of water from time to time for their tap, they will not have to refill the tank so often and will save time. Moreover, if temperatures go below zero during winter, refilling from an outdoor pipes system can become a bit tricky, which is another reason to avoid large water consumption in private units.

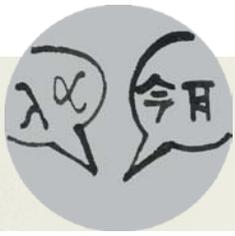
Having common facilities on earth next to the boats can also generate problems. One is that you actually need space nearby the boats, which might restrain the potential settlement areas. Maybe having the common spaces divided up in several physical units is a way to reduce this problem and allow more flexibility to different urban contexts. Because of proximity to water, those physical units could even be on piles, to address the issue of flooding. Another challenge is to avoid some kind of “camping site” effect because of the fact that people have to go out of their personal unit (the houseboat) to shower for instance.





4.2.5. Scale level 4: City





Language support

Språkcaféet, Esperantoplatsen, Gothenburg.

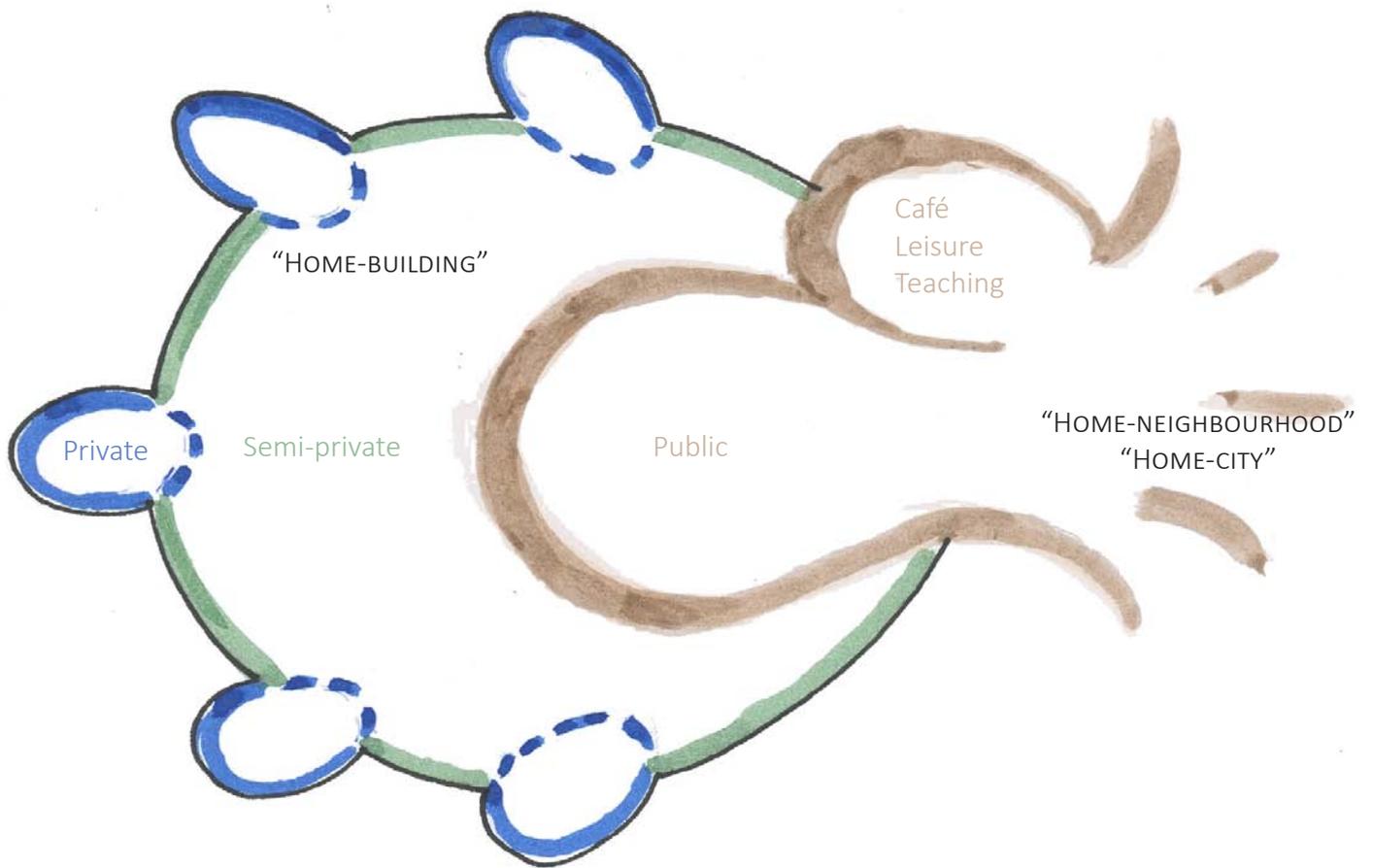
PRINCIPLE

When living in a new country, learning the language can be an issue and is an important parameter in the process of being confident. An informal way to learn it could be by leisure (café, games...). This component is about gathering local and international people together. Sessions could be organised to learn local language with natives and other sessions to teach your mother tongue. Thus, exchanges with local people are generated. Maybe it can also be an opportunity to practice your mother tongue with other foreigners and meet already integrated people.

This gathering place could even be a temporary income generator for still unemployed newcomers. If the place includes a café, it could be run by inhabitants themselves. Teaching your own language could even be a small job opportunity, by giving language support classes to students for example.

DISCUSSION

The main issue addressed here is integration, through language and communication and by creating an international community network including local people. The place should be advertised, visible at neighbourhood scale to encourage people to come.





International itinerant libraries

Global Bibliotek, Gothenburg.
Itinerant libraries, as the Chilean one seen in
the research part.



