

GOVERNANCE AND PLANNING IN STUDENT HOUSING DEVELOPMENT

An Analysis of Municipal Steering Capacity in Dutch Student Cities

Delft University of Technology



Management in Built Environment | AR4MBE010

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Any errors, omissions, or interpretive missteps that remain are entirely my own.

A statement on the use of AI tools is provided in Appendix G

Naga Sai Bhuvana Kolli
Delft, June 2026

ABSTRACT

The Netherlands has a chronic shortage of student housing; however, there is inadequate knowledge of governance processes affecting delivery outcomes. There is substantial existing literature outlining the quantitative deficit of student housing; however, there has been limited study on governance processes and their impact on delivery outcomes in relation to the preservation of qualitative goals (shared housing typologies and affordability) throughout the development life cycle via the municipalities' ability to translate negotiated visions into delivery outcomes (influence/steering).

This thesis will investigate how governance methods (soft tools) and planning approaches (hard tools) impact the success of the delivery of student housing in Dutch student cities. It will do so through a qualitative comparative case study by analysing two distinct Purpose-Built Student Accommodation (PBSA) projects (the Pauwmolen project in Delft and the High Five project in Utrecht) that represent different markets but share very different institutional approaches to and rates of construction completion

Using the framework of an Institutional Steering Chain with a focus on network governance theory and a synthesis of Buitelaar & de Kam's (2009) success framework, the analysis was conducted in three stages. The lens for this analysis is transferable to other areas of student housing but is not limited to only these areas. The triangulation of data used for the analysis involved elements of policy, planning, and semi-structured interviews (with municipal stakeholders, developers, and student union representatives).

The findings from the analysis indicate that Delft is operating within a facilitative land-based regime consisting of fragmented instruments and no common Normative Vision (for how to achieve student housing success). The result is a mixed outcome for student housing; quantitative goals for delivery have been accomplished, however, qualitative expectations — with respect to the provision of shared housing, tenancies longer than 12 months, and affordability of student housing — have not been fulfilled.

Conversely, Utrecht has developed a layered instrument architecture to guide development through multi-party covenants, conditional zoning regulations, and the creation of a ground lease (to manage efficiency pressures while maintaining other binding commitments associated with the delivery of student housing). The result has been an effectiveness ratio that suggests a high projected level of effectiveness for student housing within a framework of conventional governance and planning methods.

In conclusion, the research indicates that an effective student housing delivery system under extreme market pressure requires the development of layered and redundant governance and planning mechanisms, as well as a combination of proactive legitimacy, ownership of land by public authorities, and the use of conditional legal instruments. The research recommends that Delft establish a multi-party covenant, create a layered governance and planning framework, and work together to conduct national advocacy.

Keywords: student housing, municipal steering capacity, governance networks, land policy, Netherlands, PBSA, normative vision, effectiveness

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CHAPTER 1: INTRODUCTION

1.1 Problem statement

There is an ongoing shortage across the Netherlands, particularly of suitable accommodation for students. As with the trend seen globally, Purpose Built Student Accommodation (PBSA) is now considered an asset class across both the real estate investment space and other markets (Newell & Marzuki, 2018). In mature PBSA markets such as London and Sydney, institutional developers typically build standardised, higher priced products such as self-contained studio apartments. The motivation is primarily due to achieving maximum financial return rather than providing environments which will meet the unique demographic of all student residents (Livingstone & Sanderson, 2022; Lam & Chen, 2022). The struggle for developers to achieve market driven results with local qualitative requirements can be seen very clearly in the Netherlands. To fully understand how these two types of results affect each other, the way decisions are made regarding the Dutch housing system should be further investigated.

For qualitative objectives such as housing affordability and community liveability in the Dutch Institutional Landscape, there is no single body directing their creation. Rather, they are the result of negotiation through the **Triangle of Actors** as described by Heurkens (2020) in Figure 1.1. The actors engaged in the urban property market, drive their interests, power and strategies further up this triangle and historically have expected local municipalities to undertake a proactive Land Policy and utilise both the ownership of land and their land use planning powers as key instruments in negotiating land use agreements that align development outcomes with policy objectives (Needham, 2014). However, there has now been a permanent shift away from active land policies to more facilitative approaches. Rather than controlling land directly, they must negotiate with the private landowner for development outcomes (Heurkens, 2012; Buitelaar & de Kam, 2009)

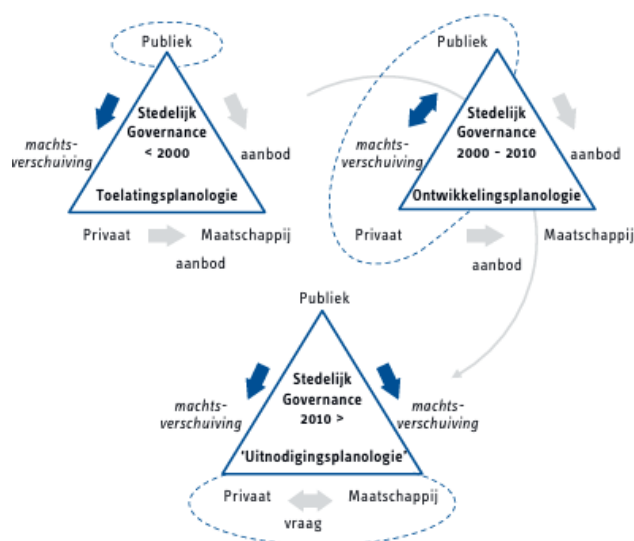


Figure 1.1: The Triangle of Actors operating in an urban property market (Heurkens, 2020)

The triangle-based framework and change in land policy are both described well enough in literature; however, there is also a lack of academic literature about the relationship of projects from the conception stage to the result regarding retaining original goals and those that do not. Local governments are in a very difficult position because they have a dual responsibility: they are accountable for housing the population socially and politically; however, they must operate in an environment where their historical methods of influencing development have become ineffective (van der Krabben & Jacobs, 2013). There is no qualitative, process-based explanation in the literature for maintaining or losing project-level standards throughout the development process. Student housing also has specific characteristics, including partial government subsidy structures, that compound these challenges.

Student accommodation is a unique sub-market characterised by concentrated demand over a relatively short duration of occupancy, with some regulatory boundaries (Rugg et al., 2000). New developments in this area are

extremely susceptible to market-driven standardization. The construction of additional units does not ensure a balanced housing supply (Sanderson & Özogul, 2022; Boelhauer & Hoekstra, 2009). Therefore, how successful a development is will ultimately depend on the municipality that is tasked with turning development plans into reality. No study has measured how successfully municipalities deliver student accommodation, nor established metrics for doing so.

Although there is an urgent need to address a shortage of student accommodation, the existing research is mostly quantitative, focussing on quantifying the deficit and on researching the governance systems that result in those deficits (Kences, 2025). There is a critical need for research to understand how various governance configurations, and regulatory planning instruments affect the alignment of project's beginning goals with its delivery outcomes. By examining projects from an inception-delivery point of view, this study seeks to fill a gap in comparative research regarding land governance configurations impact on the delivery of student accommodation within the context of Dutch cities which are home to some of the largest numbers of students in Europe.

1.2 The Dutch Student Housing Context

It's essential to evaluate the context of student housing in the Netherlands to understand how municipalities might fill this void. The facilitative land management approach, while a worldwide trend, is ultimately facilitated through the various actors in specific geographic areas within the Netherlands. The development of a building under a municipal policy will involve multiple housing typologies as well as different steering instruments, depending on the municipality's geography.

1.2.1 The Student Housing Landscape: Typologies and Pressures

Student housing is a distinct market within the larger real estate market, characterised by concentrated demand, limited time frames for occupancy, and specific regulations (Rugg et al., 2000). In the Netherlands, the student market has a greater qualitative mismatch than quantitative, resulting in excess production of stand-alone studios while still having a missing segment of traditional rooms with common/shared space (Kences, 2025).

This delivery is further shaped by concentration policies and NIMBY (Not In My Backyard) dynamics. Because student housing involves high density and potential noise impacts, it is frequently clustered in designated hubs to protect the residential quality of existing family-oriented neighbourhoods (Gibson, 2005). Therefore, there is limited land suitable for student housing, which provides leverage to the private landowners and causes the need for PBSA delivery models:

- **Campus-Based Delivery:** Housing located on university-owned land. As part of the Triangle of Actors, a university is an important landowner, working with both social housing associations and private developers to manage site quality and social integration in the long term (Heurkens, 2012).
- **Off-Campus Institutional Housing:** Projects developed within the city fabric; typically, social housing associations play a primary role in student housing development through a partnership with the municipality, ensuring affordability and community-based outcomes by creating social housing within the municipality's overall social housing supply (Haffner & Elsinga, 2009).
- **Private-Led Market Delivery:** International investors and private developers may acquire land or renovate existing commercial buildings to creating student housing. The municipality will help through private agreement structures and zoning approvals to support alignment of the project with the overall housing strategy. (van der Krabben & Jacobs, 2013; Heurkens, 2012).

1.2.2 Normative Vision and Actor Dynamics

A core challenge in delivery is reconciling the diverse objectives of the three different entities that comprise the Triangle of Actors – municipalities, developers and institutional partners (Heurkens, 2020).

- **Goal Divergence:** Each participant in the Triangle of Actors has its own agenda, therefore conflicting agendas. While municipalities would often be motivated to create affordable and inclusive typologies (e.g., shared housing) private sector developers would typically be motivated to create profitable (i.e. bankable) projects and mitigate their risk (i.e., through the creation of individual studio apartments); therefore, typically favouring independent studio apartment designs (due to greater liquidity within the market) and availability of rental subsidies (Heurkens, 2020).

- **Normative Vision:** According to Koppenjan & Klijn (2004), a Normative Vision is the shared frame of reference negotiated among the members of the Triangle of Actors at a project's inception. It represents the collective quality standards, typology requirements, and social objectives that the network formally agrees to pursue.
- **The Power-Interest Matrix** (Figure 1.2): The transition from a municipal wish list to a shared normative vision is shaped by the distribution of resources. An actor's ability to secure its goals in the normative vision depends on its leverage, such as land ownership or regulatory authority, which is analysed through the Power-Interest Matrix (Mendelow, 1981).

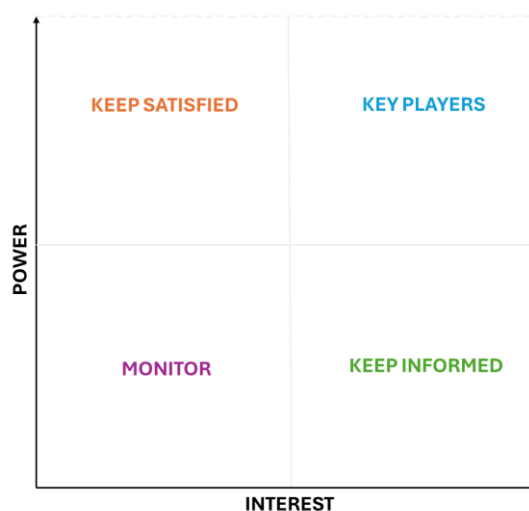


Figure 1.2: Power-Interest Matrix by Mendelow, (1981)

The matrix serves as an analytical tool to categorize actors based on their interest in the project outcomes and their power (leverage) to influence them. When analysing student housing projects, the sources of power typically are land ownership, regulatory authority, or financial authority. For example, a land developer that owns the land and has a vested interest in developing a student housing project would be considered a **Key Player** and would therefore most likely have a high level of interest and power in developing an end-state normative vision for that project. Conversely, an actor such as a future student resident would have a high interest in the student housing project but little power to influence any of the Key Player's decision-making concerning the project unless they are included in the decision-making process via one or more of the Key Player's authorities.

1.2.3 Municipal Steering Capacity

Municipal steering capacity refers to the ability of a municipality to translate normative visions into delivery outcomes. In addition to the concept of steering capacity, the ability of the municipality to work collaboratively with the other actors in the governance network to coordinate and direct decision-making toward common or collective objectives represents the use of Network Governance in facilitating a governance network to achieve collective goals (Koppenjan & Klijn, 2004). This capacity is exercised through two types of instruments:

- **Governance Processes (Soft Tools):** These are relational and communicative links between actors aligning their interests through dialogue (*Convenants* or Tripartite Agreements). They are called soft because they depend on both public and relational commitment and informal consensus rather than a strict legal foundation to be enforceable (Koppenjan & Klijn, 2004). While they are not legally enforceable, they are essential for building the normative visions necessary to commence a project
- **Municipal Planning Strategies (Hard Tools):** These are the formal legal and regulatory instruments for formalising and securing a negotiated vision into mandatory requirements. These are called hard tools because they provide a legally binding basis for the built environment (Zoning Plans (*Bestemmingsplannen*), Design Briefs (*PvEs*) and Contracts (*Anterieure Overeenkomsten*) (Needham, 2014; van der Krabben & Jacobs, 2013). These tools transform normative visions into the legal reality that actors must comply with.

As established in Section 1.1, municipalities are experiencing increasing challenges associated with market-oriented development contexts. This research examines how varying configurations of soft and hard tools impact the success of student housing delivery. Together, these instruments constitute Municipal Steering Capacity, the central mechanism through which the research aim, outlined in Section 1.4, is examined. By doing so, it adds to the broader dialogue regarding municipalities' ability to retain their steering capacity in complex negotiated contexts.

1.3 Evaluation Framework: Success Metrics

To analyse the Delivery Outcomes of these steering processes, this research applies the success framework developed by Buitelaar & de Kam (2009). The success framework provides three unique lenses through which to analyse governance processes and planning strategies as they relate to managing the divergences of interest among the Triangle of Actors relating to the effectiveness of the steering processes:

- **Effectiveness:** This serves as the primary indicator of success, measuring the degree of congruence between the initial normative vision and the final built typology. The normative vision against which effectiveness will be determined includes both quantitative benchmarks (number of units) and qualitative measures (typology, tenure, affording ability). Effectiveness will be used to evaluate whether the municipality's steering process accomplished its goal despite the market pressures.
- **Efficiency:** This measures the transaction costs of the governance process, specifically the time taken to achieve an outcome and the administrative effort needed by the public & private sectors to move from vision to implementation.
- **Legitimacy:** This examines the degree to which the actor network has defined transparency, trust, and acceptance among the various stakeholders, serving as a measure of the social and political stability of the steering process.

While these metrics are often presented as a balanced triangle, this study establishes a specific hierarchy, detailed in the theoretical framework in Chapter 2, that prioritizes effectiveness as the result-oriented goal, while utilizing efficiency and legitimacy as explanatory factors to investigate why certain steering configurations succeed or fail.

1.4 Research Aim and Scope

The aim of this research is to analyse how governance approaches and planning strategies shape the effectiveness of student housing delivery outcomes in Dutch student cities. There is a need for research that examines how the normative vision for a student's housing project is, or is not, reflected in the final built product throughout the development process. Based on the definitions in Section 1.2.3, governance approaches represent the use of soft tools, while planning strategies represent the use of hard tools and together, they constitute Municipal Steering Capacity, the ability of a municipality to translate normative visions into delivery outcomes.

To evaluate this, the success framework of Buitelaar & de Kam (2009) is used; effectiveness is defined as the ultimate measure of success, while efficiency and legitimacy act as explanatory variables. The scope of this study is new-build Purpose-Built Student Accommodation (PBSA) in the Netherlands. The geographical scope is limited to the selected Dutch student cities, and the analysis is confined to the delivery lifecycle, from the initial shared agreement to the final completion of the building. The study represents a qualitative approach to understanding the relationship between governance approaches, planning strategies and the Triangle of Actors, and will not analyse the housing shortage quantitatively.

Effectiveness will be assessed by the fidelity of the governance process - the extent to which the construction delivery process remained consistent with the normative vision and the binding instruments (i.e., requirements and/or conditions) as they were established at the outset of the project as defined in the planning literature. The compliance of an instrument demonstrates to what extent a binding requirement is enacted as intended and, therefore, is a legitimate measure of the ability to steer development through the delivery phase of the project (Needham, 2014; van der Krabben & Jacobs, 2013). This definition does not extend to evaluating post-occupancy management behaviour by operators.

1.5 Research Questions

Main Research Question

How do governance approaches (soft tools) and planning strategies (hard tools) shape the effectiveness of student housing delivery outcomes in the Dutch student cities?

Sub-questions

1. What normative visions and actor configurations establish the legitimacy of student housing goals in the Dutch student cities?
2. How do municipalities employ governance approaches and planning strategies to translate normative visions into binding typologies, and how do efficiency considerations influence these delivery outcomes?
3. Why do certain governance approaches and planning strategies lead to varied effectiveness, measured through the lenses of efficiency and legitimacy, across different land policy configurations?

1.6 Research Relevance

1.6.1 Scientific Relevance

By providing an empirical analysis of the intersection between Municipal Steering Capacity and delivery outcomes in the sub-market of student housing, this study adds to the body of research on governance and planning. Existing research has documented extensively how student housing has been financialized, and how institutional investors have utilised various investment strategies (Sanderson & Özogul, 2022); however, considerably less research has been undertaken to identify how governance and planning strategies over time are used to manage the market forces experienced by student housing as it transitions from a normative vision to a technically delivered project.

Through comparing different configurations of land policy, this research provides empirical data that demonstrates how Municipal Steering Capacity determines the pathway of a project from normative vision to delivery. Therefore, this research will be able to provide insight into the ways that soft tools (governance approaches) and hard tools (planning strategies) can provide protection for qualitative housing standards when faced with market pressures (Heurkens, 2012; Buitelaar & de Kam, 2009).

1.6.2 Societal and Professional Relevance

Inadequate student housing impacts well-being and access to education, with increased pressure on the general housing market creating competition for limited unit availability (Rugg et al., 2000; Kences, 2025). The issue of student housing presents both a structural urban issue for municipalities and a major component of spatial planning and social sustainability (Needham, 2014).

This research will provide a professional critical review of the soft and hard tools currently available to planners in the Netherlands regarding student housing delivery. By examining what factors influence student housing delivery outcomes, we will have better defined parameters for making quality decisions and collaborative development within the Triangle of Actors (Heurkens, 2020; van der Krabben & Jacobs, 2013). This is extremely relevant in the fast-paced, dense urban settings where land availability is scarce and the NIMBY dynamics associated with studentification require extreme precision in steering the system.

1.7 Summary and Outlook

This chapter addressed the research problem, the context, and the analytical approach. The Netherlands faces a persistent student housing shortage, yet there is little understanding of how governance processes influence delivery outcomes. The research questions focus on how governance approaches and planning strategies affect the effectiveness of the delivery; however, the scope is restricted to purpose-built student accommodation (PBSA) in Dutch cities and towns.

CHAPTER 2: THEORETICAL FRAMEWORK

The Institutional Steering Chain

In order to answer the research questions drawn from Chapter 1, this chapter synthesises the relevant literature into a process-based model – the Institutional Steering Chain. As visualized in the Conceptual Framework (Figure 2.1), this model highlights **Municipal Steering Capacity** as the engine that translates normative visions into physical reality within a complex market context.

This theoretical framework was developed using network governance theory (Koppenjan & Klijn, 2004) and planning evaluation literature (Buitelaar & de Kam, 2009; Needham, 2014) to address the specific analytical needs of this research.

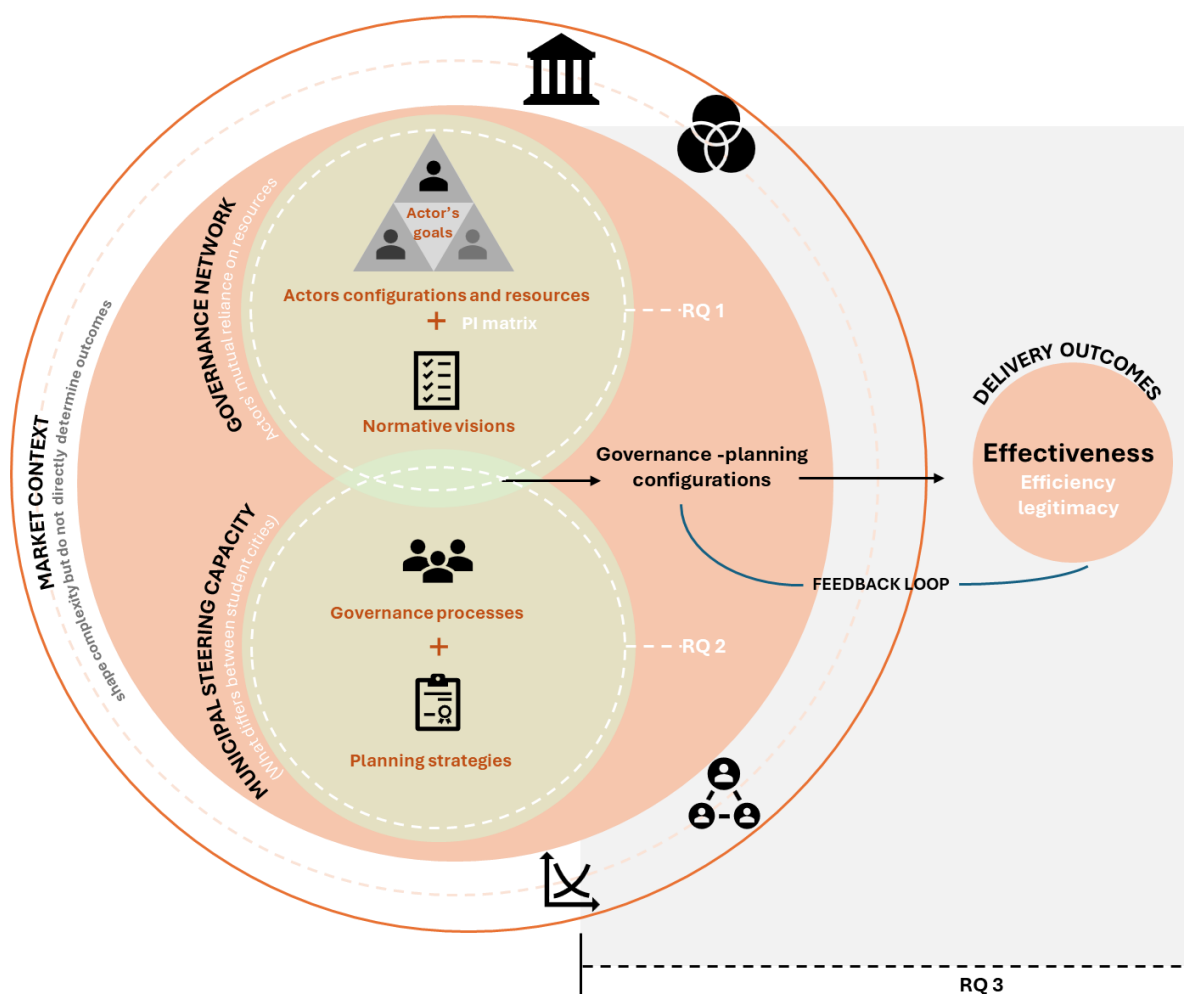


Figure 2.1: Conceptual framework

The following sections provide an overview of the literature that supports each stage of the model shown above.

2.1 The Governance Network: Negotiating the Input (Addressing RQ1)

Urban development is a complex, networked process that requires multiple resources to work together (Koppenjan & Klijn, 2004). This is shown in the top sphere of Figure 2.1.

2.1.1 Actor Goals and Power Dynamics

When actors enter the **Triangle of Actors** (a framework for identifying the key participants involved in urban planning), they have different goals to achieve. The purpose of this research is to assess how key resources, such as land ownership, impact an actor's ability to influence the Power-Interest Matrix, and to evaluate whether the goals of certain actors are included in the normative vision.

In the Dutch facilitative context, land ownership primarily determines the actor's position within a network and, hence, their leverage (van der Krabben & Jacobs, 2013). Needham (2014) differentiates between municipalities that implement active land policies, which acquire land before any development activities to tie binding requirements to the subject property, and municipalities that implement facilitative land policies, which negotiate with private landowners for development via contractual means. In high-pressure housing markets, private landowners control most of the power in the Power-Interest Matrix; their agreement is a prerequisite for development in each jurisdiction. Koppenjan & Klijn (2004) encourage Resource Interdependence to govern actors within a Network; therefore, actors that control key or essential resources (land, equity, or regulatory authority) will establish whose goals will become part of the normative vision. This study will apply this logic within the context of the student housing submarket; land scarcity will enhance developer's ability to leverage their power.

2.1.2 Market Context and Friction

This model integrates the network into a larger market context, where friction (resistance) that impedes the realisation of the initial vision occurs due to external factors like land availability (limited land available to develop) and concentration policies (government regulations concerning whether to concentrate/limit the development of an area). In this context, because there is such high demand for market space (competition among developers), standard, high-yield typologies are more attractive than providing a development that meets the unique qualitative needs of a given community (Livingstone & Sanderson, 2022).

Livingstone & Sanderson (2022) show that in established PBSA markets, institutional investors consistently prefer self-contained studio divisions to sharing divisions because these studio units are more liquid and benefit rental subsidy eligibility. Thus, they are structurally misaligned with efforts by regulatory authorities to achieve community-focused affordable housing. This issue has been identified by Mooij (2014) in the Netherlands specifically noting that while there is a national subsidy for individual renters through the *huurtoeslag* program, there is no equivalent subsidy to facilitate shared housing. Therefore, market friction can be attributed not only to price pressure but also to the regulatory systems governing eligibility for subsidies.

2.2 Municipal Steering Capacity: The Process Stage (Addressing RQ2)

The centre of the framework represents the process stage of the Steering Chain: Municipal Steering Capacity, as defined in Section 1.2.3. This capacity is operationalized through a combination of soft and hard tools.

2.2.1 Soft Tools (Governance Approaches)

Soft tools refer to non-binding methods employed by the municipality (consensus building, dialogue, covenants, partnerships, and agreements) to build consensus and keep actors aligned (Koppenjan & Klijn, 2004).

