Making Integrated Value visible in Urban Regeneration

Strategies to improve early-stage decision making in Dutch Urban Regeneration

Hrishikesh Chamankar
Management in the Built Environment
2024-26 | Delft University of Technology

H. (Hrishikesh) Chamankar
6039324

Delft University of Technology
Faculty of Architecture and the Built Environment
MSc. Architecture, Urbanism and Building Sciences | Management in the Built Environment
Graduation lab- Value and valuation in the Management of the Built Environment

Graduation Committee
First Mentor: Dr. Sc. V. (Vitalija) Danivska
Second Mentor: Ir. E.H.M. (Ellen) Geurts
Delegate of the board of examiners: S. (Stefano) Milani

Cover: https://barcodearchitects.com/projects/masterplan-rijnhaven-rotterdam/

Preface

This thesis has been a long and important journey for me. It all started as an interest in creating things, to becoming an architect, to now finishing my thesis in Management of the Built Environment at Delft. Having love for designing, I was more than thrilled to take on the opportunity to learn about the strategic, organisational and financial side of the built Environment. I was drawn to this topic of decision making in Urban Regeneration due to the complexity and multiple layers of compromise, negotiation and power dynamics. This was exciting but also challenging.

At times, the thesis process itself was more difficult than I expected. There were many moments of doubt, confusion, and revision, but those moments also helped me learn and grow. I am very thankful to my supervisors, Vitalija and Ellen, for their guidance, patience and support throughout this process. Their feedback helped me improve this thesis and mature in a professional manner.

I am especially grateful for the amazing people I get to call my friends and family. To my friends and family here in the Netherlands, thank you for making life thousands of kilometres away from home feel warm and truly enjoyable. To everyone back home, I am here because of you. Your love and support have made this journey possible.

To my parents, Aai and Baba, thank you for always being my constant source of strength.

Along with this thesis, I finish this chapter of my life at TU Delft with gratitude and valuable growth.

Hrishi
Delft | March 2026

Abstract

This research investigates how early-stage decision-making in Dutch urban regeneration can better balance social, environmental, governance, and financial values and whether a more standardized approach can improve clarity, comparability, and decision-making. It examines current practice, in which financial feasibility metrics tend to dominate early assessments, while soft values such as social cohesion and participatory outcomes that are not directly expressed in financial terms but are central to public value creation in urban regeneration remain poorly specified, inconsistently documented and difficult to compare across options. As a result, recurring tensions between objectives often emerge later in the process.

Drawing on academic literature and interviews with municipal officials, developers, and housing association representatives, the study analyses stakeholder priorities, alignment requirements under the *Omgevingswet*, and the institutional conditions under which value trade-offs are negotiated and justified. Using a design science research approach, an Integrated Value Creation Framework was developed to complement financial feasibility analysis. The framework operationalises non-financial values through indicators, a participation influence log and a trade-off ledger, enabling these values to be linked to early design and investment choices in a more efficient way.

The research findings reveal that value trade-offs become more manageable and accountable when they are made explicit, recorded, and revisited as part of formal early-stage decision-making, rather than remaining suggestive. The study concludes by discussing how these values can be made more visible and influential in Dutch urban regeneration initiatives, and by offering recommendations for improving early-stage decision-making practices.

Keywords: urban regeneration, soft value, framework development, decision-making, governance

Summary

Background and problem

Urban regeneration in the Netherlands has become an increasingly important response to housing shortages, ageing neighbourhoods, climate risks, and the need to improve liveability in existing urban areas. In practice, regeneration is expected to produce multiple forms of value at the same time. Besides financial feasibility, projects are also expected to contribute to 'soft values' such as affordability, environmental quality, climate resilience, and social cohesion. This means that urban regeneration is not only a physical or economic process, but also a governance process in which different actors negotiate what kind of value should be prioritised and how trade-offs should be managed.

Despite this broader ambition, early-stage decision-making in Dutch urban regeneration still tends to be dominated by financial feasibility. Economic value is easier to calculate, compare, and defend in formal decision settings because it is linked to budgets, risks, and expected returns. By contrast, social, environmental, and governance values are often acknowledged in principle but remain weakly structured in practice. They are usually expressed as ambitions, policy intentions, or qualitative concerns rather than as decision-ready inputs. As a result, such values are more vulnerable to being reduced, or overlooked when projects move through early feasibility discussions.

This problem is increased by the fragmented nature of Dutch urban regeneration. Municipalities, developers, housing associations, and communities each define value differently. Because these stakeholder groups operate under different responsibilities and incentives, value trade-offs are not only technical but also political and institutional. The introduction of the *Omgevingswet* adds further relevance to this issue. The law strengthens the importance of integrated planning, participation, and transparency but leaves room for municipalities to determine how these principles are organised and documented. This creates variation in practice and increases the need for a structured approach that can make value trade-offs visible and traceable in the early stages of urban regeneration. The central problem addressed in this thesis is therefore how early-stage decision-making in Dutch urban regeneration can better integrate social, environmental, governance, and financial values through a more standardised and practically usable approach.

Research Methodology

This thesis uses a Design Science Research (DSR) methodology. This approach was selected because the research aims to design and evaluate a practical artefact that can support decision-making alongside policy recommendations. The artefact developed in this study is the Integrated Value Creation Framework (IVCF), intended to help stakeholders make non-financial values more visible, comparable, and traceable in early-stage regeneration decisions.

First, a literature review was carried out to examine how value is understood in urban regeneration and to explore existing decision-support approaches. Second, qualitative interviews were conducted with key stakeholders involved in Dutch urban regeneration. Third, the findings from the literature and interviews were translated into the design of the IVCF. The framework was then refined through stakeholder feedback and formative evaluation. The research focused on creating a usable support tool that fits the realities of early-stage planning and multi-actor negotiation.

Findings

The findings show that financial feasibility remains the dominant format for early-stage decision-making because it is in a standardized measureable format. Feasibility tools strongly influence early-stage decision-making because they provide clear numbers, support comparison across options, and are easier to defend politically and organisationally. This shows that non-financial values often lack a format that allows them to travel through decision processes with similar influence.

The research finds that there is an absence of decision ready structure for broader ambitions and soft values. Social, environmental, and governance values often remain too abstract to shape early choices in a consistent way. As a result, they are vulnerable when projects face pressure related to cost, timing, or risk. The research also shows that many conflicts in regeneration should be understood as governance issues rather than only as optimisation problems. Trade-offs depend on who bears cost, who carries risk, and which stakeholder has the power to influence the project direction. The study also shows that participation under *Omgevingswet* is necessary, however it is only useful when the inputs of the participation can be traced and recorded.

In response to these findings, the thesis develops the Integrated Value Creation Framework. The IVCF does not replace financial feasibility. Instead, it complements it by creating a structured way to include economic, social, environmental, and governance values in the same early-stage conversation. The framework uses a limited indicator set, short evidence notes, stakeholder-specific weighting profiles, a participation influence log, and a trade-off ledger. These elements are intended to make value differences among stakeholders more clear.

Conclusion

The thesis concludes that improving early-stage decision-making in Dutch urban regeneration does not require removing financial feasibility from the process. Financial feasibility remains necessary because it addresses deliverability, risk, and accountability. However, the research shows that current practice gives financial value disproportionate influence because it is formalised more effectively than other values. The real barrier to integrated value creation is therefore a problem of visibility and traceability. Social, environmental, and governance values become weaker not because they are less important, but because they are not translated well enough into formats that support formal decision-making.

The main contribution of this thesis is the argument that early-stage decision-making should be understood as a value-translation process. Ambitions only become influential when they are translated into indicators, conditions, trade-offs, responsibilities, and review moments that can be used within actual decision routines. The IVCF contributes to this by helping stakeholders make soft values more decision-ready while keeping their different priorities visible.

Overall, the thesis argues that better urban regeneration decisions are possible when non-financial values are not left as broad ambitions but are structured in a way that allows them to influence early choices. A standardised framework cannot remove conflict or replace judgement, but it can make decisions clearer, fairer, and easier to justify over time.

Table of contents

Abbreviation List

CBA	Cost–Benefit Analysis
DEV-1	Interview code: Developer interviewee 1
DMP	Data Management Plan
DSR	Design Science Research
ESG	Environmental, Social, Governance
EXP-1	Interview code: Policy/legal expert interviewee 1
FAIR	Findable, Accessible, Interoperable, Reusable (data principles)
HA-1	Interview code: Housing Association interviewee 1
IRR	Internal Rate of Return
IVCF	Integrated Value Creation Framework
MCDA	Multi-Criteria Decision Analysis
MOR-1,2,3,4	Interview codes: Municipality of Rotterdam interviewees
OECD	Organisation for Economic Co-operation and Development
RES-1	Interview code: Academic researcher 1
SCBA	Social Cost–Benefit Analysis
SROI	Social Return on Investment

List of Figures

1
Introduction

1.1 Background

Urban regeneration is a critical component of present-day urban development, aiming to revitalize underutilized or deteriorating urban areas to improve social, economic, and environmental conditions (Nevescanin, 2023). This process involves comprehensive planning, investment, and policy interventions to transform old neighbourhoods, industrial zones, or declining areas into vibrant, functional spaces that accommodate housing, businesses, and public amenities (Turok, 2004). As cities face increasing challenges such as population growth, housing shortages, climate change, and economic inequality, urban regeneration plays a pivotal role in creating resilient, inclusive, and economically viable urban environments (Couch et al.,2003).

Urban regeneration has become a central task for Dutch cities as they face housing shortages, ageing neighbourhoods, and the need to adapt to climate change. Regeneration projects aim to improve economic activity, social well-being, and environmental performance in existing urban areas rather than expanding outward. This shift reflects a policy preference for compact growth and better use of scarce land. It also reflects the practical reality that cities must renew infrastructure, diversify housing, and sustain local economies within existing boundaries (Colantonio et al., 2011).

In the Netherlands, municipalities are the main initiators and coordinators of regeneration. They set strategic aims, guide spatial plans, negotiate land and infrastructure arrangements, and decide when and how projects move forward. Regeneration typically involves developers and investors who finance and deliver projects, housing associations with social mandates for affordability and liveability, and communities which are the users of the spaces (Klijn & Koppenjan, 2015). This multi-stakeholder setting is a strength because it brings resources and perspectives together, and a challenge because each stakeholder values outcomes differently.

These differences produce negotiations and trade-offs throughout the decision process. Municipalities often seek long-term public value such as accessible housing, quality public space, social cohesion, and climate resilience. Developers must ensure financial feasibility and acceptable risk. Housing associations aim to secure affordability and neighbourhood stability. Communities call for meaningful participation and visible benefits. The concept of value in urban regeneration extends beyond economic performance to include social cohesion, cultural identity, environmental quality, and long-term urban resilience (Louali et al., 2022). This broader value landscape is further shaped by the *Omgevingswet* (Environment and Planning Act), which came into effect in January 2024. The Act was developed to integrate and simplify previously fragmented spatial planning, environmental, and construction legislation into a single framework, with the aim of supporting more coherent and area-oriented development. At the same time, it raises expectations for early-stage collaboration, transparency, and the systematic documentation of stakeholder participation.

This thesis examines how value is defined, negotiated, and balanced in Dutch urban regeneration, with particular attention to decision-making under the *Omgevingswet*. It explores practical ways to make social, environmental, and governance considerations more visible and traceable alongside financial feasibility at early decision-making stages.

1.2 Problem Statement

Urban regeneration projects in the Netherlands are crucial for enhancing city liveability, economic vitality, and sustainability (OECD, 2017; Louali et al., 2022). However, current decision-making in these projects tend to prioritize financial metrics while treating social, environmental, and governance values are not adequately represented (Louali et al., 2022). This imbalance means that many regeneration strategies do not align with broader societal objectives and progressive planning policies, notably the *Omgevingswet* which mandates an integrated, participatory approach to spatial planning. In practice, feasibility plans often overshadow intangible 'soft values' such as social cohesion, increased safety and access to green spaces. (Louali et al., 2022).

Despite growing awareness that urban regeneration must create multi-dimensional value, there is still no standardized framework for systematically balancing economic, social, environmental, and governance criteria in early project decisions (Beukers et al., 2014). Existing evaluation tools, such as cost–benefit analysis or multi-criteria decision models, have notable limitations. They often fail to incorporate stakeholder perspectives or governance factors, leading to misaligned priorities and limited public trust in the planning process (Beukers et al., 2014). Important social and environmental benefits such as improved well-being, social cohesion, climate resilience, remain hard to quantify and are thus undervalued in decision-making (Louali et al., 2022). These gaps in current practice are increasingly problematic as Dutch cities face long-term sustainability commitments that demand broader definitions of value in urban development.

Governance complexity further complicates value-based decision-making in Dutch urban regeneration. These projects involve a network of stakeholders such as municipal authorities, private developers, investors, housing associations, and community groups, each with different interests and value priorities (Klijn & Koppenjan, 2015). This means that without a transparent way to reconcile competing priorities, project decisions can become protracted or conflict-ridden. Although the *Omgevingswet* now legally requires early stakeholder engagement and integrated planning, many municipalities struggle to implement these principles in practice.

Stakeholder input in regeneration is often ad hoc or uneven, even with participatory planning requirements, so community voices may not be systematically factored into project appraisals. Many residents feel poorly informed about development plans and excluded from meaningful decision-making. For example, nearly half of Dutch residents surveyed by Cyclomedia (2023) report that it is unclear how long construction impacts will last and that they receive insufficient information about nearby development projects, leading to frustration and a desire for greater involvement in planning processes. In addition, debates at the municipal level over participation practices have surfaced under the *Omgevingswet*, with opponents of development plans in Terneuzen and Eindhoven claiming they were not properly heard despite participatory efforts, sometimes resulting in mobilisation of local councils and appeals to the Raad van State, which delay projects (van Den Brand, 2024). Moreover, in broader housing development contexts, large numbers of objections from local neighbours have caused large project delays, signalling resistance rooted in perceived lack of transparency and inadequate engagement. (Binnenlands Bestuur,2024)

Early-stage decision-making in Dutch urban regeneration consists of fragmented responsibilities and non-uniform evaluation practices across projects and municipalities. Although social, environmental, governance, and financial values are widely acknowledged as relevant, no single stakeholder is formally responsible for integrating these dimensions into a coherent early-stage

appraisal. Thus, there is no shared, neutral or traceable basis on which value trade-offs are made explicit or compared across alternatives.

In practice, this institutional fragmentation leads early decisions to rely primarily on financial feasibility assessments, not because other values are considered less important, but because they are more readily formalised and defensible within existing governance arrangements. Social, environmental, and governance considerations are often addressed qualitatively or at later stages, making it difficult to demonstrate how they influenced early choices or to account transparently for trade-offs made under uncertainty. This gap contributes to recurring tensions around sustainability objectives, social equity and participatory legitimacy, particularly under the increased transparency and participation requirements of the *Omgevingswet*.