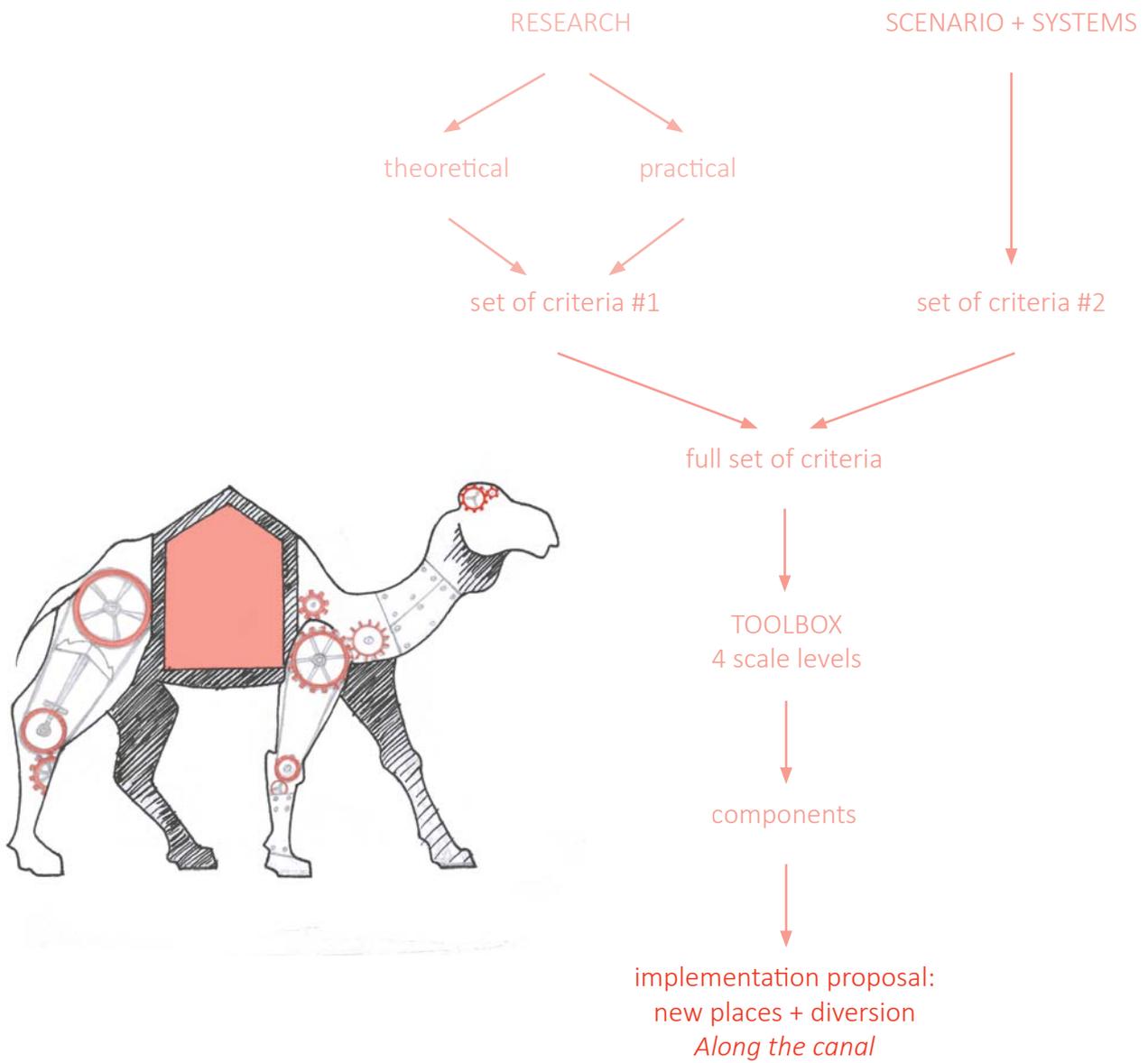
PRINCIPLE

The idea is, instead of keeping books from different cultures in one single space, to make their location as varied and mobile that people who can read them. Instead of staying in a normal library, mobile workers' mother tongue could come to them, as well as becoming more visible and attractive to others. Several spots could be defined in the city where library vans could stop for one day or half a day.

DISCUSSION

The temporary aspect of itinerant libraries could be a good way to catch attention on other cultures and generate more open-minded communities. It also creates temporary landmarks in the city. But using vans, when coming to an environmental sustainability perspective and considering the future models criteria, is maybe not the best solution. Maybe it could be interesting to use several bikes connected to small trailers instead. One bike could even correspond to one language, which would generate even more attention.

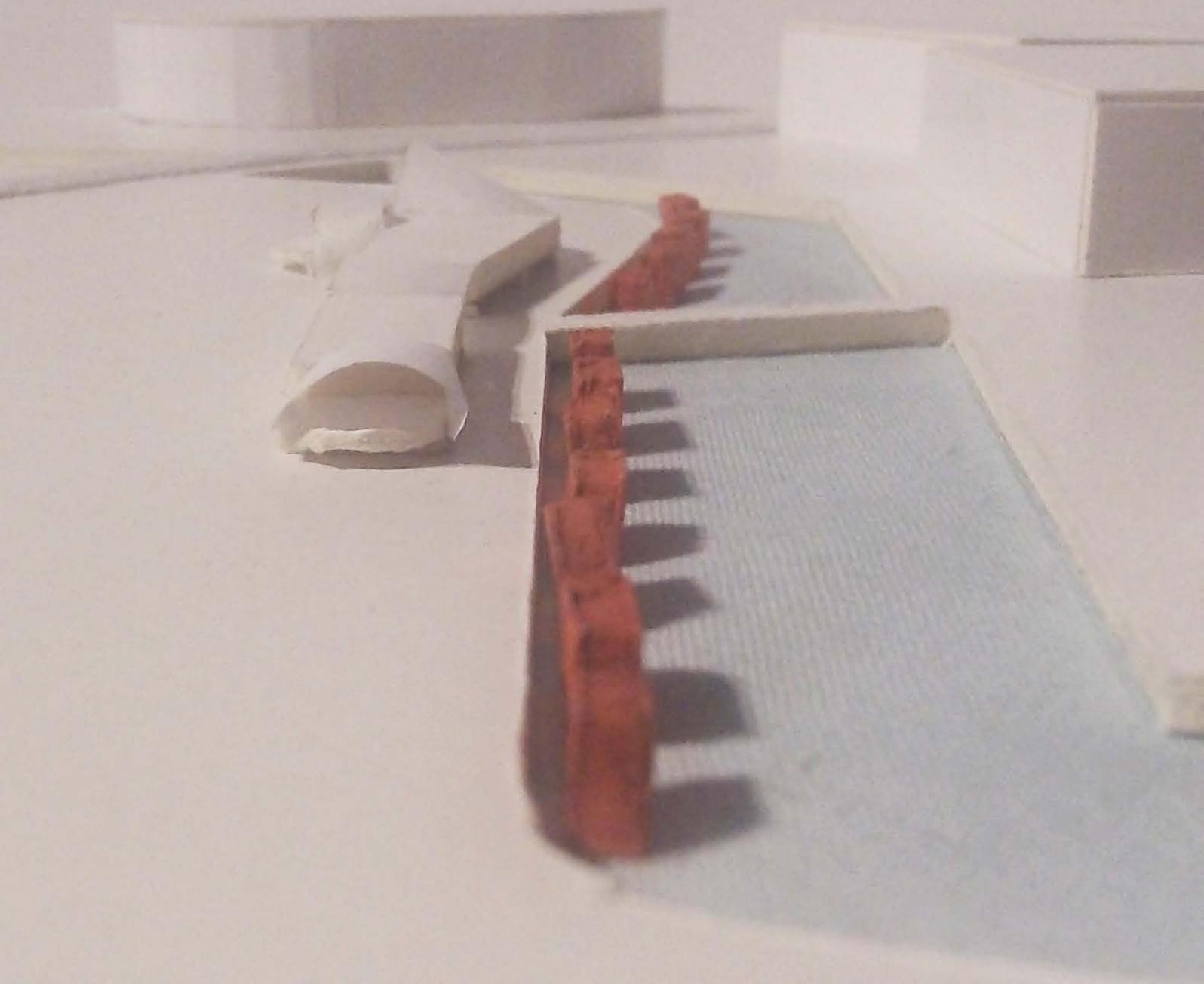




4.3. Implementation proposal in Gothenburg

This proposal is a test to show how the toolbox could be implemented in a real context. It has not been the main part of the thesis work at all and therefore remains a conceptual proposal.

The proposal is about developing a small houseboats' community in the city centre of Gothenburg, on the Vallgraven canal between Kungssportsplatsen and Grönsakstorget. Other places could have been suitable for houseboats, as Ringön, but in its actual state of industrial area, mobile workers would be segregated. Stora Hamn Kanalen close to Brunnsparken, even if in the city centre, did not work either, because there would not have been enough space to settle the common spaces. The chosen spot has the advantage to be central in the city and to have enough space along the canal to establish common spaces.



DIAGRAMMATIC MAP //

Once the proposal area was chosen, I placed the different components on the map, taking into account issues of visibility, access and privacy.

