

### **Position**

This work at hand is the final step of graduating from TU Delft's study program Management in the Built Environment (MBE). This program was chosen out of personal interest as it describes itself, amongst others, as working 'towards a sustainable built environment where the interests of the enduser and other stakeholders are key', and the department educates the 'next generation of managers in the built environment' (Delft University of Technology, 2020). While the skills in the field of management are beneficial in any personal or professional stage of life, this work was mainly concerned with the topic of sustainability. The department of MBE includes the chair of Housing Management, which connects the topics of socio-economic and environmental sustainability to the housing market, with an increasing interest in collaborative housing initiatives.

Contrasting to the established focus on strong and important stakeholders and institutions, the topic of this thesis purposely deals with the built reality of medium-scale resident-initiated housing developments. Building on contemporary theory on sustainability in collaborative housing (CH), it is investigated how realized projects perform with regards to social, environmental and economic sustainability. The purpose is to provide insights to a wide audience of different institutional levels into possible and functioning solutions that may benefit housing development in the long term.

#### Scientific Relevance and limitations

Besides a personal interest and societal relevance, the topic regards various fields of scientific interest. The concept of sharing is as old as modern humans, but it recently receives increased interest, especially in the sense of sharing economy and collaborative consumption (Agyeman et al., 2013; Hamari et al., 2016). Sharing spaces and goods is one of the key underlying concepts of collaborative housing projects and it, therefore, seems likely that there is a connection to the oftentimes praised sustainability of CH projects (Lang et al., 2018; Williams, 2005). The importance of looking at all three aspects of sustainability - social, environmental and economic – simultaneously and the uncertainty about how sustainable collaborative housing really is, suggests the need for further research and prioritization in future planning and policy (Daly, 2017; Jarvis, 2011; Tummers, 2016; Williams, 2005). The research topic is furthermore supported by scholars who demand more research and critical reflection on sustainability in collaborative housing (Lang et al., 2018).

Limitations occur in the form of the restricted research scope, weakness within the methodology and problems in the data collection, as well as in the transferability.

To keep this work within an appropriate timeframe with a manageable workload, it was only possible to look at one specific focus area within the three sustainability aspects. This restriction naturally weakens the overall work due to possibly disregarded aspects in a strongly interrelated research field. This goes not only for the three-fold sustainability but also for the concept of sharing and the context of collaborative housing.

Consequently, the research methodologies are limited to the necessary to efficiently answer the research questions. In this sense, it was not possible to apply supportive methodologies simultaneously to determine answers from various viewpoints. Those restrictions are reflected in the data collection. Oftentimes, a different angle comes in handy for filling a specific gap in the found data. Within the case studies, gaps within the desktop research could be filled by the interviewees, while the thereof resulting problems could be clarified by personal communication via email and telephone. The resilience of the research strategy was proven by the sudden event of a global pandemic that resulted in the cancellation of all site visits and personal interviews. The physical presence and experience onsite would have been beneficial to understand the project better and deeper than by the online interviews. This shifted the data collection methods from personal contact to online communication. In some situations, the data collection would have been easier and more direct by sitting together and discussing solutions. A visit to both projects is planned as soon as the travel restrictions allow for it.



A limitation in the variety of viewpoints is apparent. The persons that volunteered to be interviewed all belong to the group of residents that is rather involved in community activities and therefore may have biased positions. Persons with opposing experiences or unsatisfaction about the situation did not take the word. Those people should equally be addressed by the resident survey, that was distributed to everyone. The possibility remains that persons that are less involved did not take the chance to fil in the survey why the outcome might still not reflect the average opinion. Therefore, the answers should not be generalized for all residents of the two case studies.

Additionally, it is not possible to generalize findings to all collaborative housing communities in Vienna or on a bigger scale. Each project is individual (in context, structure, administration, etc.) and requires an individual approach of research. The presented case study findings show possible outcomes for a different setting, but do not grant any of them.

Regarding the application of the research findings, it is referred to the recommendations for future development and collaborative housing communities. The whole of this report at hand should not only provide insights regarding future urban planning and development but also inspire forming and existing communities to apply efficient sharing practices to contribute to more sustainable cities.

### Reflection on ethical concerns

Research on housing and resident behaviour can easily get personal since the researcher tries to get a deep insight into the private lives of interviewees and survey respondents. During this work, some social issues were encountered that challenged the researcher in staying professional and nonbiased.

As mentioned above, there is a risk to mainly consider the opinions of persons that actually raised their voice in the interview or survey. This results in biased and subjective findings that do not reflect the common opinion like it is assumed. This issue was tried to be overcome by particularly addressing all residents with the survey. Nevertheless, there could be done more by getting in personal contact, for instance.

Questions on life in the community and especially on the involvement as well as on the sharing habits require a willingness of the residents to answer freely and honestly. Even though one cannot imagine any reason for not sharing certain content, a respondent might feel uncomfortable, humiliated, or as if he might betray someone else with his/her answer. Aiming to respect the free will, dignity and privacy, and expecting honest answers, it was clearly stated in the beginning that any answer can be denied, without giving any reason. Furthermore, all interview respondents receive an extract of the P4 report to check whether any statements humiliate their reputation or are otherwise not to be shared.

Conducting the group interviews, some clash of experiences or opinions was recognized. Topics like group involvement and personal engagement were charged with emotions like a feeling of injustice, compulsion or disappointment. Even though the interviewed persons were rather homogenous regarding their community engagement, they had slightly opposing positions regarding sensitive issues. An example would be opposing perceptions about how group participation looks like and the resulting possibility to automatically blame people that engage differently. The interviewer tried to understand each personal perception from a neutral standpoint and see where the opposing ends meet. Not wronging anyone, but at the same time getting a good understanding of the situation and the issues, took effort and was tried to achieve by attentive listening and asking careful questions that are critical, but also respecting dignity and privacy. By listening back to the interview recording, it was tried to draw conclusions that were as objective as possible.

The case studies aimed at discovering the sharing practices that foster sustainability in collaborative housing communities. Most people actively chose for this way of living, including the aspect of sharing certain spaces and goods collaboratively. This is a personal decision that would not equally be taken by every other person out of a free will and according to their individual expectation towards living. Sharing in collaborative housing offers one path towards more urban sustainability but is not the one-fit-all solution and, therefore, cannot be imposed upon every person living in an urban environment. It is emphasized that this was not the goal of this study as it is assumed that people have different desires and needs, and different expectations from living together in a pleasing and dignified way.

# Reflection on the research process

Starting the work was difficult due to a wide range of interest and countless options for focussing a one-year research on. It took most of the time, numerous research questions, methodological frameworks and plenty of literature research to define the final path to be taken. For a person with many interests, it is helpful to choose a research topic with tight restrictions or according to one preset research question. The process was longsome and cost a lot of writing and reflecting but finally led to a clear plan for action. Of course, the entire process was overshadowed by the sudden restriction of public life which not only impacted the research methods but also the communication with the supervisors. Communication was possible via email which delays the responses. Scheduling video calls proposes a good alternative but requires planning and therefore does not immediately answer relevant questions that are necessary for moving on. Instead, fellow graduating students, the internet, and literature on research methods were consulted. Knowing that the circumstances were not convenient for anyone, it would have been helpful to receive more frequent and detailed feedback than only the necessary comments and advice after a presentation.

This graduation process had phases of less and more intensity, mainly due to own time management because of the involvement in some projects next to graduation. The freedom was perceived as pleasing and involved the learning effect of setting priorities and work effectively on different projects at the same time.

## References

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