This research addresses the gap by developing an integrated value creation framework that incorporates diverse stakeholder inputs and aligns with the Netherlands' planning laws and sustainability objectives. The framework is intended to guide municipalities, developers, and community partners in jointly assessing urban regeneration proposals, thus improving the traceability of decisions and ensuring that investments in urban renewal advance not only economic gains but also social well-being, environmental resilience, and good governance (Klijn & Koppenjan, 2015). By providing a structured, multi-value evaluation tool for the initial stages of regeneration projects, the aim is to support more balanced decision-making that builds sustainable, inclusive, and prosperous urban environments in the Netherlands.

1.3 Relevance

This research is relevant because it addresses the imbalance in Dutch urban regeneration decision-making, where financial feasibility often dominates while social, environmental, and governance values remain less visible or systematically represented. By tackling this imbalance, the study provides insights and a standardized framework that support more balanced, transparent, and accountable decision making in regeneration projects. At the municipal scale, the framework offers a practical tool to operationalise ambitions of soft values which are often discussed but lack implementation. Municipal reporting from *Gemeente.nu*, (2025) show that existing participatory and planning requirements do not yet deliver better integration of community input into early decisions, and many municipalities see value in improving how participation and qualitative concerns are operationalised.

Scientifically, this study contributes to the under-explored intangible dimensions of value in Dutch urban regeneration. By developing a framework that translates stakeholder decision making into clear objectives alongside broader goals, the research bridges the gap between policy ambitions and operational decision-making in practice. It builds on academic work on socially sustainable urban development by advancing a research-based decision-support artefact that operationalises social, environmental, and governance values in early-stage urban regeneration. In doing so, the study contributes to the literature by demonstrating how these often qualitatively defined values can be made clear, comparable and traceable alongside financial feasibility, thus supporting more transparent and legitimate decision-making.

1.4 Research Questions

This research aims to explore how a standardized, framework can improve decision-making about social, environmental, and governance values in Dutch urban regeneration. Specifically, it seeks to place 'soft values' on the same page as financial feasibility so that options can be compared transparently, trade-offs can be made explicit, and participation inputs are traceable.

The main research question guiding this study is:

"How can early-stage decision-making in Dutch urban regeneration be supported through a standardized approach to value creation, particularly with regard to social, environmental and governance values?"

The following sub-questions will help address this main research question.

1. **What frameworks are currently used to support decision-making in urban regeneration, and to what extent do they enable the integration of social, environmental, governance, and financial values in early stages?**

   This sub-question maps the existing landscape of decision-support frameworks and identifies where they succeed and where they fall short, particularly in capturing multi-dimensional value. This gives direction towards what needs to be improved in the standardized framework.

2. **Who are the stakeholders involved in Dutch urban regeneration, and how do they define and prioritise value?**

   This question aims to understand the perspectives of municipalities, developers and housing associations, exploring how each stakeholder interprets value and where priorities converge or diverge.

3. **What trade-offs emerge between economic, social, and environmental values in Dutch urban regeneration projects?**

   This sub-question identifies recurring conflicts in Dutch urban regeneration. It examines how these tensions are negotiated among stakeholders highlighting the compromises made and the consequences on regeneration projects.

4. **How can value assessment approaches be aligned with the requirements of the *Omgevingswet*?**

   This sub-question examines how frameworks can respond to the Dutch planning context, including legal obligations for participation and integrated evaluation, to ensure policy relevance and compliance.

5. **How can stakeholder assessments of usability and relevance be captured, and reflected within the framework to support early-stage decision-making?**

   This sub-question gathers feedback on whether the framework is practical, understandable, and useful for decision-making contexts, without requiring full implementation on a real project.

1.5 Research Framework

The research model in the figure 1 below demonstrates how the study moves from diagnosing the problem to testing a potential support tool, with the overarching aim of making Dutch urban regeneration decisions more balanced and transparent.

The research focuses on what shapes the problem of weak integration of soft values in Dutch urban regeneration decision-making. This is studied through four main aspects. First, by looking at actors and interests, because different stakeholders such as municipalities, developers, housing associations, and residents often want different things from a regeneration project. Second, it looks at gaps in existing approaches, especially where current methods do not properly include soft values in decision-making. Third, it explores the different value domains involved, such as social, environmental, governance, and economic value. Fourth, it checks how the issue connects to the Omgevingswet, especially in relation to participation, transparency and integrated planning. These help to answer the main research question and give direction for development of the design artifact.

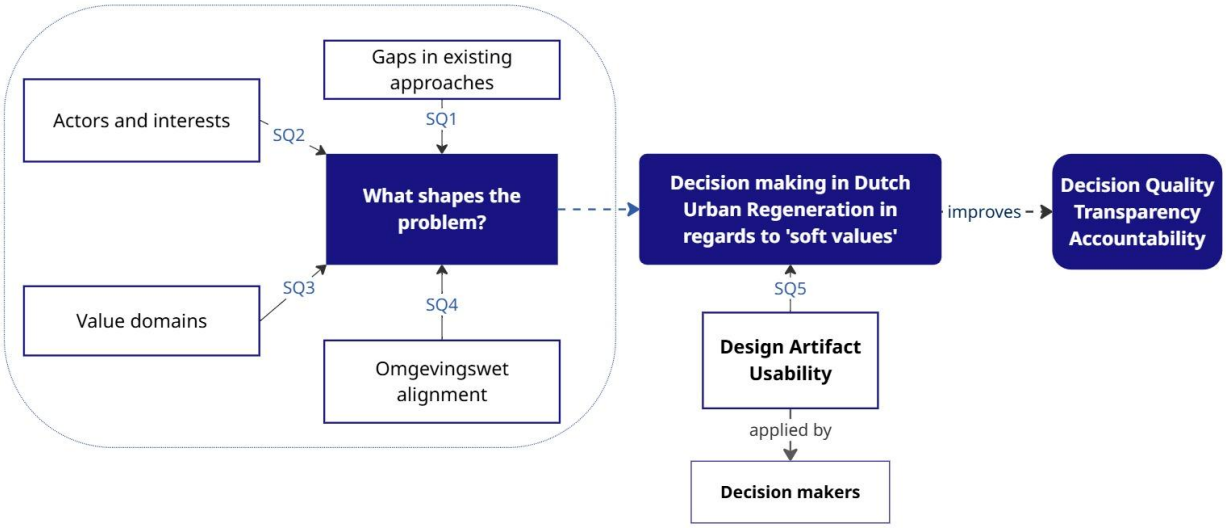


Figure 1: Structure of sub-questions supporting the main question (own work)

2
Literature review

This chapter presents the theoretical foundations for understanding how a standardized framework can support decision making in Dutch urban regeneration by exploring the concepts of value creation, stakeholder roles, governance and participation, and evaluation approaches.

This thesis focuses on early-stage decision-making in Dutch urban regeneration and asks how decisions can better balance social, environmental, governance, and financial values. It shows how economic, social, environmental and governance values are understood, how different stakeholders prioritise these values, and how trade-offs emerge in practice. It also examines how the *Omgevingswet* creates new demands for participation and transparency, and reviews existing evaluation tools to highlight their limitations.

2.1 Urban regeneration as multi-value creation

Urban regeneration refers to intentional, area-based interventions often led or supported by the public sector, aimed at revitalizing urban areas suffering from various forms of deprivation (Roberts et al., 2017). It is widely described as a set of coordinated interventions that aim to improve declining or underused urban areas through physical renewal, economic development, and improved social and environmental conditions (Colantonio et al., 2011). Urban regeneration is a long process with many decisions about land use, design, governance, timing, and financing. Early-stage decisions are especially important because they shape what later outcomes are possible and because they often decide key constraints that are expensive or politically difficult to change later (Couch et al., 2003).

One of the main themes in urban regeneration literature is that regeneration aims to create value in more than one domain at the same time. 'Value' in regeneration is not only economic growth or higher land and property values. It can include improved housing quality, safety, better public space, stronger communities, healthier living environments, and reduced environmental impacts (Colantonio et al., 2011; Mak et al.,2014). These can also be referred to as 'soft values'.

Urban regeneration outcomes are contested and can be experienced differently by different groups. Regeneration and modernization agendas can operate as broader gentrification strategies that reshape cities through investment, upgrading, and displacement pressures, even when projects are framed as improving liveability (Smith, 2002). For example, work on Rotterdam's Afrikaanderwijk describes how residents can simultaneously experience physical improvement and still feel that choices were limited and that social outcomes were uneven, leading to the idea of 'false choice urbanism' (Doucet & Koenders, 2018). These findings matter for early-stage decision-making because they show why social value cannot be treated as a generic benefit that automatically follows from physical redevelopment. Social value must be defined more precisely and it must be tracked across the process.

2.1.1 Financial Value in Urban Regeneration

Financial or economic value refers to the monetary benefits of regeneration, such as increased land and property values, higher rents, and economic activity growth. In European regeneration practice, economic objectives have often played a major role, because cities use regeneration to strengthen competitiveness and attract investment (Couch et al., 2003). Dutch cities operate in that same context, and municipal investment in strategic locations is often justified by expected economic value development and investor response (Mak & Stouten, 2014).

Financial value tends to be represented through quantitative feasibility and investment metrics because it is tied to costs, revenues, and risk. In regeneration and real estate development contexts, these commonly include discounted cash flow reasoning and measures such as net present value (NPV) and internal rate of return (IRR), alongside residual land value logic and cost–benefit style comparisons (Moorhead et al., 2024). This measurability helps explain why financial performance typically dominates early-stage decision gates as it produces numbers that can be compared, audited, and defended in both public and private decision arenas (Beukers et al., 2014).

However, a single-minded focus on economic returns can lead to imbalances. According to literature (Nevescanin,2023) is it understood that existing value frameworks often overemphasize financial metrics while neglecting social and environmental benefits. One consequence is the risk of gentrification and socio-economic exclusion. As property values rise, lower-income residents

can be priced out of regenerated areas, undermining social sustainability. In Rotterdam, for instance, regeneration of neighbourhoods like the *Oude Noorden* showed significant housing price increases and some indications of gentrification, although largely limited in scope (Mak & Stouten, 2014). Displacement of long-term residents has been documented as a concern in such projects, raising questions about who truly benefits from the economic value created.

Financial value is central because it links directly to feasibility, investment decisions, and accountability requirements. Yet the literature shows that financial uplift can coincide with exclusion and gentrification pressures.

2.1.2 Environmental Value: Sustainability and Climate Resilience

Environmental value in urban regeneration refers to improvements in ecological performance and climate resilience. This includes reducing greenhouse gas emissions, improving energy efficiency, expanding green and blue infrastructure, improving air and water quality, and reducing vulnerability to climate risks such as flooding and heat stress. Environmental goals have become more prominent in the Netherlands because the country has a formal climate policy direction toward climate neutrality by 2050, and climate adaptation is increasingly treated as a core planning task (Government of the Netherlands, n.d.). Regeneration of existing urban areas is also seen as a way to reduce land take and limit outward urban expansion, aligning with the EU goal of 'no net land take by 2050.' (European Environment Agency, 2025).

Regeneration of existing urban areas is widely regarded as an important strategy for achieving these goals. Regeneration supports compact development and reduces pressure on undeveloped areas by and upgrading already developed land. This aligns with Dutch spatial planning principles and broader sustainability strategies focused on efficient land use (Systemiq Analysis, 2024).

Environmental value can partly be captured through indicators (e.g., CO_2 reductions, energy performance), but many benefits are long-term and diffused, such as health improvements from cleaner air or long-term risk reduction from climate-adaptive infrastructure. Because these benefits are harder to monetize or attribute early in a project, they can be undervalued in early feasibility-driven decision routines unless explicitly operationalized (Bos et al., 2022).

A further complication is that environmental upgrading can interact with housing affordability. Studies on 'green gentrification' shows that new green infrastructure and greening investments can be associated with gentrification and inequality in access to environmental benefits (Sax et al., 2022). This is relevant for Dutch regeneration because more green areas and climate adaptation are increasingly expected outcomes, but they can also contribute to rising property values and affordability pressures. Public debate surrounding the redevelopment of the *Tweebosbuurt* in Rotterdam-Zuid showcases these tensions. The project combined environmental and spatial upgrading with substantial changes to the housing stock, including the demolition of social rental housing, raising concerns about social displacement (Raad van State, 2022).

These examples show that environmental value cannot be assessed independently from social and financial considerations. Environmental ambitions may support long-term sustainability while also reshaping housing markets and urban planning.

2.1.3 Social Value: Liveability, Inclusiveness and Community Benefits

Social value in urban regeneration refers to the improvements in societal well-being and community quality of life that a project can deliver. This includes affordable housing provision, housing quality, social mix and cohesion, public safety, health and happiness of residents, access to services, preservation of cultural heritage, and overall liveability of neighbourhoods. According to literature, regeneration should be evaluated not only by market outcomes but also by its contribution to inclusive and liveable neighbourhoods (Colantonio et al., 2011).

In the Dutch context, social objectives are often discussed using the concept of *leefbaarheid* (liveability), and municipalities and researchers use monitoring systems to track neighbourhood conditions. The *Leefbaarometer* is an official tool used to monitor liveability at fine spatial scales for Dutch neighbourhoods, districts, and streets, supporting policy preparation and evaluation (*Leefbaarometer*, n.d.).

Social value delivery is tied to benefits of both the local residents as well as new incoming people. Social value delivery involves protecting affordability, maintaining social and mid-income housing, improving public space and services, and supporting social infrastructure. For example, Rotterdam's long-term approach in the south of the city is often discussed through the *Nationaal Programma Rotterdam Zuid* (NPRZ), a multi-partner 20-year program focused on improving outcomes in housing, work, and education (*Nationaal Programma Rotterdam Zuid*, 2022). NPRZ also produces indicator-based reporting to track progress, which reflects the practical need to operationalize social goals into measurable proxies over time (*Nationaal Programma Rotterdam Zuid*, 2022).

Measuring social value remains difficult. Some outcomes can be tracked through statistics (e.g., affordability, crime rates, school outcomes), but many important benefits such as sense of belonging, perceived safety, and trust are partly qualitative. Social impact assessment frameworks stress structured identification of likely social effects and the importance of participation and follow-up, but they also recognize that social change is complex and context dependent (Arce-Gomez et al., 2015). Social valuation approaches such as social return on investment and social value measurement frameworks attempt to make these outcomes more legible to decision-makers by building impact models and, where justified, monetizing some outcomes. However, these approaches also require assumptions that need transparency (Fujiwara et al., 2022; Then et al., 2017). Dutch case work applying social cost benefit analysis to bottom-up planning further shows both the usefulness and the effort involved in making social value visible in appraisal (Louali et al., 2022).

Social value is central to the public purpose of regeneration, and Dutch practice increasingly uses indicators and monitoring tools to track aspects of it. Yet many key social outcomes remain hard to measure and compare early.

2.1.4 Governance Value: Participation and transparency

Governance value refers to the quality of decision-making and collaboration in regeneration, including participation, transparency, accountability, and long-term stewardship. It includes transparent decision-making, inclusive stakeholder participation, accountability of public officials and private developers, and effective collaboration among parties (Ansell & Gash, 2008). In the Netherlands, good governance is seen as a critical enabler of achieving the other value domains

where it is through robust governance mechanisms that environmental, social, and economic goals can be aligned and trade-offs mediated.