2.2.2 Hard Tools (Planning Strategies)

The municipality uses **hard tools**, which are binding methods (e.g., zoning plans, ground leases, legal contracts) designed to define the binding codes against which developers are required to comply (Needham, 2014; van der Krabben & Jacobs, 2013).

2.2.3 The Hardening Mechanism

A major focus of this pillar is the **Hardening Mechanism**, an analytical tool to examine how municipalities convert Normative Visions (common planning goals) into binding technical realities. Theoretical research on the various Land Policy Configurations (the multiple ways in which municipalities can regulate land use and entitlements) lays the groundwork for identifying which specific types of contracts (to be identified through the case study) are most resistant to market friction.

As much as it is true that the content of an instrument is important, the sequence in which instruments are sequenced is equally as important. According to Buitelaar & de Kam (2009), governance failures do not occur simply because there are no instruments, but because they are implemented in isolation from one another and not in an orderly, layered manner. For example, a covenant that establishes joint commitments will not have any means of enforcement until there is a zoning ordinance that converts such joint commitments into legally enforceable conditions, and, finally, until there is a ground lease or contract that locks in those conditions for the duration of the project. If there is a break in this chain of events — for example, if there is a covenant but no legally binding provisions in the subsequent AO — the governing normative vision will then be viewed as a preference document instead of an enforceable obligation. Therefore, this research will test the assumption that

layered instrument architectures operate at a greater level of effectiveness than unlayered instrument architectures under comparable market conditions.

2.3 Delivery Outcomes: The Success Framework (Addressing RQ3)

The last stage of the framework begins with Section 1.3 which operationally defines the steering process using the Buitelaar & de Kam (2009) success framework to measure it. These metrics are used as benchmarks in Chapter 1 as study objectives; here, they provide the theoretical basis for their use within the Institutional Steering Chain.

This research establishes a hierarchy in the way the Buitelaar & de Kam (2009) governance framework conceptualizes effectiveness as the ultimate criterion of success and efficiency and legitimacy as the two causal variables which explain why effectiveness was or was not produced under a given type of governance configuration.

2.3.1 Effectiveness (The Benchmark of Congruence)

The definition of effectiveness provided by Buitelaar & de Kam (2009) is the extent to which the normative vision agreed upon aligns with the final built typologies (the result/output of the project). Within this framework, effectiveness primarily serves to provide evidence whether the qualitative and/or technical goals established for the project were maintained during the implementation phase.

2.3.2 Explanatory Factors (Efficiency and Legitimacy)

The two metrics remaining from Buitelaar & de Kam's (2009) were used through the analytical lenses of efficiency and legitimacy to provide an explanation of the results as described:

- *Efficiency*: This analyzes the transaction costs, as described by Buitelaar & de Kam (2009) and the speed and ease with which steering occurs during project delivery. Inefficiency could ultimately strain the hardening mechanism, which could, in turn, prompt a renegotiation of the financial feasibility of a redevelopment project. For the purposes of this model, efficiency represents both the time taken to complete a task and the impact an efficient or inefficient task has on the stability of the output.
- *Legitimacy*: This measures how consensus among stakeholders and the level of transparency affect the stability of the vision for the project. The legitimacy provides institutional glue for the ability of municipalities to enforce the requirements. If there is a lack of legitimacy, it indicates that the consensus has broken down and creates the potential for change in the vision.

By contrasting these explanatory factors with the delivery outcomes, this research can determine the mechanisms responsible for a housing project realising or failing to realise its normative vision.

2.4 Conclusion

In summary, the Institutional Steering Chain conceptualises student housing delivery as a three-stage process. The first stage is the input (Governance Network), where the normative vision and the configuration of actors are established. The second stage is the process (Municipal Steering Capacity); here, the normative vision becomes binding by creating soft and hard tools to enforce it. The third stage is the output (Delivery Outcomes), where effectiveness is measured, and efficiency and legitimacy are used as explanatory variables. This framework offers guidance for the data analysis in Chapter 5 and will be used to compare Delft and Utrecht.

CHAPTER 3: METHODOLOGY AND RESEARCH DESIGN

This research uses a qualitative comparative case study to examine Municipal Steering Capacity under high market pressure. It builds directly upon the **Institutional Steering Chain** (See Chapter 2) by examining how governance arrangements and planning processes translate normative visions into delivered outcomes, using qualitative methods. A qualitative methodology is utilised because governance and planning are relational in nature and dependent on context, making them impossible to capture with quantitative indicators alone (Koppenjan & Klijn, 2004).

The research design is structured to trace the Institutional Steering Chain of a housing project, from normative visions and the use of soft tools to the implementation of hard tools. Operationally, the analysis will identify the impact of Municipal Steering Capacity on the final delivery of housing by investigating the operational realities of the achieved buildings via a multi-stage analysis. The following sections detail the selection logic, data collection methods, and the analysis framework.

3.1 Research Strategy: Case Selection Logic

The rationale for selecting the projects used in the research employed a systematic three-stage funnel selection process, in which the variables and selection criteria established in the Institutional Steering Chain framework are directly operationalised. This ensured that selected projects were representative rather than isolated examples of the broader institutional challenges cities face regarding differences in Municipal Steering Capacity. By focusing on a narrowed geographical context (from a national level to an urban and to a project level), the comparison is based on objective data suitable for fulfilling the analytical needs established in Chapter 2 of the thesis.

The objective of the three-stage funnel selection process was to select cities that were subject to almost the same market pressures (i.e., Constants) but have a significant different institutional frameworks for construction and momentum for construction (i.e., Variables). The overall objective of the research was to examine whether there were significant differences in the project outcomes because of differences in municipal steering decisions versus those created by external marketplace forces.

The following sections detail the criteria used at each stage of the selection process, supported by data from the National Student Housing Monitor (Kences, 2025)

3.1.1 City Selection: Market Pressure and Construction Dynamics

Initially, the research screened 19 of the largest university cities in the Netherlands (Figure 3.1), then selected Delft and Utrecht as cities demonstrating the highest levels of market tension (shown through their anticipated 2024-25 pressure indicators with a level of ‘++’, Kences (2025)), yet with different trends in construction pipelines.

Drukindicator naar woonstad

Woonstad	Drukindicator	Woonstad	Drukindicator
Amsterdam	++	Leiden	++
Arnhem	0	Maastricht	+
Breda	+	Nijmegen	++
Delft	++	Rotterdam	++
Den Haag	+	's-Hertogenbosch	+
Ede	0	Tilburg	0
Eindhoven	++	Utrecht	++
Enschede	0	Wageningen	+
Groningen	+	Zwolle	++
Leeuwarden	0		

DUO, CBS, enquête | '24-'25

Figure 3.1: Pressure indicator of the years 2024-2025, Kences (2025)

Market Pressure (Constant): Both cities experienced the highest level of pressure. As seen in the Demand Forecast, the national shortage is forecasted to increase from 21,500 units to 63,200 units in a high-demand scenario (Figure 3.2). Utrecht and Delft are at the centre of that crisis, and both cities are shown to need many hundreds to thousands of units of growth to ensure stability.

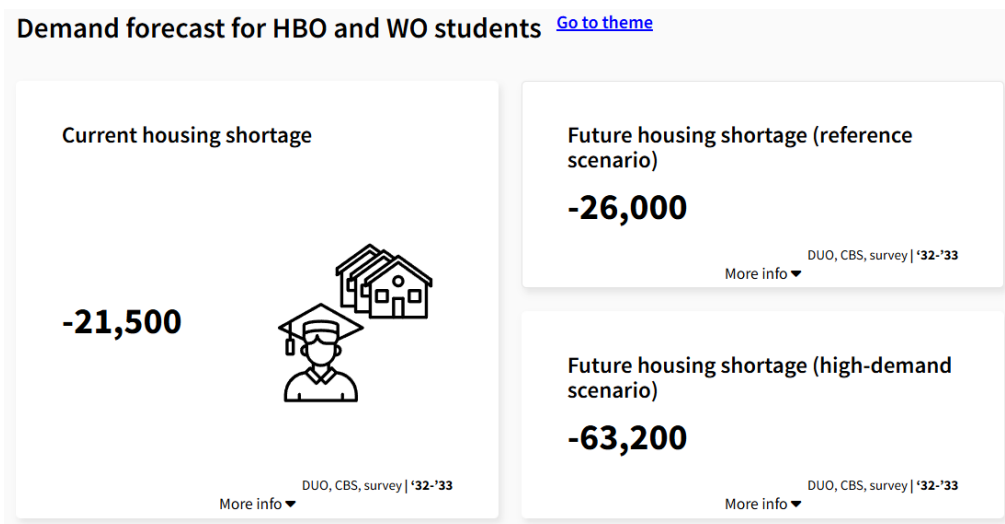


Figure 3.2: Demand Forecast of 2032-33, Kences (2025)

The Construction Gap (Variable): The selection is supported through the presence of the Hard Construction Plans (2025-2033) (Figure 3.3).

- Utrecht has a very ambitious, fast-moving pipeline of hard plans to be completed between 2025 and 2030 (which totals over 3,500 units). This demonstrates a very active steering environment.
- Delft, by contrast, has an insufficient number of hard construction plans, showing a much lower and staggered hard plan pipeline (totalling approximately 1,000 units between 2025 and 2030).

Hard construction plans in the 19 largest study cities by year of completion

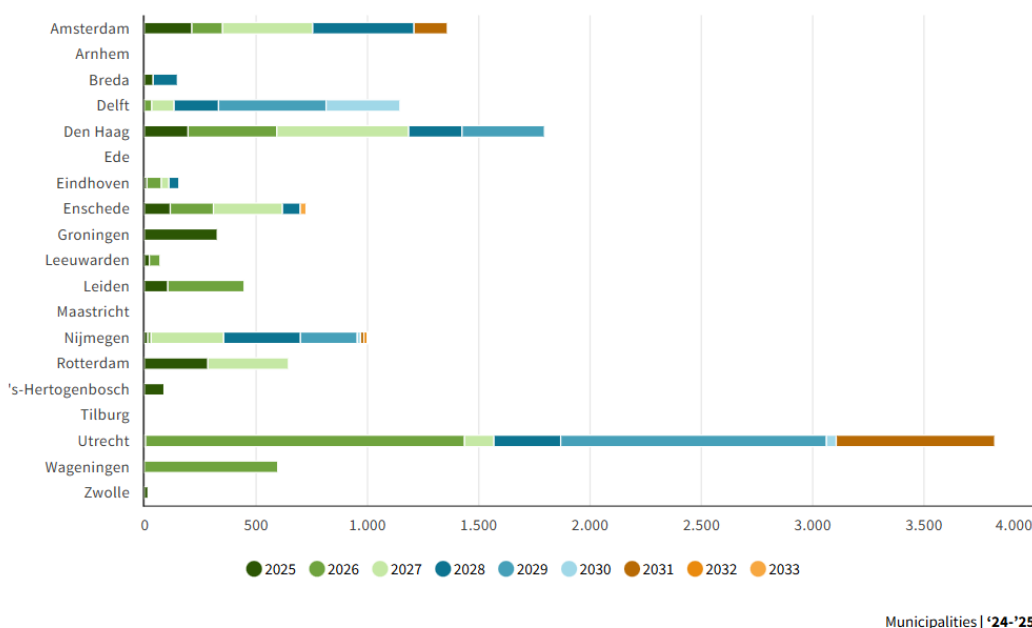


Figure 3.3: Hard Construction Plans in units (2025-2033), Kences (2025)

By comparing a city with high construction momentum (Utrecht) against one struggling to finalize hard plans (Delft), the research can expose how the Municipal Steering Capacity of both cities will determine the realisation of normative vision, as opposed to the market demand alone.

3.1.2 Project Selection: Scale and Strategic Importance

Following the selection of two cities, the research focused on specific projects in active developments within those cities. Selected projects were Pauwmolen (Delft) and High Five (Utrecht) as per the criteria listed below:

1. **Scale:** Both were large-scale developments (>250 units), making them strategically significant for their respective municipalities.
2. **Institutional Diversity:** They offered a contrast between a fully private-led development (Pauwmolen) and a university-social provider partnership (High Five).
3. **Life-Cycle Stage:** By analysing both operational development (Delft) and planned/implemented development (Utrecht), the research developed an understanding of how institutions are steered in “real-time” as well as “retrospectively”.

3.2 Data Collection Strategy

The Triangulation Approach

To provide a reliable basis for the findings, this research used a triangulation strategy to develop accurate, reality-based analyses. This triangulation strategy synthesized formal documents, perspectives of the stakeholders and physical outcomes to systematically track the progression of each stage in the Institutional Steering Chain, from creation of the normative vision to final delivery. Data was analysed in accordance with the success framework developed by Buitelaar & de Kam (2009), with effectiveness as the primary measure of success.

The triangulation is structured into three layers of research: Paper Reality, Human Reality, and Physical Reality.

3.2.1 Paper Reality (Document Analysis)

Document analysis formed the foundation for documenting precisely what type of steering mechanisms existed in each city (Needham, 2014). The purpose of this phase was to establish a clearly defined normative vision, written delineations of boundaries established by a government authority, policy objectives, and legislative restrictions imposed by the relevant municipal organisation on the direction of the project within the city. Both hard and soft tools were captured where they had been documented in an official or institutional record.

Document category	Information sources	Tool classification	Relevance
Strategic Visions	Woonvisie, Housing Agendas	Soft Tool	Identifying the initial actor goals.
Network Agreements	Covenants (Tripartite)	Soft Tool	Identifying the baseline for coordination and normative vision.
Regulatory Tools	Zoning Plans, Design Briefs	Hard Tool	Identifying how technical standards, actor goals and NIMBY resistances are managed
Legal Contracts	AO Contracts, Ground Leases	Hard Tool	Identifying 'Hard' tools used to lock in the normative vision.

Table 3.1: Document Analysis Categories

3.2.2 Human Reality (Semi-Structured Interviews)

In this stage, the governance approaches employed were identified, along with whether the visions, tools, and objectives of the actors were aligned or misaligned. Documenting the reality of how governance took place (as documented in the “Paper Reality”) provided the formal methodologies employed to achieve the final project. Knowledge obtained through the interviewing process indicated the reality of how governance occurred (i.e., dynamics of negotiation, informal agreements reached, and unscheduled events leading to resolution of an impasse). It should be noted that the connection between the Institutional Steering Chain and the Actors, as

identified through the interview process, will focus on the shifting dynamics of power across the city's interactions.

Purposive Sampling Strategy (N total = 6): A targeted purposive sample of individuals throughout both cities (Utrecht and Delft) was used to maximize qualitative research:

- Public Sector (1): Strategic Policy Advisor or Operational Project Manager.
- Private/Semi-Public Sector (1): Commercial developer or Housing association (SSH/DUWO).
- Target Group/Union (1): Student union or resident representative.

Core Interview Logic: A preliminary Power-Interest Matrix was created prior to each core interview to support participation and to illustrate the participant's perceptions of shifting power dynamics, thereby verifying whether the formal rules of engagement aligned with actual influence.

Each of the interview participants was assigned a pseudonym; a complete list of pseudonyms, including the actor types, is presented in Chapter 5 (Table 5.1) along with the date and duration of each interview (See Appendix A.7). Interview guides for each actor category can be found in Appendix A. All participants signed an informed consent form (See Appendix B) prior to their interview.

Interviews were conducted to gather information from all types of actors in the city of Delft. The interviews for the three categories of actors were conducted as follows: public (DEL_PUB_01), private (DEL_PRI_01), and semi-public (DEL_SEM_01). For the student union perspective, however, the interview was conducted directly (UTR_UNI_01); for the developer, municipal, and university perspectives for Utrecht, documentation was used for reconstructing those actor types. Utrecht's participant perspectives were reconstructed primarily through documentary analysis; this methodological constraint is addressed as a limitation in Section 6.3.2. As such, the analysis of Utrecht's participant perspectives will be primarily framed as being documentary-based with interviewed corroboration from the student union only.

During the core interviews, an unsolicited comparative insight was received from a representative of the Delft commercial developer (DEL_PRI_01) regarding the Utrecht governance model; this supported the patterns identified in the documentary analysis and added a cross-city practitioner perspective to the Utrecht case. The asymmetry in interview coverage between the two cities is acknowledged as a methodological limitation and is addressed in Section 6.3.2.

3.2.3 Physical Reality (Case Study Comparison)

The third and final evidence of steering will come from the physical reality. By analysing the Pauwmolen (operational) and High Five (planned) outcomes, the research assessed the outcomes against the requirements established in the 'Paper Reality'.

The evaluation framework detailed in chapter 2 includes the use of the effectiveness factor to determine the degree to which the outcome aligns with the original normative vision. The research compared the physical outputs (number of buildings delivered and typology mix) with the specifications provided during the planning process to indicate how well Municipal Steering Capacity had impacted delivery.

Given that there remains a possibility that the High Five will experience similar post-occupancy issues to the Pauwmolen after it becomes operational, the analysis presented is concerned with assessing the fidelity of the governance process and alignment between the normative vision and the governance process for delivery, as indicated in Section 1.4, rather than with assessing long-term post-occupancy impact.

3.3 Data Analysis: Thematic coding in ATLAS.ti

Data analysis was performed using ATLAS.ti utilizing a hybrid thematic coding process. The deductive codes directly corresponded to the primary components of the Institutional Steering Chain - actor configurations, steering instruments, delivery outcomes - ensuring that empirical findings are systematically connected to theory. This process allowed the researcher to track Physical Reality (outcomes) back to Human & Paper realities.

3.3.1 Deductive Coding (Top-Down)

The initial codes were obtained from the conceptual framework to classify the known variables of the steering process, which included:

- Actor Configurations: Coding segments defined the roles of the Public, Private, and Social/Semi-Public sectors.
- Power-Interest Mapping: Labelling segments where actors had leverage by analysing the results of the participatory PI Matrix sessions (e.g., land ownership vs zoning authority).
- Success Metrics: Labelling data related to effectiveness, efficiency, and legitimacy.

3.3.2 Inductive Coding (Bottom-Up)

The second round of open coding captured the “invisible” nuances that helped explain the steering process results in:

- Market Friction: Developer issues (interest rates/cost) causing changes to typology.
- Institutional Deadlocks: Disagreement within municipal departments.
- Spatial/NIMBY Pressures: Local resistance or concentration policies limiting “steering room”.

Network Analysis: Using ATLAS.ti's network visualisation, the codes were linked to demonstrate causality, for example, connecting a “Market Friction” occurrence to an associated change in room typology. This was supported through visual exploration of code–document relationships, with illustrative examples provided in Appendix F.

3.3.3 Codebook Structure

This study's coding framework is organised into four categories, based on the Institutional Steering Chain and success metrics discussed in Chapter 2 plus inductive codes that appear in the data. See Appendix A for a complete codebook including definitions and example quotes. See Table 3.2 for a summary of the code categories and their source, while Appendix C matches the full codebook with definitions and examples.

Code Group	Description	Source	Appendix Reference
GROUP 1: INPUT - Governance Network	Actor goals, power dynamics, normative vision	Deductive (Koppenjan & Klijn, 2004; Mendelow, 1981)	Appendix C, Table C.1
GROUP 2: PROCESS – Municipal Steering Capacity	Soft and hard steering tools	Deductive (Koppenjan & Klijn, 2004; Needham, 2014)	Appendix C, Table C.2
GROUP 3: OUTPUT - Success Metrics	Effectiveness, efficiency, legitimacy	Deductive (Buitelaar & de Kam, 2009)	Appendix C, Table C.3
GROUP 4: INDUCTIVE- Emergent Frictions	Themes that emerged from data (e.g., dependency trap, developer type)	Inductive (from interviews and documents)	Appendix C, Table C.4

Table 3.2: Summary of code groups

3.4 Operationalization

3.4.1 Research Question Operationalisation

Table 3.3 shows how the research questions (RQs) corresponded to the different data sources and analytical foci. These operationalisations converted the theoretical concepts found in Chapter 2 into empirical variables and indicators.

Research Question	Primary Data Source	Analytical Focus / Actor Perspective
RQ1: Visions & Configurations	Strategic documents & Covenants; Interviews (Public/Uni)	Legitimacy: How power dynamics shaped the initial normative vision.
RQ2: Tools & Translation	Legal Contracts (<i>AO/Erfpacht</i>); Interviews (Public/Developers)	Efficiency: How the choice of 'Hard' and 'Soft' tools managed Market Friction during implementation.

RQ3: Effectiveness & strategies	Delivery outcomes; All interviews (Students/SSH)	Effectiveness: Why specific land policy strategies succeeded or failed in matching the vision to reality.
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Table 3.3: Operationalization: Connecting Data to Research Questions

3.4.2 Effectiveness Operationalisation

Table 3.4 describes how effectiveness is defined in chapter 2 and gives the theoretical dimensions and indicators from the theoretical framework. These dimensions and indicators will be used in Chapter 5 to compare the effectiveness of the case studies. By operationalising the concept, it allows for the systematic evaluation of effectiveness within the Institutional Steering Chain framework for each case study. The table is presented as an analytical framework; the empirical assessment for Delft and Utrecht is provided in Chapter 5.

Effectiveness is assessed through a structured qualitative comparison using predefined indicators (Table 3.4), where each case is evaluated across six dimensions (typology, tenure, affordability, etc.). Rather than numerical scoring, the assessment follows a comparative logic identifying presence, absence, or partial fulfilment of each indicator.

Dimension	Indicator
Quantitative targets	Number of units delivered
Typology diversity	Presence of shared housing requirement
Tenure stability	Contract duration provisions
Affordability	Service cost regulation
Efficiency management	How efficiency is prioritised vs quality
Legitimacy	Stakeholder acceptance mechanisms

Table 3.4: Operationalisation of effectiveness - analytical framework

3.5 Chapter Summary

This chapter describes the methodology for conducting the comparative case study research. It outlines the two cities (Delft and Utrecht) and the two projects (Pauwmolen and High Five) selected to demonstrate contrasting construction processes within the institutional steering chain framework under similar market conditions. The data collection methods included paper-based records, human-collected data, and physical data, which were then triangulated through document review, semi-structured interviews, and site visits. The hybrid coding strategy (inductive and deductive) was used to keep the analyses grounded in both the theoretical framework/s and empirical data. The operationalisation tables (Table 3.3 and Table 3.4) related the research questions to the data sources used in the comparative analysis and provided an indicator of their effectiveness.

The next chapter will establish the factual baseline for the two case studies after the methodological foundation is discussed in Chapter 3. Chapter 4 will establish the physical context, project specifications, and site-specific technical requirements of the Pauwmolen project in Delft and the High Five project in Utrecht, in preparation for the empirical application of the Institutional Steering Chain and analysis of the Municipal Steering Capacity of the case studies in Chapter 5.

CHAPTER 4: CASE STUDY DESCRIPTIONS

The purpose of this chapter is to document the detailed factual and technical information regarding the two research projects and should serve as a logical foundation for evaluating the governance methods utilised by

municipal authorities when delivering the projects contained within each case study in Chapter 5. Chapter 4 will collect this information using the **Institutional Steering Chain** identified in previous chapters and establish the baseline for the physical context, project specifications, and site-specific technical requirements.

4.1 Case Study 1: Pauwmolen, Delft

The Pauwmolen project is a high-density residential development located at Jan de Oudeweg in the Wippolder district of Delft (2628 SJ). The site represents a functional transition from a former industrial and office zone to a residential hub within the Technological Innovative Complex (TIC) Delft (Gemeente Delft, 2011c).

4.1.1 Project Formulation and Capacity

Two major structural types make up the Pauwmolen project: a 17-story residential tower and a 5-story apartment. The project is also intended to operate as a “self-contained urban living campus” (B-Right Urban Living, 2021).

In 2010, the municipality and developer entered an *Anterieure Overeenkomst* (AO), registering the details of the project for 285 residential units, consisting of 143 student units and 142 social/starters units. (Gemeente Delft, 2022).

4.1.2 Project Timeline and Organizational Transition

The development of Pauwmolen followed a multi-stage timeline involving a transition in project ownership and management:

- *2007-2014: Planning and Negotiation.* This represented the initial negotiations between the municipality of Delft and the original developer, which are the basis of the project's spatial quality and requirements for the basic unit of housing.
- *2014-2017: Ownership Transition.* The original developer transferred the project to a new private developer. The completion of this phase was the transition from the original developer's vision for the project to the issuance of a building permit and construction.
- *2021-Present: Management.* Following the completion of construction, operational management is to be assigned to a specialised management company. This represents the transition of the project from a construction/development phase to a long-term residential community.

4.1.3 Technical and Environmental Standards

Due to its location immediately adjacent to the A13 motorway, the project was subject to significant environmental and acoustic constraints. Legal health and safety standards necessitated the following technical interventions:

- *Acoustic Mitigation:* Noise levels from the A13 ranged from **53 to 63 dB**. To ensure a permissible indoor living climate, the project was mandated to implement deaf facades (*dove gevels*) and specialized ventilation systems (Nieman, 2011).
- *Air and Soil Quality:* On-site technical investigations are required to control for pollution risks associated with being in a city. Air Quality and Soil Quality Investigations were a requirement to confirm that soil had been contaminated with lead and mineral oil due to the site's history as a lead mill, and that appropriate steps would have been taken prior to construction (Gemeente Delft, 2011d; MWH B.V., 2010)

These general conditions define basic elements of how the Delft governance network functions: private land ownership, a shift in management control from developers, and specific environmental limitations on sites, which led to hold-up issues in the Institutional Steering Chain prior to the implementation of any governance or planning measure. Chapter 5 examines whether the municipality was able to effectively utilise its steering capacity to translate these baseline conditions into delivery outcomes consistent with its normative goals.

4.2 Case Study 2: High Five, Utrecht Science Park

High Five, located along the Cambridgelaan at the Utrecht Science Park, represents a significant development of student housing. The complex will also assist in addressing both the lack of adequate student housing and the goal of developing a “24/7” vibrant campus community.(Gemeente Utrecht, 2022).

4.2.1 Project Formulation and Capacity

Two residential towers are being built with a connected shared-use building called a “plinth” for common amenities, reaching a maximum height of about 74 meters (Gemeente Utrecht, 2021). The project will create a total of 925 residential units, consisting of 721 independent studio apartments and 200 group housing units for community-building (SSH, 2020).