Houseboats units take place on the canal, and common spaces are situated right next to the boats, in the park (Kungsparken). Houseboats are private units, from which some usually private functions are transferred into common spaces (principles of “transfers private/common” and “international community networking”). Already existing pedestrian paths in the park are preserved and converge at the common spaces. This allows to create new interactions while keeping already existing characteristics of the city.

Two main interactions-generating areas were identified, on each side of the chosen area. One is Grönsakstorget, the other one is Kungssportsplatsen and Stora Teatern. Those are already hubs of activities (shops, culture, transportations). The fact that they already attract people can be used to get those people to interact with the common spaces of the houseboats' community. A buffer zone should be kept between the city and the houseboats because of privacy issue, but should still allow to bring external people for specific interactions:

1 // On Grönsakstorget's side:

With the proximity of the university, the language support's café has the potential to be quite popular, and maybe even more with international students. The café is paired with a shelter for itinerant mobile library. This gives the opportunity to take a coffee and read. What is more, international students can promote the use of the international library.

Both café and library are directly visible from the street or tram.

2 // On Stora Teatern's side:

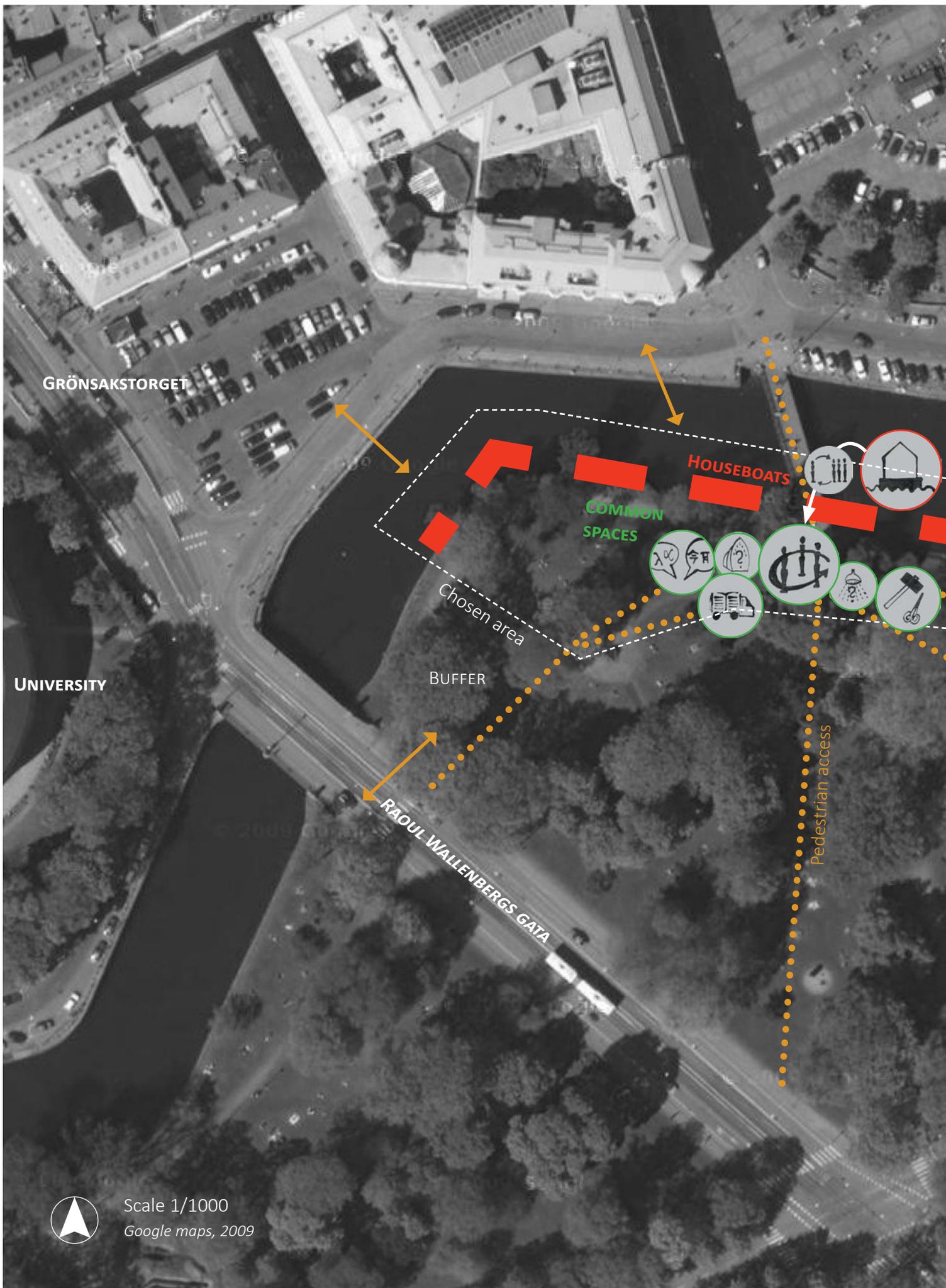
The houseboats' community is a bit farther from street compared to Grönsakstorget's side. Bringing external people to the common spaces is then achieved in several steps.

This side is more related to the workshop: the theater has a cultural dimension, which might help to create more easily interactions with the workshop and its art's value. An international community garden plugged on Stora Teatern can be a first step out of the Avenyn and towards the houseboats. The second step is to actually enter

the houseboats' area because of visual attraction. However one limitation is the risk of conflict between integration in the city and the need for security and privacy. The third step is to finally enter the workshop.

The two spots of public structures (library/café and workshop) create a buffer for the spaces in between them, which are still common but semi-private rather than public structures (meeting spaces, bathroom, kitchen, laundry). All together, those structures form some kind of privacy barrier for the houseboats.

Another community garden can potentially generate other connections by catching attention, on the parking on the other side of the canal.