In the Netherlands, governance value has gained additional weight due to legal reforms. The Environment and Planning Act (*Omgevingswet*) entered into effect on 1 January 2024 and combines and modernizes laws for the physical environment. This supports an integrated approach to planning and increases expectations that participation and interest balancing are handled clearly in the preparation of decisions (Government of the Netherlands, n.d.; IPLO, n.d.). This legislative shift reflects a broad recognition in the Netherlands that governance processes themselves carry value where a well-governed project yields greater public trust, legitimacy, and ultimately more sustainable outcomes (van den Hurk & Taşan-Kok, 2020).

Van den Hurk and Taşan-Kok (2020) observe that Dutch urban regeneration often relies on complex contractual arrangements between municipalities and private investors, which can constrain flexibility and democratic oversight. They found that when contracts are overly rigid or prioritize investor returns, city officials have less leeway to adjust projects in response to community input, potentially leading to suboptimal investment decisions driven by narrow interests. In contrast, a more adaptive, collaborative governance approach, involving continuous dialogue and trust between stakeholders, can better balance different values (Ansell & Gash, 2008). Participation quality is not guaranteed by the fact that participation occurs, the outcomes depend on process design and whether engagement is meaningful and timely.

Governance value affects whether regeneration can balance financial, social, and environmental goals over time. Dutch legal reform and contractual governance dynamics make it especially important to document participation, decision rationales, and value trade-offs so that regeneration remains legitimate and adaptable.

2.1.5 Tangible vs. Soft values

A recurring theme in the literature is that some regeneration outcomes are easier to measure than others. Tangible outputs (e.g., units built, budgets spent, infrastructure delivered) and financial feasibility indicators are usually measured and audited early, while ‘soft’ values (e.g., social cohesion, perceived safety) are real but harder to quantify and compare. Literature on social value measurement shows that appraisal practice is shifting toward wider societal impacts, but embedding these impacts into decision-making requires clear indicators, transparent assumptions, and governance routines and not only narrative statements (Fujiwara et al., 2022).

Dutch evaluation practice also recognizes this difficulty and increasingly discusses how to include broader welfare outcomes in appraisal approaches. Bos et al. (2022), for example, provide concrete recommendations for better incorporating broad prosperity considerations into social cost benefit analysis, illustrating that what counts in evaluation is not fixed but can be improved through methodological and procedural choices. Beukers et al. (2014) similarly show that appraisal tools can function as learning and communication devices when they make assumptions and trade-offs explicit. Together, these sources support the thesis argument that visibility bias occurs when only financially legible metrics are structured and comparable early, while soft values are left vague and therefore become weak decision inputs. Soft values are widely recognized but often remain less influential early because they are harder to quantify, standardize, and trace through decisions.

Environmental, Social and Governance (ESG) is widely used as a structured language to describe non-financial performance and non-financial risk in investment and organisational decision-making. In urban regeneration, ESG is relevant because regeneration projects influence environmental outcomes (e.g., energy use, emissions, climate resilience), social outcomes (e.g., affordability, displacement risk, access to services), and governance outcomes (e.g., participation, transparency, legitimacy) over long time horizons and across multiple stakeholders. ESG therefore also corelate to the 'soft values' talked about in this research that can travel between municipalities, developers, housing associations, financiers, and institutional investors, even though these stakeholders use different decision routines and accountability systems.

2.2 Stakeholders and value priorities

Urban regeneration is shaped by multiple stakeholders who hold different responsibilities, resources, and ideas about what counts as 'value.' In most regeneration projects, value is not defined by a single stakeholder. Instead, outcomes emerge through negotiation between public authorities, private market actors, semi-public housing organizations and residents. This reflects a governance setting where actors are interdependent and must cooperate to deliver spatial change, even when their priorities differ (Klijn & Koppenjan, 2015).

In the Dutch planning context, this multi-actor setting is often described through concepts such as network governance and collaboration. These concepts help explain why regeneration decisions can be slow and contested(Klijn & Koppenjan, 2015). Value conflicts become visible when tight housing delivery targets must be combined with qualitative ambitions such as affordability, liveability, and sustainability (Jonkman et al., 2022). A stakeholder perspective is therefore essential for early-stage decision-making with different interpretations of value.

Municipalities: Dutch cities operate under a decentralized governance model, granting municipal governments substantial control over urban planning and regeneration. Municipalities are central actors in Dutch urban regeneration because they hold formal responsibilities for spatial planning, local policy, and public investment coordination. They are responsible for determining land-use plans, setting development conditions, and coordinating infrastructure and public space improvements that often enable regeneration (OECD, 2017). Municipalities also have an important role in structuring participation processes and translating political priorities into spatial planning instruments, particularly after the introduction of the *Omgevingswet*, which emphasises integrated planning and participation in the physical environment (*Rijksoverheid*, 2024).

Municipalities often define value in broad public terms. Their goals typically combine quantitative objectives such as housing delivery, economic development, and densification with qualitative ambitions such as affordability, spatial quality, liveability, and climate adaptation (Jonkman et al., 2022). This broad value framing reflects the municipal task of serving multiple publics and addressing multiple policy domains. At the same time, it creates internal tensions. Jonkman et al. (2022) show that Dutch housing development is increasingly shaped by conflicts between quantitative targets and qualitative ambitions. In practice, this means municipalities often face difficult choices between speed and output, on one hand, and quality and inclusiveness, on the other.

Municipal decision-making is also shaped by public accountability. Municipalities must justify regeneration decisions to elected councils, residents, and oversight institutions, which encourages

emphasis on transparency, legal robustness, and coherent justification of choices (Bovens, 2007). Municipalities' steering capacity is constrained by institutional, financial, and market conditions, which can reduce direct public control and increase reliance on negotiated outcomes with private actors (Buitelaar, 2010). This is particularly relevant in regeneration projects, where the municipality often needs private capital and delivery capacity to realise plans. Municipalities typically define value as multi-dimensional public benefit and are responsible for balancing competing goals.

Developers and investors: Private developers and investors are crucial for the implementation of regeneration because they provide financial resources, development expertise, and organisational capacity for delivering complex projects. Regeneration often requires high upfront investment, multi-year phasing, and coordination of multiple risks (Apollo & Brzezicka, 2014). This increases the importance of private financing and limits how far public actors can push requirements without affecting deliverability.

Developers and investors typically define value through feasibility and financial performance. Their decision logic focuses on profitability, risk, and predictability, including expected sales revenues or rental income, construction and financing costs, and exposure to planning delays (Apollo & Brzezicka, 2014). Regeneration projects are sometimes riskier than standard greenfield projects because demolition, remediation, infrastructure complexity, and stakeholder conflict can increase uncertainty and costs (Apollo & Brzezicka, 2014).

In the Dutch context, private-sector-led development has become more prominent in some project types, with municipalities adopting a more facilitative role. Heurkens and Hobma (2014) describe how private sector-led urban development projects operate under conditions where developers may lead while public authorities provide planning frameworks and negotiate public benefits. In these settings, developers often prioritise program elements that align with market demand and reduce delivery risk. Requirements related to social housing quotas, costly public amenities, or sustainability measures can be perceived as financial burdens unless they are compensated, mandated clearly, or supported through policy tools (Heurkens & Hobma, 2014).

Planning uncertainty, changing political priorities, and formal objections can increase timeline risk and therefore financial risk (Apollo & Brzezicka, 2014). Literature on uncertainty in real estate and urban regeneration suggests that flexibility can be valuable in such contexts for example, the ability to delay, stage, or adapt investment under uncertain future conditions. However, this flexibility may conflict with municipal desires for early certainty and fixed commitments to social and environmental objectives (Apollo & Brzezicka, 2014).

Overall, the private sector's influence is rooted in capital and delivery capacity. Developers and investors cannot fully define regeneration outcomes without municipal approvals, but municipalities may also struggle to achieve regeneration without private involvement unless public resources are unusually strong.

Housing Associations: Housing associations are distinctive stakeholders in Dutch regeneration because they combine a social mandate with financial and managerial responsibilities. They often own and manage large portions of the housing stock, especially in post-war districts and lower-income neighbourhoods, which positions them as key actors in renewal and restructuring debates (Priemus, 2006). Their mission primarily emphasises affordability, housing quality, tenant welfare, and neighbourhood stability, which shapes how they define regeneration value (Priemus, 2006).

At the same time, housing associations operate under financial constraints. They do not distribute profits like private developers, but they must maintain solvency, manage assets responsibly, and ensure that regeneration investments are financially sustainable (Priemus, 2006). This hybrid position between market and public logic means that housing associations continuously balance social objectives with investment capacity and regulatory limits (Priemus, 2006).

In practice, housing associations often prioritise social and governance values in regeneration negotiations. For example, when redevelopment plans propose demolition of social rental housing, associations may push for alternatives such as renovation, tenant rehousing guarantees, replacement of affordable units, or phased approaches that reduce disruption. These positions reflect both their social mandate and their relationship with tenants and tenant organisations (Priemus, 2006). Housing associations also increasingly engage with environmental value goals, such as energy efficiency improvements and sustainability upgrades, but these measures can raise costs and create trade-offs with affordability, which again reinforces the need for negotiated solutions.

Community groups: Community and resident groups contribute experiential and place-based perspectives to regeneration. They often define value through improvements to daily life, such as safer streets, cleaner environments, accessible green space, affordable housing options, and preservation of local identity. These priorities often focus on distribution: who benefits from regeneration and who bears burdens such as disruption, higher costs, or displacement risk.

Communities also value the decision process itself. Meaningful participation, transparency, and influence are often seen as important outcomes, not only as tools for better design (Reed, 2008). Participation research suggests that the value of participation depends heavily on process quality: participation can enhance legitimacy and learning, but only when it is organised in ways that are timely, inclusive, and connected to decisions (Reed, 2008). If participation is symbolic or unclear, it can increase distrust and conflict.

Communities can influence regeneration through multiple channels, including engagement in participation processes, media and political pressure, and formal objection and appeal procedures in planning processes. Recent legal-institutional research on participation requirements under the Omgevingswet suggests that participation requirements have not changed as radically as some expectations suggested, which may contribute to ongoing debate about what ‘good’ participation means in practice (Hollemans et al., 2025). Governance theory adds that collaboration does not automatically ensure accountability. Sørensen and Torfing (2021) argue that collaborative governance can enhance accountability but can also create new accountability challenges that need to be addressed through transparency and clear responsibility structures.

Stakeholders in Dutch urban regeneration define and prioritise value in systematically different ways such that municipalities prioritise public value and accountability, developers and investors prioritise feasibility and risk-adjusted returns, housing associations prioritise affordability and tenant outcomes within financial constraints, and communities prioritise liveability and procedural fairness.

2.3 Existing decision support approaches for regeneration

In Dutch urban regeneration, decisions are often supported by formal evaluation approaches that focus on financial feasibility and quantifiable societal effects. These approaches are rooted in welfare economics and public investment appraisal traditions. They are designed to help decision-makers compare alternatives, justify public spending, and show whether a project is efficient from a societal perspective (Romijn & Renes, 2013).

In practice, these tools are strongest when costs and benefits can be expressed in monetary terms or through standard quantitative indicators. Environmental effects such as emissions, noise, or health impacts can sometimes be quantified and valued using established methods. However, many regeneration outcomes are 'soft' or process-based and are therefore harder to represent. Examples include social cohesion, trust, perceived safety, the quality of participation, and the legitimacy of governance. These values are central to regeneration success, but they are often difficult to monetize, attribute, or compare across options, especially at early project stages.

The main approaches discussed in academic and applied literature include cost–benefit analysis (CBA) and social cost–benefit analysis (SCBA/MKBA), social return on investment (SROI), multi-criteria decision analysis (MCDA), and newer participatory or hybrid approaches that combine technical appraisal with stakeholder deliberation (Cinelli et al., 2014).

2.3.1 Cost–Benefit Analysis (CBA) and Social Cost–Benefit Analysis

The cost-benefit analysis has long been the standard tool for evaluating large infrastructure and regeneration projects. It compares all costs and benefits of a project, expressed in monetary terms, to determine whether the societal benefits outweigh the costs (Romijn & Renes, 2013). Importantly, Dutch guidelines require that non-financial effects such as environmental pollution, health impacts, and quality of the living environment are included where possible (Bos et al., 2022). In Dutch policy practice, this is often referred to as a *maatschappelijke kosten-batenanalyse* (MKBA), which aims to represent costs and benefits for society as a whole rather than for a single investor. The social cost-benefit analysis extends this framework by emphasizing social returns, incorporating effects on well-being, social networks, or community resilience (Louali et al.,2022).

A key strength of CBA/MKBA is that it forces decision-makers to consider externalities and long-term impacts. It is designed to move beyond narrow project budgets by including effects such as environmental and health impacts, accessibility effects, and changes in quality of the living environment where these can be identified and valued (Romijn & Renes, 2013). In the Dutch context, MKBA guidance has also been developed for the social domain. This reflects recognition that many public interventions aim to improve well-being, social participation, and social services, and that these effects need structured assessment even when markets do not price them directly (Koopmans et al., 2019). In regeneration, this is relevant because many intended outcomes are social in nature: improved liveability, stronger communities, reduced health issues, and better access to services.

At the same time, CBA/MKBA has clear limitations for regeneration. First, it struggles with outcomes that are difficult to monetize or where valuation is contested. Social cohesion, cultural identity, and governance legitimacy often end up as qualitative notes rather than quantified entries, which reduces their influence in comparison and decision gates (Bos et al., 2022). Second, CBA focuses on aggregate welfare. Questions such as who benefits, who loses, and where impacts concentrate can be described, but they are not always central to the main outcome metrics, which

can reduce attention to equity concerns that are often politically important in regeneration (Bos et al., 2022).

Third, CBA can be difficult to use as a shared decision tool among stakeholders. Beukers et al. (2014) argue that CBA can function as a learning process if it is used to surface assumptions and uncertainties, improving communication and trust. However, if it is treated mainly as a technical instrument, it can reduce transparency for non-experts and contribute to contestation, particularly when stakeholders feel their concerns are not reflected in the analysis (Beukers et al., 2014).

SCBA applications in Dutch settings illustrate both the promise and difficulty of expanding CBA toward 'soft' outcomes. For example, Louali et al. (2022) apply a social cost–benefit approach to bottom-up spatial planning in a Dutch shrinking-city context. Their work shows that it is possible to broaden appraisal to better represent citizen-led value creation. At the same time, it demonstrates that doing so requires strong assumptions, careful definition of outcomes, and transparency about attribution and uncertainty (Louali et al., 2022).

2.3.2 Social Return on Investment (SROI)

Social return on investment aims to make social outcomes more visible by translating them into monetary values. Typical SROI studies build an impact models, identify stakeholders, and then estimate the value of outcomes such as improved health, reduced crime, greater inclusion, or stronger social networks (Then et al., 2017). The method is often attractive in regeneration contexts because it expresses social outcomes in a language that resembles investment appraisal, which can help communicate value to decision-makers who are used to financial metrics (Fujiwara et al., 2022).

A central strength of SROI is that it explicitly emphasizes stakeholder perspectives. It requires analysts to identify which groups are affected and what outcomes matter to them, which can improve legitimacy and relevance compared with tools that rely only on expert-defined indicators (Then et al., 2017). This stakeholder orientation also aligns with regeneration needs, where residents and local organizations often evaluate success through lived experience outcomes that are not captured by property value changes alone.