The realization is formalized through an *Anterieure Overeenkomst* (AO) between the Municipality and SSH, a *Chw Bestemmingsplan*, a *Bouwenvelop* (building envelope), and a Ground Lease (*Erfpacht*) agreement between Utrecht University and SSH (Gemeente Utrecht, 2022).

The project is a 'triple helix' of collaborators. The collaborators are the Municipality of Utrecht and Utrecht University as public partners, and SSH as the developer that will implement the project.

4.2.2 Project Timeline

The development of High Five has gone through several key procedural phases as follows:

- *2018-2020: Concept and Intent.* The Omgevingsvisie USP was created to define a vision for a vibrant campus available 24 hours a day, 7 days a week. The Intent of this Phase was to define the site's strategic intent.
- *2021: Formalization and Instruments.* The legal framework for the project included the building envelope (*Bouwenvelop*) and the Ground Lease agreement between Utrecht University and SSH.
- *2024-2026: Realization and Outcome.* The project has commenced the construction phase; this is the practical execution of the housing mix and social amenities/spaces defined in the first two phases.

4.2.3 Technical and Environmental Integration

Given its high-density nature and campus location, several technical studies were required to ensure the quality of the living environment. The need for these studies has been described in various traditional legal and planning documents as part of the identification of how technical standards are applied within the governance approaches and amongst the various actors involved:

- *Wind Climate:* The height of the towers, which is 74 metres above ground, requires that a Wind Climate Study be conducted; otherwise, there will be uncomfortable “gusts” of wind at pedestrian level at the entrances to the buildings (Gemeente Utrecht, 2021a).
- *Acoustics and Shadow:* An analysis of the reactionota (Gemeente Utrecht, 2021a) for the building's envelope indicates that there was a need for special studies to understand how to reduce the impact of shadowing on the adjacent “Johanna” and “Cambridgeflat” buildings and to control the noise levels at the edges of Cambridgelaan.
- *Climate Adaptation:* The approved site plan indicates that the site will include green zones and water management features to offset the increase in building mass resulting from the conversion of previously green pastures into buildings (Gemeente Utrecht, 2022).

The baseline circumstances just described differ from those of Delft in one major structural way: all those involved in the governance structure of this project are cooperating via public institutions (Utrecht University) that own land. The land ownership differences (public vs. private) link all parties in the governance structure of the project as documented in Chapter 5. The analysis of the site-related technical criteria (wind, acoustic, climate adjustment) has been included in the *bouwenvelop* (Gemeente Utrecht, 2021a) and zoning regulations, whereas in Delft they would have been viewed as exceptions to a post-decision-making process. Furthermore, in this case, the planning process resulted in the inclusion of social and environmental quality standards into enforcement mechanisms.

CHAPTER 5: ANALYSIS

This chapter analyses Municipal Steering Capacity for student housing delivery in Delft and Utrecht. As detailed in Chapter 3, the analysis draws on document analysis, semi-structured interviews, and physical observation.

Interview participants are referred to using the pseudonyms listed in Table 5.0 (see also Appendix A.7 for interview dates and durations). The analysis follows the **Institutional Steering Chain** framework established in Chapter 2, examining the Governance Network (input), Municipal Steering Capacity (process), and Delivery Outcomes (output). The chapter is structured in three parts: the Delft case analysis (5.1), the Utrecht case analysis (5.2), and the comparative analysis (5.3).

Pseudonym	Actor Type	City
DEL_PUB_01	Public (Municipality)	Delft
DEL_PRI_01	Private (Developer)	Delft
DEL_SEM_01	Semi-public (Housing Assoc.)	Delft
DEL_UNI_01	Student Union	Delft
UTR_UNI_01	Student Union	Utrecht

Table 5.1: Interview participant pseudonyms

5.1 Delft Case Analysis

The Pauwmolen project examines how these specific arrangements affected steering capacity across the three stages of the Institutional Steering Chain, as described in Chapter 4, for a private developer working on privately owned land using an *Anterieure Overeenkomst* (AO).

5.1.1 Normative Vision

The first stage of the Institutional Steering Chain is defining the Governance Network, in which the actors negotiate a common normative vision. A **normative vision** is defined as the common reference frame agreed upon in the Triangle of Actors at the beginning of a project; it is their collective quality standards, typology requirements and social objectives upon which the network will formally pursue (Koppenjan & Klijn, 2004).

The *Woonvisie* (Gemeente Delft, 2023) may seem like it is fulfilling this role; however, it does not qualify as a common normative vision because it is a municipal policy paper for the municipality and states only the goals of the municipality and not a frame of reference that has been discussed and developed jointly among different parties. Furthermore, the developer, the student union and the university have not approved the *Woonvisie* because they are not parties which participated in the creation of it. Although it states that “preferably there will be a variety of individual and non-individual housing types”, it also uses the word “preferably” to indicate that this is a wish rather than a requirement. This is important because it means that the **Hardening Mechanism** (see Chapter 2.2.3) can only begin once the goals themselves are identified as requirements, since the hardening of normative vision relies solely on the fact that those goals have become requirements.

To show the difference between this stated preferred type of housing location and the actual housing types available in this area, additional documents have been reviewed. The *Anterieure Overeenkomst* (AO), the primary contractual agreement between the municipality and the developer, contained no requirements about housing typology, contract duration, or rent levels. The CDA, a political party in Delft, submitted formal questions after discovering that Pauwmolen's starter units were being offered as short stay rather than long-term housing (CDA, 2022). In its formal response (Gemeente Delft, 2022), the municipality admitted that “no binding contractual agreements were made about the type of rental contracts and rent price”. In other words, the *Woonvisie* (Gemeente Delft, 2023) expressed a preference, but the legal instruments that could have turned that preference into a requirement were empty.

Interviews with different actors reveal how this absence shapes their behaviour. At the most basic level, the municipal policy advisor (DEL_PUB_01), confirms the minimalist philosophy that produced these hollow instruments: “We just tell them to keep themselves to the law – nothing else”. This passive stance forces other actors to find their own solutions. The student political party representative (DEL_UNI_01), unable to rely on any binding agreement, resorts to political motions: “I put in a motion for a minimum percentage of shared housing. I got a majority. It was accepted”. Yet even when such motions pass, the underlying problem persists. The student housing organization representative (DEL_SEM_01) articulates this contradiction directly: “Shared

housing is by far the most important for us... but sometimes the choice is studios or no rooms at all”. Without binding agreements, the shared goals that actors claim to hold cannot be enforced.

This evidence reveals that Delft lacks a shared normative vision as defined in Chapter 1. The *Woonvisie* (Gemeente Delft, 2023) expresses preferences, but those preferences were never translated into binding requirements in the AO or any other instrument. The governance network operates without a collectively negotiated reference point to guide subsequent steering. The hardening mechanism fails at the foundation of the steering process.

5.1.2 Land Ownership and Resource Interdependency

Having established that Delft lacks a shared normative vision, the analysis now turns to the governance network's resource configuration. Among the resources that shape actor leverage in the network, land ownership is particularly significant. As noted in Chapter 1, Dutch municipalities historically used land ownership as a primary lever to steer project delivery outcomes, but a fundamental shift has occurred toward more facilitative land policies in which the municipalities often operate without direct control (Heurkens, 2012; Buitelaar & de Kam, 2009). The Pauwmolen project offers a clear illustration of how this shift plays out in practice.

In Delft documents, the *Woonvisie* (Gemeente Delft, 2023) acknowledges the municipality's limited land position: “the possibilities offered by ground lease to make housing affordable... we know that effects may be limited, because the municipality has limited land positions”. The *bestemmingsplan* (Gemeente Delft, 2011b) confirms that for this project, “the developer owns these lands”. Together, these documents indicate that the municipality lacked land ownership as a steering resource from the outset.

In the interviews, the municipal policy advisor (DEL_PUB_01) confirms this resource gap: “We don't own much land. Only somewhere around the hospital”. This lack of land, combined with the city's passive steering philosophy – “We just tell them to keep themselves to the law – nothing else” – meant that the developer, not the municipality, controlled the project's parameters.

The commercial developer (DEL_PRI_01) confirms the resulting power imbalance: “Municipalities need private developers. They just add up all the ambitions... The costs are really high... reality is that not a lot of people are able to do that anymore”. The student housing organization representative (DEL_SEM_01) accepts this dependency as an unavoidable reality: “When trying to fix the room shortage, you need everyone... private developers play a big role”. Even the municipal policy advisor (DEL_PUB_01) concedes: “Given the limited own land positions, the municipality is strongly dependent on the outcomes of negotiations with landowners”.

Accordingly, the evidence demonstrates that in Delft, land ownership is the key governing resource within the governance network. Due to its ownership of the land, developers occupy the dominant position in the Power-Interest Matrix - they possess high power (via land ownership) and have high interest (via profit from development). Because the municipality does not own any land, it cannot impose binding conditions by means of ground leases. Furthermore, there is not enough regulatory authority (permits and zoning) at the municipality's disposal to offset the developer's leverage. Therefore, the historical lever that was previously necessary for the municipality to steer development is no longer available; as a result, Delft has not been able to find another effective means to steer development.

This configuration of private land ownership, limited municipal land holdings and a heavy reliance on contractual agreements, fits the definition of a facilitative land regime (see Chapter 2). In addition, the municipality of Delft will be negotiating from a position of dependency, thereby shaping all future steering activities.

It should be noted that Delft is not an entirely facilitative entity — the municipal adviser confirmed that the municipality holds some land near the hospital (DEL_PUB_01). Whether this represents a strategic choice not to use available leverage, or a structural incapacity to do so, cannot be resolved with the available evidence. This distinction is discussed as a limitation in Section 6.3.

5.1.3 Efficiency as the Dominant Logic

Based on the previous section, there is no shared normative vision of governance among the members of the institutional network associated with Delft, and the municipal government assumes that municipal land ownership is a key resource. Therefore, given this configuration, one must now ask how the municipality of

Delft steers this network toward the municipality's goals. This section looks at how municipalities in Delft have utilized their steering capacity through the use of multiple methodologies (documents and interviews) to determine how efficient their municipalities are in the discharge of their responsibilities as they relate to their community.

Chapter 1 defined effectiveness as an indicator of how close the actual project delivery is compared to what was intended when the idea for the project was conceived (i.e., the normative vision), while efficiency is defined as how quickly the project was built using the least amount of resources during that time frame (Buitelaar & de Kam, 2009). The relationship between these two metrics is not neutral; choices that prioritize one often come at the expense of the other.

In the Delft documents, the *Woonvisie* (Gemeente Delft, 2023) explicitly addresses this trade-off. The document states that “a higher production speed takes precedence over the realization of more affordable housing. We choose not to break open existing agreements or hard plans with a view to affordability”. It also identifies affordable housing as a key objective elsewhere in the document – for example, in its stated ambition to ensure *betaalbaar wonen* (affordable living) for Delft residents. Yet the document openly declares that when delivering affordable housing (effectiveness) conflicts with delivering quickly (efficiency), efficiency takes precedence. This is not an implicit trade-off discovered through analysis; it is a conscious policy choice written into the city's housing framework.

The *bestemmingsplan* (Gemeente Delft, 2011d) documents another instance in which efficiency overrode effectiveness. The public health service (GGD) “strongly advised against” the project on health grounds due to air quality and noise from the adjacent A13 highway, where acoustic studies confirmed noise levels of 53–63 dB, far exceeding the legal preference value of 48 dB. Despite this, the municipality overruled the GGD's advice, stating that health concerns do not block the plan because student housing is “very desirable” (Gemeente Delft, 2011a; Nieman, 2011). Effectiveness – achieving a healthy living environment – was traded against efficiency – delivering housing units.

The higher limit values decision reveals a further concession to efficiency. The project does not comply with the municipal noise policy on two points: it lacks a traditional “quiet side” facade, and its single-exterior-wall studios cannot meet the requirement for a bedroom away from the most noise-burdened side. The municipality granted an exception, stating that the policy was not intended to distinguish between self-contained and non-self-contained units (Gemeente Delft, 2011a). Effectiveness – policy compliance – was again subordinated to efficiency.

Interviews with different actors reveal how stakeholders perceive these trade-offs. When asked whether efficiency always wins over effectiveness, the student housing organization representative (DEL_SEM_01) responds: “I think it does. If that wouldn't be the case, we wouldn't have a room shortage of 1600 right now”. The student political party representative (DEL_UNI_01) acknowledges the same logic, though with less acceptance: “What do you want? Fewer houses which are more affordable? Or more houses which are a little more expensive?”. The commercial developer (DEL_PRI_01) confirms the financial pressure that drives these outcomes: “We do need some profit”.

To summarise, the overall logic in Delft's steering process is efficiency, and as described above, it is preferred over effectiveness in multi-tier decisions. Stakeholders have accepted that this tradeoff was necessary given the current housing crisis and regularly suspend the hardening mechanism when there is a concern about efficiency.

5.1.4 National Policy as Binding Constraint

In addition to the municipality's resource and policy constraints, the national policy is one of the external constraints that limit what Delft can ultimately accomplish. This section examines how the rental subsidy (*huurtoeslag*) system limits local authorities' steering capacity.

The *Woonvisie* (Gemeente Delft, 2023) states “the city is unable to solve Housing Shortage on its own; therefore, we will need to ask the national government for modifications to the rental valuation process or to provide large-scale rent assistance/subsidies for student housing.” The fact that the municipality of Delft openly admits this is a very important milestone; as such, the municipality has publicly acknowledged that the most important tool for reaching its housing goals lies outside of its direct influence, at a national level.

Interviews with various representatives illustrate how national regulations affect the availability of shared housing in Delft generally. The political party representative of students has stated that “shared housing is the key issue” for students, but the underlying cause has been identified as related to national regulations, not the individual municipalities, developers, or institutions. “Nationally, shared living...is not very much recognised” and there is “financial assistance for developing single-occupancy housing [studios] but none for developing multi-occupancy housing [shared]...”. According to the student housing representative, this also results in the developer choosing studios, as the national policy provides greater financial incentive to create studios or no housing at all in comparison to creating multi-occupancy or community homes. The commercial developer who was interviewed also stated that the financial aspect of renting would also make it logical for developers to create studios instead of shared community housing since “there will always be a greater financial reward with studio rental assistance than community housing rental assistance. From the perspective of a developer or tenant studios are a more attractive, cost-effective option because they provide greater financial benefit”.

The Pauwmolen project demonstrates how the national constraint influenced the local policy failure due to similar systems. The service-cost problems that occurred within the Pauwmolen project exemplified how national policies could create difficulties for tenants. The CDA letter noted that some service costs and furnishing fees exceed the affordability caps, which permit the landlord to increase total costs to tenants without increasing base rent (CDA, 2022). In discussing this practice with the commercial developer in Pauwmolen, the developer (DEL_PRI_01) indicated their practices were “as per National regulations such as the Rent Act and the Housing Valuation System. This is what we do strictly conform to.” The apparent local enforcement issue is found to be supported under National terms of use. The developer complied with local regulations; however, they complied within the National framework. The municipality failed to include a cap on service costs in the *Anterieure Overeenkomst* (AO); therefore, the service cost issue arose by virtue of the lack of a local instrument and because of the permissible actions under the national framework. Thus, the service cost issue existed for the tenants. The gap between student expectations and actual costs in Pauwmolen was not necessarily a local steering failure; it was a legal strategy permitted by national regulations and left unaddressed by the local instrument.

The available data demonstrates that the national policy acted as an overarching limitation on Delft's ability to steer the Pauwmolen development activities. The representatives of the student political party (DEL_UNI_01) stated a preference for shared housing; however, the national codes and regulations created financial disincentives, making it difficult for potential landlords or developers to provide shared accommodation. The national Rent Subsidy Program is designed to promote the provision of studio apartments over shared housing and, therefore, overrides the local community's preference for shared accommodation as expressed in the *Woonvisie* (Gemeente Delft, 2023). The service cost issue was a legal matter under national regulations; thus, the municipality was unable to address it through the AO process, i.e., it could not regulate service costs under any new or amended national legislation. Therefore, the developer's decision to provide a series of studio units was a rational decision given the existing incentive structure, and the service cost practices considered for the Pauwmolen development project would also have complied with corporate law. The differences in steering capacity between Delft and the developer of Pauwmolen were impacted by not only a lack of resources to execute the steering function but also due to the existence of a national policy framework that the municipality would be unable to unilaterally change and the lack of adequate local regulatory instruments to adequately govern the development until the completion of the National Policies concerning these types of development..

5.1.5 Goal Divergence: Three Misalignments

Goal divergence happens when there is a difference between what was expected and what was received. The Institutional Steering Chain follows the input (Governance Network) to process (Municipal Steering Capacity) to output (delivery outcomes). The previous sections identified the absence of a common normative vision and a specific resource configuration of land ownership as resources, and the factors affecting the way in which the Municipal Steering Capacity is shaped (efficiency is the primary logical factor affecting the way steering capacity is shaped; national policy is a constraint against further development of steering capacity). In this section we examine the output stage of the Institutional Steering Chain to measure goal divergence.

For the Pauwmolen project, the zoning plans and AO provided a numerical description of what was to be provided: 285 units — 143 student units; 142 social/starter units (Gemeente Delft, 2011b). However, there are no binding provisions with respect to housing typologies, duration of contracts or costs of services contained in these plans. As a result, the Pauwmolen project does not provide a clear normative vision against which its

effectiveness can be measured. Nevertheless, a divergence between what the zoning plans allow, as indicated by *Woonvisie* (Gemeente Delft, 2023), and what the actors who participated in the Pauwmolen project expected to be delivered is evident.

To properly evaluate the specific differences, it is necessary to first discuss the circumstances that led the municipality to use private developers. According to the municipality, no units were produced by DUWO (the social housing corporation) during COVID-19, resulting in the municipality relying on DUWO as an agency to provide student housing. The municipality also indicates that the type of developer also plays a role, “one developer stated a developer could provide a maximum of only a certain percentage of student housing; whereas DUWO indicated it would produce significantly above that percentage available to the other developers”. Due to a lack of alternatives for student housing, the municipality had no option but to accept the conditions imposed by the private developer. These circumstances clarify that the differences detailed in the next section are not due to poor negotiation, but rather due to an abject lack of alternative suppliers.

Three types of misalignments are evident in the data.

The first misalignment concerns tenure. The *Woonvisie* (Gemeente Delft, 2023) describes starter units as housing for young starters who are interested in settling down (this language implies a long-term tenancy); units were included in the zoning plan for this target group, but there was no specified contract length. Later, the CDA discovered that these types of units were being rented as short-term rental units, rather than as long-term housing; the CDA noted, “For young starters who are looking to settle down, a home being rented short-term (the maximum length of stay being 6 months) is not an attractive option” (CDA, 2022). The municipality's formal response (Gemeente Delft, 2022) did not deny that this practice was occurring, but only redefined it by stating “the term used to define short stay” is a misnomer, and that only “short-term contracts” are being used as a “searching period”. A commercial developer (DEL_PRI_01) confirmed that offering a short-stay type of contract allows for a higher turnover and profitability of a rental unit; when asked about the city's desire for long-term stability of community, the developer said, “We usually do not have a preference when someone wants to rent one of our properties; as long as they can afford the rent, they can rent the unit.” There are neither hard nor soft tools intended to prevent the divergence between the implied expectation and delivered outcome.

The second misalignment concerns affordability. According to the zoning plan, all 142 units in the low-rise structure must be classified as social housing, which is defined as units with a rental price below the *huurtoeslag* limit (Gemeente Delft, 2011b). However, this requirement applies only to the base rent. The CDA reported that service charges and furnishing fees circumvent the cap on affordable housing, which provides the landlord with the opportunity to increase the total cost to each tenant without increasing the base rent. (CDA, 2022). The local representative for a student housing authority (DEL_SEM_01) confirmed that this is a known tactic, stating: “Private developers will try to charge more for their service fees. When this happens, tenants often complain to the Rent Office, who then reduces the amount they can charge; however, they try it first, hoping the tenants will not notice or complain.” While the private developer (DEL_PRI_01) claims that he has been completely compliant with all applicable legislation, including the national Rent Act and the Housing Valuation System, he has not taken any illegal actions; the gap in affordability is a legal tactic, based on national law. There was no limit placed on service charges in the AO and there was no provision in the zoning plan that links the affordability requirement to the service costs. No hard tool prevented this outcome.

The service cost problem is not an evaluation of post-occupancy management behaviour per se. Rather, it falls within the scope of this research's effectiveness definition because it resulted directly from the absence of a binding provision in the governance instrument, the AO contained no cap on service costs. As defined in Section 1.4, such instrument failures constitute evidence of governance process failure within the delivery lifecycle, even when they manifest after occupation.

The third misalignment concerns handover. The original developer exited the project because they “were not equipped to develop or exploit student housing”. The municipality had signed an AO with a developer whose core business did not match the project's needs. When the commercial developer took over, they brought expertise in communal spaces and wanted to improve the design. The student political party representative (DEL_UNI_01) emphasize that “shared housing is by far the most important for us”. The student housing organization representative (DEL_SEM_01) agrees: “A really important social goal is to create communal rooms where you share a kitchen and share a bathroom”. In other words, both the city's elected student representatives and the student-run housing organization wanted communal spaces. The incoming developer,

whose expertise was in such spaces, also wanted to add them. Yet they could not. The zoning plan had already locked in the original layout, and the technical constraints from the A13 highway were already embedded in the approved noise measures. “We weren't able to change things on the plans,” the developer says. “I don't think we could change anything on the project anymore when we bought it”. Delft has no mechanism to update social requirements when ownership changes. The zoning plan's rigidity – a hard tool that typically provides legal certainty – became a weakness that locked in the original design. Even when all relevant actors aligned on the desirability of communal spaces, the steering architecture made it impossible.

Delft has a pattern of goal divergence across three dimensions. The zoning plan provided for units but did not distinguish type; the Development Agreement did not require the developer to keep the units rental for the long term; the cost of services was left unregulated, while the Zoning Plan required affordability for the units but not for the cost of services. Thus, when a stronger developer took over the project, he could not improve the site because of zoning requirements; each of these examples demonstrates how predictable it is that there have been goal divergences due to the facilitative land regime.

5.1.6 Assessment of Effectiveness in Delft

As defined in Chapter 1, effectiveness measures the degree of congruence between the normative vision and the final delivery outcome (Buitelaar & de Kam, 2009). For the Pauwmolen project, there is no substantive normative vision to use to measure effectiveness, however, effectiveness can be determined by what the zoning plan allowed, and by what it required.

Quantitatively, the targets set forth in the zoning plan have been met; specifically, 285 units have been delivered consistent with the split in the zoning plan between student and social/starters units.

Qualitative expectations were not met. As documented above, the delivered project consisted of independent studios with no communal spaces, starter units were offered as short stay rather than long-term housing, and service costs were not included in the rent cap. The CDA's specific expectation for long-term tenancy was not realized. More broadly, actors in Delft valued shared housing and affordability, but these values were not translated into enforceable requirements.

Effectiveness is therefore mixed. No goal divergence exists in quantitative targets – the required number of units was delivered. However, goal divergence exists in qualitative expectations – shared housing, long-term tenancy, and affordability in practice were not realized.

The explanatory factors identified in previous sections explain why this mixed effectiveness occurred.

First, efficiency was prioritized over effectiveness. According to the theoretical framework (Chapter 2), efficiency refers to the speed of delivery and transaction costs. When efficiency dominates, the risk is that the normative visions may be traded away to accelerate delivery. In Delft, this is exactly what happened. The *Woonvisie* (Gemeente Delft, 2023) explicitly states that speed takes precedence over affordability. The municipality overruled health advice from the GGD and bent its own noise policy to enable the project. Efficiency was high – the project was delivered. But this came at the cost of effectiveness.

Second, legitimacy was weak and reactive. As established in Chapter 2, legitimacy is the institutional glue that enables steering by fostering transparency in networks and maintaining stakeholder acceptance of the network. In a proactive way, legitimacy must exist for the municipality to prevent divergences; otherwise, it will only react after they have occurred. The municipality of Delft did not establish legitimacy through proactive monitoring or stakeholder co-signature, but rather identified problems after they occurred, such as the need for a case to be reviewed by the CDA due to a question posed to them by the CDA, and thus were reactive in their investigation and used STIP to obtain the criteria they wanted to enforce based on political motions that were adopted after the fact. The lack of a proactive monitoring system was extremely detrimental to maintaining governing legitimacy; hence, the governing network lacked the necessary trust to effectively steer towards qualitative outcomes.

Third, resource configuration placed the municipality in a weak position. As stated above, the municipality was in a position of relative weakness due to resource configuration. As documented in Section 5.1.3, land ownership was shown to be the critical resource that defined candidates' leverage within the project. Limited land ownership meant no leverage through rental agreements; the developer owned the land, so the developer

was at financial risk, and DUWO's inaction left the need to rely on private developers. The lack of these resources severely restricted the steering capacity of the governing network from the time it was formed.

Fourth, national policy acted as a binding constraint. As introduced in Chapter 1, the rent subsidy system operates as a friction in the housing market that incentivizes studios over shared housing. In Delft, this became a reality: the service cost problem was legal according to national rules and the rent-subsidy system made studios rational for developers. Hence, even when the municipality wanted to enforce shared housing or regulate service costs, it could simply not do so without changes to national law. The municipality's steering capacity was constrained by a policy framework that could not be changed single-handedly.

To summarise, Delft proved efficient at the expense of effectiveness. Reactive legitimacy and reliance on private developers, coupled with constraints imposed by national policy, have so far cooperated to preclude earlier corrections of instances of divergence or the achievement of qualitative aspirations. This divergence in Pauwmlen is not solely due to municipal weakness or lack of vision; as concluded above, it is largely the result of a trade-off between the facilitative land regime and the constrained bargaining position.