GRÖNSAKSTORGET

HOUSEBOATS

COMMON SPACES

Chosen area

BUFFER

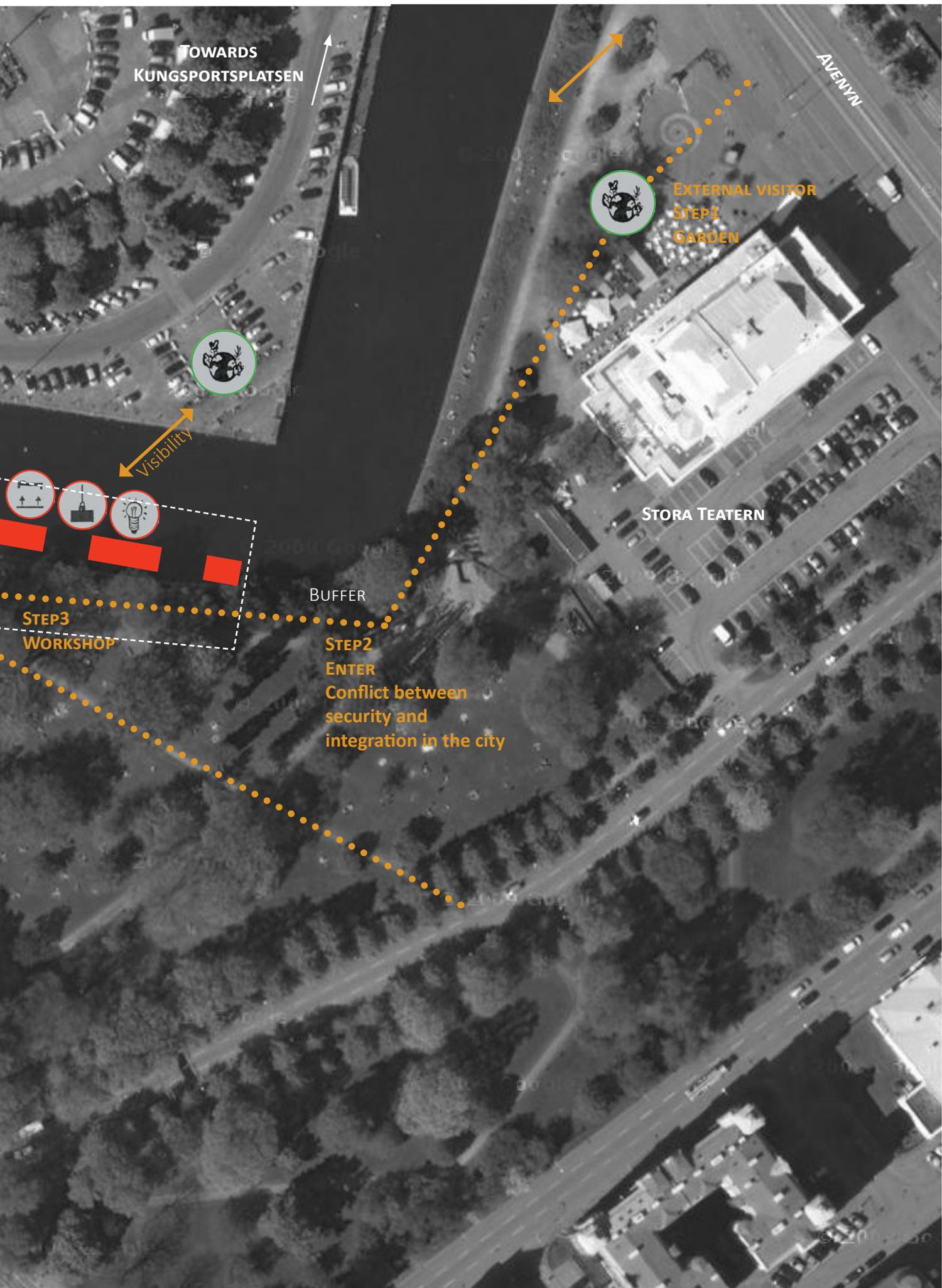
RAOUL WALLENBERGS GATA

Pedestrian access

UNIVERSITY