However, SROI also has limitations that affect its use in formal early-stage decision-making. First, SROI relies heavily on assumptions and numbers. Many outcomes do not have a direct market price, so valuation depends on chosen proxies (e.g., willingness-to-pay estimates). These choices can be contested and can vary significantly across studies, reducing comparability (Then et al., 2017). Second, here is a risk of overstatement in the converted metrics. Recent social value measurement literature similarly emphasizes that monetized social value estimates can strengthen decision narratives, but only if they are transparent about assumptions and do not conceal uncertainty (Fujiwara et al., 2022).

2.3.3 Multi-Criteria Decision Analysis (MCDA)

Multi-criteria decision analysis is widely discussed as an alternative or complement to monetary appraisal when decisions involve multiple value domains that cannot be reduced to a single scale. MCDA evaluates options using a set of criteria, which can include financial feasibility, environmental performance, social outcomes, and governance considerations (Cinelli et al., 2014). Criteria can be measured quantitatively (e.g., costs, emissions) or qualitatively (e.g., participation

quality), and weights can be used to represent relative importance. This flexibility makes MCDA attractive for urban regeneration, where trade-offs between value domains are common and where stakeholder goals are not fully measurable.

Other model-based approaches to regeneration decision-support also share MCDA's multi-dimensional logic. Manganelli et al. (2020) develop a decision-support model for urban regeneration using multi-objective optimization. Their work highlights how different stakeholder categories can be represented through objective functions and demonstrates the potential for rigorous comparison of alternatives. The main limitation of MCDA is that results depend heavily on the design choices of the model. Criteria selection and weighting are inherently normative. If weighting is not transparent, or if it reflects institutional agendas rather than negotiated priorities, MCDA can be perceived as manipulable or inconsistent across cases (Cinelli et al., 2014). In regeneration, another practical challenge is integration with existing governance routines. Even when MCDA produces a clear ranking, decision-makers still need to justify how the ranking relates to legal obligations, political priorities, and feasibility constraints (Manganelli et al., 2020).

2.4 Collaborative governance, participation and the *Omgevingswet*

Participation is a central theme in regeneration, but the literature stresses that participation outcomes depend strongly on design. Reed (2008) shows that participation is commonly justified through normative arguments (democracy and fairness) and instrumental arguments (better decisions), but that participation quality varies and should not be assumed effective by default. Newig and Fritsch (2009) similarly argue that participatory, multi-level environmental governance can improve outcomes, but effects depend on representativeness, delegation of influence, and institutional embedding.

Collaborative governance theory helps explain why these conditions matter in regeneration. Ansell and Gash (2008) argue that collaboration requires supportive starting conditions, clear institutional design, facilitative leadership, and sustained engagement. In regeneration, these conditions are difficult because projects are long-term and affect unequal groups differently.

Similarly, citizen initiatives in urban planning illustrate the institutional work needed to legitimise non-traditional actor roles and to translate grassroots ambitions into acceptable planning objects, contractual forms, and regulatory fit (Bisschops et al., 2023). Such studies suggest that participation is not merely about generating inputs, but about negotiating new roles, responsibilities, and assurances often producing gaps between rhetorical support and practical backing (Bisschops et al., 2023).

From an early-stage decision perspective, these findings imply that participatory value must be paired with mechanisms that stabilise commitments. Without such mechanisms, participation risks becoming symbolic by raising expectations without producing implementable trajectories (Bisschops et al., 2023). In the context of the Netherlands' evolving legal-planning environment, law can structure participation by enabling or constraining collaboration and by shaping the procedural space for co-creation. The Omgevingswet (effective from 2024) increases expectations for integrated planning and participation in the physical environment. Collaborative governance research also raises an accountability issue. Sørensen and Torfing (2021) argue that collaborative governance can enhance accountability but can also generate new accountability problems due to blurred responsibilities. In regeneration, where multiple actors co-produce outcomes, this

implies that documenting who decided what, why certain trade-offs were made, and how participation input influenced decisions becomes essential for legitimacy and for reducing later conflict.

Together, these concepts reveal key gaps which are the lack of a consistent and standardized framework, the difficulty of making 'soft values' visible and comparable, and the challenge of integrating diverse stakeholder perspectives into early decisions. By framing these gaps, the chapter establishes the theoretical underpinning of the research as shown in figure 2 below and justifies the need to develop an integrated value creation framework to support more balanced and transparent decision making in Dutch urban regeneration.

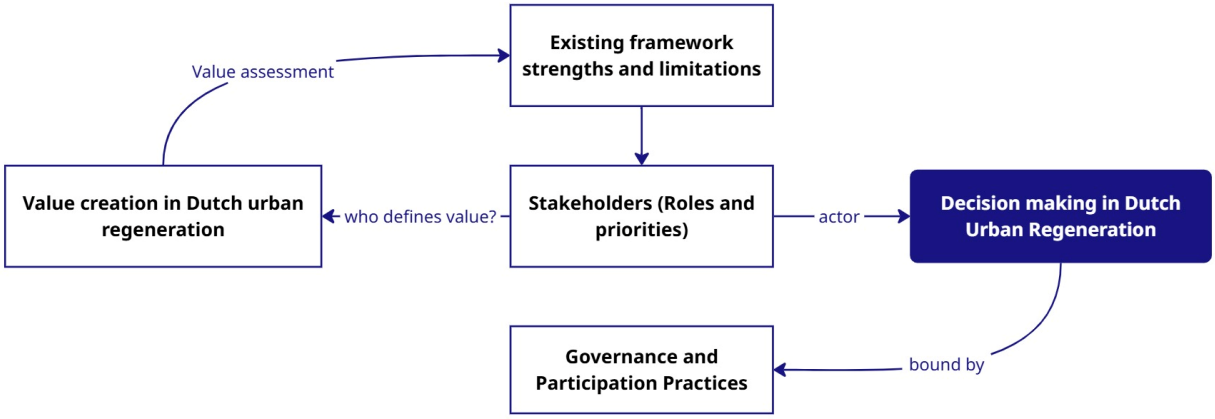


Figure 2: Theoretical background (own work)

3
Research Methodology

This chapter outlines the methodological design that guided the development of the Integrated Value Creation Framework. The research followed a Design Science Research (DSR) methodology. The framework as addressed in the research was designed in alignment with the participatory planning mandates of the Dutch *Omgevingswet* and aimed to integrate economic, social, environmental, and governance values into a decision supporting tool.

3.1 Research Design

Design Science Research (DSR) had emerged as a robust method for addressing complex, real-world problems through the development of purposeful artifacts (vom Broke et al,.2020). DSR aims to develop an innovative solution to a well-defined problem by assembling, integrating, refining, and extending existing design knowledge into a purposeful artifact (vom Brocke et al., 2020). This approach was well-suited to the study, which used qualitative methods to support early-stage decision making in Dutch urban regeneration by making social, environmental, and governance values visible alongside financial feasibility. Drawing on academic literature and Dutch planning practice, the study developed an integrated value creation framework to guide value-balanced appraisal under the *Omgevingswet*. In line with DSR, the project contributed both a design artifact (the framework) and design theory outputs (strategy recommendations for value-balanced decision making) as discussed by vom Brocke et al. (2020).

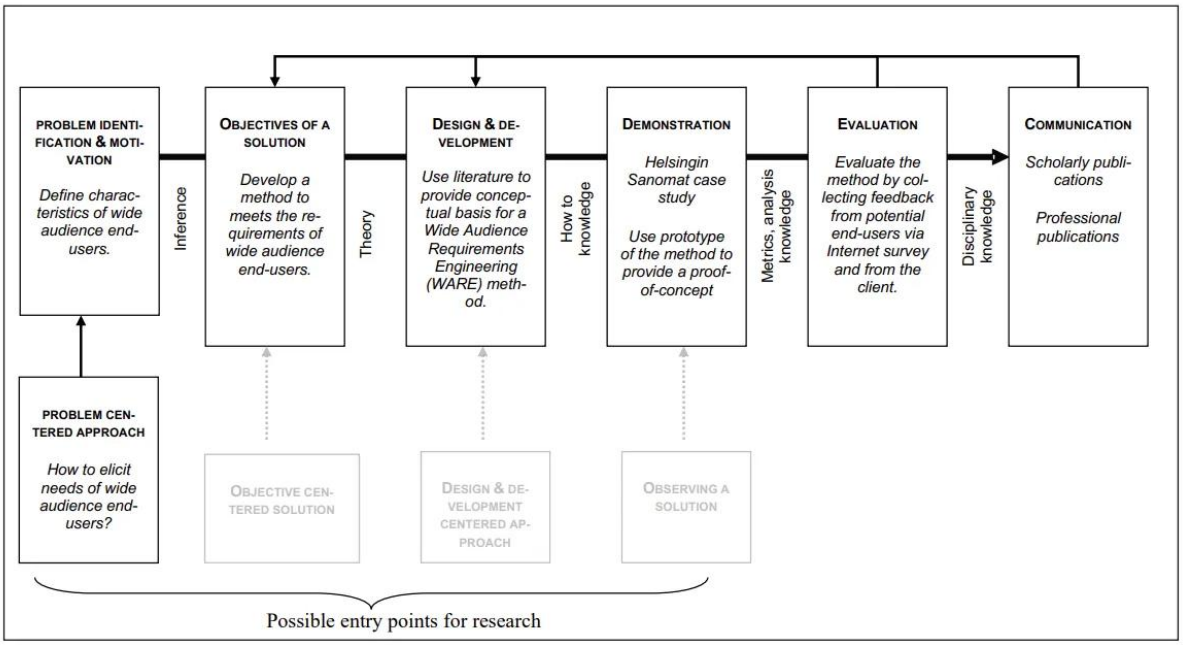


Figure 3: Design Science Research Methodology Model (Peffers et al.,2007)

Design Science Research was guided by six core principles as outlined by Peffers et al. (2007): problem identification, objective definition, artifact design, demonstration, evaluation, and communication. These stages formed a structured yet flexible process that enabled researchers to develop and refine artifacts in response to real-world challenges. This made DSR particularly effective in fields where governance structures, stakeholder dynamics, and policy requirements had to be integrated into viable and adaptive decision-support tools. Therefore, DSR method fits this research.

The cycle began with problem identification, recognising that Dutch urban regeneration frequently had value misalignment and fragmented decision-making, where economic considerations overshadowed social equity, environmental quality, and participatory justice. Under the *Omgevingswet*, which required integrated assessment and early, meaningful participation, these shortcomings became more consequential. Municipalities, housing associations, and developers lacked a transparent, integrated instrument that operationalised these requirements within routine decision processes.

In the second stage, objectives of a solution were defined. The intended framework had to satisfy several key requirements: it needed to enable the co-definition of value indicators by stakeholders, it needed to support a multi-criteria evaluation process across economic, social, environmental, and governance dimensions, and to ensure transparent participatory documentation that met legal and institutional planning standards.

The third step developed the framework Prototype 1. The skeleton of the framework was assembled from peer-reviewed literature on urban regeneration evaluation, complemented by ESG-oriented sources that translate social and environmental aims into indicators suitable for project appraisal. The framework (prototype 1) was self-evaluated to ensure its ease of use, step by step clarity and robustness as per Sonnenberg and vom Brocke's (2012) concurrent evaluation logic. This ensures that the framework is rigorous and applicable to the Dutch urban regeneration context. A semi-structured interview with a Dutch policy expert on the *Omgevingswet* was conducted at this stage to understand the alignment of evaluation methods and importance of participation processes as per the *Omgevingswet.* This semi-structured interview helped refine the participation and traceability components of the framework.

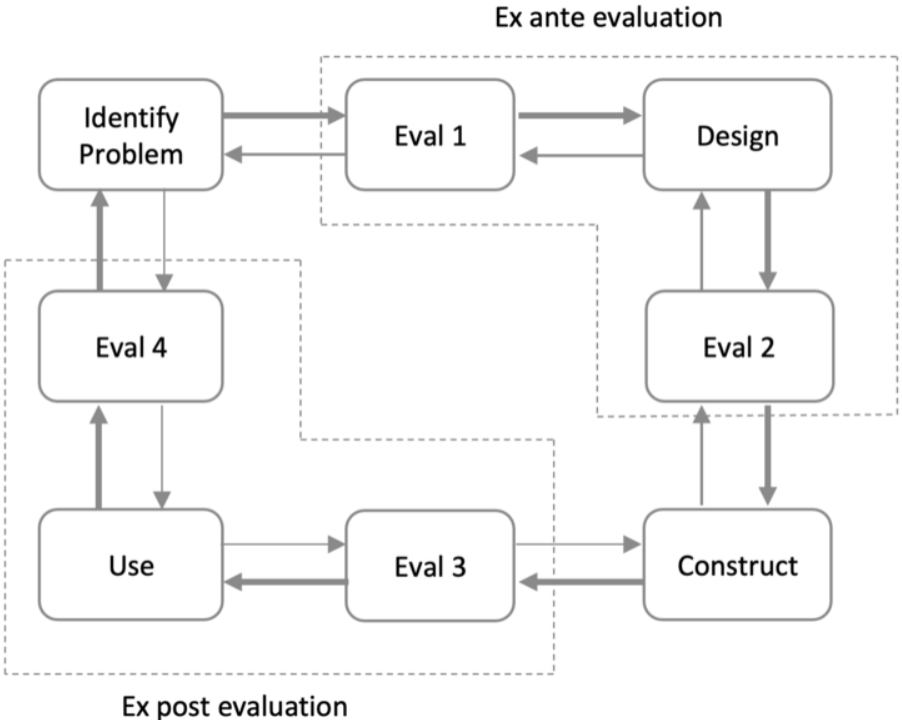


Figure 4: Evaluation Activities in the DSR Process (from Sonnenberg & vom Brocke (2012)) (Peffers et al., 2007)

In the fourth step, the framework was subsequently demonstrated through role-specific, semi-structured interviews with early-stage decision makers, using the framework prototype used to make an interview guide (Annex 1) to test clarity and practical fit. Three interviews were held with project developers at the municipality of Rotterdam, one with an investor-developer, and one with a developer at a housing association. The interviews explored current appraisal routines, how different values are weighed, and where soft values and participation typically drop out. The municipality and all stakeholder interviewees were purposively selected for their direct roles and demonstrated expertise in Dutch urban regeneration. Interviewees also walked through Prototype 1 to identify frictions, missing indicators, and suggested adding a participation log and trade-off ledger to add value. This was focused to inform a more workable and efficient design iteration of the framework.

In the fifth step, evaluation, of the DSR feedback from the demonstration was analysed thematically for usability, clarity, policy alignment, traceability, and perceived legitimacy and triangulated across roles. Four recurrent needs guided Prototype 2(see Annex 3). First, improving the capture of stakeholder priorities through clearer weight prompts. Second, streamlining the indicator focus by reducing and clarifying anchors within each domain. Third, making the trade-off ledger and finally, making the participation log. Prototype 2 was then discussed in follow-up interviews for usability feedback only, consistent with SQ5 with one interview with a municipal asset manager, two follow-ups with developers at Municipality of Rotterdam, and one follow-up with the investor-developer. Evaluation remained formative and assessed ease of use under time pressure, fit with initiative and pre-feasibility decisions, alignment with *Omgevingswet* participation expectations, the ability to trace inputs and trade-offs, and legitimacy for explaining choices to boards, councils, and communities. The findings prompted minor layout edits, additional indicator anchors, and clearer guidance towards the framework.

