P5 Reflection
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Track: MSc Management in the Built Environment
Thesis Title: Navigating the Heat Transition: Effective stakeholder decision-making in Dutch low-carbon heating projects

REFLECTION

Based on the reflection questions provided in the Graduation Manual 2023/2024, the reflection has been divided into three sections to answer the prescribed questions.

Relevance

This thesis was written as part of the TU Delft MSc Architecture, Urbanism, and Building Science track of Management in the Built Environment. A key focus on the teaching of this track is on utilising knowledge of management and process in to overcome hardships encountered in projects of the built environment. A overarching aim of this research is to provide input for the acceleration of the energy transition within the built environment through managerial actions, hence aligning with the Management in the Built Environment track. More specifically, heat grid projects affect the built environment in a variety of ways. Not only do they entail infrastructure constructure within the built environment, the key focus of heat grids is to connect the real estate of the built environment to the grid to provide them with sustainable heating. Additionally, heat grids influence the quality of life of the neighbourhood residents given its impact of heat supply and the financial implications associated. As shown during this research, it is evident that adequate management and organisation of these projects is lacking and that the involved parties are struggling for this reason. Therefore, it is crucial for people with knowledge of management in the built environment to focus on these kinds of projects. Given that these projects have experienced a large push from the government, the relatively new industry is struggling to identify the best way to organise and work in these projects while fighting against time due to the 2050 heat transition deadline. Therefore, the industry needs support from researchers to help them find the most effective approach to their process in order to successfully achieve the heat transition. This demonstrates the strong relation of the topic to the master programme and track. Additionally, this research provides great academic and societal value. As mentioned in the problem statement and research gap, there is little research and documentation about the specific decision-making process and encountered barriers in heat grid projects. Although both of these may differ between stakeholders or projects, the research provides insight into almost all stakeholder perspectives to give a wholistic view of the typical project processes and barriers. This can provide significant benefit to parties involved in such projects because although many barriers and perspectives can be assumed, the research provides validation or refutation to those assumptions by stakeholders. During the interview process, all participants would express their interest in the research, with several expressing that some mentioned aspects from the research have been topics of discussion within their organisation and that they were pleased to see that other parties have been contemplating the same topics. Furthermore, the societal value of the research lies in addressing the discontentment people currently feel about the ongoing processes. Not only can it benefit individuals involved or impacted by these projects, but it also provides recommendations for advancing the heat transition more seamlessly, ultimately contributing to our collective efforts to combat climate change.

However, the influence of the political landscape on the relevance of this research must be noted. The limitations section of the research shed light on the potential variation in the outcomes and results of this research with the enactment of the WCW law, which aims to specify requirements for the initiation process, grid ownership, and stakeholder roles of such projects. On a broader scale, political dynamics often shape the policy agenda, financial backing priorities, regulatory setting, stakeholder engagement processes, and public perception of such projects and initiatives. This means that although heat grid projects are a priority currently given the government and political structure in place at the time of the research, this can easily and rapidly change with a change in political landscape. Therefore, a shift in government priorities, changes in regulatory frameworks, and political tensions between stakeholders generates consequences for the feasibility, acceptance, and success of heat grid projects. Political influences must therefore be considered when shaping the trajectory of collective decision-making in heat grid projects in the Netherlands.

Methodology

The chosen topic was entirely unfamiliar to me when selected, resulting in a continuous learning-by-doing process. Consequently, my approach evolved significantly throughout, leading in a process that perhaps was not as straightforward as it could have been. As I gathered more information and understanding, my trajectory shifted accordingly. Departing from my initial P2 research proposal, I decided to prioritize the stakeholder interviews as I noticed that they were yielding in-depth insights, capturing firsthand experiences, frustrations, and challenges that often remain absent in existing literature. Although my methodology may not have followed a conventional path, I believe the results offer a comprehensive understanding of the current issues in heat grid projects that require urgent change. Therefore, although occasionally being frustrating, the changes in my methodology ultimately provided me with a good grasp of the industry. Additionally, the obtained results present several factors that contribute to their transferability. Firstly, the consideration of a diverse range of stakeholder in the interviews enhances the transferability of the findings given that their perspective provide valuable insight that can be relevant to projects within the Netherlands and potentially beyond. However, given the country-specific nature of the research, it must be recognised that the results may not directly apply to other countries due to regulatory or socio-cultural aspects. Nonetheless, certain results, particularly those related to the barriers, could indeed be transferred to other countries or energy transition projects given that these results are a combination of qualitative data and a literature review that consisted of worldwide and country-specific energy transition literature. Additionally, the results regarding collective decision-making have potential for application in various contexts by informing decision-making not only in the Netherlands but also in other regions facing similar challenges. This includes the definitions provided for collective decision-making an mixed-use neighbourhoods which can be transferred to other contexts.

Personal Reflection

Reflecting on the journey of writing this thesis, I must acknowledge that although complicated and frustrating, it was paradoxically greatly satisfying. As I delved deeper into my chosen topic, I found an unexpected passion such that I now find myself constantly bringing up the topic in any conversation, and considering a career in the field. During the interviews, I found myself deeply engaged, yearning to extend the discussion but being forced to stop due to time constraints. However, these feelings did not always prevail as I occasionally found myself regretting choosing such a complex topic and that I

was being too ambitions given I had no prior knowledge on the subject. Additionally, I would often get stuck given that my desire to solve every problem led me down tangents and intricate details which skewed away from my research objectives. This impossibility of resolving everything led to the feeling that I was not achieving enough with my research, making it difficult to know when to stop as everything felt important and intriguing. Additionally, not having partaken in an internship for this study posed hurdles, especially when seeking interviewees or deciphering industry-specific nuances. Nonetheless, I am grateful that a network of individuals emerged that were eager to generously offer their insights and help in any way possible, which I deeply appreciated. Overall, this thesis has not only provided me with great insight into the heating industry, it has also provided me essential skills to tackle confronting challenges, seize opportunities, and to trust myself and move forward with confidence whether in the professional, academic, or personal field.