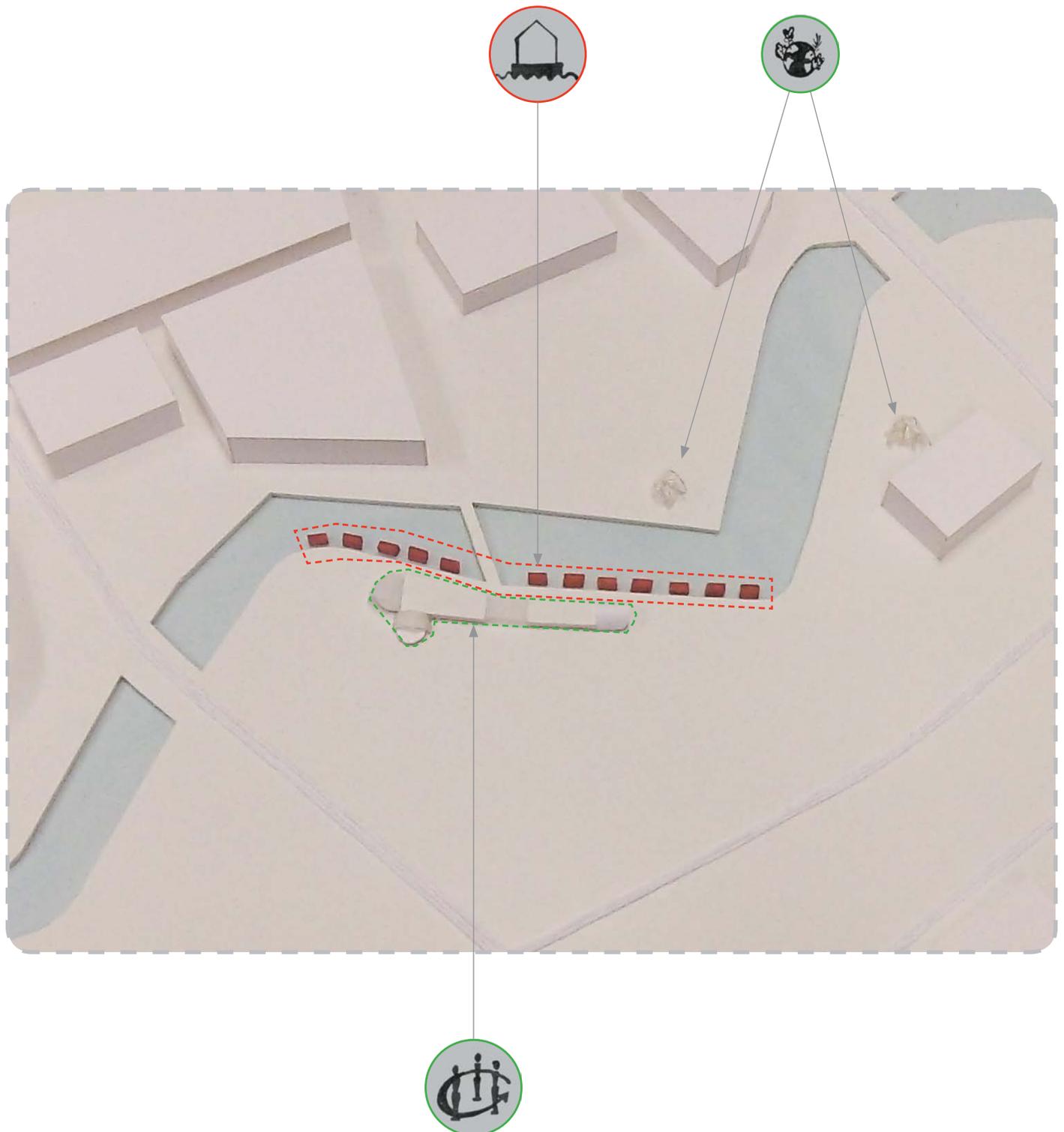


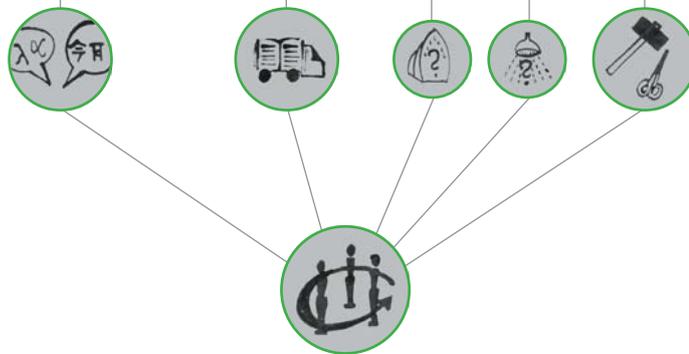
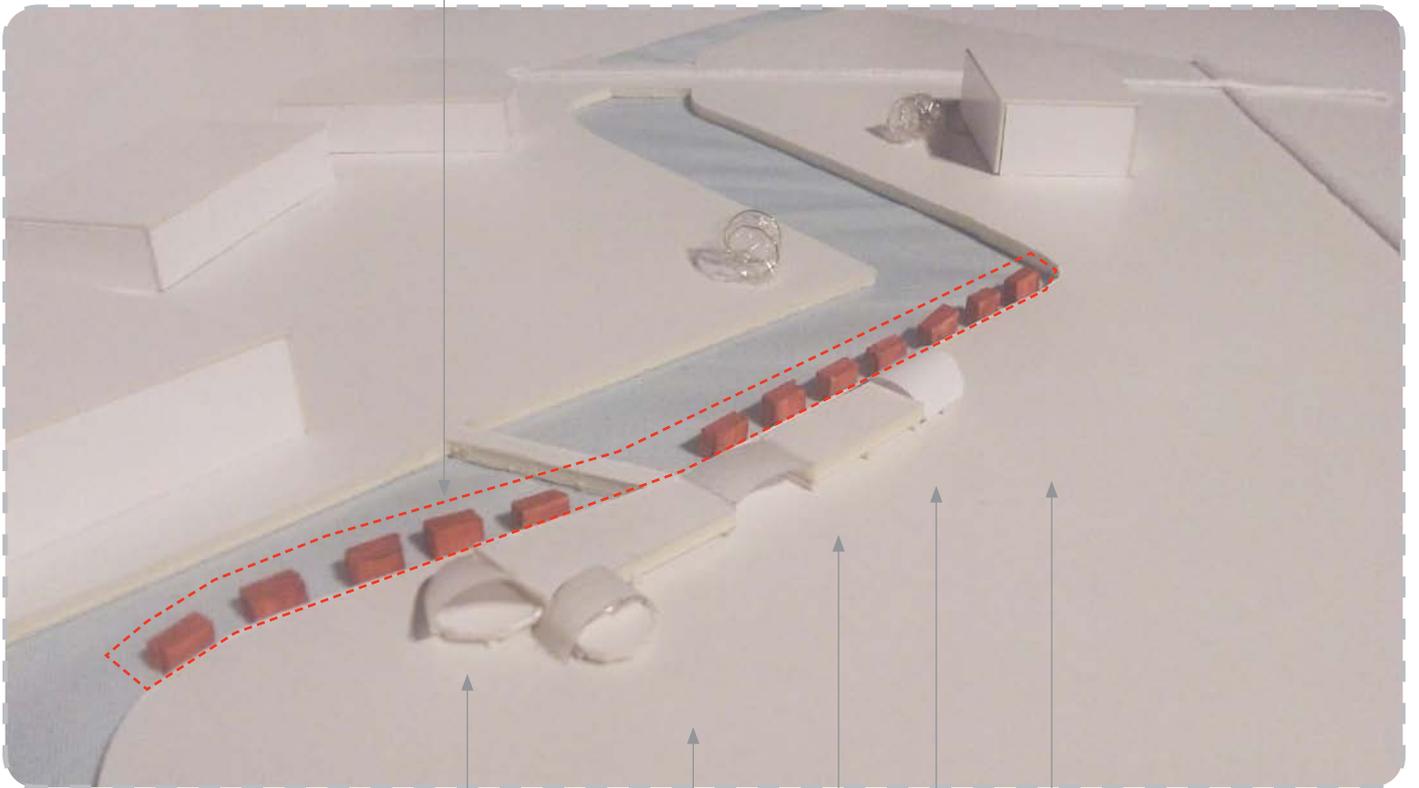
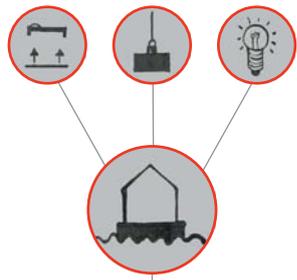
Scale 1/1000
Google maps, 2009