In step six of DSR the design logic, empirical insights, and policy implications were documented in this thesis. The outputs comprised a design artifact which is the Integrated Value Creation Framework (Prototype 2) with templates of the framework along with the two added supporting documents and a design theory set which are strategy recommendations for supporting improved decision making in urban regeneration. The findings were also validated through a discussion with a researcher at TU Delft working on decision making frameworks at the Municipality of Utrecht.

The sub questions were addressed through the literature-to-design pipeline and stakeholder interviews by mapping existing tools and gaps, aligning with Dutch planning policy, identifying stakeholder value priorities, and clarifying recurring trade-offs the framework must support. SQ5 was addressed by gathering usability feedback on the artifact by testing practicality, clarity, and perceived relevance without claiming summative effects. Figure 5 below, visualises the research steps, instruments, and workflow from problem identification to strategy recommendations and artifact improvements.

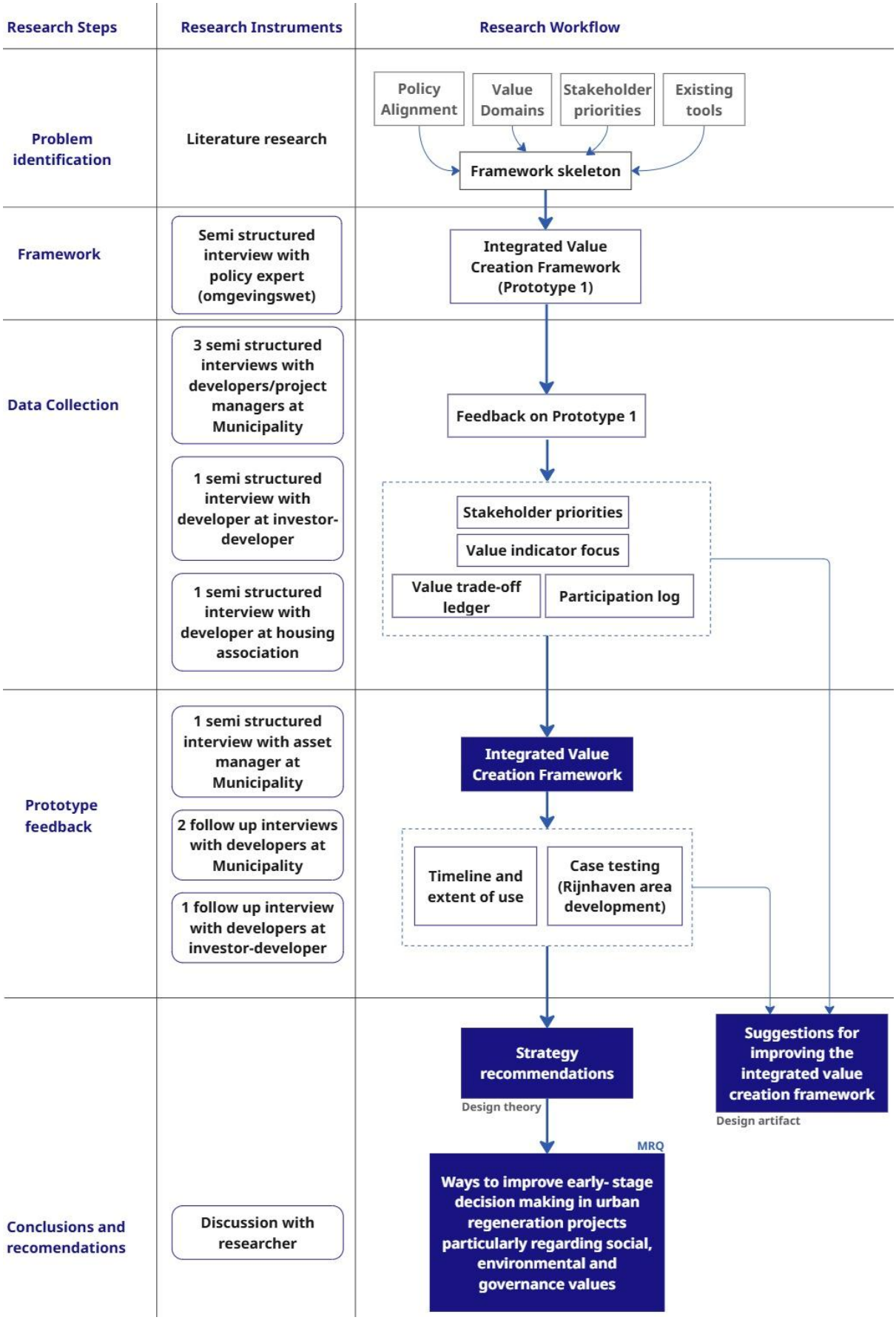


Figure 5: Research Methodology (own work)

3.2 Methods and Techniques

This section explains the methods used to design, apply, and evaluate a value-creation framework to examine how early-stage decision-making on social, environmental, and governance values can be better supported in Dutch urban regeneration. Following a Design Science Research (DSR) approach, the framework functioned both as a design artefact and as a research instrument for understanding how value considerations are currently addressed under the *Omgevingswet*.

The research design initially anticipated the development of a structured framework that could sit alongside financial feasibility analysis and make non-financial values more clear in early-stage decisions. Based on the literature reviewed in Chapter 2 the study first identified key value dimensions and requirements for transparency, comparability, and traceability. These theoretical insights informed the initial framework structure and the decision to work with indicators, scores, and documented trade-offs as design principles.

Three methodological techniques were central to the research. First, semi-structured expert interviews with municipal officials, developers, and housing association representatives were used to explore current decision-making practices, perceived limitations of existing tools, and requirements for practical usability. Second, a case-based testing approach was used to explore how the framework could function in a realistic regeneration context. Third, a set of working templates including indicator sheets, participation influence logs, and trade-off ledger were developed as operational components of the framework.

While the use of templates was foreseen as part of the research design, their specific form and level of detail were not fixed in advance. Initial versions were derived from literature-based concepts and were then refined through iterative testing and feedback from interviewees. Particularly, the trade-off ledger and participation log were introduced and expanded during the research process in response to recurring interview insights about the loss of earlier decisions, unclear reasoning, and the difficulty of tracing how participation influenced outcomes. These introductions reflect the iterative and responsive nature of DSR, in which the artefact evolves through cycles of design, use, reflection and refinement.

By showing both the planned methods and the changes made during the research process, this study shows how the framework and its components developed over time. It explains how the design was informed by academic literature as well as by insights gained from the interviews.

3.2.1 Semi-structured interviews

Semi-structured interviews formed the core empirical method within the Design Science Research build–evaluate cycle. These interviews were used to explore how early-stage decisions are currently made in Dutch urban regeneration and to identify where social, environmental, and governance values tend to become less visible. The semi-structured format allowed guided discussion around predefined themes, while giving interviewees the space to explain their experiences in detail and introduce additional insights from practice.

During Step 3 (Artefact development), interview findings informed the initial content and structure of the framework, including which indicators could represent non-financial values alongside financial feasibility and what information needed to be recorded to make early decisions more transparent. Step 4 (Demonstration) then used follow-up discussions to observe whether

Prototype 1 influenced decision-making conversations, for example by making value trade-offs more explicit.

In addition to the semi-structured interviews, three follow-up interviews with MOR-1, MOR-2 and DEV-1 were conducted in a more detailed and structured manner. These interviews focused specifically on reviewing and refining the framework and its components. Insights from these sessions directly led to the development of the participation log and the trade-off ledger, as interviewees repeatedly highlighted the loss of earlier participation inputs and the re-emergence of unresolved trade-offs in later project stages. Finally, Step 5 (Evaluation) used these detailed interviews to assess the usability and practical relevance of Prototype 2 and to identify how the framework could realistically support early-stage decision-making. Towards the end of the research, a discussion was conducted with a researcher working on a similar topic to validate the findings in the industry.

Participants were recruited through purposive sampling to cover the roles such as municipal development, investor developers and housing associations that shape early decisions in Dutch urban regeneration. Selection criteria emphasised direct responsibility and expertise in this field. Invitations included an information sheet and consent form and the interviews done in person or MS Teams were recorded with consent, transcribed, and anonymised with respect to research guidelines as mentioned in Chapter 3.4.

Interview set and mapping to DSR steps

Seven semi-structured interviews were conducted across key actor groups in Rotterdam's ecosystem: four professionals from the Municipality of Rotterdam (planning; project delivery; area accounts, asset manager), one private developer (project development), one housing association representative (asset management), one policy expert on the *Omgevingswet.*

Code	Organisation type	Indicative role	DSR Step	Topic
EXP-1	Legal/policy expert	*Omgevingswet*	Step 3	Understanding *Omgevingswet* requirements
MOR-1	Municipality of Rotterdam	Project Planning	Step 4. Follow-up at Step 5	Stakeholder role, Framework feedback, addition of framework templates
MOR-2	Municipality of Rotterdam	Project development	Step 4. Follow-up at Step 5	Stakeholder role, Framework feedback, addition of framework templates
MOR-3	Municipality of Rotterdam	Area accounts manager	Step 4	Stakeholder role and decision making
MOR-4	Municipality of Rotterdam	Asset manager	Step 5	Stakeholder role and decision making

DEV-1	Private developer	Project development	Step 4. Follow-up at Step 5	Stakeholder role, Understanding soft value and financial value in decision making. Understanding framework made by the stakeholder.
HA-1	Housing association	Project development	Step 4	Stakeholder role, Understanding soft values in decision making
RES-1	Academic Institution (TU Delft)	Decision making in projects	Step 6	Understanding the use of decision support frameworks.

Figure 6 : Interview set (own work)

In addition to these interviews, short follow-ups with three interviewees (MOR-1, MOR-2, DEV-1) and document comments were used to gather formative feedback on the framework. This feedback informed refinements but is treated as supplementary to the core interview dataset.

As a supplementary validation step, the findings direction of this research were discussed with a researcher working on a related topic and currently interning at the Municipality of Utrecht. This discussion did not form part of the primary interview dataset, but served as a reflection through which the findings could be assessed against parallel academic and practice-based perspectives. The discussion confirmed the observation that value ambitions articulated at the beginning of a project are not always retained in later stages.

While this study did not seek statistical generalisation, it was done to understand how to improve early decisions and to refine the framework. The sample was sufficient because the aim was narrow and participants had high role specificity (they owned or advised on those decisions). The interview guide was informed by the literature review, and interview quality was high with artifact-based follow-ups. Across the first set of interviews converging themes arose, however no new themes emerged after the follow-ups, indicating sufficiency for a DSR study as discussed by vom Brocke et al. (2020).

3.2.2 Case based testing

A core principle of the Design research science methodology is the demonstration of the framework in a real-world or realistic use context to validate its feasibility, relevance, and adaptability. In this research, the Rijnhaven area in Rotterdam is selected as the demonstration case for the value creation framework. This site provides an ideal testing ground due to its complex planning history, ongoing regeneration initiatives, and its urban transformation.

The demonstration involved constructing a planning scenario that served as a proxy for a proposal subject to multi-stakeholder evaluation. The framework was applied to this scenario to simulate how project alternatives could be assessed across four value dimensions: economic, social, environmental, and governance. Crucially, this exercise did not evaluate the Rijnhaven project itself and did not render any judgement about the actual project. It was a bounded demonstration of framework use with Rijnhaven project functioning as an illustrative example. Any scores and weights were indicative and, where necessary, based on publicly available assumptions from the project data. Within this scope, the demonstration operationalised the evaluation structure of

scoring, weighting, trade-offs, and participation influence recording under conditions that reflected real decision-making. This process revealed potential gaps and tensions between formal planning objectives and on-the-ground stakeholder expectations and, in turn, informed suggestions on how the framework could be adapted or extended prior to any deployment in a live planning process.

3.3 Data collection and analysis

Data collection and analysis proceeded in two phases that mirrored the study's Design Science Research logic. The first phase established a conceptual baseline through a review of academic literature, followed by a second phase that generated primary qualitative evidence through exploratory semi-structured interviews with the main stakeholder groups in Rotterdam's urban regeneration ecosystem.

The literature phase reviewed work on early-stage decision-making, multi-criteria evaluation, and value indicators across economic, social, environmental, and governance domains. Rather than being treated as a separate dataset for analysis, this review provided the conceptual building blocks for the empirical phase. Specifically, it informed the initial vocabulary, indicator types, and key design principles such as the need to make qualitative or soft values explicit, comparable, and traceable. These insights were used to develop the interview guide and to produce a first draft of an indicator dictionary.

The concrete framework components, including the indicator sheets, weighting sheets, participation log, and trade-off ledger, did not emerge directly from the literature phase. Instead, they were developed during the empirical phase through interaction with interview data. Early interviews revealed practical difficulties in tracing how participation inputs influenced decisions and how trade-offs were recorded and revisited over time. In response, the participation log and trade-off ledger were introduced as design elements to address these gaps. These tools were then refined through subsequent interviews and case-based testing and were analysed as part of the framework's performance in supporting early-stage decision-making.

Semi-structured interviews were chosen for exploratory purposes because the research aimed to understand how different actors prioritised values in practice, dealt with trade-offs, and explained what they would need from a tool to make these priorities visible at early decision points. These are insights that were difficult to obtain from documents alone. At the start of the research, I had limited detailed knowledge of how early-stage decisions were made in practice, which made a flexible interview format necessary so that relevant issues could emerge from the interviews themselves.

The semi-structured format allowed me to guide the conversations using a prepared interview guide, while still giving interviewees space to describe their experiences, reflect on recent cases, and comment on proposed framework components. In practice, much of the information was provided by the interviewees themselves, with my role focusing on asking follow-up questions, seeking clarification, and linking their insights to the developing framework. This approach was more suitable at this stage than fully in-depth interviews, which usually assume a clearer understanding of the topic from the outset.

Compared with focus groups, individual interviews also reduced risks linked to group dynamics, such as dominant voices or reluctance to share sensitive process details. They also made it possible to explore the reasons behind specific decisions or compromises in greater depth, which was important for understanding how value trade-offs were handled in early-stage urban regeneration.