5.2 Utrecht Case Analysis

The High Five project, as described in Chapter 4, constituted land ownership by the university, a ground lease, and a non-profit developer. The analysis looks at how this arrangement shaped the steering capacity in three stages of the Institutional Steering Chain.

5.2.1 Normative Vision

In Utrecht documents, the *Convenant* Studentenhuisvesting 2025-2030 (Gemeente Utrecht, 2024) serves as the normative vision, representing the first stage of the Institutional Steering Chain: the Governance Network. The agreement has been signed by nine different entities, including the municipality, SSH (the largest student accommodation provider), Utrecht University, HU (the University of Applied Sciences), HKU (the Academy of Art and Design), MBO Utrecht, ROC Midden Nederland, VIDUIS (the student union), and BoKS (the tenants' association). The covenant establishes formal governance structures, including a steering group and a working group, with meetings scheduled at least twice annually.

The *Convenant* (Gemeente Utrecht, 2024) is the basis for the hardening mechanism established in the Action Plan (Gemeente Utrecht, 2023a) by operationalizing the previously agreed shared commitments into clear targets and standards for design. The Action Plan was developed “in consultation with the covenant partners” to ensure that it accurately reflects their intent. The technical requirements for the High Five project will be defined in the zoning plan; for example, Article 6.3.5 of the High Five zoning plan (Gemeente Utrecht, 2022) states “The use is only permitted if at least 200 student homes with non-self-contained living spaces are present”. This condition illustrates how the covenant creates enforceable regulations based on expectations created through the normative vision and how the developer cannot avoid compliance.

In the interviews, the student union representative (UTR_UNI_01) confirms that there is a unified vision of what is right, yet states that there are limitations. They say: “Our role is strictly advisory. We have some meetings, in which we get together with the other partners. Each of the two groups gives their own input about how they feel.” The student union is a covenant signatory, but it lacks legal authority.

This information shows that Utrecht has a unified vision in the two organisations. The Covenant (Gemeente Utrecht, 2024) outlines the collective commitments made, the *Actieplan* (Gemeente Utrecht, 2023a) describes how those commitments are being implemented, and the Zoning plan makes those commitments legally binding for each development project. However, the student union's advisory role shows that just because an institution is included institutionally does not ensure that it can participate in decision-making.

The question of whether the Covenant constitutes a normative vision is raised in relation to the definition of the term as set out in Chapter 1: a negotiated frame of reference shared among multiple actors (Koppenjan & Klijn, 2004). If binding commitments from all parties who sign the covenant are part of the definition, then a covenant with advisory parties could be viewed more as a preferred document with some institutional legitimacy and support rather than as a truly co-created normative vision. Nonetheless, two factors mitigate this concern. First, the primary responsible parties involved in delivering the Covenant, including SSH, the municipality and the University, all have formally accountable/binding roles in the implementation of the Covenant. Second, although the student union has an advisory role, that role is acknowledged and managed via the escalation

ladder indicating that the lack of binding authority is contained institutionally, not ignored. Consequently, the Covenant qualifies as a normative vision per the Framework's definition, while also understanding that the inclusion of stakeholders is separate from authority of stakeholders. However, the determination that advisory co-signature is meaningful participation remains conceptually contested and is required for this interpretation.

5.2.2 Land Ownership and Resource Interdependency

Within the governance network, resource configuration determines actor leverage. The *bestemmingsplan* (Gemeente Utrecht, 2022) indicates “the land within the plan area is owned by Utrecht University” and is therefore not owned by the municipality, although the university acts as a partner in the tripartite arrangement. The ownership of land creates an important mechanism, as indicated in the *intentiedocument* (Stichting Studenten Huisvesting, 2020) adds that “SSH will enter into a ground lease contract with Utrecht University to use the land”. The *Actieplan* (Gemeente Utrecht, 2023a) clarifies that this ground lease has binding conditions, stipulated to ensure that the land will be used in the same manner for a minimum of 20 years after the ground lease is executed. As such, ground lease is not merely a theoretical possibility; it is a practical instrument with binding conditions for land use that will endure for many decades, thereby ensuring a long-term commitment to the envisioned normative future.

The developer, SSH, is a non-profit housing corporation. The *intentiedocument* (Stichting Studenten Huisvesting, 2020) shows that SSH guarantees affordability for a minimum exploitation period of 20 years. Moreover, SSH accommodated the municipality's request to include shared housing: “The shared housing units were included at the request of the municipality, in accordance with the covenant”

In the interviews, the student union representative (UTR_UNI_01) notes a limitation of this arrangement: “the university has a lot of grounds, but they can't build their own housing on it. That has to do with what is public and what is private money”. This reveals that while university land ownership provides a foundation for steering, public funding rules still constrain what can be done with that land. Consequently, Utrecht still depends on developers – in this case, the non-profit SSH – to build housing.

This evidence reveals that Utrecht operates under an active land policy, enabled by university land ownership and tripartite collaboration. The municipality uses ground lease through the university to attach binding conditions. The non-profit developer's alignment with the covenant's commitments creates a collaborative dynamic. Nevertheless, even with an active land use policy, the municipality still relies on the actions of developers and relies on SSH's continued non-profit intent and political stability to ensure that the ground lease will be enforced for the specified duration. Therefore, the municipality will retain a degree of dependence on SSH; however, this dependence can be managed by leveraging binding commitments to ensure that the social uses are met.

5.2.3 Efficiency as a Managed Trade-Off

This section (the process) will move from reviewing the governance network, to how much efficiency impacted the steering process of Utrecht City.

In Utrecht documents, the *Actieplan* (Gemeente Utrecht, 2023a) an evaluation of previous performance, only 40% of planned units created thus far are considered, therefore concluding that “this level of growth is not acceptable”, so more steering is required to move forward with the shared housing vision.

Utrecht is following through with this commitment to increase steering however there are outside constraints - for example the *raadsvoorstel* (Gemeente Utrecht, 2023b) for High Five shows how efficiency pressures are managed in practice. The municipality explicitly chooses not to reopen negotiations to increase the shared housing quota beyond 200 units, reasoning that any change would cause “significant extra costs and delay” and that the speed of delivery is itself a political goal (Gemeente Utrecht, 2022). Here, efficiency is a factor in decision-making, but the binding requirement of 200 shared units remains in place.

The *reactienota* (Gemeente Utrecht, 2021b) provides another example. It states that adaptive reuse of existing buildings is possible but too slow: “When the renovation is complete... buildings will become vacant. However, that will only be in a few years. Until then, there is no space for new student housing. Because the demand for student housing is very high now, High Five is being built”. Delivering housing quickly is prioritized over waiting for adaptive reuse, but this choice is made transparently and justified.

In the interviews, the student union representative (UTR_UNI_01) confirms that stakeholders are aware of this tension. When asked about the balance between long-term and short-term housing, they state: “By investing in long-term housing, you can serve fewer students. It's hard to balance right now”.

This evidence reveals that Utrecht manages efficiency within a normative framework. The *Actieplan* (Gemeente Utrecht, 2023a) shows that when effectiveness gaps appear, the response is more steering. The *raadsvoorstel* (Gemeente Utrecht, 2023b) shows that efficiency pressures are acknowledged but binding requirements remain in place. The *reactienota* (Gemeente Utrecht, 2021b) shows that trade-offs are made transparently and justified. Utrecht uses efficiency as a factor in decision-making without sacrificing the binding commitments of the normative vision.

5.2.4 National Policy as Binding Constraint with Joint Lobbying

Continuing with the process stage, this section examines how Utrecht responds to national policy constraints.

In Utrecht documents, the *Actieplan* (Gemeente Utrecht, 2023a) includes a lobby section: “We continue the lobby to modernize the housing valuation system as soon as possible in combination with income support for students”. The *Convenant* (Gemeente Utrecht, 2024) commits parties to joint lobbying: “Parties ensure knowledge exchange and use the local cooperation for a joint lobby”. The nine municipalities are working together to lobby the national government for changes to legislation regarding shared housing; acting collectively will be effective in lobbying for change on behalf of all municipalities participating in the covenant for shared housing.

The student union representative (UTR_UNI_01) provides specific examples of national constraints during interviews with him. When asked about enforcement, the representative comments: “There is no active enforcement of the rules other than that people must go to the Rent Commission for enforcement of the rules relating to excessive rent. If you have someone whose paying too much rent, after six months of not complying, he/she will just have to lower their rent; he/she does not receive any refund for what he/she has already paid.” This indicates an active gap between the existence of rules and enforcement; enforcement relies solely upon complaints by citizens, and the penalties for noncompliance are minimal. In addition, the student union representative identifies issues of public funding as a constraint: “The university has a lot of land to develop for housing. So far as university-owned land cannot be used to develop housing, and the reason is that there is a distinction between public & private money.”

The evidence, therefore, indicates that Utrecht recognises national policymaking restrictions but does not view them as fatalistic. The municipal government, along with the full covenant partnership, will collaborate on single-lobby efforts to address some of the restrictions associated with national policymaking. Additionally, the student union’s comments on the enforcement mechanics further justify a single, combined effort among the full covenant partners to advocate for national policy change.

5.2.5 Goal Divergence: Limited and Managed

At the output stage of the Institutional Steering Chain, goal divergence measures the gap between vision and delivery. This section examines whether such divergence exists in Utrecht.

In Utrecht documents, the *raadsvoorstel* (Gemeente Utrecht, 2023b) for High Five documents a specific tension. The new coalition agreement (post-2022) wanted more shared housing, but the High Five project was already locked in at 200 units. The municipality of Utrecht explicitly states that reopening negotiations would involve “significant extra cost and delay”, and that the speed of delivery is a political objective (Gemeente Utrecht, 2022). Therefore, there is a disconnect between the aspirational political ambitions of the new coalition and the actual project already in place; however, this is being presented as a transparent trade-off rather than as a hidden failure.

The transparent nature of trade-offs is supported by institutional mechanisms for conflict resolution. In one of the interviews reviewed, the representative from the student union corroborated that the university has created friction with their partnership: “The university is not that good of a partner... they are very stubborn... they can make it challenging to work together.” The partnership agreement has structures in place to de-escalate any friction before it evolves into divergence on goals; and, again, the student union representative confirmed this: “We do use an escalation ladder with the university. The people there all have the best interests of students at

heart, which makes talking with them a lot easier. We would escalate on big things, but not on something small like the amount of parking spaces”.

This evidence shows that there are limits to and methods for managing goal divergence in the city of Utrecht, via the following two principals: first, when tensions arise as a result of conflicting political ambitions (i.e. ones that may conflict with projects that have already been ‘locked-in’ to the governance process), the available options for resolution are transparently defined as trade-offs rather than being hidden or ignored; second, when friction occurs among actors, the acts of providing an escalation ladder provides a formalised structure through which to achieve resolution; this means that although the divergence itself does not cease to exist it can be managed via established institutionalised processes.

5.2.6 Assessment of Effectiveness in Utrecht

As defined in Section 1.4, this research measures effectiveness through governance process fidelity — the degree to which binding instruments reflect the normative vision — rather than through post-occupancy verification, which is not possible as High Five remains under construction at the time of writing. With that scope clearly bounded, the evidence indicates that congruence between agreed commitments and governance process is high.

What was agreed: The *Convenant* (Gemeente Utrecht, 2024) acknowledged that supporting the well-being of students is important through the means of provision of ‘shared’ housing. The zoning plan (Gemeente Utrecht, 2022) established that 200 shared housing units will be provided. The ground lease will provide for a 20-year period of exploitation and the *Actieplan* (Gemeente Utrecht, 2023a) also established the pay-per-use principle for service costs.

What was delivered: 200 shared units are legally required under Article 6.3.5 of the zoning plan and contractually secured through the ground lease. As of the time of this research, construction is ongoing; the governance instruments locking in this commitment are in place and have not been subject to renegotiation.

The student union representative (UTR_UNI_01) concurs that the tripartite structure (municipality/university/SSH) is more likely to protect student interests than a standard private-market model in which a private developer builds and operates student housing, stating “*Absolutely 100% Yes*”. While this support does not provide for a metrics of effectiveness, it provides a validation of the legitimacy of the governance process - in essence, it provides stakeholder buy-in to the governance process. The legibility factor as defined by the theoretical framework (Chapter Two) is an explanatory variable that ultimately leads to effectiveness. By having both buy-in and trust in the process, stakeholders will be much less apt to challenge outcomes, resulting in improved municipality ability to guide without having to bear constant opposition. Thus, the support of the student union provides demonstrate of why Utrecht achieved high levels of effectiveness; the governance network has the support and trust of the key actors.

Thus, based on the available evidence of governance process, effectiveness will ultimately be high. Evidence indicates that that what was agreed upon to be delivered was, in fact, delivered. The explanatory variables, including the legitimacy as demonstrated by the support received from student union, provide explanation of why such a high level of congruency was achieved.

The factors that were previously discussed reinforce this position. The existence of efficiency pressures has certainly been acknowledged; however, they will be maintained through the binding requirements such as Article 6.3.5 in the zoning plan. The legitimacy of the project will be achieved through a series of institutionalised processes. For example, a covenant will provide co-signing to gain stakeholder acceptance, an escalation ladder will provide a structure for resolving conflicts, and there will be an annual process for self-correction through monitoring. Additionally, as stated earlier, public ownership of land allows the use of ground leases to serve as a steering mechanism, and SSH (a non-profit developer) has a mission that aligns with the obligations contained in the covenant, which is another means of providing legitimacy to the project. Utrecht, as mentioned previously, has taken collective action to respond to national policy limitations of lobbying together.

Therefore, it appears that the governance process in the city of Utrecht indicates high projected effectiveness based on governance process fidelity; however, several caveats should be considered. For example, the project was still under construction at the time of this research, so we do not yet know the actual outcome of the post-occupancy period. Also, the success of the project will be contingent upon conditions that will not be replicated,

such as the ownership of the land by the university, the use of a non-profit developer (SSH) and a coalition of nine parties that have similar interests. The Utrecht model also has limitations; for instance, the university will need to operate within the rules of public funding while also managing (not eliminating) its dependence on developers (even non-profit developers). Therefore, while it appears as though the governance process will provide a high level of effectiveness, this can only be substantiated once the post-occupancy verification process has been completed.

5.3 Comparative Analysis

This section presents a direct comparison of the two cities, Delft and Utrecht, using the Institutional Steering Chain to analyse how the two locations developed through conflicting institutional conditions and steering strategies in providing divergent outcomes.

5.3.1 Normative Vision and Resource Configuration

The first stage of the Institutional Steering Chain is input: the Governance Network.

Both Delft and Utrecht had an affinity towards providing shared housing within their planning documents, *Woonvisie* (Gemeente Delft, 2023) and *Convenant* (Gemeente Utrecht, 2024). Both cities experience similar market factors including high demand, dependency upon developers and legal limitations imposed by national policies.

However, the two cities responded differently to the above market factors. Before expanding on the two cities' differences; it is important that both cities also share several similarities. Both Delft and Utrecht currently experience some of the highest levels of market pressure in the Netherlands; both cities are developing large PBSA projects; both cities operate under the same national regulatory framework; and both depend on developers to create housing opportunities. It is important to note that the AO is not inherently a weak instrument; in other Dutch municipalities it has been used to secure binding qualitative conditions. In Delft, it was not the instrument that failed but its contents, the normative commitments that should have preceded and shaped it were absent. In Utrecht, it was not the instrument that failed but its contents, the normative commitments that should have preceded and shaped it were absent. These shared conditions matter because they establish that the divergent outcomes observed below are not the product of fundamentally different contexts. They are the product of different steering choices within the same context.

The first difference lies in their normative vision. Utrecht has a shared, multi-party covenant that establishes a collective frame of reference before individual projects begin. Delft, by contrast, has a unilateral municipal document that expresses preferences, not commitments, and no other actor is party to its contents. The consequences of this difference are visible in how external actors perceive the two cities. The commercial developer (DEL_PRI_01) from Delft acknowledges this directly, stating that in Utrecht “*they already agreed on the rules of the game before developers came in*”. This statement captures how Utrecht establishes clear rules before projects begin, thereby providing developers with predictability. Delft's approach of negotiating on a project-by-project basis, by contrast, lacks this certainty. As both cities are similarly dependent on developers, developers in Utrecht can assess the financial viability of projects and commit to the goals agreed upon at the time the contract was established. In comparison, the developer commitments at the time of construction contracts for the development of shared housing in Delft are vulnerable to future changes made by developers, due to financial pressures.

The second difference concerns resource configuration. Utrecht uses standard public land ownership (and thus can create active steering tools through ground leases) as the basis for how publicly owned land is to be used. Delft has little public land ownership and therefore follows a passive land development approach, i.e., cannot use land-based requirements (like the AO) to meet a planned standard. In contrast to Utrecht, where land ownership determines (and therefore shapes) all subsequent active steering options, imitating a ground lease will not be possible in Delft. Utrecht can create binding requirements through a ground lease (i.e., a 20-year ground lease with a differential fee for social housing), while for Delft/create an AO with the developer and rely on the developer's compliance with any agreed standard.

There is a significant disparity between the two municipalities in their ability to leverage authority. The developer of the residence in Delft owns the property and bears financial risk; thus, it has the bulk of the negotiating power to establish an agreed standard of development and must work cooperatively with the landowner's agreement to proceed with development. The developer in Delft can leverage the fact that the land

has a building permit and the potential use of the property but will likely not work cooperatively with the municipal approval to develop the property. In Utrecht, the university's land ownership enabled the municipality to attach binding conditions through a ground lease. The non-profit developer (SSH) had no profit motive to resist these conditions, and its long-term role as operator aligned its incentives with the normative vision. This meant that power was distributed across the tripartite structure rather than concentrated in a single actor.

It should be noted, however, that Utrecht's covenant includes advisory-only parties (the student union). The difference is not that Utrecht has a fully binding vision while Delft has none, but that Utrecht's legitimising signatories are institutionally managed through an escalation ladder, whereas Delft has no such mechanism.

5.3.2 Steering Instruments

The second stage of the Institutional Steering Chain is process: how the municipality translates the governance network into binding requirements. The two cities employed different instrument architectures.

Utrecht employs a layered instrument architecture. The process begins with the covenant, which establishes shared commitments. From there, the *intentioned document* (Stichting Studenten Huisvesting, 2020) captures the developer's commitment before legal processes formally begin. The *bouwenvelop* (Gemeente Utrecht, 2021a) then translates these commitments into concrete design requirements, such as minimum distances and green compensation. Next, the zoning plan hardens the shared housing target into a legally binding conditional obligation through Article 6.3.5. The ground lease locks in long-term exploitation, requiring that land be used for student housing for at least 20 years. Although the escalation ladder (*prestatieafspraken*) provides a structured approach to dispute resolution, there is redundancy across the various layers of instruments available to protect against violations of established standards, as no single instrument will cover all instances of non-compliance.

Delft's toolkit differs from Utrecht by being disjointed as a whole. The principal tool being used is the *Anterieure Overeenkomst* (AO) Private Agreement which includes no such binding social terms. While the zoning plan included 285 units, there was no requirement for shared housing. Whereas Utrecht's layered toolset could build upon itself (the greater system), Delft's toolset (instruments) does not build upon one another. When the AO turned out to be ineffective, there was no backup to implement the normative vision; therefore, the lack of layers in the toolkit provided no redundancy to Delft. Since the layering of instruments creates multiple enforcement points, if one instrument were to fall through (e.g., no binding conditions in the AO), the other two instruments (e.g., the zoning plan, ground lease) could still enforce the normative vision. On the other hand, a single hollow instrument in a broken toolkit would collapse the entire steering mechanism as it did for Delft.

Both cities have relied on outside developers to produce the physical housing through different contractual arrangements. Utrecht managed its reliance on outside developers through having compelling conditions to non-profit providers; whereas Delft worked with commercial entities through negotiations in a facilitative series. Thus, both cities share the condition of being dependent on other developers to develop housing, but the process they utilized to manage their dependency was quite different.

5.3.3 Output and Success Metrics

The third stage of the Institutional Steering Chain is output: the Delivery Outcomes. Utilizing the operationalisation framework established in Chapter three (table 3.4), table 5.2 illustrates how Delft and Utrecht have been comparably evaluated against six output indicators.

Dimension	Indicator	Delft	Utrecht
Quantitative targets	Units delivered	285 (met)	925 (on track)
Typology diversity	Shared housing requirement	None	200 units (conditional obligation)
Tenure stability	Long-term contracts	Short stay (no binding provision)	Long-term (20-year lock-in (ground lease))
Affordability	Service cost regulation	None (bypassed via fees)	Pay-per-use principle embedded

Efficiency management	Speed vs quality trade-off	Speed prioritized	Managed within normative framework
Legitimacy	Stakeholder acceptance	Weak, reactive	Proactive (co-signature, monitoring, escalation)

Table 5.2: Comparative assessment of Delft and Utrecht

Note: Utrecht output values in the right column reflect governance process fidelity at the time of research - High Five was still in the construction phase, therefore verification of occupancy is outside the scope and would require further research.

Both cities faced similar challenges of efficiently delivering housing units rapidly under intense competitive conditions; however, their approaches are considerably different.

The first distinction between the two cities is that Delft explicitly prioritises efficient provision over effective delivery when faced with challenges; as an example, the *Woonvisie* (Gemeente Delft, 2023) indicates that meeting ‘speed’ requirements took precedence over providing ‘affordable’ housing. The municipality has, at times, overridden lawful health ordinances and reinterpreted its own noise ordinance to expedite development. Loosening the framework to deliver the unit faster is a practical example of this priority. Conversely, Utrecht accepts efficiency pressure but requires compliance with the requirements. The *raadsvoorstel* (Gemeente Utrecht, 2023b) acknowledges that changing agreements would cause delays, yet Article 6.3.5 remains in the zoning plan. The *reactienota* (Gemeente Utrecht, 2021b) justifies choosing new construction over adaptive reuse on the grounds of speed, but this trade-off is made transparent.

Both cities made trade-offs; the difference lies in which commitments were sacrificed. Delft sacrificed qualitative goals to achieve speed; Utrecht sacrificed speed (by not reopening negotiations) to preserve qualitative goals.

The second difference concerns how goal divergence is identified and managed. In Delft, goal divergence is explicit and multi-dimensional. Three distinct misalignments emerged: tenure (short stay instead of long-term), affordability (service costs bypassing rent caps), and handover (incoming developer could not add communal spaces). Divergence was identified by the political opposition (the CDA), not by the executive's self-assessment. The municipality's response was reactive – investigating only after questions were raised.

Utrecht operates differently on each of these counts. First, regarding identification of divergence: Delft relied on political opposition to uncover problems; Utrecht, by contrast, uses executive self-assessment, with the *Actieplan* (Gemeente Utrecht, 2023a) stating that past progress has been insufficient and calling for extra steering. Second, regarding transparency of tensions: In Delft, divergence remained hidden until exposed by the CDA; Utrecht, however, makes its tensions transparent, as demonstrated by the *raadsvoorstel* (Gemeente Utrecht, 2023b) which documents the conflict between new political ambitions and locked-in projects openly, framing it as a trade-off rather than a failure. Third, regarding resolution mechanisms: Delft had no structured way to resolve friction once identified; Utrecht, in contrast, provides an escalation ladder for resolving disagreements when they occur. The contrast is that Utrecht identifies gaps through self-assessment and addresses them through institutionalized processes before they become failures, while Delft relies on political opposition to catch failures after they have already occurred.

Using the Buitelaar & de Kam (2009) framework, explanatory factors, efficiency and legitimacy will be assessed, followed by effectiveness as the key output.

Both cities completed their development projects, but they made different trade-offs regarding efficiency. While Delft maintained its normative vision as a priority within the broader context of its development plan, it loosened that framework to allow greater efficiency. Utrecht faced constraints on efficiency but remained committed to providing complete transparency while making trade-offs. As a result, both cities achieved efficiency; however, Delft did so at the expense of normative vision, whereas Utrecht sustained its commitment.

The distinction between the legitimacy of the two cities is equally apparent. Legitimacy in Delft was weak and highly reflective. To illustrate this weakness, the only way problems were identified was after they occurred. The CDA asked questions that resulted in reactive investigation, STIP passed political motions to impose requirements, and there was no proactive system for monitoring progress. In contrast, Utrecht built its

legitimacy through institutionalised processes. The covenant allowed for the acceptance of stakeholders based upon the participation of all co-signers. The existence of a structured framework for the escalation ladder provides for a defined framework for resolving disputes. The process of self-correcting itself through an annual monitoring process was institutionalised. The student union's endorsement of the covenant as being “100% better” than a market-driven approach exemplifies the legitimacy and trust that exists for both cities.

With these explanatory factors established, effectiveness can now be assessed. Effectiveness is mixed in the city of Delft; although it achieved its quantitative goal of producing 285 units, it did not achieve qualitative expectations for shared housing, long-term tenancies and affordability in practice. The governance process in Utrecht points to high effectiveness, as it has achieved the shared housing planning target of 200 units and the pay-per-use principle is already determining service costs before they become an issue.

Applying the Buitelaar & de Kam (2009) framework, Utrecht's governance process also indicates that it has high effectiveness, as evidenced by management of efficiency and proactive legitimacy, whereas the city of Delft presents a mixed picture as to its effectiveness; it has achieved high efficiency at the cost of its normative vision and has weak/ reactive legitimacy; therefore, only partially adhere to its effectiveness (quantitative goal met, but qualitative expectations not met). However, it would be a mistake to interpret the outcome for Delft as a governance failure; given the structural constraints it faced due to limited land ownership, inactivity of DUWO and market pressures, accepting a hollow AO may be seen as a rational decision. Conversely, Utrecht has both structural constraints (i.e., university land ownership, the role of the non-profit developer and nine party coalition) that are not available to all cases; as such, each case demonstrates that there are shared structural constraints present (market pressure, developer dependence, limits on national policy) that do not alone ensure that a desired delivery outcome occurs; thus, it requires the steering capacity of the participants to ensure desired delivery outcomes are met.