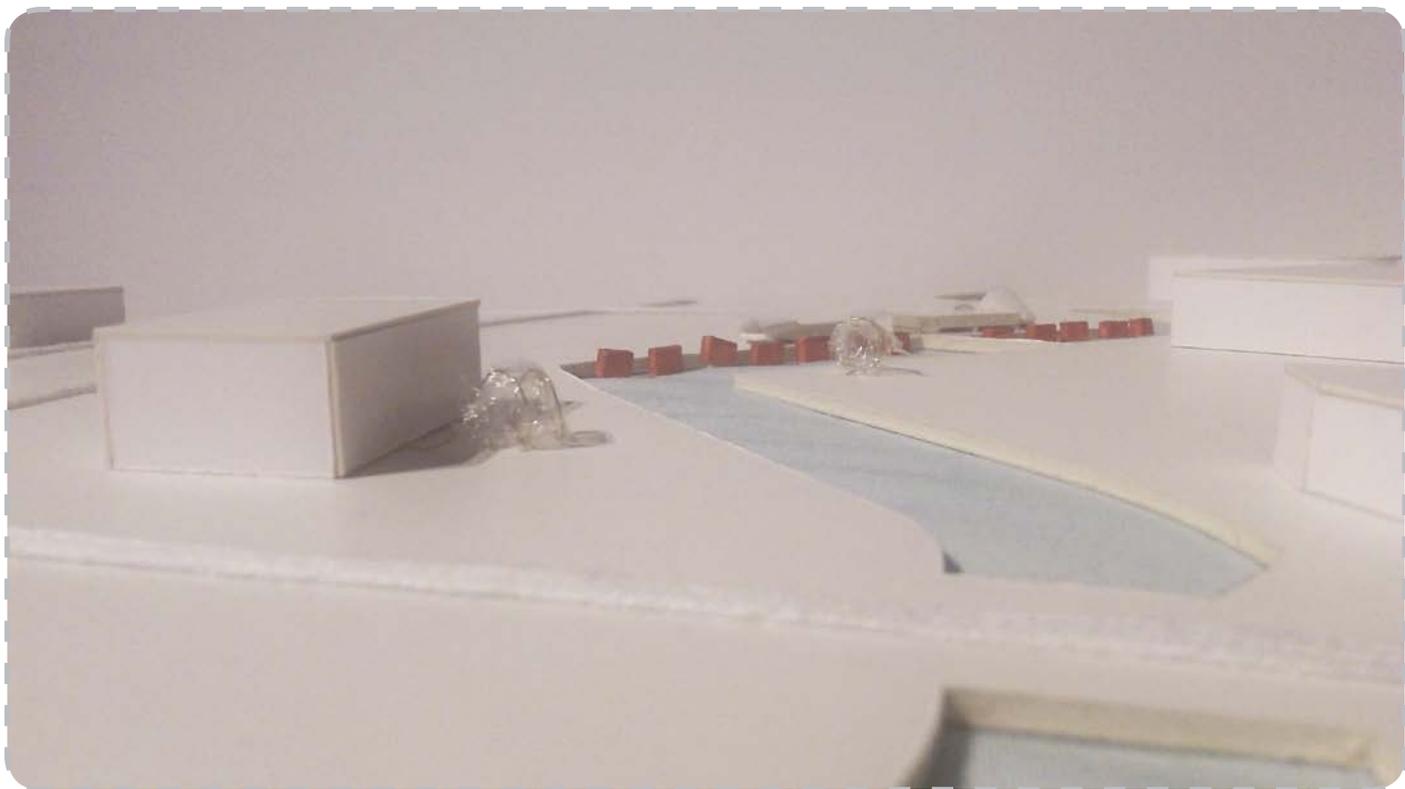


CONCEPTUAL MODEL //

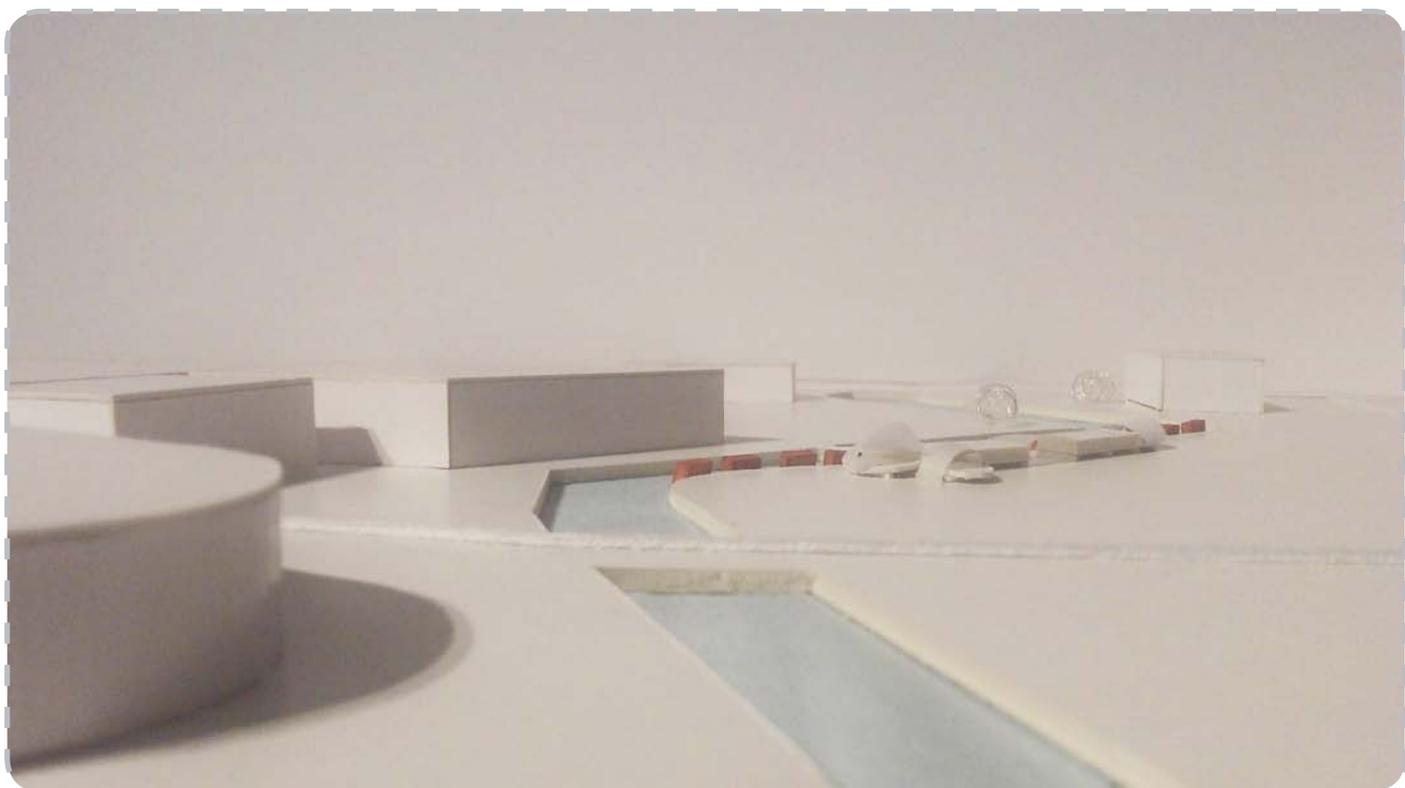
After the diagrammatic mapping, I developed the proposal in 3D with a conceptual model. It should not be considered as a proposal for the shape of the common spaces, but as a representation of some of the common spaces' qualities and characteristics, which would be used to develop a full architectural design.



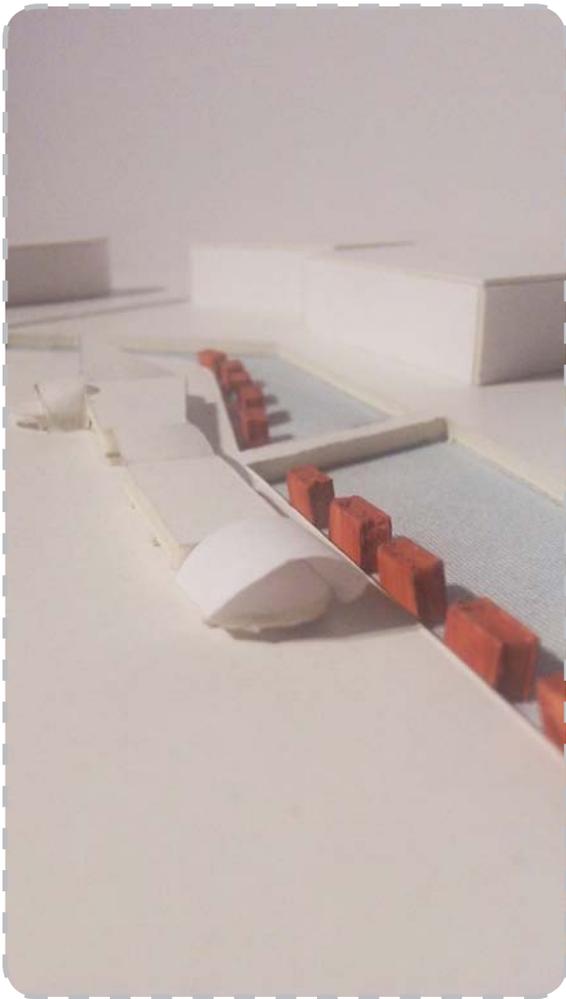




View from Stora Teatern //
Attention is caught by international community gardens.



View from Grönsakstorget //
Attention is caught by the café and shelter for temporary international library.