Interview guide (see Annex 1): A planned semi-structured questionnaire structured all sessions around five themes that were held constant across actor groups. I started the interview with the detailed guide (Annex 1) but then adapted the conversation according to the participant's expertise. One interviewee from the private developer also demonstrated a similar internal framework to the one made in this research in use at their firm. The five themes are:

1. Current evaluation practices and limits: This theme explored how projects were actually assessed at decision making points, which documents and checkpoints carried weight (e.g. *grondexploitatie*), and where 'soft values' (social cohesion, safety, health) did or did not enter formal comparisons. Questions examined practical barriers such as time pressure, data availability, lack of agreed thresholds, and the short planning timeline that privileges near-term metrics. Probing focused on times where non-economic considerations were acknowledged but not translated into comparable decision inputs, and how that shaped outcomes.
2. Participation under the *Omgevingswet*: Through this theme the interview centred on scope of influence, timing, inclusivity, and evidence of 'what changed' after participation. Participants described how stakeholders were identified, which formats were chosen (inform/consult/co-create), and how participation was recorded for transparency. Follow-ups probed method–decision fit, continuity across long project timelines, and the traceability expected by the *Omgevingswet*.
3. Value priorities across chosen domains: This theme established which value dimensions and indicators were most important to each stakeholder. Interviews clarified indicator definitions, measurement units, and the role of timelines in judging distributional effects. Prompts included asking participants to rank priorities and to identify trade-offs so that indicators and scoring anchors could reflect real tensions rather than broader aspirations.
4. Requirements for a usable framework: This theme mapped usability constraints and design preferences: length and clarity of the indicator dictionary, calibration of scoring anchors, stakeholder/domain weighting options, and documentation. Participants reacted to proposed outputs. The interviews gave information about existing municipal/developer decision making, how results should be presented in meetings, and what minimum evidence would be feasible at early stages.
5. Risks and success factors: This theme identified potential failure modes of indicators, indicator overload, and loss of commitments across phases.

Together, these five themes ensured that interviews captured both the institutional realities of decision-making and the practical design requirements of a tool meant to operate within them, while the flexible, free-flowing format preserved the depth and specificity needed for framework development.

Each interview session began with consent confirmation and a short introduction on the participant's role and responsibilities. The discussion then followed the thematic guide, after which the demonstration interviews used the prototype materials to walk through the scenario in the order an early decision-making meeting would typically follow. Closing questions explored practical fit, documentation burden, and clarity of instructions. Follow-up interviews focused more on the revised Prototype 2, with attention to ease of use under time pressure, alignment with

initiative and pre-feasibility gates, minimal evidence standards, and the framework's usefulness for explaining choices to boards, councils, and communities.

Data from the semi-structured interviews were analysed using thematic analysis, following the principles set out by Braun and Clarke (2012). Given the focused and framework-oriented nature of the research, the analysis relied on structured summaries rather than full line-by-line coding. This approach was appropriate for a small, expert sample and helped preserve the context and nuance of individual responses.

Each interview transcript was systematically reviewed using a predefined thematic structure derived from the interview guide and the research questions. This structure included themes such as value prioritisation, handling of trade-offs, participation practices, and requirements for decision-support tools. During the review, relevant statements were summarised under these themes, and additional sub-themes were added where interviewees raised important issues that had not been anticipated in advance. These structured summaries formed the basis for identifying recurring patterns and insights that supported the design and refinement of the framework.

3.4 Data plan and research ethics

A data management plan (DMP) was essential for maintaining the security, integrity, and accessibility of research data throughout the research lifecycle. The study followed the data-governance protocols outlined by TU Delft and complied with its guidelines for the ethical collection, handling, and storage of data. The DMP was designed to ensure that all data were properly protected, confidentially stored, and preserved for future reference or verification, while remaining compliant with institutional and legal standards.

Primary data collection was carried out through semi-structured interviews with selected experts and practitioners involved in urban regeneration. To uphold ethical standards, all interview participants were informed of their rights through a consent form and information sheet provided prior to the interview. These documents explained the purpose of the study, the voluntary nature of participation, and the intended use of the data. Consent forms were based on TU Delft's official ethical research templates and were signed by each participant before the interview began.

All collected data including interview recordings, transcripts, consent forms, and field notes were securely stored on the TU Delft Project Data environment (U: Drive). This institutional platform was protected by university-level security protocols and ensured that access was restricted to the principal researcher(s) only. The system also supported automated backup and long-term data storage, providing a secure and reliable infrastructure for sensitive information. Personally identifiable information (PII) was isolated and encrypted, and data files were labelled and organized using consistent metadata standards.

Anonymisation of data was conducted during the transcription phase. All references to specific names, organizations, and identifiable roles were replaced with generic labels to protect participant identity. Only anonymised transcripts were used in the thematic analysis, and no identifiable data were shared or published. This approach ensured that the data could be used confidently for research while preserving the privacy and dignity of those involved.

In line with practices in data stewardship, the research adopted the FAIR principles, ensuring that the data were Findable, Accessible, Interoperable, and Reusable. Although raw interview data were not made publicly available due to confidentiality agreements, anonymised analytical materials such as coded transcripts, thematic matrices, and synthesis tables were archived and, where appropriate, shared via TU Delft's data repository under controlled access. This structured approach to data management strengthened the transparency, replicability, and scientific value of the research.

Ethical Considerations

The core ethical principles of research were followed. Participation in the interviews was voluntary, and participants could withdraw from the study at any time. Informed consent was obtained from all participants involved in the study, including investors, housing association representatives, and municipal representatives. Consent forms were released prior to the interviews and were prepared using TU Delft templates. It was ensured that participants were aware of the research objectives, their involvement, and how their data would be used before data collection began. Interviews were conducted either online or in a room at TU Delft to ensure that research ethics were followed.

The data collected were kept anonymous to secure the privacy and confidentiality of participants. The data were handled and analysed carefully to ensure that no harm came to any participant. To maintain transparency throughout the research process, the research objectives, methods, and any potential conflicts of interest were communicated to the participants.

4

Findings and Analysis

This chapter presents the findings and analysis from the empirical phases of the Design Science Research. The purpose of the analysis was to understand how early-stage decisions in Dutch urban regeneration were made in practice especially how social, environmental, and governance values were handled alongside financial feasibility and to identify what conditions and support structures would make these values more visible and usable at early-stage decision making.

First, the chapter analyses what interviewees described as the dominant structure of early-stage decision-making. Second, it examines how the three main actor groups which are municipality, developer, and housing association differed in priorities and tolerance for uncertainty. Third, it understands the cross-cutting tensions that repeatedly emerged in early meetings. Lastly, it analyses recurring trade-off patterns and links them to practical requirements for decision support, which later guided the design choices in the artefact.

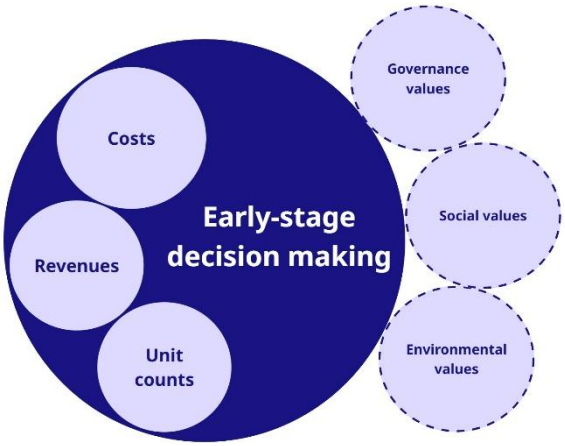
4.1 Stakeholder priorities and insights

This section analyses the interview findings collected across Step 3 (artefact development), Step 4 (demonstration), and Step 5 (evaluation) of the DSR. It shows how early-stage decisions were structured in practice and why certain value dimensions gained influence more easily than others.

4.1.1 Financial feasibility as the dominant decision format

Across interviews, early-stage decision-making was consistently described as being structured around financial feasibility. Municipal interviewees (MOR-1, MOR-2) described the *grondexploitatie* model as the central reference point at initiative and pre-feasibility stages. MOR-2 stated that decisions were made at the ground exploitation table and that everything else came after that. In practical terms, this meant that unit counts, costs, revenues, and cash-flow timing set the tone for early discussions. Social, environmental, and governance aspects were not absent, but they were rarely treated as inputs with the same decision status as feasibility metrics.

DEV-1 described a similar sequence in decision making. The developer first tested whether a basic financial case was viable using worst, base, and best scenarios to understand risk and define conditions for proceeding. When the baseline was weak, the conversation moved quickly toward familiar feasibility levers such as land price, subsidy, phasing, programme mix, or performance requirements. Only once the base case was workable, then wider ambitions become negotiable in a meaningful way.



Taken together, interviewees described feasibility not as one information source among many, but as the baseline structure that defined what was treated as realistic at the decision making gate. This also explained why early meetings often moved quickly toward what could be adjusted in the financial model. Under time pressure and uncertainty, structured and comparable inputs arrived first and shaped the meeting format.

Figure 7: Feasibility as the dominant decision format for early-stage decision making (own work)

4.1.2 Lack of structure with respect to soft values

All stakeholder groups described social and environmental values as important. However, interviewees across the research repeatedly explained that these values did not arrive in the same structured, portable form as the feasibility pack. Themes such as social cohesion, perceived safety, belonging, and place identity were treated as meaningful, but they were also described as difficult to carry forward when early meetings were driven by quantified outputs and short decision packs.

This was stated clearly by MOR-1. They described how soft values were discussed often, yet slipped out of view after the meeting because they were not tracked. MOR-1 stated:

"We talk about soft values all the time, but these values get put to the side as soon as the meeting ends, as there is no way to track them."

DEV-1 described a related point from the opposite side of the table. Soft values could be decisive, but only if they were given enough structure to survive the long timeline of delivery. DEV-1 stated:

"Soft values can be 60% of the decision, but you need structure to keep them alive over years."

Across both perspectives, the issue was not a lack of concern. The issue was that soft values were not anchored in a format that travelled as easily as the financial documents. As a result, soft values could influence discussions in the room but were less likely to remain visible and less likely to be checked once the meeting ended.

This finding broadly corroborates what is discussed in the literature on early-stage appraisal and value-based planning. Economic feasibility tools typically produce structured outputs that circulate easily across organisations and decision gates, while social and governance concerns are more often recorded in qualitative form, which reduces their influence when decisions have to be justified quickly and consistently. This is also understood from literature by Beukers et al., (2014) that conventional appraisal approaches provide only a partial picture of value and that impacts that are difficult to monetise or quantify tend to be treated as secondary or narrative inputs.

The findings can be understood as a possible pattern in decision making. The interviews were conducted with a small, role-specific sample in a Rotterdam-related regeneration context, where feasibility routines and portfolio pressures are particularly strong. The study does not quantify how often this occurs across the Netherlands, but the consistency of this theme across stakeholder groups (municipal, developer, housing association) suggests it is not an isolated perception.

4.1.3 Decision making influence linked to traceable participation

Participation was valued across interviews, but its influence was described as uneven. The consistent preference was not for more engagement events or longer participation minutes. Instead, interviewees valued a short, reconstructable record that showed what participation changed, or why it did not lead to change.

MOR-1 described good practice as stating the scope of influence early and keeping a short record of what changed due to engagement. However, participation was still often treated as a procedural step to document, rather than as an input that travelled through the same core decision logic as feasibility and programme assumptions.

DEV-1 described participation in practical terms. Engagement with participants was useful only when scope was clear and when changes could be traced back to specific inputs. Setting clear boundaries early on reduced false expectations and later disputes. DEV-1 therefore preferred short change notes linking a raised concern to a concrete adjustment, rather than long narrative minutes that were difficult to use later.

HA-1 linked participation directly to trust. Participation had value only if it was logged and connected to actual change. HA-1 stated:

"If residents cannot see themselves in the outcomes, then there is less trust in the project."

EXP-1 framed this as a governance requirement under the *Omgevingswet*. It implied that influence needed to be traceable. EXP-1 stated:

"Early, traceable participation matters; consensus is not required, but the influence on choices must be visible."

EXP-1 also said that participation needed to match the scale of the project, but in all cases justifying the decisions in the project depended on clarity about who was invited, what scope was offered, and what changed. Long participation meetings without a clear account of the changes required were described as risky because they created ambiguity and encouraged objections.

It can also be understood from these interviews was that participation did not mean the same thing for all stakeholders. For some municipal interviewees (MOR-3, MOR-4), participation also included internal alignment between municipal departments and other institutional stakeholders, not only residents. This participation also needs to be focused on having a reusable trace of the discussions.

4.1.4 Improving decision making with short indicator set

All interviewees supported using fewer indicators for the framework. Long indicator lists were described as slowing meetings, weakening focus, and increasing suspicion that indicators were being selected to defend a preferred outcome.

MOR-3's account made the portfolio challenge visible. Their role involved alignment across many projects and stakeholders, and current practice relied heavily on experience, informal knowledge, and ad hoc spreadsheets. MOR-3 described frustration that there was no common framework and stated that they repeatedly rebuilt Excel files to justify choices. This was described as time-consuming and as reducing consistency and cross-site comparison.

MOR-4 reinforced the need for a compact, portable record that survived handovers. Their focus was not only one decision meeting, but how commitments and ambitions travelled across phases and remained readable years later.

DEV-1 shared the same preference for a short set of indicators, selected to fit the context. They described long generic checklists as unhelpful. In their internal tool demonstration, a small set of anchored indicators with short justifications kept discussion focused and produced a compact record that could be shared with managers and partners.

HA-1 supported simplicity in the framework because of the long project timeline. The association described the risk that agreed social aims faded as teams changed. Short records were therefore valued as a way to protect intent across time.

Across interviews, a small indicator set supported prioritisation, reduced tool fatigue, and made decisions easier to explain to both internal boards and external audiences.

4.2 Differences across stakeholder groups

This research focused on three core stakeholder groups that shape early-stage decisions in Dutch urban regeneration: municipal stakeholders (responsible for public objectives), private developers (responsible for delivery feasibility and financial risk) and housing associations (responsible for affordability and long-term resident outcomes).

Even though the stakeholders agreed on many basics, they still valued different things, accepted different levels of uncertainty, and preferred different levers to make changes. These differences were reasonable because each role had its own mandate and risks.

The dominance of feasibility in early meetings (Section 4.1.1) reflected the developer's need to reduce financial risks and the municipality's need for a justified baseline that can be compared across projects. The weaker position of soft values (Section 4.1.2) reflected that municipalities and housing associations often expressed these values as ambitions or qualitative concerns, while developers required them to be translated into delivery terms, conditions, or levers to manage risk. Similarly, the emphasis on participation influence being traceable (Section 4.1.3) reflected the municipality's accountability under the *Omgevingswet* and the housing association's focus on trust, while developers valued participation when it reduced later delays and disputes. This section analyses the differences in stakeholder findings.

1. Priority differences in evaluation

Municipal interviewees placed strong emphasis on comparability, resilience, and legitimacy. They wanted decision inputs that could be read across different projects in a consistent way, would remain meaningful when staff or political priorities changed, and could be explained to councillors and residents. They repeatedly asked for short, portable records that showed why an option progressed and how participation influenced the choice. This preference aligned with their role where municipalities needed decisions that were not only technically workable, but which could also be justified to the public.

The developer prioritised feasibility stability and risk control. DEV-1 described protecting the base case first and then looking for ways to raise ambition if a lever was available to pay for it. Common levers mentioned were ground price, phasing, and programme mix. In practice, this meant that higher social or environmental aims were more likely to be accepted when the delivery route was also specified. When a request to make changes arrived, it was treated as added risk, and the discussion shifted back toward protecting feasibility.

The housing association focused on housing availability, affordability, and tenant outcomes. HA-1 was more willing to use slower, qualitative signals when formal data lagged behind, because resident outcomes such as satisfaction and perceived safety developed over time. They did not expect everything to be proven early, but they wanted clear ownership of follow-up actions and a planned reviews. Their aim was to keep resident outcomes visible at early gates rather than postponing them to later phases.