CHAPTER 6: DISCUSSION

Chapter 5 established that steering capacity, not the presence of structural constraints, explains the divergent delivery outcomes in Delft and Utrecht. This chapter positions that finding within the existing literature, identifies what is theoretically novel or surprising about it, and acknowledges the methodological limitations that qualify its scope. The discussion follows the three stages of the **Institutional Steering Chain** established in Chapter 2: input (Governance Network), process (Municipal Steering Capacity), and output (Delivery Outcomes).

6.1 Positioning Findings in Literature

This section discusses how the findings from Delft and Utrecht relate to the theoretical framework established in Chapters 1 and 2, and what they contribute to the existing literature on Governance Networks, Municipal Steering Capacity and student housing delivery.

6.1.1 Normative Visions and Actor Configurations

The first stage of the Institutional Steering Chain concerns how actors negotiate a shared normative vision within the governance network. As established in Chapter 5, Delft and Utrecht exhibit fundamentally different patterns at this stage.

The absence of a shared normative vision in Delft

The theoretical framework indicates that a Normative Vision requires multi-party approval in order to be considered a binding reference point (Koppenjan & Klijn, 2004). As noted above, this normative framework is missing in Delft; therefore, without this reference framework, the governance network cannot align, which leads to a reactive, rather than proactive, governance approach. This is corroborated by interviews where the municipal policy advisor (DEL_PUB_01) states that the city “just tells developers to 'follow the law, period'”, demonstrating that there is no pro-active effort made to create an agreed-upon normative vision.

The case study in Delft also illustrates literature's description of a facilitative land regime (Heurkens, 2012; Needham, 2014). As was discussed earlier, the municipality owns very little land and must negotiate with private landowners. The implications of this finding extend the literature on facilitative regimes to include how privatised land affects the interdependence of resources in favour of the developer (Koppenjan & Klijn, 2004; van der Krabben & Jacobs, 2013).

Overall, both cities experienced structural constraints due to high market pressure, a heavy reliance on developers, and limitations based upon national policy. However, the manner in which these constraints were responded to differs across cities, lending support to the view that steering capacity, rather than the existence of constraints per se, explains the differences in delivery outcomes across the cities.

The shared normative vision in Utrecht

In contrast, Utrecht has a collective normative framework and a dynamic land use system in place. As concluded, the *Convenant* (Gemeente Utrecht, 2024) has nine parties to it, demonstrating that negotiated agreement is conceptually the bedrock of efficient steering (Koppenjan & Klijn, 2004; (Teisman et al., 2010). It also provides formal governance arrangements in the form of a steering committee, and a working group as institutional arrangements for collaboration, which is an important factor in managing complex governance networks as indicated by the literature (Koppenjan & Klijn, 2004).

However, the Utrecht instance shows that there are limitations to the literature as well. The student union, despite its status as a signatory of the covenant, has only a consultative role. Stakeholder participation literature typically assumes an endorsement of co-signing constitutes power (Heurkens, 2020; Hoekstra & Gentili, 2023), while this finding suggests that being included institutionally may be primarily symbolic rather than substantive. Additionally, these findings will further clarify actor configurations by distinguishing between having a seat at the table (stakeholder agreement) and having administrative authority (stakeholder power).

However, as noted in Section 5.2.1, the student union's advisory role means this is not a fully binding agreement. Utrecht's normative vision is better understood as a legitimised municipal preference document with broad institutional buy-in, rather than a genuinely co-produced vision with binding authority for all signatories.

This finding extends the literature on stakeholder participation (Heurkens, 2020; Hoekstra & Gentili, 2023) by identifying a distinction that the theoretical framework does not sufficiently capture: stakeholder acceptance (a seat at the table) is distinct from stakeholder authority (a binding vote). The theoretical concept of A Normative Vision requires further specification along this dimension - distinguishing between advisory co-signature (which provides legitimacy) and binding co-ownership (which provides enforcement). Future governance research should operationalise this distinction explicitly.

Towards a refined conceptualisation of normative visions

The distinction identified in this research between stakeholder acceptance (a seat at the table) and stakeholder authority (a binding vote), suggests a refinement to Koppenjan & Klijn's (2004) concept of The Normative Vision. The original framework assumes that multi-party agreement implies shared commitment, but it does not differentiate between different modes of participation. This research proposes that normative visions can be more usefully understood as operating along two dimensions: the breadth of signatories (who is included) and the depth of authority (what power they hold).

Based on this distinction, two ideal-typical categories of signatories can be identified. Legitimising signatories are actors whose co-signature provides political and social legitimacy to the normative vision, but who hold no binding authority over its implementation, as illustrated by the student union in Utrecht. Authorising signatories are actors whose co-signature carries a binding commitment and enforcement authority, as illustrated by SSH, the municipality, and the university in Utrecht. Exploration into future governance studies should verify whether such a distinction exists in other multi-stakeholder arrangements as well as if the existence of legitimising signatories without authorising power has systemic implications for the execution of the original projects.

The Power-Interest Matrix: Perception gaps between paper and human reality

As discussed in Chapter 3, the **Power-Interest Matrix** (Mendelow, 1981) allows actors to be classified according to their desire for successful project outcomes and their ability to influence those outcomes. The research from each city indicates an important difference between what is documented (the paper version) and how those documents are implemented in practice (the human version). The municipality sees itself as having low relative power, while other actors view it as very powerful; in Utrecht, the student union appears to play a prominent role in the covenant, but it is largely an observer.

This difference in perception shows that you cannot determine power purely from formal documents (Koppenjan & Klijn, 2004). Therefore, the findings of this research indicate that the Power/Interest Matrix should be formulated from both the paper and human realities to yield accurate results, suggesting that Mendelow's (1981) framework is valuable when conducting a governance network analysis approach.

Co-dependency versus hierarchy in governance networks

An analysis of how documents represent authority (the municipality as a hierarchy) versus how people originally view authority (as a co-dependence) demonstrates that theory must change to account for how municipalities and political parties work together. The political party representative (DEL_UNI_01) for the student body notes that "officially, it is a hierarchy, but in reality, I believe it to be a form of co-dependence." This supports the findings of Koppenjan & Klijn (2004) and Teisman et al. (2010), who argue that rather than operating from a top-down perspective, network governance theory emphasizes interdependence of resources and reciprocity. The municipality's need to provide more social housing by developing private land has exacerbated the reality of co-dependence between the municipality and the political party in this case, rather than a more traditional hierarchy, even though the municipality has the authority to issue permits.

6.1.2 Municipal Steering Capacity

Research focused on Municipal Steering Capacity primarily emphasizes the choice of instrument, while not providing enough detail regarding the sequencing of these instruments. This research extends the current literature by illustrating the presence of redundancy in layered instruments, a condition not covered by the current literature (Buitelaar & de Kam, 2009; Needham, 2014).

Layered versus fragmented instrument architecture

The literature on Municipal Steering Capacity emphasizes that the choice and sequencing of instruments shape steering capacity (Needham, 2014). However, the findings from Delft and Utrecht extend this literature by showing that layering instruments – rather than relying on a single tool – creates redundancy. Utrecht's layered architecture demonstrates that multiple instruments working in sequence can lock in commitments from the normative vision at different stages of the delivery process. Delft's fragmented toolkit, by contrast, placed all weight on a single instrument – the AO – which proved insufficient. This suggests that the **Hardening Mechanism** is more robust when instruments are layered than when they stand alone.

Conditional obligations as a hardening mechanism

Utrecht's use of a conditional obligation (*voorwaardelijke verplichting*) in the zoning plan – requiring a minimum of 200 shared units – is a concrete example of the hardening mechanism. Delft's zoning plan contained no such condition. Additionally, the findings support the literature on the use of legal & contractual instruments in urban development (van der Krabben & Jacobs, 2013). The strongest legal instruments for the municipality to use for the development of urban areas in the Netherlands are conditional obligations. Utrecht has used these tools, while Delft has not; this provides evidence that a softening of the hardening mechanism depends on the constraints imposed by the municipal authorities and their level of political will.

Ground lease as a long-term lock-in mechanism

In terms of the student housing development project, Utrecht's use of land lease (*erfpacht*) provisions generated interest from Utrecht University; the minimum exploitation period of the land is 20 years. Previous research (Needham, 2014; Hartmann & Spit, 2015) suggests that an active land policy produces a greater likelihood of success than a facilitative policy. In cases where the municipality (or a publicly owned entity) holds the land title, the municipality can apply enforceable conditions at the time of the initial ground lease to require the developer to continue to use the property for its intended purposes. In contrast, when land is held by a private landowner, the municipality must rely on contractual arrangements (e.g., the AO) that do not have the same level of enforceability and can be modified more easily.

Analysis of the Utrecht case also illustrates an additional limitation associated with active land policies. Specifically, as indicated in Section 5.2.2, the representative for the student union (UTR_UNI_01) stated that public funding rules limit the university's ability to construct its own student housing. This finding expands upon previous research that concluded that public funding rules also limit the potential activities of the landowners even when they have a lever of land ownership. The municipality, therefore, remains dependent upon private developers (even those operating through non-profit organisations) to construct actual student housing.

This research draws on the work of Needham (2014) and Heurkens (2012) in distinguishing between active and facilitative land policy; however, in their research, Shahab et al. (2021) suggested that land policy exists on a continuum and is not a binary relationship. The municipalities of Delft and Utrecht represent opposite ends of this continuum, providing analytical clarity but perhaps overemphasising the distinctions between them. Although many Dutch municipalities are somewhat active in using tools typical of passive municipalities to achieve goals, there is limited research on whether municipalities are effective at layering these tools, and so it is important for future research to expand this area of knowledge.

The ability of municipalities with land to apply the tool of conditional obligations is dependent on whether the municipality holds sufficient land. If they do not hold public land, a well-constructed zoning plan with conditional obligations (Article 5.161c of the Bkl) can be used in lieu of holding public land.

6.1.3 Delivery Outcomes

Buitelaar & de Kam (2009) treat effectiveness, efficiency, and legitimacy as co-equal measures of planning success. This research refines that framework by establishing a hierarchy: effectiveness serves as the primary dependent variable, while efficiency and legitimacy function as explanatory conditions that account for why effectiveness was or was not achieved under a given governance configuration. The cases of Delft and Utrecht (Netherlands) provide empirical support for this hierarchy. In the case of Delft, effective measures were sacrificed in favour of highly efficient ones; therefore, these two measures do not simply complement each other, but rather they exist at odds due to market pressures. This suggests that Buitelaar & de Kam's (2009) original evaluation framework can be extended into a causal model of governance breakdown.

Legitimacy as institutional glue

The findings also support the role of legitimacy as institutional glue that enables steering (Chapter 2; Buitelaar & de Kam, 2009). The high legitimacy of the tripartite structure endorsed by the student union reflects the same high level of legitimacy afforded to the tripartite structure and its participants. Conversely, the legitimacy experienced by Delft was weak and reactive, relying heavily on political opposition to correct the failures that occurred because of the redeveloped services delivered to the public. This is an extension of Koppenjan & Klijn's (2004) literature on network governance, identifying what proactive legitimacy looks like in practice, including; stakeholder acceptance provided by co-signatures, transparency provided by monitoring and

structured conflict resolution provided by escalation ladders. Reactive legitimacy (i.e., correcting failures after they occur) does not provide enough assurance to stop goal divergence.

Efficiency as a managed trade-off

The differences in how the two municipalities respond to efficiency pressures illustrate that there is a trade-off between achieving efficiency and achieving effectiveness. Buitelaar & de Kam (2009) have identified three evaluative metrics for planning success; effectiveness, efficiency and legitimacy; both cases show that the attainment of efficiency can be achieved to the detriment of the attainment of effectiveness - or the two can be managed together and success achieved, depending upon the systems of governance in place and planning strategies employed. The conclusions drawn from the case of Delft are that efficiency pressures often create the need for the normative vision to be renegotiated; however, the case of Utrecht indicates that this is not a foregone conclusion.

6.1.4 Theoretical Contributions

The results of both Delft and Utrecht are significant to the research objective: to evaluate how municipal control and land ownership influence the delivery of student housing. The facilitative zone in Delft, where instruments are highly fragmented, has led to a lack of alignment between vision and delivered products. In Utrecht, on the other hand, the combination of an active zone using layered instruments with clear legitimacy has meant that the alignment has been maintained throughout the different phases of delivery. These two contrasting examples will be further discussed in subsequent subsections with respect to their implications for broader theoretical debates.

Delft as a new example of market-led planning failure

The example of the Delft case also provides a new empirical case study in support of market-led planning failure (Livingstone & Sanderson, 2022). The gap identified in Pauwmolen is not the result of a municipal failure but a predictable outcome of a facilitative land governance framework; the municipal government lacks land ownership, binding instruments, mechanisms to modify obligations when conditions change, and proactive legitimacy to detect problems at an early stage. This finding provides evidence supporting the literature on the limitations of facilitative governance in situations with high market pressure (van der Krabben & Jacobs, 2013; Heurkens, 2012).

An alternative reading of the Delft case is that the municipality acted rationally, given its structural limitations. With limited land ownership, an inactive DUWO, and very high market pressure, accepting hollow AOs from DUWO was likely the only way to provide affordable student housing in reasonable timeframes.

Utrecht as evidence that public land ownership enables the hardening of the normative vision

The Utrecht case demonstrates that public land ownership – even when held by a university partner rather than the municipality directly – enables the hardening of the normative vision into legally binding requirements. A ground lease, combined with conditional obligations in the zoning plan and proactive legitimacy through co-signature and monitoring, allowed Utrecht to translate the covenant's commitments into enforceable conditions. This stands in contrast to Delft, where no shared normative vision existed. The *Woonvisie* (Gemeente Delft, 2023) expressed municipal preferences, but these were never translated into enforceable conditions in the zoning plan or AO. This finding provides empirical support for Needham's (2014) and Hartmann & Spit (2015)'s arguments that active land policy enables stronger steering capacity. However, the Utrecht case also reveals the limits of public land ownership, national funding rules still constrain what the landowner can do, and dependency on developers – even non-profit ones – is managed rather than eliminated.

In summary, this thesis confirms existing literature on the importance of active land policy (Needham, 2014; Hartmann & Spit, 2015) and network governance (Koppenjan & Klijn, 2004). It extends this literature by operationalising Municipal Steering Capacity for the student housing submarket, demonstrating empirically how layered instruments create redundancy in the hardening mechanism: if one instrument fails (the AO lacks binding provisions), others (the zoning plan's conditional obligation or the ground lease) still provide protection, ensuring that the normative vision remains enforceable. This research has revealed three significant misunderstandings (tenure, affordability, handover) around the use of facilitative regimes because of their fragmented implementation. The study identifies the connection between proactive legitimacy (through co-signature, oversight, and escalation)- preventing these misunderstandings from arising.

The illustration of these connections is predicated on Utrecht's success; specific conditions must be met for it to remain so. These include university ownership, not-for-profit development, and a coalition of nine parties. Future research should determine whether similar findings would apply in other circumstances.

Contribution of the Institutional Steering Chain framework

The Institutional Steering Chain, developed in this thesis, synthesises network governance (Koppenjan & Klijn, 2004) with planning evaluation literature (Buitelaar & de Kam, 2009; Needham, 2014). The Institutional Steering Chain advances existing literature by temporally ordering and hierarchically weighting the three stages of municipal steering - vision negotiation, instrument design, and outcome evaluation - within a single analytical model. Unlike previous frameworks, it treats effectiveness as the primary dependent variable and positions efficiency and legitimacy as explanatory conditions rather than co-equal metrics. There is significant opportunity for future studies to use the Institutional Steering Chain to evaluate other housing submarkets (seniors housing and socially subsidised housing), as well as other forms of governance structures where policy implementation requires ongoing coordination among many stakeholders. In addition, the layering logic developed in this research could be used to evaluate future hybrid land-use policies. While the framework was developed for the Dutch context, its structure, distinguishing between vision negotiation, instrument design, and outcome evaluation, is potentially transferable to other multi-actor governance settings.

6.2 Insights for practice

Beyond the theoretical contributions discussed above, Delft and Utrecht provide numerous valuable lessons to municipal policy makers, planning professionals, and housing developers. These lessons confront widely held beliefs about how steering instruments work in the real world.

6.2.1 AO Limitations

One common assumption is that qualitative expectations such as affordable rent levels and long-term tenancy can be enforced through the *Anterieure Overeenkomst* (AO). The Delft example proves otherwise; the strength of the AO will depend entirely on the negotiation process that preceded its creation.

In Utrecht, the normative vision was established prior to drafting an AO. This did not happen in Delft; as the commercial developer (DEL_PRI_01) observed, “We already had an established part of the rules before developers got involved in Utrecht”

The lesson to be learned is that municipalities cannot expect an AO to create commitments that were not established through negotiation; instead, significant effort must be put into creating a shared normative vision before the contract is executed.

6.2.2 Zoning Rigidity

Another belief associated with critiques of market-oriented planning is that developers resist the imposition of qualitative requirements. According to the Delft example, the developer for this project was interested in providing amenity spaces (communal spaces) but the zoning regulations didn't allow it. “We could not make any changes to the project after we purchased it” (DEL_PRI_01).

In conclusion, the rigidity of zoning plans, which provides legal certainty, may very well be a liability in situations where several actors come together regarding an improvement project. As ownership of a site changes, municipalities should consider mechanisms for changing qualitative requirements.

6.2.3 Covenant Signatories

A common assumption is that a co-signature implies a co-decision. In Utrecht, the student union is a covenant signatory but has only an advisory role. “Our role is purely advisory... Each group gives input on what they think” (UTR_UNI_01).

This means that the stakeholder acceptance (a seat at the table) is distinct from stakeholder power (binding authority). Municipalities should be transparent with stakeholders about whether their role is advisory or decision-making.

6.2.4 Practical Value

Regarding the cities of Delft and Utrecht, they demonstrate that cities that utilize a fragmented instrument architecture are less efficient than those that use a layered approach. The layering of instruments creates redundancy, while the lack of a fragmented toolkit in Delft does not. The ultimate purpose of this research is to illustrate how municipalities can maintain a common normative vision, even in the face of tremendous efficiency pressures; through the use of layered instruments, conditional obligations, and proactive legitimacy.

6.3 Limitations and Reflections

The study's findings should be viewed in light of several methodological and contextual limitations. Such limitations do not diminish the conclusions drawn from the research but do help frame how the research can be applied and thus should be considered when interpreting the findings.

6.3.1 Case Selection

The research used comparative case study methodology and selected two Dutch student cities (Delft and Utrecht) and one development project from each city (Pauwmolen and High Five). The selection criteria focused on cities with relatively high market pressure for student housing. As a result, this research identifies conditions associated with student housing markets under high market pressure. Whether the same relationships exist in cities experiencing moderate to low levels of market pressure or in cities that differ from these in their institutional structures remains an unanswered question. When interpreting the results, it is possible that there is a bias toward the conclusion that “strong governance works better,” as the only studies included in the research were those with successful outcomes from strong governance and those with only successful outcomes from weak governance. This potential bias should be taken into consideration when evaluating the results.

Also, Pauwmolen and High Five are both examples of major strategic projects in these cities. The development of student housing does not necessarily take place in those two examples. There are examples of smaller developments; examples of reconstructed housing developments; or examples of developments created by developers other than those involved with these large projects, that have different *bestuurskundige* (public administration expert) dynamics. Therefore, there is a bias toward the construction of projects due to their restricted size; as such, the results may not be generalizable.

6.3.2 Data Availability

Three components of the research were triangulated (paper, human and physical); however, each component presented limitations.

In paper reality, for example, the *Anterieure Overeenkomst* (AO) for Pauwmolen was not available for examination as a result of the lack of transparency surrounding the agreements with municipalities for the benefits the developer received; therefore, there are no means by which to verify what the municipality gave in exchange for the developer's commitments (i.e., reduced fees or expedited permit processing). The lack of transparency common to most private contracts means this research cannot determine whether the missing AO was due to an ineffective negotiation or a functionalized negotiation.

In human reality, the scope of the master's thesis granted the researcher only limited access to interviews. Utrecht had only one interview (UTR_UNI_01), representing the student union perspective. Municipal and developer perspectives for Utrecht were reconstructed from documents rather than direct interviews. This asymmetry between Delft (multiple actor types interviewed) and Utrecht (student union only) means the Utrecht case analysis relies more heavily on paper reality than the Delft case.

Regarding physical reality, Pauwmolen was operational at the time of research, allowing assessment of delivered outcomes. High Five was still under construction, meaning the final physical outcome could not be fully verified against the normative vision. The analysis of Utrecht's effectiveness therefore assumes that the delivered project will match the zoning plan and ground lease requirements – an assumption that future research should verify post-completion.

This asymmetry reflects a deliberate design choice rather than a data gap. As the primary case, Delft required deeper multi-actor triangulation to capture the governance tensions that are the central focus of this research. Utrecht, as the structured comparison case, is analysed primarily through its documentary-institutional record — which is both sufficient and appropriate for the purpose of identifying how a different governance configuration

produces different outcomes. The cross-city comparative remarks provided by DEL_PRI_01 further bridge this asymmetry from a practitioner perspective.

6.3.3 Developer Type

The Utrecht case involved SSH, a non-profit housing corporation. The Delft case involved a commercial developer (DEL_PRI_01) under a facilitative land regime. This means the two cases differ on two variables at once: land policy and developer type. This co-variation is the most significant design limitation of this research. It prevents clean attribution of outcomes to either variable alone. This limitation came up in the interviews as well, the Utrecht student union representative (UTR_UNI_01) explicitly says that non-profit developers behave very differently from commercial ones.

It is possible that Utrecht would have achieved similar results even under a facilitative land regime if SSH was still the developer. Or, Delft might have done better if DUWO (a non-profit) had been active instead of a commercial developer.

In an ideal comparative design, these two variables would be held constant independently. For example, a third case involving an active land regime with a commercial developer (such as certain Amsterdam projects that use ground leases with private developers) would show whether active land policy alone can produce good outcomes. Or a case with a facilitative regime but a non-profit developer (such as DUWO projects in other cities) would show whether developer type matters more than land policy.

Because this research does not include such cases, it cannot say for sure whether Utrecht's success comes from its active land policy, its non-profit developer, or both. The same goes for Delft. What it can confirm is that the combination of active land policy and non-profit developer produced high effectiveness, while the combination of facilitative land policy and commercial developer produced mixed effectiveness. The conclusions about what causes effectiveness must therefore be treated as hypotheses for future testing, not as proven facts.

A research design capable of isolating these effects would require at least two additional cases: one involving an active land regime with a commercial developer — such as certain Amsterdam ground lease projects with private actors — and one involving a facilitative regime with a non-profit developer, such as DUWO-led projects in cities without strong municipal land positions. Together, these cases would allow the independent assessment of the contributions of land policy configuration and developer type. This represents the most important direction for future comparative research building on this thesis.

The deliberate selection of contrasting project types (private-led vs university-social partnership) was intended to maximise analytical variation. However, this design choice also means that the findings cannot distinguish whether observed differences are due to governance configuration or project type. Future research should examine mixed-type projects to isolate these effects.

6.3.4 Temporal Scope

This research traced each project's steering chain from initial vision to delivery. As High Five was still under construction at the time of research, the final physical outcome could not be fully verified against the normative vision. The analysis of Utrecht's effectiveness therefore assumes that the delivered project will match the zoning plan and ground lease requirements – an assumption that future research should verify post-completion.

What remains unknown is whether Utrecht's high process fidelity will translate into successful post-occupancy outcomes. Ground lease duration and pay-by-use features are well established, however, the continued implementation of these features over the 20-year lease term is contingent upon political stability, institutional capacity, and long-term stakeholder dedication; the fulfilment of these conditions is uncertain. It would be beneficial to conduct a follow-up longitudinal study to analyse whether governance instruments developed for the delivery phase continue to be used effectively during the utilization phase.

6.3.5 Researcher Position

The researcher is a master's student at TU Delft, who is interviewing senior professional stakeholders. Although there are safeguards for anonymity and pseudonymization (see Appendix B), some of the study participants may provide moderated responses regarding municipal failures or business approaches. This is a typical phenomenon encountered in elite interviews and cannot be controlled for. As such, municipal failures or business approaches may not be well represented in the study results due to participants' unwillingness to disclose such information.

6.3.6 Time Constraints

Due to the scope of the master's thesis, it was not feasible to interview all relevant parties. There was no interview with any original developer in Delft; thus, the study was based upon interviews of a party that took over the project in its second phase. In Utrecht, only one individual from the university's student union (UTR_UNI_01) was interviewed, therefore both the city's and developer's opinions were gathered using multiple document reviews. A more complete set of interviews would have strengthened the analysis, particularly for understanding negotiation dynamics that are not documented in formal records. Consequently, the analysis of Delft relies on the perspective of the incoming developer rather than the original negotiator, potentially missing insights into the initial AO negotiation.

6.3.7 Analytical framework

This thesis uses an 'Institutional Steering Chain' tool that imposes the linear (Input > Process > Outcome) logic on normally messy, difficult-to-respond-to, and iterative (Input > Process > Outcome) governance processes. The separation and unique delineation of the various stages of this model may exaggerate the degree of clarity experienced within real-world governance whereby disruptions in politics and emergent political strategies often cut across these lines. Future research could test the applicability of additional governing frameworks (such as actor-network theory, or institutional logics) and how they may yield alternate understanding about the evolution of governing configurations due to unanticipated events over time.