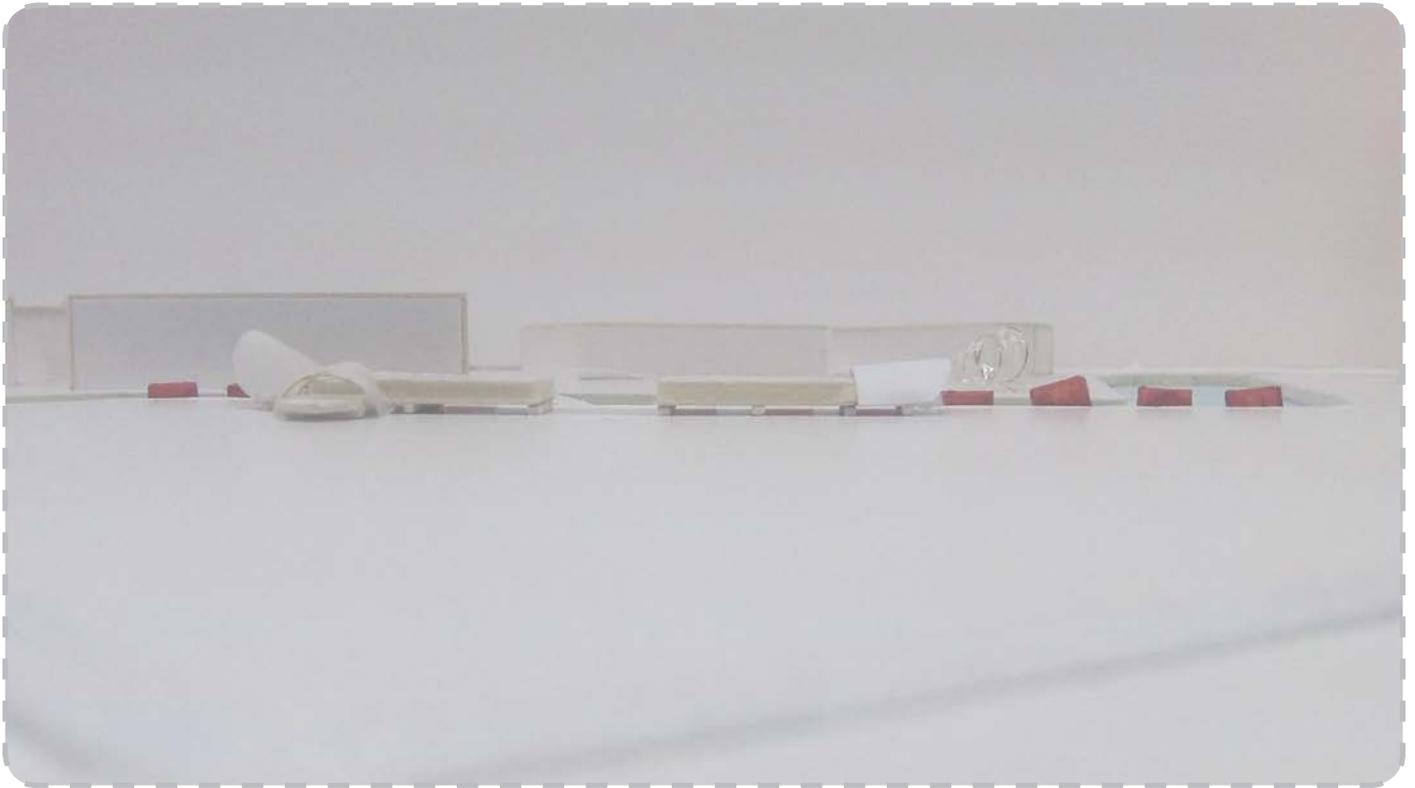


Workshop //
Meeting place, but privacy
should in some cases be kept
to support creativity.
> *Opacity but still open.*



Café and library //
Support meetings, bring people
from the whole city. Even if they
are connected, the café and library
should remain separated, as a
library is a more quiet area.
> *Transparency and open.*



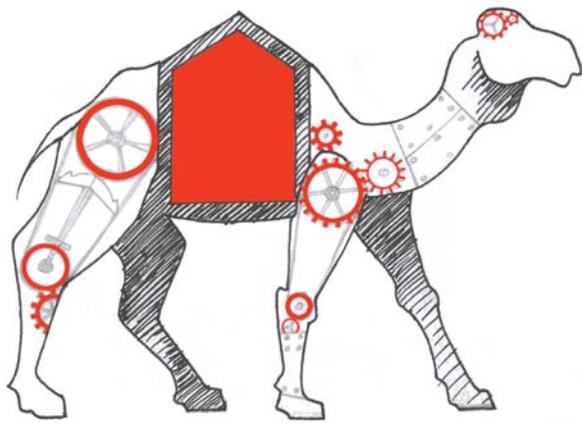


Decentralized home functions //
Living-room-like spaces, chores and
bathrooms entail a need for privacy.
> *Opacity and close.*



+

All common structures are on piles, so that it is possible to move them if the houseboats move. It also prevents from damages in case of flooding.



5. Conclusion

5.1. Outcome

How can designers help people re-create a feeling of home in a foreign environment, as a first step to integrate in a new context?

- How does scale affect design's role in the process of helping people feel at home?

This research question raised the fact that home should not be considered as limited to what is between our house's walls.

- How can designers activate positive attitudes among *nomads* towards their place?

I realised that this research question was harder to answer from a design perspective. I found a lot of information about activating attitudes in the theoretical research part, but I felt that the gap to go from research to design was bigger with this particular research point than with other ones.

- How can temporary dwellers be integrated in the city through social interactions?

This research question brought up issues of initiating social interactions at small scale (common spaces in buildings), to then go towards bigger scale (catching attention on façades while keeping privacy, interact with the neighbourhood and the city with community gardens and itinerant libraries for instance).

- At the same time, how do you save room for their individuality and personal identity? By which means can you maintain people's socio-cultural particularities?

Those research questions lifted up issues of pride and identity, either in the very private sphere or displayed in an interactive way with the neighbourhood and city.

Home is a complex set made of different layers of scale and privacy. Conceiving perfect private spaces supporting individuality will never be enough to create a home, as a room or house does not stand by itself and is included in a particular context. Neither conceiving a space perfectly integrated in its surroundings will be sufficient: we always need our personal space at one point. Furthermore, we are at home in a very broad range of space. We actually *live* in the city, and not only in our houses. This is even more true for the scenario of mobile workers. Newcomers to the place and culture, they need to integrate more than anyone else. In order to do so, they need to feel at home anew.

Within their house, this can be done by offering places with potential to adapt to their personal habits and cultures. This provides a point of reference and privacy where personal and specific cultural patterns and symbols can be reproduced. However, the thesis suggests to challenge this privacy aspect a little bit within the home-building boundaries, by including interactions with people who do not belong to one's private sphere. Household activities as chores are decentralised from private to semi-private spaces, allowing people to interact with each other and to recreate social bonds.

Interactions at larger scale are supported by displaying identity through façade's interventions for example, involving directly inhabitants. In that way, they can catch attention of other people who might start to interact with them. This is what happens when the neighbourhood, and even the city, connects to the home-building. The building allows to share activities with people coming from different scales. From this connection, the neighbourhood becomes home-neighbourhood and the city, home-city.

5.2. Recommendations

5.2.1. Broad perspective

Some issues of the set of criteria were not really used to develop the strategies and discuss them. This is the case of most of the activating attitudes criteria for example. Does it mean that those issues are hard to implement in design? Or is it something that could be looked more into in future research?

If more detailed design for the toolbox's components was to be developed, it would be interesting to carry out some in-depth research about how the component is perceived in other cultures. This would help to develop adaptability of home according to the different mobile workers' cultures. Further development of components could also be provided with a SWOT (a SWOT is an analysis' method consisting in identifying Strengths, Weaknesses, Opportunities and Threats of a situation; this method is used to develop strategies). Somehow, the discussion part of each component had similarities with this method, but maybe a proper SWOT would help to go further.

5.2.2. Personal perspective

I decided from the beginning that the thesis would be theory oriented. Indeed, I wanted to explore processes as well as design strategies and principles rather than providing detailed design. However it would have been interesting, if more time would have been available, to continue exploring the toolbox's components and implementation with more details. Maybe this could be something for me to explore in future professional practice.