These different priorities shaped how the same option was evaluated. This difference also explained why one final score was not the natural outcome of early discussions. Stakeholders were often not trying to converge into one shared priority profile, but to make their priorities visible and negotiate compromises.

2. Different tolerances for uncertainty

The developer preferred making changes when levers and conditions were explicit. Open-ended commitments were resisted when there was no funding, control mechanism, or trigger for review. DEV-1 was comfortable with flexibility if it was written down clearly such as when a choice would be checked again, what evidence would be needed, and what would happen if costs or outcomes shifted. Conditional approvals were seen as practical, for example, agreeing to increase affordable

units if subsidy was confirmed by a set date. This matches expectations given the developer's need to secure feasibility and manage risk. Because developers carry short- to medium-term delivery risk and are accountable for investments, they tend to prefer commitments that are tied to controllable levers, clear thresholds, and explicit review points.

The housing association accepted provisional evidence for decisions where outcomes matured slowly. They were willing to agree to a direction early and revisit it at a fixed review date, because many tenant outcomes could only be assessed after delivery and occupancy. This approach allowed progress while keeping long-term outcomes on the agenda. This aligns with the housing association's mandate to safeguard affordability and resident wellbeing over longer periods of time. Their motivation is less tied to early financial closure and more tied to whether required outcomes are protected over time, which makes staged commitments and post-occupancy evaluations workable way to manage uncertainty.

Municipal interviewees managed uncertainty through consistent definitions and recorded reasons. They preferred common definitions for value based on their broader goals. This reduced case-by-case arguments and supported fairness across projects. It also helped with internal alignment across departments and with external accountability. This fits expectations given the municipality's role as a public decision-maker that must justify choices across projects and people.

In short, developers managed uncertainty with conditions and cost controls, the housing association managed it with staged actions and check-ins, and the municipality managed it with consistent definitions and recorded reasons.

3. Differences in lever preferences for negotiation

Developers and municipal development teams commonly started with ground price and phasing because these negotiation levers sat close to the feasibility model and could be adjusted early. A phasing change could bring costly features forward or spread them over time to match cash flow. Because these levers were familiar to finance and planning teams, they were more likely to be discussed in early meetings.

The housing association leaned more toward programme mix and operational commitments. Programme mix affected who could live there and how the area would function day to day (for example, the share of social, mid-market, and market units, or the mix of community and commercial uses). Operational commitments covered management, maintenance, and tenant engagement. HA-1 emphasised that without operational commitments, physical promises made during design could fade after handover. They wanted commitments that protected tenant outcomes over time, not only physical delivery targets.

Environmental and compliance specialists (as described by municipal interviewees) focused on performance standards in areas such as energy, water, and circularity.

Overall, these differences were consistent with role mandates where the municipality safeguarded fairness and portfolio defensibility while the developer safeguarded feasibility and the housing association safeguarded affordability and tenant outcomes. In the interviews, decision progress improved when these differences were stated explicitly rather than remaining vague.

4.3 Cross-cutting tensions in decision making

This section brings together the tensions that appeared repeatedly across interviews, regardless of stakeholder role. While Section 4.2 showed that differences between municipalities, developers, and housing associations can be explained by their mandates, this section focuses on what happens when those mandates meet in the same early decision gate. Interviewees described these tensions as recurring because compromises were often embedded in feasibility packs, programme choices, or informal agreements without being recorded as explicit trade-offs with conditions. As a result, the same topics resurfaced later when circumstances, staff, or decisions changed.

A central tension concerned the relationship between public value ambitions and private feasibility constraints. Municipal interviewees and HA-1 emphasised public value outcomes such as affordability, social inclusion, neighbourhood benefits, and quality public space. DEV-1 emphasised the need for a scheme that remained feasible, deliverable, and within acceptable risk limits. These aims were not framed as opposing values rather having differing priorities.

This tension keeps coming back because the benefits of 'soft value' are often shared widely, while the costs and risks affect one project budget. That means public ambitions only become real choices when someone can point to a lever that pays for them, such as ground price, subsidy, phasing, or programme mix. If no lever is named, the ambition stays a wish rather than a decision. This also explains why stakeholders asked for clear records of trade-offs, so that they could see what was agreed in the meetings and why it was agreed to.

A second recurring tension was a mismatch in time horizons. Municipal and housing stakeholders wanted long-term outcomes such as social stability, perceived safety, resident satisfaction, and neighbourhood cohesion to be visible and protected at early stages, because they feared these outcomes would otherwise drift or be postponed until too late. Developers, by contrast, had to make financing and risk decisions on a near- to medium-term basis. They needed to protect a base case now and avoid open-ended commitments that could destabilise the business plan.

This mismatch did not mean developers dismissed long-term values. Rather, DEV-1 described willingness to pursue higher social and environmental ambitions when these ambitions were connected to a manageable delivery pathway. In this sense, time-horizon mismatch also reinforced the importance of recording trade-offs such that they made it possible to acknowledge long-term outcomes early without pretending they could be fully proven or fixed at that stage.

Several tensions appeared consistent with what would be expected given stakeholder needs and the Dutch urban regeneration context. In that sense, the observed tensions were not described by interviewees as surprising, but as structural and recurring.

4.4 Patterns of emerging trade-offs within decision making

This subchapter analyses the most frequent conflicts that appeared when social, environmental, governance, and economic aims were considered together. For each one, it sets out why the tension arose, which kinds of indicators were involved, the levers that typically helped, and the decision logic that kept agreements workable over time.

4.4.1 Time horizon mismatch across stakeholder groups

Trade-offs occurred because projects had to fit multiple aims into limited space, budgets, and time. Land, daylight, and cost ceilings were finite. Increasing value in one area (more affordability, more green space, higher performance standards) often reduced capacity elsewhere. Benefits were often spread across residents, the city, and future users, while costs and risks were concentrated in the project budget and delivery responsibility. Under time pressure, information that arrived in a structured, comparable format gained priority, while slower and harder-to-measure outcomes (satisfaction, cohesion, perceived safety) were discussed but were less likely to become binding early commitments. Split responsibilities across organisations also meant that no single actor controlled all levers needed to resolve tensions.

These conditions produced repeated conflicts at early decision gates, especially when compromises were absorbed into feasibility assumptions or informal agreements without being recorded as explicit trade-offs with conditions and revisit points.

4.4.2 Patterns emerging in early-stage urban regeneration decision making

Pattern 1: Structured financial inputs dominated unless soft values became comparable and traceable

Across interviews it was known that, early decisions centred on what arrived most formalised which is short-term financial feasibility. Feasibility packs set agendas because they were ready, comparable, and fast to read under time pressure. Social, environmental, and governance concerns often appeared as narratives and therefore remained at the edge of the decision. In early-stage decision making settings with time constraints, structured inputs tended to receive more attention and were easier to defend. This did not mean that stakeholders did not care about soft values, but it meant that soft values needed a structured format to compete with the feasibility packs.

Pattern 2: Participation had most value when it's influence was visible

Interviewees consistently linked the value of participation to the clarity of influence. What mattered was not the length of participation reporting, but whether participation could be connected to a change, a condition, or a clear reason for not changing the decisions in a project. They wanted to know if local concerns, ideas, or objections had actually led to a change in the design, a new condition in the plan, or at least a clear explanation of why no change was made. This made participation more meaningful and credible.

Pattern 3: Trade-offs should be recorded together with negotiation levers

A third pattern was that negotiations shortened and decisions travelled better across phases when trade-offs were written down explicitly and paired with concrete levers and revisit conditions to deal with the trade-offs. Without a short record, the same issues resurfaced as project teams changed, or project phases changed. Interviewees described this as a repeated practical problem in long regeneration timelines.

These patterns were derived from multiple interviews and a single bounded test. They indicate comparison to municipal settings where early decision gates relied on feasibility packs and multi-stakeholder negotiation. The subsequent chapters translated these patterns into recommendations for practice. The trade-offs are shown in Figure 7 below.

	Trade-off	Indicators involved	Why it arises	Typical levers
1	Housing affordability vs Long-term financial sustainability	Social: Housing affordability Economic: Long-term financial sustainability	Deeper discounts or more regulated rents reduce cash flow and returns unless compensated.	Ground price reduction/ targeted subsidy/ programme mix/ indexed rents within policy limits.
2	Housing availability vs Green infrastructure	Social: Housing availability; Environmental: Green infrastructure	Higher yield competes with open/green space at street level and on roofs.	Stacked/rooftop greens// podium parks/ shared courtyards.
3	Energy performance standard vs ROI	Environmental: Energy efficiency of built stock Economic: Long-term financial sustainability	More upfront costs	Façade optimisation/ performance contracting
4	Climate adaptation standard vs Cost and Time	Environmental: Climate adaptation Economic: Long-term financial sustainability	Approvals may lengthen.	Targeted subsidy
5	Green infrastructure vs Private investment leverage	Environmental: Green infrastructure Economic: Private investment leverage	More non-revenue space can weaken private returns and deter capital.	Programme mix shifts/ value capture for green spaces
6	Displacement risk vs Project viability	Social: Displacement risk, Housing affordability Economic: Private investment leverage	Sometimes displacement is an intended result, while other times due to rising prices	Anti-displacement methods
7	Resident satisfaction vs Land-use efficiency	Social: Resident satisfaction Economic: Long-term financial sustainability	Larger dwellings/amenities improve experience but reduce lettable area	Shared amenities or compact typologies
8	Crime reduction measures vs operating expenses	Social: Crime reduction Environmental: Green infrastructure Economic: Long-term financial sustainability	Security investments can raise operating costs	Shared/ Increased security budgets.
9	Participation quality vs Delivery speed	Governance: Stakeholder participation quality Economic: Long-term financial sustainability	Iterative, inclusive engagement takes time and resources.	Clear scope-of-influence and change-log
10	Transparency vs Negotiation flexibility	Governance: Transparency/Monitoring & evaluation	Open conditions and KPIs improve legitimacy but can slow deal-making and add reporting load.	Use a lean indicator set

Figure 8: Trade-offs occurring in Urban Regeneration (own work)

4.5 Interpreting value trade-offs in Dutch Urban Regeneration

4.5.1 Value trade-offs as governance choice

The tensions identified in subchapters 4.3 and 4.4 are often presented in practice as if they are purely technical trade-offs between project objectives. Typical examples are the relationship between affordability and financial viability and the tension between meaningful participation and the speed and predictability of planning processes. In meetings, these tensions are usually translated into feasibility calculations and planning timelines. These gave the impression that there was a single optimal solution decided by the financial numbers, and that other choices play only a secondary role.

However, when the previously mentioned tensions are addressed, they are better understood as governance choices about who pays costs, who receives benefits, and which public values are prioritised. The tension between affordability and project viability illustrates this most clearly. Increasing the share of social and affordable housing reduces land values and reduces the expected return for private partners. In the interview with the developer DEV-1, this appeared as a feasibility ceiling, beyond which a project would no longer be considered good for investment. At the same time, municipal interviewees emphasised their requirement to deliver social and affordable housing and their political accountability for meeting inclusion goals. Whether a higher affordability share is accepted thus depends less on financial threshold than on the willingness of the municipality to adjust ground prices, phase programmes differently or bring additional public resources to the table and on the willingness of developers and housing associations to accept lower returns or higher risk.

Thus, it is understood that, eventually trade-offs are negotiated governance outcomes, rather than the outcome of a feasibility spreadsheet. This aligned with governance literature on Dutch regeneration that showed how contractual arrangements shaped flexibility, responsibilities, and room for adjustment over time. In that, contracts structured how change and value claims were handled between public and private actors, rather than only reflecting market and project constraints (van den Hurk & Tasan-Kok, 2020).

Similar concepts can be seen in the trade-offs around public space and development intensity. Interviewees from the municipality stressed the importance of a high-quality public realm and green space for liveability, climate adaptation and long-term area value, but also acknowledged the pressure to realise housing numbers within limited urban land. The underlying issue may not just be an optimisation problem but about which values are allowed to dominate when objectives between the different stakeholders are conflicted.

The tension between deeper participation and the pace of decision-making discussed earlier follows the same pattern. Municipal interviewees described strong formal expectations, particularly under the *Omgevingswet*, to engage residents and local organisations early. At the same time, both municipal and developer interviewees highlighted tight timelines and the need to maintain a degree of control over the process. When participation is limited to informing and consulting on predefined options, this is often justified by reference to deadlines or legal procedures. However, this choice also reflects a governance preference which is a decision to protect planning speed and risk control over the potential benefits of more open-ended co-creation such as better local fit, increased legitimacy, or avoidance of later conflict.

Therefore, the power to adjust parameters in decision making depends on informal negotiating positions of the stakeholders. These arrangements determine which values are easier to defend at the decision-making gate and which are more easily sacrificed when tensions arise. Interpreting trade-offs as governance choices therefore shows the political nature of early-stage urban regeneration decisions, even when these are framed in technical and financial terms.

4.5.2 Alignment with collaborative governance and *Omgevingswet*

The *Omgevingswet* was designed to support integrated and participatory decision-making. It entered into effect on 1 January 2024. In practice, the participation requirement focused on the stakeholders stating whether and how participation was organised, while participation itself remained largely form-free and was only mandatory in specific cases defined by the municipal council (Hollemans et al., 2025).

Early-stage decisions in Dutch urban regeneration should be moments where public values are collectively explored, contested and prioritised in an open manner, with clear documentation of how different concerns have been addressed.

The interviews with the municipality (MOR-1, MOR-2) suggest that these ambitions are present in current practice, but often in a limited or fragmented form. The municipal interviewees described efforts to organise participation. Social and environmental aspects are also regularly mentioned in early discussions, for example through sustainability ambitions, social programme narratives or references to neighbourhood needs. MOR-1 expressed a desire to do more than the legal minimum and to use regeneration projects to advance broader social and environmental goals.

However, participation input was rarely connected to the core decision-making logic that combined programme, design, and feasibility. Rather, it tends to be processed in parallel, resulting in adjustments at the side. Similarly, although conflicts between affordability, environmental performance and financial viability are widely recognised, they are rarely recorded as explicit trade-offs. Instead, they are absorbed into feasibility parameters or design choices, without a transparent account of which values have been prioritised and why.

Interviewee EXP-1 stated that early participation mattered when influence on choices was traceable and visible. I interpreted this as the key alignment gap. Participation was treated as necessary for legitimacy, but its influence did not travel through the same structured formats as feasibility.

This misalignment with the requirements of the *Omgevingswet* shows the need for routines and tools that connect participation and soft value trade-offs more directly to financial decision-making. Tools such as the integrated value creation framework do not aim to remove conflict, but to make it explicit and discussable.

4.5.3 Implications for defining public value in early-stage decisions

The interview with the developer DEV-1 suggested that public value in early-stage regeneration was often treated as deliverability within an acceptable financial range. Social and environmental goals were acknowledged, but their influence was strongest when they could be expressed as risk management, feasibility conditions, or deliverable outputs.

The municipal interviews with MOR-3 suggest that questions regarding affordable housing access, displacement and improved amenities, are recognised but not actually answered in early decision

moments. Process values such as inclusion, transparency, and trust were also described as important, yet they rarely functioned as decisive criteria when they conflicted with feasibility thresholds or deadlines.