6.3.8 Legal framework

This comparative research was conducted on two municipalities (Delft and Utrecht) operating under the same Netherlands-based Dutch Planning Act and law. However, the interpretation of the law and capacity within and between departments as well as the accessibility of municipal legal resources differ among municipalities. Thus, although something may be legally possible for one municipality, it is not feasible for another municipality due to variation in staff, political willingness, or legal precedents for enforcing the required conditions

The first example of this variation can be seen in comparing the two municipalities. Delft's municipal policy advisor (DEL_PUB_01) stated that the city simply advises developers "to follow the law - nothing else", giving an indication of Delft's minimalistic approach to the law and their limited enforcement capability of binding conditions. Conversely, Utrecht used legally dedicated external resource experts to draft the zoning plan for the covenant conditional obligations and the ground lease. It is not possible for us to know whether the outcomes of Delft would have been different if Delft's legal capacity were equal to that of Utrecht. This implies that the findings of this study should be used cautiously when comparing to municipalities with similar legal capacity. Future research on this subject would include information on how different legal capacities can result in different steering outcomes for municipalities.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

Chapter 6 discussed the extent to which the findings are positioned in the literature, in addition to the theoretical and practical implications discussed throughout the remainder of the dissertation. This chapter will provide direct answers to the research questions and will synthesise the comparative analysis of Delft and Utrecht. This chapter also reflects on the limitations of the study, which include co-variation in land policy/developer type, differences in the number of interviews conducted in each municipality, and assumptions made regarding anticipated outcomes of Utrecht's effectiveness. Finally, this chapter will present some policy recommendations for adapting the instruments used by Utrecht to the structural conditions found in Delft.

7.1 Direct Answers to Research Questions

7.1.1 Normative Visions and Actor Configurations

What normative visions and actor configurations establish the legitimacy of student housing goals in Dutch student cities?

Legitimacy, as defined by Buitelaar & de Kam (2009) is the degree to which stakeholders accept and trust the governance process, which is a function of the degree to which the reality created by the documents of governance, referred to as paper reality, aligns with the reality experienced by the actors of governance, which is referred to as human reality. The illustration of the relationship between paper and human reality which forms the Power-Interest Matrix can be used to depict how the legitimacy of governance is determined by the alignment of paper and human realities.

Both Utrecht and Delft face significant market pressure to develop affordable student housing through reliance on private builders, while also facing national restrictions that limit development opportunities. These similar conditions may provide an explanation for the varying outcomes of legitimacy by examining the differences in the steering capacity of the two municipalities, as shown in Figure 7.1.

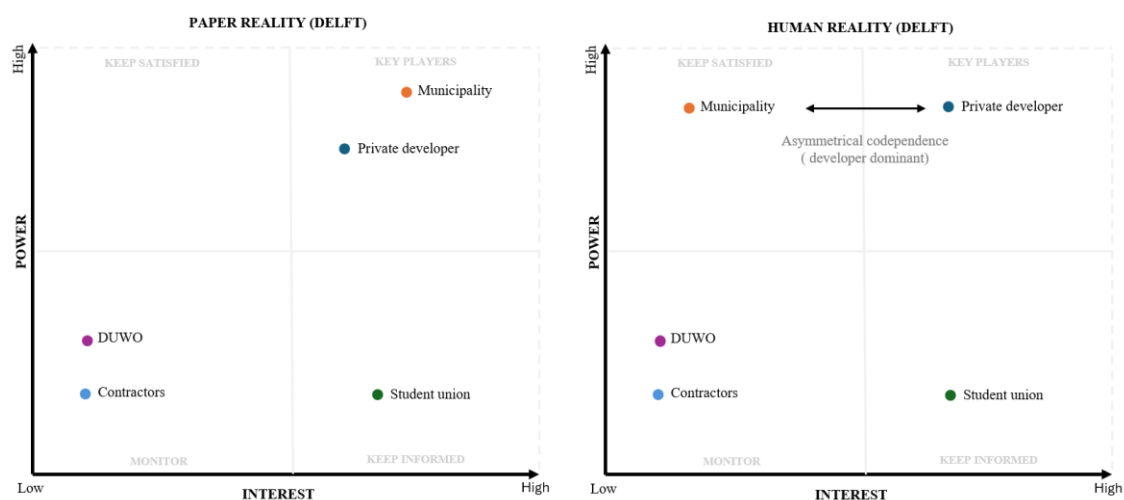


Figure 7.1a: Power-Interest Matrix – Delft

The reality of the paper in Delft is a clearly defined hierarchical structure, where the municipality and the developer are both seen as **Key Players**, DUWO and the contractor are seen as **Keep Satisfied** and the students' union is reported in the paper to be **Keep Informed**. However, when examining the human experience, this hierarchical relationship is significantly altered. In this example, the municipality moves from being a Key Player to Keep Satisfied when considering the extent of their dependency upon the private developer. The developer remains the dominate Key Player. The students' union continues to be classified as Keep Informed. Because there are no clear pathways for student input into decision making, they are left only with the option of making political motions to attempt to influence the landlords, state and local governments. Additionally, there are no systems to provide communication between the paper and the human reality, including having no covenant, escalation ladder, or monitoring system. This results in an asymmetrical co-dependency between the actors (i.e., the municipality and the developers depend on each other) with the developer's ownership of the land providing the developer with greater influence over the municipality. The actors believe they are being treated unfairly by the process resulting in weak legitimacy.

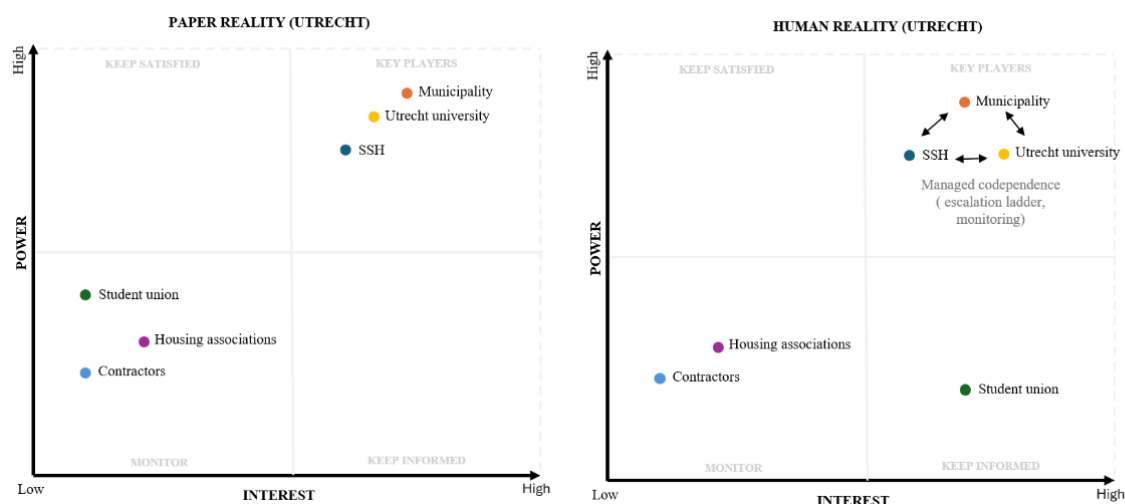


Figure 7.1b: Power-Interest Matrix - Utrecht

The reality of paper in Utrecht shows a distributed structure with the municipality, Utrecht University and SSH all being classified as Key Players, while the student union continues to be classified as Keep Informed. The stable distribution of human reality is consistent with the paper reality but has one exception: the student union's role as an advisor only, rather than an authority. The student union has less authority than paper reality indicates, which is a gap actively managed by institutional mechanisms; the escalation ladder, yearly monitoring, and steering group create structured pathways for providing input to manage the gap rather than eliminate it, thereby creating acceptance among stakeholders. In this context, legitimacy is defined as trust in the process despite limited formal authority, not all stakeholders having authority.

Legitimacy is defined through a shared normative vision that generates a stable Power-Interest Matrix in which paper and human reality are aligned and/or the gaps are actively managed through institutionalised mechanisms. Utrecht achieves this through managed co-dependency; Delft does not, as its gap remains wide and unmanaged. The Power-Interest Matrix, constructed from both realities, reveals whether a governance network has the stable actor configuration necessary for legitimate steering.

7.1.2 Governance Processes and Planning Strategies

How do municipalities employ governance processes and planning strategies to translate normative visions into binding typologies, and how do efficiency considerations influence these delivery outcomes?

Municipalities translate normative visions into binding typologies by layering instruments – soft tools to build consensus, followed by hard tools to lock in requirements at successive stages. Efficiency considerations influence this process by pressuring the **Hardening Mechanism**; layered architectures can withstand these pressures, while fragmented toolkits collapse under them. Table 7.1 illustrates how two cities operationalised this mechanism.

Efficiency – the speed of delivery and the transaction costs of the steering process (Buitelaar & de Kam, 2009) – influences whether the hardening mechanism can survive pressures such as delays, rising costs, or political urgency. The hardening mechanism is the translation of soft commitments into hard, enforceable requirements through the deliberate sequencing of instruments.

Both cities faced efficiency pressures – the need to deliver units quickly under high market pressure. However, their responses to these pressures differed fundamentally. Table 7.1 compares the instrument architectures of the two cities.

Utrecht employs a layered architecture where instruments work in sequence and reinforce each other. As documented in Table 7.1, Utrecht's architecture uses a sequence of instruments – covenant, *intendiedocument*, *bouwenvelop*, zoning plan (with conditional obligation), ground lease, and *Actieplan* – each locking in commitments at successive stages. The redundancy created by this layering means that when efficiency

pressures arise – for example, the potential delay from reopening negotiations – they can be acknowledged without forcing the abandonment of binding requirements. As documented earlier, the *raadsvoorstel* (Gemeente Utrecht, 2023b) admits that increasing the shared housing quota would cause delays, yet the conditional obligation for 200 shared units remains in place. Efficiency is managed within a normative framework, not prioritised over it. This outcome, however, depends on specific preconditions: university land ownership, a non-profit developer, and a coalition of nine parties. Moreover, managing efficiency rather than prioritising it comes with trade-offs, including slower decision-making and longer negotiation timelines.

Instrument type	Delft	Utrecht
Shared vision document	<i>Woonvisie</i> (unilateral, no binding force) (Gemeente Delft, 2023)	<i>Convenant</i> (multi-party, 9 signatories) (Gemeente Utrecht, 2024)
Pre-legal commitment	None	<i>Intentiedocument</i> (Stichting Studenten Huisvesting, 2020)
Design requirements	None specified in binding form	<i>Bouwenvelop</i> (min distances, green compensation) (Gemeente Utrecht, 2021a)
Zoning plan condition	None	Article 6.3.5 (conditional obligation: 200 shared units)
Long-term lock-in	None (no ground lease)	Ground lease (20-year exploitation)
Conflict resolution	Political motions only)	Escalation ladder
Service cost regulation	None (bypassed via fees)	Pay-per-use principle, <i>Actieplan</i> (Gemeente Utrecht, 2023)

Table 7.1: Instrument architectures in Delft and Utrecht

Delft, by contrast, employs a fragmented toolkit. As established earlier, the primary instrument – *the Anterieure Overeenkomst* (AO) – contained no binding provisions on housing typology, contract duration, or rent levels. No shared normative vision existed to guide what such provisions should secure, and no backup instruments existed to fill the gap left by the hollow AO. Consequently, any efficiency pressure forced a choice between speed and the municipality's expressed qualitative goals. The analysis showed that Delft explicitly chose speed: the *Woonvisie* (Gemeente Delft, 2023) states that a higher production speed takes precedence over affordability, the municipality overruled health advice to enable the project, and it granted exceptions to its own noise policy. Given Delft's structural constraints – limited land ownership, an inactive DUWO, and high market pressure – this prioritisation of speed was a rational response to a difficult bargaining position, not a governance failure.

The comparison in Table 7.1 reveals whether a municipality has adopted a multi-instrument sequencing or a single-instrument approach. Layered, redundant strategies enable efficiency to be managed within a normative framework; fragmented, hollow strategies force a choice between speed and quality.

7.1.3 Varied Effectiveness Across Land Policy Configurations

Why do certain governance-planning strategies lead to varied effectiveness, measured through the lenses of efficiency and legitimacy, across different land policy configurations?

Effectiveness – the degree of congruence between the negotiated vision and the final delivery outcome (Buitelaar & de Kam, 2009) – varies across land policy configurations due to structural conditions, institutional choices, and their interaction across the Institutional Steering Chain. Both cities faced similar structural constraints: high market pressure, dependency on developers, and national policy limitations. However, their approaches to constraints resulted in both producing different levels of effectiveness.

As determined in the comparative analysis, this different level of effectiveness - mixed effectiveness from Delft and implied high effectiveness from Utrecht - is due to how each city establishes their input, process and output stages.

Utrecht's configuration indicates projected high effectiveness, as it aligns across all three stages. A standard input is a normative vision, which is a framework for cooperation of many parties and allows ground leases as an active instrument. During the process stage of the instrument, layered instruments turn social objectives into legally binding obligations as shown in the comparative analysis. Governance tools used by Utrecht include co-signature, annual monitoring and an escalation ladder to address national policy limitations through collective lobbying. The combination of these process selections at the output stage implies high levels of effectiveness and proactive legitimacy. However, these results can only be achieved under specific conditions: university ownership of land, a non-profit developer, and a coalition of nine different parties. The sustainability of these outcomes under varying circumstances is unknown.

Delft exhibited mixed effectiveness due to a misaligned configuration. No common normative vision existed at the input stage because the *Woonvisie* (Gemeente Delft, 2023) was neither a binding commitment to each other nor a facilitative land regime with limited ownership. At the process stage, instruments were fragmented and lacked binding components; the *Anterieure Overeenkomst* (AO) lacked binding commitments; and the zoning plan lacked a common housing requirement. The results of the output stage indicate weak, reactive legitimacy with mixed effectiveness. The quantified targets were met; however, the qualitative expectations were not.

While Delft's outcome was less effective, it was not irrational. Given the infrastructure limitations i.e. the restricted land ownership, the inactive DUWO and the high pressure of the market on the other, the only option available to obtain units within any reasonable timeframe was to accept an empty AO.

The analysis shows a positive correlation between layered governance configurations and high effectiveness; however, this does not imply that the two constructs are deterministically correlated. Other variables impact outcomes in addition to those identified in the previous section, i.e., type of developer, national policy limitations, time frame for completion, and state of political alignment. Because these other variables can influence outcomes, they cannot be completely isolated in a two-case comparison. Therefore, the causal claims made in this thesis should be interpreted as identifying necessary conditions and patterns, and not containing definitive proof that layered governance will always produce high effectiveness across multiple contexts.

Differences in effectiveness between the land policy configurations relate to whether the municipality's governance network, Municipal Steering Capacity and management of both efficiency and legitimacy work together as a coherent system. These differences in effectiveness as illustrated above between Utrecht and Delft do not result principally from municipal capacity or effort. This is a predictable outcome of an environment where there are no land ownership rights for municipalities, no binding regulations in place to guarantee that the requirements can be modified in due course, and therefore no proactively created legitimacy with which to identify problems before they arise.

7.1.4 Main Research Question

How do governance approaches (soft tools) and planning strategies (hard tools) shape the effectiveness of student housing delivery outcomes in Dutch student cities?

Both Utrecht and Delft faced the same structural constraints; however, their responses to these pressures were very different. Therefore, their effectiveness resulted in the differing levels of effectiveness of their governance approaches and/or planning strategies.

The central finding is that governance architecture, the deliberate design of how soft and hard instruments relate to and reinforce each other across the delivery lifecycle, is the primary determinant of whether qualitative goals survive market pressure. Instrument type matters less than instrument sequencing and the normative foundation that precedes legal formalisation. As identified in research question one, the co-creation of normative vision creates a stable actor configuration that legitimizes the process for the participants. This confirms the hypothesis advanced in Section 2.2.3: layered instrument architectures operating within a collectively negotiated normative vision demonstrate greater effectiveness than fragmented toolkits under comparable market conditions. Conversely, without a normative vision, governance is always contested by the respective participants and has very weak legitimacy.

Practical evidence of this can be seen in the case of Utrecht; as previously discussed in research questions one and two, a consolidated instrument architecture and proactive legitimacy created through the three ways of creating legitimacy — co-signing, monitoring, and escalation — create a high fidelity of governance processes.

However, these processes are only possible under limited pre-conditions: university land ownership, a non-profit developer, and a coalition of nine stakeholders, none of which are universally replicable.

Conversely, Delft has been impacted by a fragmented toolkit as a result of the same market pressures; therefore, due to an ineffective AO, the absence of a normative vision, and reactive legitimacy, their effectiveness cannot be measured in quality. According to the findings from RQ3, all actions taken were rational responses to structural constraints; therefore, none can be considered a conventional failure of governance.

Beyond these two cases, the findings suggest a generalisable principle for Dutch student housing governance: under high market pressure, the alignment between soft tools that build consensus and hard tools that lock in requirements is a necessary condition for maintaining qualitative delivery goals. Where this alignment is absent — regardless of the specific city, project type, or developer — efficiency pressures will systematically displace qualitative objectives. Municipalities operating under facilitative land regimes face this risk acutely, but even active land regimes provide no guarantee if the instruments are not sequenced and layered. The implication for Dutch student cities more broadly is that governance architecture — the deliberate design of how instruments relate to one another — matters as much as the instruments themselves.

7.1.5 Conclusion: From Discussion to Answers

The discussion in Chapter 6 established three qualifications that carry forward into the policy recommendations. First, the layered instrument architecture identified in Utrecht creates redundancy — if one instrument fails, others provide protection — but this depends on preconditions that Delft does not currently possess. Second, the distinction between legitimising signatories (advisory co-signature) and authorising signatories (binding co-ownership) means that building a covenant in Delft is not sufficient on its own; the signatories with delivery responsibility must hold binding rather than advisory roles. Third, the co-variation of land policy and developer type means the recommendations below are framed as transferable principles rather than prescriptive templates — the goal is functional alignment between instruments, not replication of Utrecht's specific configuration.

7.2 Policy Recommendations

Before presenting the recommendations, two caveats are necessary. First, Utrecht's layered governance model is not presented as a template to be copied. It emerged from specific structural conditions — university land ownership, a non-profit developer (SSH), and a coalition of nine parties — that may not be replicable in Delft or other municipalities. Second, Delft's outcomes should not be read as a governance failure. Given its limited land ownership, an inactive DUWO, and high market pressure, accepting a hollow *Anterieure Overeenkomst* may have been a rational response to structural constraints. The lessons learned in Utrecht are applied here to meet the particular needs of Delft, rather than repeating Utrecht's methods.

Although these recommendations contain context-sensitive principles developed through comparisons of Delft and Utrecht, municipalities are encouraged to tailor them to their own capacities, market conditions, and governance systems. Implications for Delft are generally illustrative rather than prescriptive.

Coalition-building should take place first through negotiation of a multi-party covenant establishing a common normative vision and governance system; second, through gaining access to non-market delivery actors (e.g., DUWO) to reduce reliance on commercial developers for bargaining power; third, through placement of binding provisions in zoning plans and contractual agreements to create multiple layers of instruments; and fourth, through collective lobbying efforts to address national constraints. By establishing a coalition of all relevant entities before any parties use their bargaining power, parties will support the common vision before any leverage is employed. If not done in this order, earlier actions may be hampered by a lack of leverage, while later actions may be deemed symbolic rather than enforceable. This sequencing is consistent with the patterns observed in both Delft and Utrecht, but in practice, these steps may overlap or be repeated based upon local circumstances.

7.2.1 Layered Governance

The Utrecht project showcases how effective a layered form of governance can be through the formal mechanisms such as planning, along with informal mechanisms like agreements and monitoring. However, the patterns of governance are not easily translatable to other locations.

To achieve this, municipalities should selectively combine instruments based on:

- institutional capacity
- degree of land control
- market dependence
- political alignment

Rather than replicating a specific model, the emphasis should be on functional alignment between tools.

A possible route for Delft could be to use the instruments that are not dependent on land ownership, such as increased contractual obligations and the regulation of conditional zoning obligations. More coordinated mechanisms, such as covenants and monitoring frameworks, may be established, but only after there is a coalition of actors. Due to Delft's reliance on private developers and DUWO's lack of an active housing development pipeline, there is potential for improvement in the municipality's leverage with non-market delivery actors. However, how those steps can occur will be contingent on both financial and political conditions.

Trade-offs: Layered governance may make coordinating stakeholders more complex due to the extended time frames as a result of various negotiation timelines; therefore, municipalities will have to determine an optimal balance between control and flexibility; the quality of the product being delivered and speed at which the product is delivered.

7.2.2 Instrument Alignment

The analysis also indicates that misalignment between policy goals and implementation tools results in the loss of project qualitative objectives.

Municipalities should try for continuity across each phase of a project from early visioning to agreements through implementation and enforcement. This is since a single instrument is often not sufficient, specifically in facilitative planning environments.

There could be an opportunity in Delft to strengthen the role of the *Anterieure Overeenkomst* (AO) to better enable developers to comply with binding portions of the planning framework, specifically regarding tenure, typology, and service costs, all of which were missing in the Pauwmolen project. Conditional obligations in zoning plans could also serve as another tool to complement the AO's responsibilities. In addition, there may be more immediate opportunities to implement regulatory instruments in the absence of a strong land base established by the municipality – however, the tools will be ineffective unless there are political support and legal possibility for establishing policies with stricter conditions.

A new alternative emerged with the recent introduction of legal provisions, specifically the implementation of the *Omgevingswet* (Environmental and Planning Act), effective January 1, 2024, and the inclusion of Article 5.161c in the *Besluit kwaliteit leefomgeving* (BKL) (see 7.2.7). This article empowers municipalities to designate specific housing categories - including social rental, mid-market rental, and affordable owner-occupied homes - directly in the *omgevingsplan* (environmental plan). Municipalities can use this instrument to impose minimum tenancy duration requirements (at least 10 years for social and mid-market rental) and set maximum rent/price levels, regardless of land ownership. This instrument was not available to Delft at the time of Pauwmolen but offers a powerful new tool for future projects. Municipalities with limited land ownership should explore this instrument as an alternative to ground lease.

Trade-offs: Stronger alignment may reduce developer flexibility and could affect project feasibility in certain market conditions.

7.2.3 Strengthen Steering

Enhanced Municipal Steering Capacity can improve the ability to safeguard public objectives such as affordability and housing quality. This may be achieved through a combination of:

- land policy (where available)
- contractual agreements
- coalition-based governance
- inter-municipal cooperation

However, steering capacity is unevenly distributed across municipalities, particularly in contexts with strong developer dependence – as the Delft case demonstrated.

To limit reliance on commercial developers, Delft might increase the role of non-market actors such as DUWO. If private developers continue to dominate the market, it will be necessary to implement additional provisions that will ensure qualitative outcomes by adding them to the contractual agreements. Prior to any lobbying or formation of covenants through collective action, coalition building may be necessary amongst key stakeholders, which can be an incremental and time-consuming process.

Trade-offs: With increasing steering capacity, additional administrative burdens might occur and will require municipalities to have staff with specialised expertise; this type of expertise may not be readily available in every municipality.

7.2.4 Context Sensitivity

Municipalities should develop governance and planning strategies contextually rather than adopting predetermined ones to address their specific situations.

For example:

- **In land-constrained contexts** - emphasise regulatory and contractual instruments (as Delft's limited land ownership suggests)
- **In fragmented governance environments** - prioritise coordination and coalition-building (as Utrecht's covenant model illustrates)
- **In high market-pressure contexts** - reinforce non-negotiable affordability and typology requirements (as both Delft and Utrecht face)

Governance and planning strategies in Delft, where land available for private ownership is restricted, will likely require the use of zoning criteria, contract-based agreements, and actor coordination rather than land-based tools (e.g. ground leases). An important precondition for successful implementation is a strong institutional capacity to monitor and enforce any strategy. If this is not met, formal provisions will be symbolic; as in the case of the empty AO in Pauwmolen.

Trade-offs: Context-sensitive approaches may result in less standardisation and comparability for municipalities, leading to increased difficulty when attempting to learn across case studies.

7.2.5 Governance Trade-offs

Coordinated and layered governance arrangements will provide benefits and improved quality of outcome; however, these will also create new trade-offs.

When utilising the governance arrangements identified above, municipalities must consider:

- Increased coordination may slow decision-making
- Longer negotiations can raise development costs
- Higher administrative demands require sustained capacity
- Reliance on political continuity may create vulnerability to policy change

Before pursuing more coordinated governance arrangements, Delft may need to assess whether sufficient administrative capacity, political stability, and market conditions exist to sustain such an approach. There is a potential role for initial capacity assessments to help determine feasibility of additional complex governance arrangements.

7.2.6 Monitoring

To strengthen long-term effectiveness, municipalities should develop clearer indicators for affordability, social mix, and housing typologies. Monitoring should extend beyond project completion into the post-occupancy phase, reducing reliance on ex-ante assumptions – as the Pauwmolen case demonstrated, where service cost problems emerged only after occupation.

Monitoring mechanisms in Delft may use periodic tenant reports and service cost reporting embedded in contractual agreements, with the potential for inspections conducted by municipal staff. The capacity to conduct

inspections exists through legal authority (embodied in the AO) and dedicated staff for carrying out inspections; however, without these, municipal enforcement may remain inadequate due to absence of formalised agreements.

Trade-offs: Post-occupancy monitoring increases municipalities' future administrative burden, potentially requiring them to share resources to complete monitoring tasks.

7.2.7 Article 5.161c Bkl as a land-independent steering instrument

In 2024, the Dutch *Omgevingswet* introduced Article 5.161c into the *Besluit Kwaliteit Leefomgeving* (Bkl), directly addressing the primary structural constraint identified in the Delft case, the municipality's inability to impose binding typology and tenure requirements without land ownership. The article gives municipalities the power to set standards for various housing categories (e.g., social and mid-market rental units) with binding minimum lease terms and maximum rents in their *Omgevingsplan*, while not requiring land ownership. By providing local governments with this tool, the Article directly addresses the primary structural constraint inhibiting housing options for future PBSA projects in Delft. Articles 5.161c should be applied in the *Omgevingsplan* to accommodate for the ground lease conditions that are currently unable to be imposed with respect to future PBSA projects. Then the municipality would have the ability to solidify in the zoning instrument type and tenure specifications, rather than relying on the AO, which the Pauwmolen case illustrated to not have been sufficient in establishing a normative vision that was shared in advance.

7.3 Closing Reflections

The goal of this thesis is to demonstrate how governance techniques and planning methods can shape the efficiency of student housing development in student cities in the Netherlands. The results of this thesis demonstrate that there is far more to achieving student housing development than just a municipality's ability and effort to create units. A predictable result from comparative analysis of the land policy patterns, instrument architecture and efficiency and legitimacy management during the entire delivery process will create the development of student housing.