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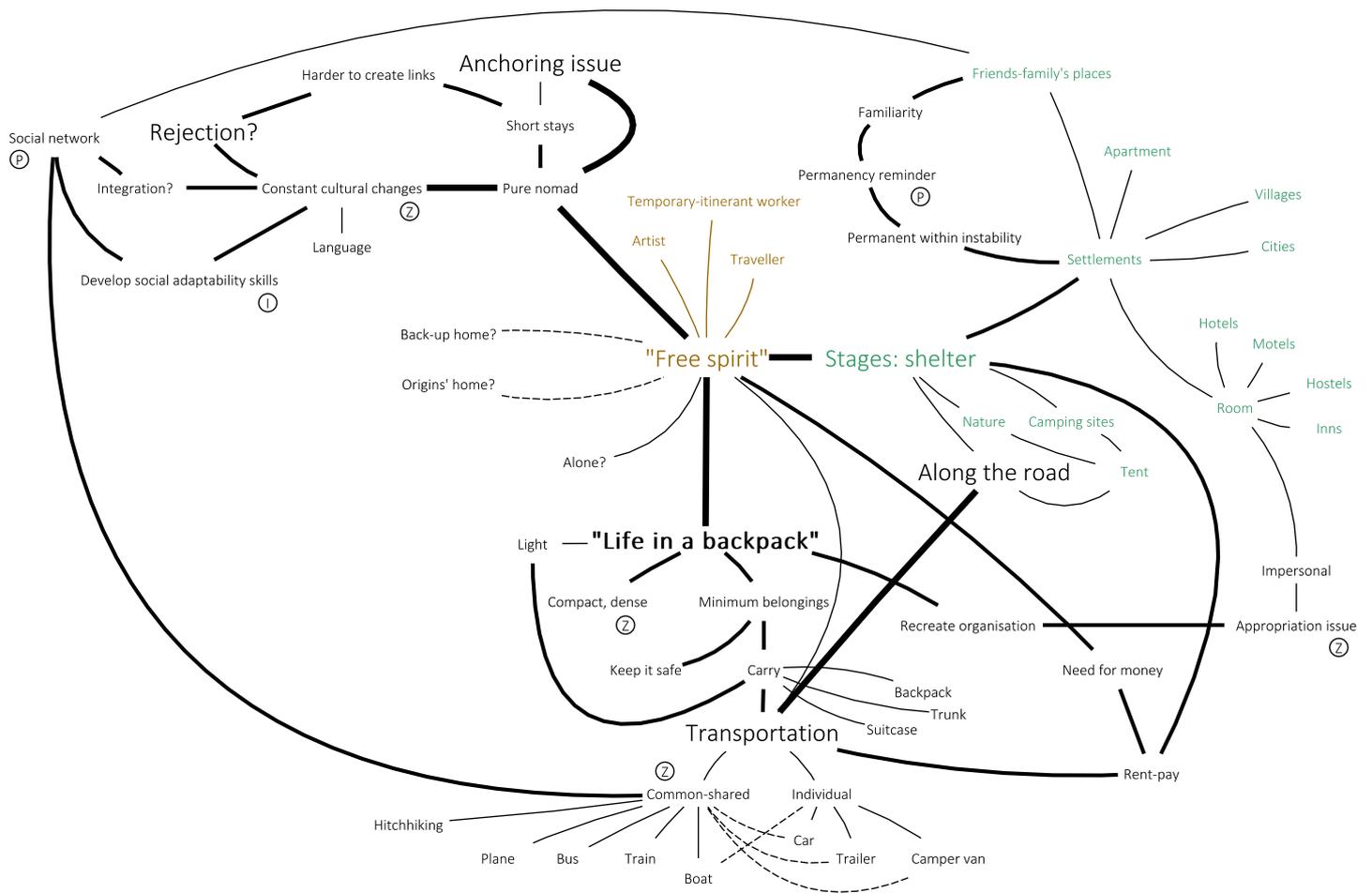
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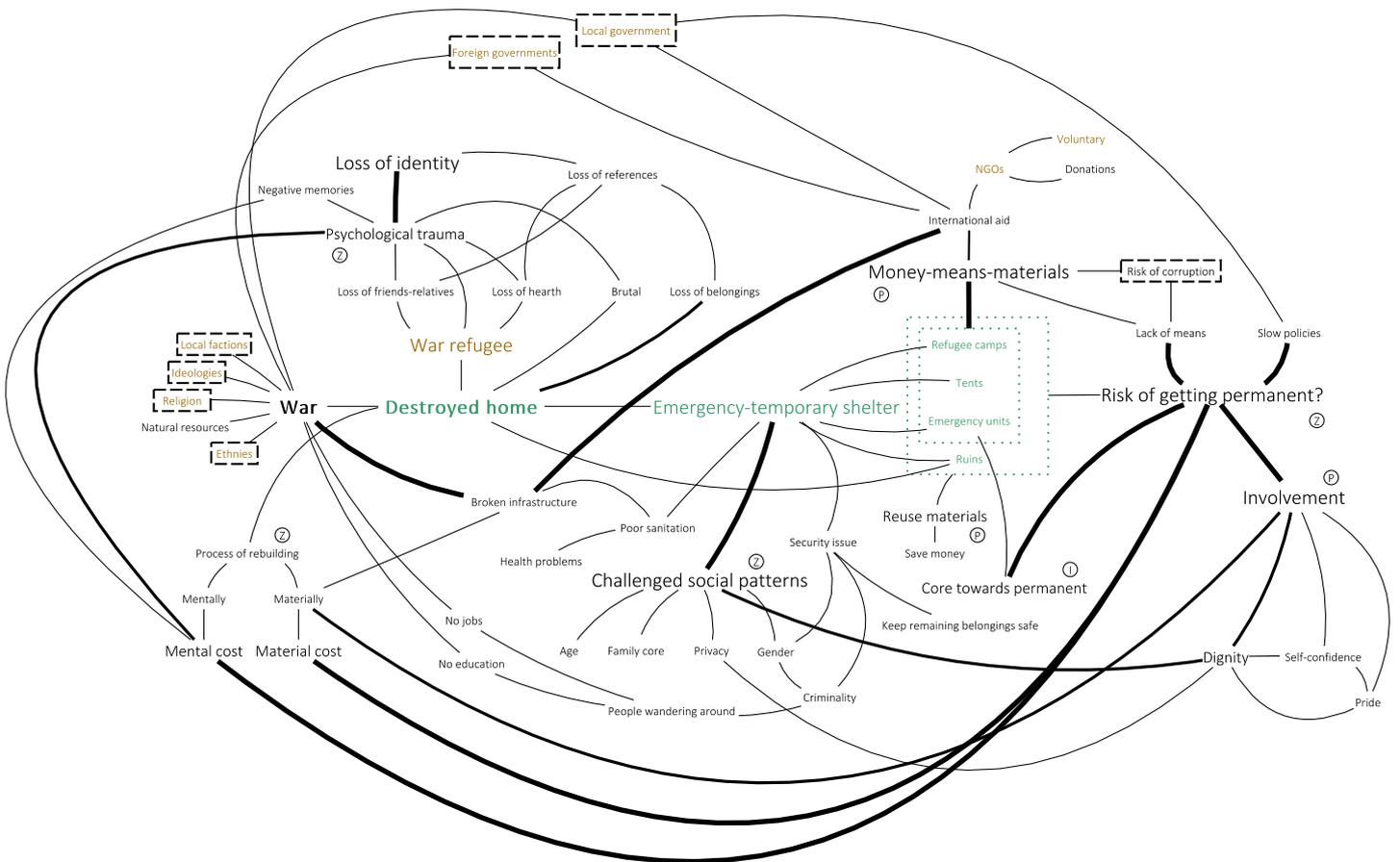
Non-listed hand-drawings and photographs are by the thesis' author.

7. Appendices

SCENARIOS' PRELIMINARY RESEARCH



"Free spirit": giga-map



War refugee: giga-map