While Delft achieved what most municipalities aim for under pressure – the delivery of student housing units – this is not in itself an indicator of effectiveness. For effectiveness, the vision and reality must be congruent with each other, and in Delft's experience the expected quality standards were not met. This outcome was not a failure, but rather a logical outcome of structural limitations e.g., there are few parcels of land available to develop, DUWO was not able to be active and develop student housing because of the number of units developed in proximity to the town centre and the extremely high pressure of the housing market. Utrecht on the other hand created the environment for high levels of effectiveness; however, even Utrecht has limitations in the effectiveness (funding restrictions, managed dependency and how many units will still be available for students using the pay-per-use and leasehold methods after the first 20 years).

Governance reform alone cannot resolve the Dutch student housing deficit, but without competent municipal steering, no ambition expressed in policy will translate into built reality. This thesis has established that the key differentiator between enforceable commitments and unenforced preferences, or successful implementation and broken promises, stems from the municipality's effect on the variables that guide development (such as land ownership, type of developers, coalition forming, etc.). While getting governance right does not replace the need for more housing to be constructed, what is constructed without good governance is not likely to match the expectations of policymakers at the municipal level. The key determinant of whether commitments are enforced rather than merely expressed is not political will alone, but how that political will has been formalised within a governance structure. Municipalities that utilize layered, redundant governance structures - established within a collectively negotiated normative vision - are structurally better positioned to ensure the quantity and quality of housing will be created in face of market pressures, whether they own land.

REFERENCES

- Boelhouwer, P., & Hoekstra, J. (2009). Towards a better balance on the Dutch housing market? Analysis and policy propositions. In *International Journal of Housing Policy* (Vol. 9, Number 4, pp. 457–475). Routledge. <https://doi.org/10.1080/14616710903357235>
- B-Right Urban Living. (2021). *Pauwmolen, Delft*. <https://b-righturbanliving.com/nl-nl/project/pauwmolen>
- Buitelaar, E., & de Kam, G. (2009). Steering local housing production: Evaluating the performance of governance structures. *Journal of Housing and the Built Environment*, 24(2), 185–201. <https://doi.org/10.1007/s10901-009-9139-z>
- CDA. (2022). *Schriftelijke vragen Short Stay verhuur Pauwmolen*. https://delft.notubiz.nl/document/11159976/1?connection_type=17&connection_id=8067903
- Gemeente Delft. (2011a). *Besluit hogere grenswaarde Wet geluidhinder Pauwmolen*. https://planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/tb_NL.IMRO.0503.BP0008-2002_28.pdf
- Gemeente Delft. (2011b). *Bestemmingsplan Pauwmolen*. <https://www.planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/index.html>
- Gemeente Delft. (2011c). *Uitgebreid luchtkwaliteitonderzoek ten behoeve van de ontwikkeling 'Pauwmolen' te Delft*. https://planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/tb_NL.IMRO.0503.BP0008-2002_8.pdf
- Gemeente Delft. (2011d). *Vaststelling bestemmingsplan Pauwmolen en Evaluatieprogramma MER Bestemmingsplannen Delft-Zuidoost*. <https://www.planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/index.html>
- Gemeente Delft. (2022). *Beantwoording schriftelijke vragen over wooncomplex Pauwmolen*. https://delft.notubiz.nl/document/11239887/1?connection_type=17&connection_id=8137411
- Gemeente Delft. (2023). *Woonvisie Delft 2023-2028*. <https://delft.raadsinformatie.nl/document/13803942/1>
- Gemeente Utrecht. (2021a). *Bouwenvelop High Five, Cambridgelaan*. <https://utrecht.bestuurlijkeinformatie.nl/Reports/Document/2e915fe1-2c96-4fe9-951e-be6a0523706e?documentId=05417fc4-4548-4d72-947e-7662fdabf340>
- Gemeente Utrecht. (2021b). *Reactienota Bouwenvelop High Five, Cambridgelaan*. <https://utrecht.bestuurlijkeinformatie.nl/Reports/Document/2e915fe1-2c96-4fe9-951e-be6a0523706e?documentId=8c67c203-58fa-48a2-8c48-5887db4be7a1>
- Gemeente Utrecht. (2022). *Vaststelling Chw bestemmingsplan Studentenhuisvesting High Five, Cambridgelaan USP*. <https://utrecht.bestuurlijkeinformatie.nl/agenda/document/c2683280-f815-48ee-8301-5f7abb42c114?documentId=d6cb2994-86f9-4418-ba17-592f18e49245&agendaItemId=a625a70b-d123-4a7c-947d-35db3d2d6ce5>
- Gemeente Utrecht. (2023a). *Actieplan Studenthuisvesting 2023-2030*. <https://utrecht.bestuurlijkeinformatie.nl/Agenda/Document/f96a9627-b39e-4b5c-a96e-a391efa8eb00?documentId=45552de3-9931-4f07-a2fa-a177dd3873b8&agendaItemId=7ce1c715-933d-46ca-8443-b3a81fb6c150>
- Gemeente Utrecht. (2023b). *Raadsvoorstel Actieplan Studentenhuisvesting 2023-2030*. <https://utrecht.bestuurlijkeinformatie.nl/Agenda/Document/ede0d9c7-4312-4f23-8855-4fc963558e65?documentId=a3b45ae8-a8b0-4930-a58b-2443595316bf&agendaItemId=3472c5f8-ea61-4094-b4b7-d92a3591def0>
- Gemeente Utrecht. (2024). *Convenant studentenhuisvesting 2025-2030*. <https://utrecht.bestuurlijkeinformatie.nl/reports/document/cc4ac15c-0d52-4eee-9895-8d0f39a7b446?documentId=5a2053db-07be-40cc-bf5d-09fbad684772>

- Gibson, T. A. (2005). NIMBY and the Civic Good. *City & Community*, 4(4), 381–401.
<https://doi.org/10.1111/J.1540-6040.2005.00144.X>
- Haffner, M., & Elsinga, M. (2009). Deadlocks and breakthroughs in urban renewal: A network analysis in Amsterdam. *Journal of Housing and the Built Environment*, 24(2), 147–165.
<https://doi.org/10.1007/s10901-009-9137-1>
- Hartmann, T., & Spit, T. (2015). Dilemmas of involvement in land management – Comparing an active (Dutch) and a passive (German) approach. *Land Use Policy*, 42, 729–737.
<https://doi.org/10.1016/J.LANDUSEPOL.2014.10.004>
- Heurkens, E. (2012). Private Sector-led Urban Development Projects. Management, Partnerships and Effects in the Netherlands and the UK. *A+BE | Architecture and the Built Environment*, 2(4), 1–480.
<https://doi.org/10.7480/abe.2012.4.39>
- Heurkens E. (2020). *De rol van private partijen in duurzame stedelijke ontwikkeling* -.
<https://www.erwinheurkens.com/publications/press/de-rol-van-private-partijen-in-duurzame-stedelijke-ontwikkeling/>
- Hoekstra, J., & Gentili, M. (2023). Housing policies by young people, not for young people. Experiences from a co-creation project in Amsterdam. *Frontiers in Sustainable Cities*, 5, 1130163.
<https://doi.org/10.3389/frsc.2023.1130163>
- Kences. (2025). *LMS Nederland*. <https://studentenhuisvesting.incijfers.nl/mosaic/lms/voorwoord>
- Koppenjan, J. F. M., & Klijn, E. H. (2004). (PDF) *Managing Uncertainties in Networks*.
https://www.researchgate.net/publication/200026701_Managing_Uncertainties_in_Networks#fullTextFileContent
- Lam, T. Y. M., & Chen, C. (2022). An investigation into the investment potential of purpose-built student accommodation in Sydney. *International Journal of Housing Markets and Analysis*, 15(4), 852–874.
<https://doi.org/10.1108/IJHMA-05-2021-0054>
- Livingstone, N., & Sanderson, D. (2022). All grown up? Market maturity and investment in London’s purpose-built student accommodation sector. *Journal of Property Investment and Finance*, 40(6), 571–587.
<https://doi.org/10.1108/JPIF-08-2021-0072>
- Mendelow, A. L. (1981). Environmental Scanning--The Impact of the Stakeholder Concept. *ICIS 1981 Proceedings*. <https://aisel.aisnet.org/icis1981/20>
- Mooij, H. (2014). Finding Form for a Free Spirit: Dutch Student Housing as a Design Brief. *DASH | Delft Architectural Studies on Housing*, (10), 52–67. <https://journals.open.tudelft.nl/dash/article/view/4894>
- MWH B.V. (2010). *Actualiserend bodemonderzoek Pauwmolen, Delft*.
<https://www.planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/index.html>
- Needham B. (2014). Dutch land-use planning: The principles and the practice. *Farnham: Ashgate*.
<https://doi.org/10.4324/9781315578262>
- Newell, G., & Marzuki, M. J. (2018). The emergence of student accommodation as an institutionalised property sector. *Journal of Property Investment & Finance*, 36(6), 523–538. <https://doi.org/10.1108/JPIF-01-2018-0007>
- Nieman. (2011). *Akoestisch Onderzoek Project: Pauwmolen te Delft*.
https://www.planviewer.nl/imro/files/NL.IMRO.0503.BP0008-2002/t_NL.IMRO.0503.BP0008-2002_3.3.html
- Rugg, Julie., Rhodes, David., & Jones, Anwen. (2000). The nature and impact of student demand on housing markets. *York Publishing Services for the Joseph Rowntree Foundation*.
https://www.researchgate.net/publication/265147621_The_nature_and_impact_of_student_demand_on_housing_markets

Sanderson, D., & Özogul, S. (2022). Key investors and their strategies in the expansion of European student housing investment. *Journal of Property Research*, 39(2), 170–196.

<https://doi.org/10.1080/09599916.2021.1993315>

Shahab, S., Hartmann, T., & Jonkman, A. (2021). Strategies of municipal land policies: housing development in Germany, Belgium, and Netherlands. *European Planning Studies*, 29(6), 1132–1150.

<https://doi.org/10.1080/09654313.2020.1817867>

Stichting Studenten Huisvesting. (2020). *Intentionedocument High Five, Cambridgelaan USP*.

<https://utrecht.bestuurlijkeinformatie.nl/reports/document/833618d7-de21-4032-98bf-b71b96ec1886?documentId=04a3536e-7316-4da2-a397-ece45ea7f7f9>

Teisman, Geert., Buuren, A. van., & Gerrits, Lasse. (2010). *Managing complex governance systems : dynamics, self-organization and coevolution in public investments*. <https://doi.org/10.4324/9780203866160>

van der Krabben, E., & Jacobs, H. M. (2013). Public land development as a strategic tool for redevelopment: Reflections on the Dutch experience. *Land Use Policy*, 30(1), 774–783.

<https://doi.org/10.1016/j.landusepol.2012.06.002>

APPENDIX

APPENDIX A: INTERVIEW PROTOCOL

A.1 Opening Statement (to be read to participants before starting)

“Thank you for participating in this research. My name is Naga Sai Bhuvana Kolli, and I am a master's student at TU Delft, Faculty of Architecture and the Built Environment, track Management in the Built Environment. I am conducting research on municipal steering capacity in student housing development as part of my graduation thesis.

This interview will take approximately 45-60 minutes. With your permission, I will audio-record the session to ensure accurate transcription. Your responses will be anonymized – your name and organization will not appear in the thesis. You have the right to skip any question or withdraw from the study at any time without giving a reason. Do you have any questions before we begin? May I start the recording?”

A.2 Interview Agenda

Duration	Activity
5 min	Opening statement and consent confirmation
10-15 min	Part 1: Normative vision and actor goals
10-15 min	Part 2: Governance approaches and Planning strategies
10-15 min	Part 3: Outcomes, effectiveness, and legitimacy
5-10 min	Part 4: Power-Interest Matrix review
5 min	Closing and final questions

A.3 Informed Consent Reference

All participants signed an informed consent form prior to the interview, in accordance with TU Delft's Human Research Ethics Committee (HREC) guidelines and GDPR requirements. The consent form covered: (1) purpose of the research, (2) voluntary participation and right to withdraw, (3) audio recording and transcription, (4) anonymization of data, and (5) data storage and deletion procedures. A template of the consent form is provided in Appendix B. Ethical approval for this study was granted by the TU Delft HREC under application number 6586 (see Appendix E).

A.4 Case Study 1: Delft (Pauwmolen) - Interview Questions

Focus: Exploring steering capacity in a facilitative regime where technical constraints (A13) and a lack of land ownership created specific power dynamics.

Actor: Private Developer (coded as DEL_PRI_01)

Theme	Question
A13 Technical Offset	“The site's proximity to the A13 required significant technical investments (deaf facades, ventilation). To what extent did these technical barriers necessitate a shift toward the higher-yield furnished studio model to maintain financial feasibility?”
Tenure Logic	“Municipal records suggest a shift toward Short Stay contracts. Was this model chosen because the <i>Anterieure Overeenkomst</i> (AO) allowed for flexibility in tenure length, or was it a specific strategy to manage the high-turnover international student market?”

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Service Cost Mechanism	“Residents and the CDA have flagged high service costs. In your view, are these costs a reflection of the 'Urban Living' campus model, or are they necessary to recover operational overheads that the basic rent cannot cover?”
Handover Dynamics	“When your company took over the project from the original developer, how did you balance the previous social agreements with the municipality against the hard requirements of your own commercial finance model?”

Actor: Student Housing Organization (coded as DEL_SEM_01a / DEL_SEM_01b)

Focus: Understanding the role of municipal instruments and why certain outcomes occurred.

Theme	Question
Steering Capacity	“In your overview of the Delft market, how do private-led projects like Pauwmolen navigate typology decisions? Is the <i>Anterieure Overeenkomst</i> (AO) inherently too weak to protect the concept of shared housing?”
Service Cost Bypass	“How prevalent is the use of service costs and furnishing fees in Delft to bypass affordability caps? Does your organization see this as a growing governance challenge in facilitative land policies?”
Institutional Choice	“Why is Delft struggling to deliver through social providers, and does this dependency on private developers force the city to accept lower social standards?”
2026 Regulations	“With recent national regulation changes making shared housing more profitable, do you think shared housing will become more common naturally, or does the municipality still need harder tools like ground lease to ensure quality?”

Gap Type Matrix (Cross-validation)

Gap Type	Private Developer (DEL_PRI_01)	Student Housing Org (DEL_SEM_01a / DEL_SEM_01b)
Tenure alignment	If the short-stay model was a deliberate financial strategy	If the AO is legally too soft to prevent short-stay pivots
Affordability alignment	The direct link between A13 technical costs and high service fees	If service costs are being used systematically across Delft to bypass caps
Power dynamics	If the developer felt they had the upper hand because they owned the land	If the dependency on private developers limits municipal power

A.5 Case Study 2: Utrecht (USP High Five) - Interview Questions

Focus: Exploring networked steering and the use of the Ground Lease (*Erfpacht*) as a hard tool.

Actor A: Municipal Official (Regulator)

Theme	Question

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Collective Goal Formation	“How did the municipality align the interests of the University and the housing provider to ensure the 'Springlevend USP' vision became a shared objective rather than a top-down requirement?”
Soft Instruments	“Beyond formal permits, what soft governance approaches were used to keep actors committed to the 24/7 vibrancy goal?”
Effectiveness	“Do you believe the municipality has been effective in ensuring the active plinth and housing groups remain core to the project despite rising construction costs?”

Actor B: University (Landowner)

Theme	Question
Hard Instruments	“How did the University use the Ground Lease (<i>Erfpacht</i>) as a steering tool to mandate social outcomes that a standard zoning plan might not have been able to enforce?”
Trade-offs	“As the landowner, did you have to prioritize social goals over financial goals to make the project feasible for the housing provider?”
Steering Capacity	“At what point did you determine that a non-profit housing provider would be more effective at delivering the collective goal than a private developer?”

Actor C: Non-profit Housing Provider (SSH)

Theme	Question
Friction with Instruments	“The Ground Lease contains hard requirements for social space. How did these affect financial feasibility, and did you need to renegotiate any soft goals to stay viable?”
Typology Choice	“Steering for 200 housing groups (shared kitchens) is a specific social goal. Was this a result of municipal pressure, or an internal organizational goal for student wellbeing?”

Actor D: Technical Consultant / Architect

Theme	Question
Translating Goals	“The project includes complex features like a physical gate and laundry bar. How clearly were these soft social goals translated into hard technical requirements in the building envelope?”
Effectiveness in Design	“Were there design elements intended for social cohesion that had to be removed or altered because they conflicted with building regulations or budget constraints?”

A.6 Closing Statement

“Thank you for your time and insights. As a reminder, your responses will be anonymized, and you will have the opportunity to review the transcript if you wish. If you have any follow-up questions or would like to receive the

final thesis, please feel free to contact me at [email]. The results of this research will be shared with TU Delft supervisors and may be published as part of my graduation thesis.”

A.7 Interview Details

The table below provides an overview of the interviews conducted for this research.

Pseudonym	Actor Type	City	Date	Duration
DEL_PUB_01	Public (Municipality)	Delft	18 th March 2026	45 min
DEL_PRI_01	Private (Developer)	Delft	16 th April 2026	60 min
DEL_SEM_01	Semi-public (Housing Assoc.)	Delft	9 th April 2026	50 min
DEL_UNI_01	Student Union	Delft	28 th April 2026	55 min
UTR_UNI_01	Student Union	Utrecht	21 st April 2026	45 min

APPENDIX B: INFORMED CONSENT FORM TEMPLATE

Part 1: Participant Information Sheet

Project title:

Governance and planning in student housing development: An analysis of municipal steering capacity in Dutch student cities

Document Date: 28/04/2026

Researcher:

Naga Sai Bhuvana Kolli (Master's Student, Architecture, Urbanism and Building Sciences)

Responsible researcher (supervisor): Prof. dr. W.K. (Willem) Korthals Altes

Section A: About The Study

What is the purpose of this research?

This master's thesis investigates the municipal steering capacity in the Dutch student housing market. We are analysing how municipal goals (social policy) are translated into actual building projects. The study focuses on how planning tools and governance instruments impact the final delivery of student housing.

Why have I been invited?

You have been approached because of your professional expertise and involvement in student housing development or municipal planning in either Delft or Utrecht. Your insights into decision-making processes and stakeholder cooperation are vital for this analysis.

What will my participation involve?

Participation consists of one semi-structured interview (approx. 45 - 60 minutes). You can choose to meet face-to-face at your professional office or digitally via Microsoft Teams. With your permission, the session will be audio-recorded for accurate transcription.

Section B: Your Data and Privacy

How will you protect my confidentiality?

The planning community is small, so we use a strict 'Data Segregation' strategy to prevent your identity from being guessed:

- *Pseudonymization:* Your name and specific job title will be removed from all research reports and replaced with a code (e.g., DELFT_DEV_01).
- *Role generalization:* We will use broad categories ('Private Developer') rather than specific company names.
- *Transcript review:* You will receive the transcript to review and can flag any sensitive commercial information you want removed or paraphrased.

Who has access to my data?

All data is stored on the secure TU Delft OneDrive. Access is split into two levels:

1. *Restricted folder:* Contains your name, email, and audio. Access is strictly limited to the student researcher.
2. *Transcripts folder:* Contains the pseudonymized text. This is shared with the supervisors (Willem Korthals Altes and Marietta Haffner) for academic validation.

APPENDIX C: CODEBOOK

Table C.1: GROUP 1 – INPUT (Governance Network)

Code ID	Code Name	Definition	Example Quote
1.1	Normative Vision	Shared frame of reference negotiated among multiple actors at project inception. Represents collective quality standards, typology requirements, and social objectives.	<i>“Parties affirm the importance of shared student housing for student well-being.” (Gemeente Utrecht, 2024)</i>
1.2	Actor Goals	Individual objectives of a single actor (municipality, developer, student union, etc.) before or outside of negotiation.	<i>“We are commercial parties, so we do need some profit.” (DEL_PRI_01)</i>
1.3	Goal Divergence	Conflicting agendas within the Triangle of Actors	<i>“Developers want to build studios because they are more profitable... the choice is studios or no rooms at all.” (DEL_SEM_01a)</i>
1.4	Power-Interest: Key Player	Actor with HIGH power AND HIGH interest. Their objectives most likely define the normative vision.	<i>“The municipality is the highest power in this negotiation. They are the ones that choose to let someone build housing somewhere.” (DEL_UNI_01)</i>
1.5	Power-Interest: Keep Informed	Actor with LOW power but HIGH interest. Goals often marginalized unless championed by a Key Player.	<i>“We can scream that shared housing is important, but if developers cannot pay for them, we have to pay for them.” (DEL_UNI_01)</i>
1.6	Land Ownership	Factual statements about which actor owns or does not own the land. Neutral observation.	<i>“We don't own much land. Only somewhere around the hospital.” (DEL_PUB_01)</i>
1.7	Concentration Policy / NIMBY	Spatial strategies clustering student housing to protect family neighborhoods, creating land scarcity.	<i>“In the west and north of USP, housing is not possible due to air and noise quality from the highway.” (Gemeente Utrecht, 2021a)</i>

Table C.2: GROUP 2 – PROCESS (Municipal Steering Capacity)

Code ID	Code Name	Definition	Example Quote
2.1	Soft Tool: Covenant / Agreement	Relational mechanisms where actors align interests through dialogue. Relies on trust, not legal enforcement.	<i>“A steering group and working group are established for the implementation and monitoring of the covenant's agreements.” (Gemeente Utrecht, 2024)</i>
2.2	Hard Tool: Zoning Plan	Formal legal document dictating land use. Provides legally binding basis for what can be built.	<i>“The number of student dwellings may not exceed 925.” (Chw bestemmingsplan High Five, Article 6.2.1)</i>

2.3	Hard Tool: <i>Anterieure Overeenkomst (AO)</i>	Private-law agreement between municipality and developer on private land.	<i>“No binding contractual agreements were made about the type of rental contracts and rent price.” (Gemeente Delft, 2022)</i>
2.4	Hard Tool: Ground Lease <i>(Erfpacht)</i>	Long-term lease of publicly owned land. Allows attachment of social conditions as legal requirements.	<i>“For land issued by the municipality in ground lease, this must be exploited for at least 20 years for this purpose.” (Gemeente Utrecht, 2023a)</i>
2.5	Hard Tool: Design Brief <i>(PvE)</i>	Technical document translating social goals into binding architectural/engineering requirements.	<i>“The building envelope has been designed so that the distance between buildings is at least 50 meters.” (Gemeente Utrecht, 2021a)</i>

Table C.3: GROUP 3 – OUTPUT (Success Metrics)

Code ID	Code Name	Definition	Example Quote
3.1	Effectiveness	The degree of correspondence between the initial normative vision and the final built outcome. Neutral observation.	<i>“What do you want? Fewer houses which are more affordable? Or more houses which are a little more expensive?” (DEL_UNI_01)</i>
3.2	Efficiency: Speed / Delay	Timeline of delivery; delays increase holding costs and may force renegotiation.	<i>“A higher production speed takes precedence over the realization of more affordable homes.” (Woonvisie Delft, 2023)</i>
3.3	Efficiency: Admin Burden	Transaction costs, bureaucratic effort, procedural complexity.	<i>“The development is at the entire account and risk of the developer.” (Gemeente Delft, 2011c)</i>
3.4	Legitimacy: Trust / Transparency	Level of trust, transparency, and perceived fairness within the actor network.	<i>“The municipality responds to each complaint with evidence and justification.” (Gemeente Utrecht, 2021a)</i>
3.5	Legitimacy: Stakeholder Acceptance	Extent to which all actors accept the outcome as fair.	<i>“The talks between those three are really well structured. Everyone wants the same thing.” (UTR_UNI_01)</i>

Table C.4: GROUP 4 – INDUCTIVE (Emergent Frictions)

Code ID	Code Name	Definition	Example Quote
4.1	Market Friction: Interest Rates / Costs	Construction costs, interest rates, or inflation forcing typology changes.	<i>“We are commercial parties, so we do need some profit.” (DEL_PRI_01)</i>
4.2	Technical Constraint (Site-Specific)	Unique site conditions constraining design and increasing costs.	<i>“Noise loads from the A13 reached levels between 53 and 63 dB, requiring deaf facades.” (Nieman, 2011)</i>

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4.3	Post-Sale Visibility Gap	Municipality loses oversight once project is sold.	<i>"I'm not really sure what happens if the developer sells to an international investment fund."</i> (DEL_UNI_01)
4.4	Service Cost Bypass	Use of high service fees or furnishing costs to bypass rent regulation.	<i>"Private developers sometimes try to make the service fees higher... maybe tenants won't notice or won't complain."</i> (DEL_SEM_01a)
4.5	Dependency Trap	Municipality forced to accept lower social standards because they need private developers to deliver housing.	<i>"DUWO delivered zero new units in 2021 and 2022."</i> (DEL_PUB_01)
4.6	Ownership Transition Friction	Changes in project ownership causing goal drift.	<i>"We weren't able to change things on the plans... I don't think we could change anything when we bought it."</i> (DEL_PRI_01)
4.7	Financial Viability Threshold	The point where social goals become financially impossible.	<i>"To maintain financial feasibility, the municipality reduced the ecological compensation fee to €50,000."</i> (Gemeente Delft, 2011c)
4.8	Comparative Insight (Explicit)	Direct comparison between Delft and Utrecht governance models.	<i>"In Delft, the municipality had no land ownership... In Utrecht, the university owns the land and uses ground lease."</i> (DEL_PRI_01)
4.9	NIMBY Resistance	Local neighborhood opposition delaying or reshaping projects.	<i>"The GGD advised against the location due to health concerns."</i> (Bestemmingsplan Pauwmolen, 2011)
4.10	Political Pressure / Election Cycle	Municipal political dynamics influencing project priorities.	<i>"The CDA formally questioned why starter units were being offered as short-stay."</i> (CDA, 2022)
4.11	Knowledge / Capacity Gap	Municipal lack of technical or legal expertise to enforce goals.	<i>"We just tell them to follow the law – nothing else."</i> (DEL_PUB_01)
4.12	Municipal Requirements Density	Accumulation of municipal rules that developers claim make projects unviable.	<i>"Sometimes municipalities add up all the ambitions... reality is not a lot of people can do that anymore."</i> (DEL_PRI_01)
4.13	Short-Stay as Financial Strategy	Use of short-stay contracts to maximize flexibility and rent.	<i>"If they can pay the rent, they can live there."</i> (DEL_PRI_01)
4.14	Student Voice as Exception	Student-run organizations are rare; most developers do not represent student interests.	<i>"We are five students. We think as students. Other developers don't think as students."</i> (DEL_SEM_01b)
4.15	Permit Power as Ultimate Lever	Municipality's control over permits is their strongest (but underused) tool.	<i>"The municipality eventually has to give the permit. If they don't give a permit, it's over."</i> (DEL_SEM_01b)
4.16	Efficiency as Necessary Evil	Stakeholders accept trade-offs as necessary for speed in addressing shortage.	<i>"What do you want? Fewer affordable houses or more expensive houses? You have to make those hard choices."</i> (DEL_UNI_01)

GOVERNANCE AND PLANNING IN STUDENT HOUSING DEVELOPMENT

4.17	National Policy as Binding Constraint	National regulations limit local steering capacity.	<i>“The national government does not recognize shared housing for financial compensation.” (Gemeente Utrecht, 2024)</i>
4.18	Developer Type Matters	Commercial vs social housing corporations have fundamentally different goals.	<i>“Private developers are really the worst of the worst to have to deal with.” (UTR_UNI_01)</i>
4.19	Political Motion as Steering Tool	City council motions can mandate social goals.	<i>“I put in a motion for a minimum percentage of shared housing. It was accepted.” (DEL_UNI_01)</i>
4.20	Codependence vs Hierarchy	Municipality and developers need each other; power is symmetric.	<i>“It's rather a codependence than a hierarchy.” (DEL_UNI_01)</i>

Table C.5: Actor-specific code application

Actor	Primary Codes	Example Evidence
DEL_PUB_01 (Public / Municipality)	1.2 Actor Goals, 1.6 Land Ownership	<i>“We just tell them to follow the law – nothing else.”</i>
DEL_PRI_01 (Private / Developer)	1.2 Actor Goals, 1.2 Goal Divergence	<i>“We are commercial parties, so we do need some profit.”</i>
DEL_SEM_01 (Semi-public / Housing Assoc.)	1.2 Actor Goals, 4.3 Rent Subsidy Paradox	<i>“The choice is studios or no rooms at all.”</i>
DEL_UNI_01 (Student Union)	1.2 Actor Goals, 4.16 Efficiency as Necessary Evil	<i>“What do you want? Fewer affordable houses or more expensive houses?”</i>
UTR_UNI_01 (Student Union)	1.2 Actor Goals, 4.18 Developer Type Matters	<i>“Private developers are really the worst of the worst.”</i>

APPENDIX D: DATA MANAGEMENT PLAN**Plan Overview**

A Data Management Plan created using DMPonline

Title: GOVERNANCE AND PLANNING IN STUDENT HOUSING DEVELOPMENT An analysis of Municipal Steering Capacity in Dutch student cities

Creator: Naga Sai Bhuvana Kolli

Affiliation: Delft University of Technology

Template: TU Delft Data Management Plan template (2025)

Project abstract:

The Dutch student housing market faces a persistent shortage driven by growing student populations and high market pressure in urban centers. While municipalities develop normative visions to create specific housing typologies, such as shared living or purpose-built student housing, misalignments often emerge when these visions are translated into physical project requirements. This research investigates how municipal steering capacity, encompassing both governance approaches and planning strategies, shapes the delivery outcomes of student housing projects in the Netherlands.

Adopting a qualitative comparative case study design, this study analyzes two representative Dutch student cities. The research utilizes a stakeholder Triangle of Actors framework, involving semi-structured interviews with municipal officials, private developers, and institutional housing providers. By applying a Power-Interest Matrix, the study evaluates how various planning tools (zoning plans, briefs) and governance instruments (covenants, land agreements) impact the effectiveness of housing delivery. The findings aim to identify how misalignments between qualitative social goals and financial feasibility constraints contribute to the steering gap, providing a framework for municipalities to better align their steering instruments with the niche requirements of the student housing submarket.

ID: 196280

Last modified: 14-02-2026

GOVERNANCE AND PLANNING IN STUDENT HOUSING DEVELOPMENT: An analysis of municipal steering capacity in Dutch student cities

0. Administrative questions

1. Provide the name of the data management support staff consulted during the preparation of this plan and the date of consultation. Please also mention if you consulted any other support staff.

My supervisor, Willem Korthals Altes, has reviewed this DMP on 4th February.

2. Is TU Delft the lead institution for this project?

Yes, the only institution involved

I. Data/code description and collection or re-use

3. Provide a general description of the types of data/code you will be working with, including any re-used data/code.

Type of data/code	File format(s)	How will data/code be collected/generated? <i>For re-used data/code: what are the sources and terms of use?</i>	Purpose of processing	Storage location	Who will have access to the data/code?
Personally Identifiable	.xlsx	Contact details (names, emails) received via	Administrative purposes:	TU Delft OneDrive	Only Researcher

Information (PII)		professional networks and interview invitations	scheduling interviews and obtaining informed consent	(restricted folder)	
Signed informed consent forms	.pdf	Digital forms signed by participants prior to interview commencement	To document legal and ethical permission for data collection and recording	TU Delft OneDrive (restricted folder)	Only Researcher
Primary research data (raw)	.mp3 or .m4a	Audio recordings of semi-structured interviews (approx. 12-14 sessions)	To capture expert views on student housing steering capacity for accurate transcription	TU Delft OneDrive (restricted folder)	Only Researcher
Primary research data (processed)	.docx	Pseudonymized transcripts of interview recordings	Qualitative analysis to identify governance-planning configurations and <i>steering gaps</i>	TU Delft OneDrive (restricted folder)	Researcher and supervisors (for internal validation and grading)
Secondary research data	.pdf	Public policy documents, zoning plans, design briefs, and covenants	Baseline document analysis to reconstruct <i>hard and soft steering tools</i> in selected cities	TU Delft OneDrive (secured folder)	Researcher and supervisors
Qualitative analysis data	.atlasti	Coding project containing the codebook, Power-Interest Matrix, and network views	Thematic coding and cross-case synthesis to answer the main research question	TU Delft OneDrive (secured folder)	Researcher and supervisors

II. Storage and backup during the research process

4. How much data/code storage will you require during the project lifetime?

- < 250 GB

5. Where will the data/code be stored and backed-up during the project lifetime? (Select all that apply.)

- TU Delft OneDrive

All research and administrative data will be stored on the TU Delft OneDrive. I will implement a data segregation strategy using two distinct folder levels:

Restricted folder: This folder contains all Personally Identifiable Information (PII), specifically the raw audio recordings, the signed Informed Consent Forms, and the 'Key File' (linking participant names to codes). Access to this folder is strictly limited to the researcher; supervisors will not have access to these identifiable documents.

Transcripts folder: This folder contains the pseudonymized transcripts. Access is managed by the main student researcher and is shared exclusively with the supervisors for internal validation and grading.

Secure folder: This folder will contain secondary policy documents, and the ATLAS.ti analysis project. This folder will be shared with the supervisors (Willem Korthals Altes and Marietta Haffner) to allow for academic validation and feedback.

Raw audio recordings will be deleted immediately after transcription is verified. All personal data, including the restricted folder, pseudonymized transcripts and the identity key, will be permanently deleted upon the successful completion of the thesis defense and graduation.

III. Data/code documentation

6. What documentation will accompany data/code? (Select all that apply.)

- Procedure – A description of data processing procedure(s) (such as laboratory setup, simulation workflows).
- Metadata – I will adhere to the metadata standards used by the data repository where the data will be shared (see section V)
- Data – README file or other documentation explaining how data are organised
- Data – Methodology of data collection
- Data – Codebook describing the contents, structure, layout, and variable definitions of the data

IV. Legal and ethical requirements, code of conducts

7. Does your research involve human subjects or third-party datasets collected from human participants?

If you are working with a human subject(s), you will need to obtain the HREC approval for your research project.

- Yes – please provide details in the additional information box below

This research involves primary data collection from human subjects through semi-structured interviews. The study targets approximately 12–14 professional stakeholders representing the Triangle of Actors of student housing development, specifically municipal policy advisors, private developers, and institutional housing providers such as DUWO or SSH. These interviews will be conducted either face-to-face or via Microsoft Teams, with each session lasting between 45 and 60 minutes.

The discussions will focus on professional perspectives regarding municipal steering tools, land policy, and the identified 'steering gap' in student housing delivery. An application for ethical clearance is being submitted to the Human Research Ethics Committee (HREC) of TU Delft concurrently with this plan. Data collection will only commence after formal ethical approval has been granted, and informed consent will be obtained from every participant prior to the start of their respective interviews.

8. Will you work with personal data? (This is information about an identified or identifiable natural person, either for research or project administration purposes.)

- Yes

The project involves the processing of personal data for both research and administrative purposes. Administrative personal data includes the names, professional email addresses, and job titles of participants used for scheduling and the informed consent process. During the research phase, raw audio recordings will be collected, which are considered personal data due to the identifiable nature of the human voice. Furthermore, while the final transcripts will be pseudonymized, the initial raw transcripts may contain indirect identifiers such as specific project names or unique professional roles that could potentially identify a natural person. To manage this, a pseudonymization key will be maintained separately from the research data in a restricted folder, and all direct identifiers will be removed or replaced with generic codes during the transcription process to ensure that the final analysis focuses on professional perspectives rather than individual identities.

9. Will you work with any other types of confidential or classified data or code as listed below? (Select all that apply and provide additional details below.)

If you are not sure which option to select, ask your [Faculty Data Steward](#) for advice.

- Yes, I work with other types of confidential or classified data/code – please explain below

The research data is considered confidential because it involves professional perspectives from stakeholders regarding internal municipal processes and private-sector development strategies. The interviewees from both the municipality and private development firms will be sharing professional insights into negotiation processes and project-specific challenges.

This information is classified as confidential within the scope of this research to ensure that participants can speak openly about the 'steering gap' without fear of their specific comments being attributed to them or their organizations in a way that could cause professional friction. Therefore, all research data will be treated as confidential and pseudonymized to protect the identity of the participants and their respective organizations.

10. How will ownership of the data and intellectual property rights to the data be managed?

For projects involving commercially-sensitive research or research involving third parties, seek advice of your [Faculty Contract Manager](#) when answering this question.

The intellectual property rights to the data generated in this research belong to the student researcher. TU Delft acts as the Data Controller during the research process through the institutional OneDrive. Regarding the management and reuse of data, all secondary data such as municipal policy documents and zoning plans are considered public records and are stored in a Secure Folder shared with supervisors.

Management of the primary interview data is governed by informed consent, and participants are informed that data is collected solely for the purpose of this thesis. Access to this data follows a strict segregation strategy where raw data, including audio recordings, signed consent forms, and the 'Key File,' is kept in a Restricted Folder accessible only to the student researcher. The pseudonymized transcripts are stored in a specific Transcripts Folder where access is managed by the researcher and shared with supervisors only for validation and grading.

Upon completion of the thesis defense and graduation, all personal data, pseudonymized transcripts, and the identity key will be permanently deleted. Only fully anonymized excerpts and aggregated analysis will be included in the final thesis published in the TU Delft Education Repository. This ensures that no identifiable or commercially sensitive raw data is reused or shared publicly.

11. Which personal data or data from human participants do you work with? (Select all that apply.)

- Free text fields (for instance, in questionnaires) in which participants could unintentionally share personal data
- Proof of consent (such as signed consent materials which contain name and signature)
- Audio recordings
- Job title and/or employer
- Telephone number, email addresses and/or other addresses as contact details for administrative purposes
- Names as contact details for administrative purposes

12. Please list the categories of data subjects and their geographical location.

The data subjects in this research consist of specific professionals involved in the Dutch student housing market. These include municipal policy advisors and urban planners, representatives from private real estate development firms, and managers or directors from institutional housing providers (such as student housing corporations like DUWO or SSH).

All data subjects are located within the Netherlands. Specifically, the participants are based in the two selected case study cities.

13. Will you be receiving personal data from or transferring personal data to third parties (groups of individuals or organisations)?

- No

16. What are the legal grounds for personal data processing?

- Informed consent

Personal data processing in this study is based strictly on the informed consent of the participants. Before each interview, participants will receive an information letter detailing the research objectives, the types of data to be collected, and their rights under the GDPR, including the right to withdraw at any time. Participants will be required to sign a digital informed consent form before the audio recording begins

17. Please describe the informed consent procedure you will follow below.

First, potential participants (professional stakeholders) will be contacted via email with a formal invitation. This email will include an information letter explaining the research aim (investigating steering capacity in student housing), the voluntary nature of participation, and how their data will be handled and pseudonymized. This allows participants to review the study's scope before committing to an interview.

Second, once a participant agrees to be interviewed, they will be provided with a Digital Informed Consent Form. This form explicitly asks for permission to audio-record the session, and the audio recordings will be deleted once the transcript is verified and to use pseudonymized quotes in the final thesis. I will ensure that the consent form is signed and returned before the interview commences.

Third, at the beginning of each interview, whether face-to-face or via Teams, I will verbally re-confirm that the participant has read the information letter and is still comfortable with the recording. I will also remind them of their right to skip any question or withdraw from the study at any point until the data has been fully anonymized. The signed consent forms will be stored separately from the interview transcripts in a *Restricted Folder* on the TU Delft OneDrive, which will be deleted once the thesis ends.

I will offer a hybrid approach where participants can choose between face-to-face interview at their professional office or a digital interview via Microsoft teams. If meeting in person I will strictly follow the latest TU Delft and governmental health guidelines, as well as any specific house rules of the participant's organization. If either party experiences symptoms, the meeting will be moved online or rescheduled immediately.

18. Where will you store the physical/digital signed consent forms or other types of proof of consent (such as recording of verbal consent)?

TU Delft Onedrive.

19. Does the processing of the personal data result in a high risk to the data subjects? (Select all that apply.)

If the processing of the personal data results in a high risk to the data subjects, it is required to perform a [Data Protection Impact Assessment \(DPIA\)](#). In order to determine if there is a high risk for the data subjects, please check if any of the options below that are applicable to the processing of the personal data in your research project.

- None of the above apply

23. What will happen with the personal data used in the research after the end of the research project?

- Other – please explain below

The raw audio recordings, which contain biometric personal data, will be permanently deleted as soon as the transcripts are verified for accuracy. During the research phase, transcripts will be pseudonymized by replacing participant names with functional codes, such as 'DELFT_DEV_01'. These pseudonymized transcripts will be stored in a dedicated Transcripts Folder on the TU Delft OneDrive, where access is managed by the student researcher and shared exclusively with supervisors for internal validation.

The 'Key File' linking pseudonyms to real identities, along with the signed Informed Consent forms, will be stored in a separate Restricted Folder on OneDrive. Access to this folder is strictly limited to the student researcher to ensure a robust separation of data and prevent accidental identification; supervisors will not have access to these identifiable documents. Both the Transcripts Folder and the Restricted Folder, including the

identity key and pseudonymized files, will be permanently deleted upon the successful completion of the thesis defense and graduation.

The final thesis will contain only fully anonymized data and aggregated analysis. While the specific case study locations of Delft and Utrecht and the projects Pauwmolen and High Five will be named to maintain scientific context, all quotes and data points will be scrubbed of personal identifiers. It will be impossible for a reader to link a specific statement to an individual person. No raw or pseudonymized data sets from either the Restricted or Transcripts folders will be shared or published in the repository; only the final results will be made public.

24. For how long will personal research data (including pseudonymised data) be stored?

- Personal data will be deleted at the end of the research project

25. How will your study participants be asked for their consent for data sharing?

- In the informed consent form: participants are informed that their personal data will be anonymised and that the anonymised dataset is shared publicly

Participants will be informed through the Informed Consent Form that their raw personal data, including audio recordings and identifiable transcripts, will not be shared with third parties or made public. The consent form will explicitly specify that pseudonymized transcripts will be shared exclusively with the TU Delft supervisors via a dedicated Transcripts Folder on OneDrive for the purposes of academic validation and grading. This internal sharing is restricted to the student researcher and the immediate supervisors to maintain confidentiality.

The consent process will also clarify that no raw or pseudonymized datasets will be archived in the TU Delft repository or any other public database. Because all interview data, including the pseudonymized transcripts and the identity key, will be permanently deleted upon the successful completion of the thesis defense and graduation, there is no long-term sharing of the data. Consequently, participants do not need to worry about their data remaining in an archived dataset, as only the fully anonymized findings within the final thesis will remain public.

V. Data sharing and long-term preservation

27. Apart from personal data mentioned in question 23, will any other data be publicly shared?

Please provide a list of data/code you are going to share under 'Additional Information'.

- All other non-personal data/code underlying published articles/reports/theses

I will publicly share only the non-personal data that underlies the thesis findings via the TU Delft Education Repository. This includes the analytical codebook developed in ATLAS.ti, which provides the definitions for the thematic codes such as 'steering capacity' and 'governance gaps' used to build the analytical framework. Additionally, I will share methodological documentation, including the finalized interview protocols and the stakeholder selection criteria, as well as aggregated results such as the Power-Interest Matrix and synthesized tables that do not contain raw interview text.

To ensure the confidentiality and commercial privacy of the professional stakeholders involved, the primary interview data, including pseudonymized transcripts and the identity key, will not be shared or archived long-term. In accordance with the project's Data Management Plan, all such files will be permanently deleted from the TU Delft OneDrive upon the successful completion of the thesis defense and graduation. This approach prevents any risk of future de-anonymization or unauthorized access to sensitive commercial discussions.

Regarding secondary data, such as municipal policy documents and zoning plans, these will not be re-uploaded to the repository to avoid potential copyright infringement. Instead, a comprehensive list of these documents, including titles, dates, and persistent links or citations, will be provided in the final thesis to ensure the reproducibility of the study. This ensures that while the raw interview data is destroyed for privacy, the logic and the secondary evidence of the research remain transparent.

29. How will you share research data/code, including those mentioned in question 23?

Select all that apply and provide additional details below.

- I am a Bachelor's/Master's student at TU Delft and I will share the data/code in the body and/or appendices of my thesis/report in the TU Delft Repository

30. How much of your data/code will be shared in a research data repository?

- < 100 GB

31. When will the data/code be shared?

- As soon as corresponding results (papers, theses, reports) are published

32. Under what licence(s) will the data/code be released?

- CC BY
- Other – please explain below

the final thesis report deposited in the TU Delft Repository will be placed under copyright

The ATLAS.ti codebook and interview protocol will be released under a CC BY 4.0 license.

VI. Data management responsibilities and resources

33. If you leave TU Delft (or are unavailable), who is going to be responsible for the data/code resulting from this project?

My supervisors

Professor Willem Korthals Altes, Chair of Land Policy, Department of Management in the Built Environment (MBE).

Email: w.k.korthalsaltes@tudelft.nl

Dr. Marietta Haffner, Senior Researcher, Department of Management in the Built Environment (MBE).

Email: m.e.a.haffner@tudelft.nl

34. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

As the master's student conducting this research, I will be responsible for all data management tasks, including transcription, pseudonymization, and data documentation. These tasks are integrated into the project timeline.

Qualitative data analysis will be performed using ATLAS.ti, for which TU Delft provides a campus license.

Secure storage during the project will be managed using the TU Delft OneDrive which is provided free of charge

35. Which faculty do you belong to?

- Faculty of Architecture and the Built Environment (ABE)

APPENDIX E: HREC APPROVAL REFERENCE

Project title: Governance and planning in student housing development: An analysis of municipal steering capacity in Dutch student cities

HREC Application Number: 6586

Date of approval: 04-05-2026

Approving body: Human Research Ethics Committee (HREC), TU Delft

Statement:

Ethical approval for this research was obtained from the TU Delft Human Research Ethics Committee (HREC) prior to the commencement of data collection. The application included the research proposal, data management plan, informed consent forms, and interview protocols. The study was determined to comply with TU Delft's ethical guidelines and GDPR requirements for research involving human participants.

For verification, the approval can be referenced with the HREC under application number 6586.

APPENDIX F: ILLUSTRATIVE NETWORK ANALYSIS OUTPUTS

F.1 Sankey Diagrams of Code–Document Relationships

This appendix presents illustrative Sankey diagrams (Fig F.1 and F.2) developed as part of the network analysis approach described in Chapter 3. Within the qualitative analysis, ATLAS.ti was used not only to code data but also to explore relationships between codes and data sources. These relationships were examined to identify patterns of co-occurrence and thematic clustering across policy documents.

The Sankey diagrams below provide a simplified visual representation of these code–document relationships. Specifically, they map selected codes from the codebook (Appendix C) to the policy documents in which they appear. The selected codes include governance instruments (e.g., covenant, zoning plan, anterieure overeenkomst, ground lease), process-related themes (e.g., efficiency, speed/delay), and outcome-related themes (e.g., effectiveness, trust/transparency).

These diagrams represent an intermediate step in the network analysis process, supporting the identification of patterns that informed the interpretation presented in Chapters 5 and 6.

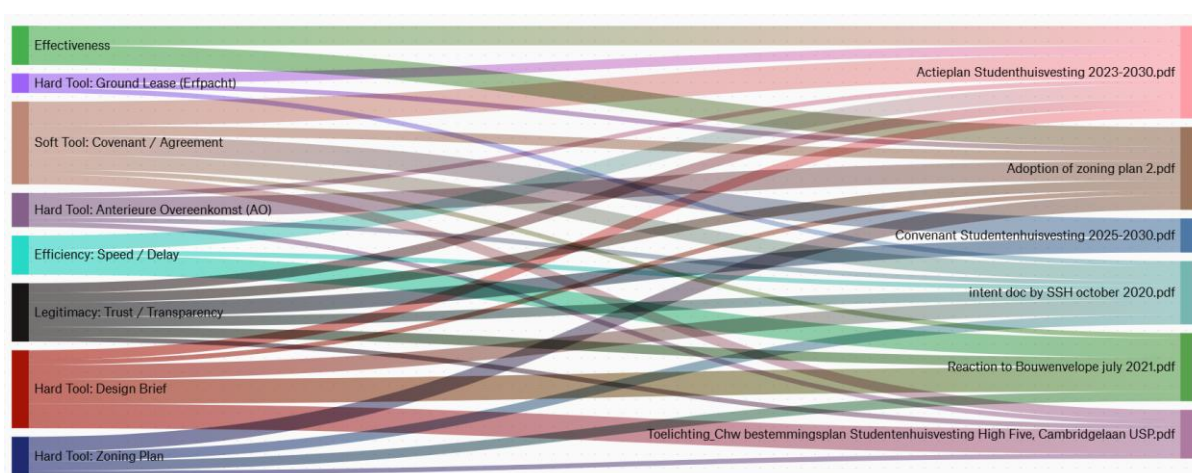


Figure F.1: Sankey Diagram – Code - Document Relationships (Example 1)

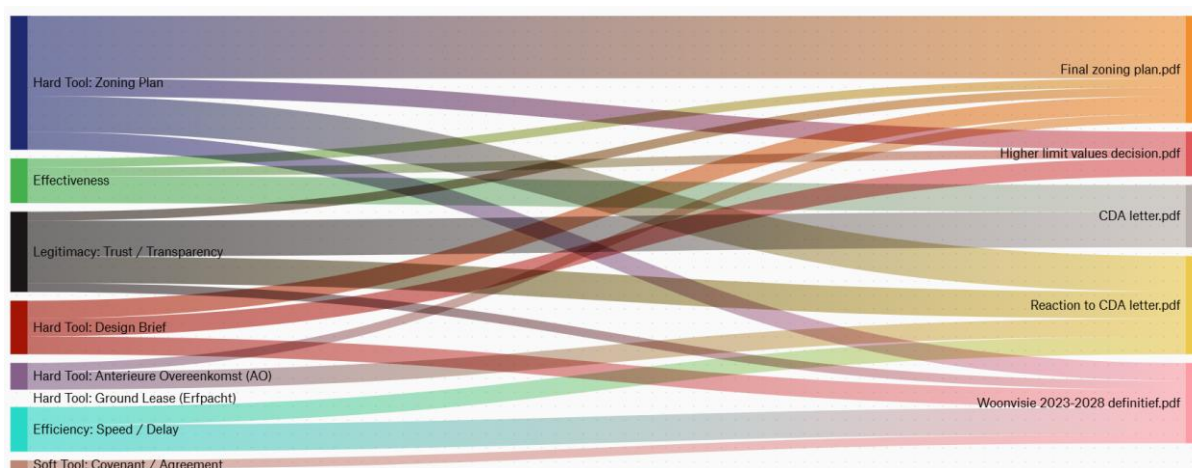


Figure F.2: Sankey Diagram – Code - Document Relationships (Example 2)

F.2 Methodological Note on Interpretation

The Sankey diagrams should be interpreted with the following considerations:

- They illustrate code–document linkages, not causal relationships
- They do not represent the frequency, weight, or relative importance of codes
- They do not indicate differences in data richness or analytical depth between cases

- They serve as illustrative examples of network-based exploration, rather than analytical results in themselves

The substantive findings derived from these relationships are discussed in Chapters 5 and 6.

APPENDIX G: USE OF AI TOOLS

This appendix discloses the use of AI-assisted tools in the preparation of this thesis, in accordance with TU Delft guidelines. AI language models were used for editing and proofreading text, improving clarity and structure, and supporting iterative refinement of written argumentation.

All substantive intellectual contributions, including research design, framework development, data collection and analysis, and conclusions, were produced independently by the author. AI tools were not used to generate data, conduct analysis, or produce final content without substantial revision.

The author takes full responsibility for the accuracy, integrity, and originality of this work.