This is not a knowledge gap, it can be interpreted as an institutional constraint. The dominant tools and documents made it difficult for soft values to carry equal footing at the decision making stage. Short-term budget constraints and planning milestones tend to dominate over long-term benefits such as resilience, health or social cohesion, particularly when they are harder to quantify. The trade-offs around affordability, density and participation thus have clear implications that go beyond process optimisation.

Interpreting soft value trade-offs through a governance and public value lens shows that early-stage decisions in Dutch urban regeneration are already deeply political, even as a part of feasibility and planning procedures. The findings suggest that the public value that is produced reflects the priorities and constraints fixed in existing institutional arrangements and decision formats, rather than a collectively deliberated view of what is actually valuable.

4.5.4 Loss of ambition across project timeline

The discussion with RES-1 brought forward the concept of loss of ambition across the project timelines. Loss of ambition refers to the weakening or disappearance of early, value ambitions as a project moves from a strategic vision toward implementation (Platform31, 2026). In urban regeneration, ambitions often begin as broader commitments to affordability, inclusivity, climate adaptation and spatial quality. These ambitions are within the broader policy goals for an area or a city as set by the municipality. As projects advance, these ambitions must be translated into documents such as project requirements, budgets, schedules, and deliverables. This concept is also explored in literature which shows that congruence between intention and outcome becomes harder to maintain as the number of actors, handovers, and decision points increases (Hupe, 2011). So formal commitments may remain visible at the symbolic level while operational routines become partially separated from them.

In urban regeneration, early ambitions around affordability, participation, climate adaptation, spatial quality, and liveability rarely disappear in one moment. They tend to weaken as projects move from strategic vision into programmes of requirements, feasibility models, design briefs, contracts, and phased delivery choices. From the discussion with RES-1 it is understood that ambitions may be diluted when public-value statements are reframed as feasibility assumptions, particularly in negotiated development settings where soft values must compete with cost-benefit logics. Ambitions may also weaken when biased participation outcomes are added into decision making, during handovers between phases and teams, and when they are not added into the program of requirements.

Urban regeneration projects unfold over long time horizons, and in complex projects, goals and governance often move over time rather than remaining fixed. In such settings, ambitions are repeatedly reframed throughout the project. Time pressure to make decisions early can lead to loss of ambitions later down the project cycle. The findings of this study align with this concept. Interviewees consistently described early-stage decision-making as being structured around financial feasibility, while social, environmental, and governance considerations entered the process in less portable and less comparable forms. RES-1 also stated that it is more important to understand general direction and priorities of the stakeholders rather than to focus on the intricate details of the outcomes.

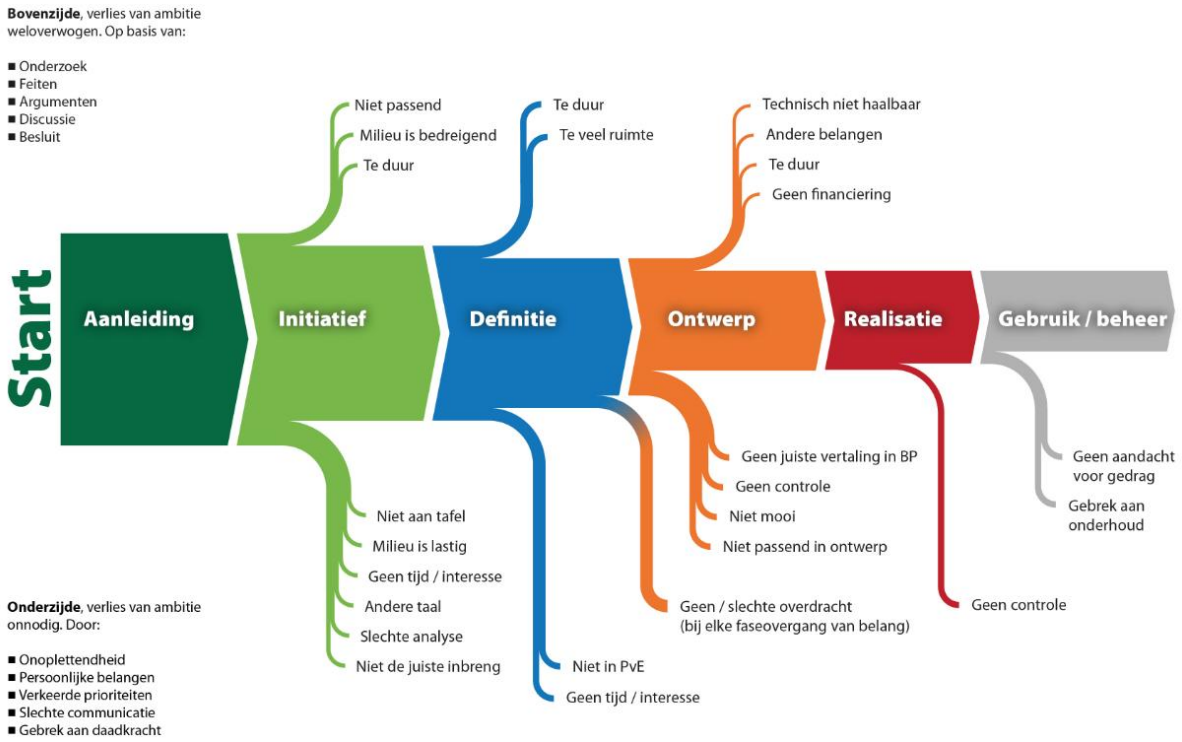


Figure 9: Law on loss of ambition*, te Riele and Van Liefland (2012)*

Figure 9 builds on this analysis by showing that not all reductions in ambition should be understood in the same way. It distinguishes between two forms of ambition reduction across project progression which are deliberate reduction of ambition and unnecessary loss of ambition. The first refers to cases in which an initial objective is reconsidered and adjusted on the basis of evidence, technical constraints, financial feasibility, competing interests, or explicit decision-making. The second refers to cases in which ambitions weaken not because of a reasoned choice, but because they are poorly translated, insufficiently documented, weakly governed, or inadequately transferred from one project phase to the next (Platform31, 2026). This distinction is important because it prevents every reduction in ambition from being interpreted as failure. In practice, some ambitions must be revised in response to legitimate constraints, while others are lost through avoidable breakdowns in the decision-making process. In that sense, keeping value visible in regeneration also means keeping it governable over time.

4.6 Analysis of the design artefact: the Integrated Value Creation Framework

This section analyses the Integrated Value Creation Framework (IVCF) as the central design artefact developed in this research. It explains how the artefact emerged through iterative cycles, what its components were intended to do, how they were refined through practitioner feedback, and what the formative Rijnhaven demonstration revealed about its usability and limits. The purpose here is not to suggest the framework as a final solution, but to analyse how the artefact addressed the specific decision-making problems identified in the interviews.

4.6.1 Design journey and iterative refinement across prototypes

The IVCF was developed in an iterative design journey rather than produced in one step, as shown in Figure 8. The process began with a basic framework skeleton derived from the literature review and shaped by an early semi-structured interview with an *Omgevingswet* policy expert (EXP-1). A first feedback loop resulted in Prototype 1. A second feedback loop, consisting of an interview with a municipal asset manager, an interview with an investor–developer, and two follow-up interviews with municipal developers, resulted in Prototype 2. Prototype 2 was then applied to the Rijnhaven area development as a case demonstration, during which municipal participants provided additional feedback during the demo.

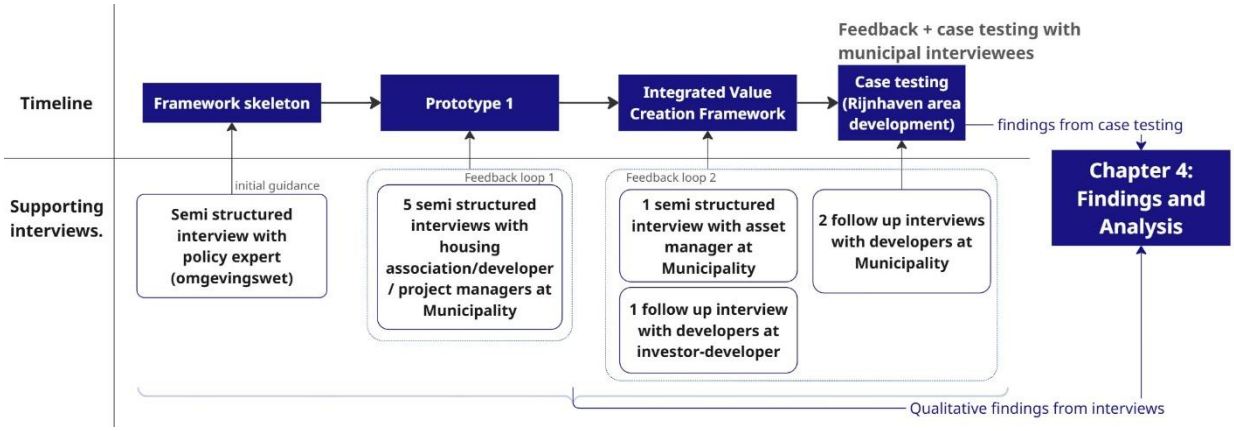


Figure 10: Framework design timeline (own work)

Two evidence streams emerged from this process. First, interview feedback provided qualitative insights into what practitioners considered usable and realistic in early decision-making settings. Second, the case demonstration provided practical observations about how the framework would perform when applied to a real regeneration context across domains. These streams were used to refine the artefact components and to analyse what the framework could and could not achieve at early stages. The case demonstration was conducted as follow-up interviews with 2 respondents separately. This mattered methodologically because it shaped the type of feedback received where respondents spoke from their own role, without group dynamics. However, this prevented a detailed understanding of the multi-stakeholder dialogue within the process.

4.6.2 Framework architecture and indicator logic

The framework was designed to support early-stage comparison of options across four value domains, so that regeneration could be judged not only on financial viability but also on liveability, resilience, and legitimacy over time:

Economic value addressed long-term financial sustainability, leverage of private investment, and efficient use of scarce urban land. Its role was to ensure that the framework remained connected to delivery constraints, even if financial feasibility itself remained assessed through the existing feasibility pack.

Social value captured whether housing was affordable and available to intended groups, whether regeneration displaced or retained existing residents, and whether resident outcomes such as satisfaction, perceived safety, and cohesion were likely to be supported after delivery.

Environmental value focused on climate adaptation and mitigation, ecological integrity, energy performance, and circularity, reflecting the strong relevance of flood and heat risk as well as sustainability ambitions in Rotterdam projects.

Governance value assessed procedural qualities that shaped legitimacy and steerability, including participation quality, transparency, decision traceability, and the ability to monitor and revisit commitments over time.

The indicators were selected through a two-stage process. An initial indicator bank of twenty-eight indicators was developed from the literature (Annex 2). This set was deliberately broad, intended to cover the main domains and prevent over-reliance on easily monetised impacts. However, interviews showed that long indicator lists were not workable in real decision meetings and would reduce adoption. Based on feedback, the working set was narrowed to twelve indicators (Figure 9 below) to balance comprehensiveness with usability. Indicator selection and refinement followed four criteria:

1. **Relevance**: indicators needed to align with Dutch policy priorities and *Omgevingswet* expectations, and with common regeneration aims such as affordability, inclusion, climate resilience, and transparent participation.

2. **Measurability**: indicators needed to be assessable using observable or verifiable data, including quantitative and qualitative sources.

3. **Comprehensiveness**: the indicator set needed to cover direct and indirect impacts across domains without systematically favouring what was easiest to monetise.

4. **Stakeholder acceptability**: indicators needed to be understandable and recognisable across the main actor groups.

A further design choice was that financial indicators were not added as a scored element in the final framework. This responded to a practical reality observed across interviews that financial feasibility was already assessed and negotiated through the feasibility pack and *grondexploitatie* routines. The framework is therefore positioned to complement that baseline by bringing under-represented value dimensions into the same decision conversation, rather than duplicating financial appraisal.

Domain	Indicator	Why it's prioritized	How to measure	Stakeholder insights
Economic	Long-term financial sustainability	Keep projects viable in the long term	10–30y cash-flow	Developer, Municipality of Rotterdam
Economic	Private investment leverage	Public-private partnerships	Risk sharing terms and money committed	Developer
Social	Housing availability	Housing unit delivery	Housing units delivered vs. targeted	Housing Association

Social	Housing affordability	Prevent displacement and to meet policy quotas	Cost-to-income % and through affordable/social housing units	Housing Association, Municipality
Social	Resident satisfaction	Direct soft value outcome for housing association	Post-occupancy checks and feedback	Housing Association
Social	Displacement risk	(Un)intended effects of regeneration	Relocation rates	Housing Association, Municipality
Social	Crime reduction	Safety/liveability indicator	Change in police-recorded crime & perceived unsafety	Municipality of Rotterdam
Environmental	Energy efficiency of built stock	Lower bills & emissions	Modelled CO_2 reduction vs. baseline	Municipality
Environmental	Climate adaptation	Rotterdam-relevant flood/heat risks	Projected numbers vs baseline	Municipality
Environmental	Green infrastructure	Liveability & resilience benefits strongly evidenced in NL	Percentage green cover; access to green spaces within 300 m	Municipality
Governance	Stakeholder participation quality	*Omgevingswet* legitimacy	Inclusiveness, changes made due to participation	All
Governance	Transparency	Track promises and conditions over long timelines	Open decision making	All
Governance	Monitoring & evaluation	Prevent soft-value drift	Through the proposed artifacts	All

Figure 11: Refined indicator bank for the framework (own work)

4.6.3 Participation influence log as a proposed artefact component

The participation influence log was developed as a response to a repeated issue raised in the municipal interviews (MOR-1, MOR-2) and confirmed in follow-up rounds that participation was often organised and reported, but its effect on early decisions was difficult to reconstruct afterwards. MOR-2 described that inputs from residents and other stakeholders could shape programme choices, design adjustments, or conditions, yet these links were rarely captured in a consistent and reusable way.

The participation influence log was therefore designed to record influence rather than only activity. It was structured to capture who was involved, what scope of influence was offered, what inputs were received, and what changed as a result or why no change was made. It would also

include fields for follow-up actions with named owners and an inclusivity note to record representation gaps and planned mitigation.

Importantly, in this research the participation influence log was a proposed artefact component. It was designed and refined through interviews, but it was not tested as part of a live participation process within a formal decision gate. Its intended contribution was analytical and procedural that it created a short record that could link participation to decisions without requiring decision-makers to re-open long narrative discussions. A template of the participation log is shown in Figure 11 below.

Field	Description / Entry
Log ID / Date	Unique ID and date of discussion
Project Stage	Tender stage/ planning / delivery
Stakeholder Groups	Residents, Businesses, NGOs
Method & Reach	Workshop / walk-in / survey: No. of participants
Scope of Influence	What can change?
Inputs Received	Key issues raised
Changes Made (what changed)	Specific adjustments to indicators/targets/design/phasing
Rationale	Why the change was (not) made
Follow-ups / Commitments	Commitments and ownership
Inclusivity Notes	If certain stakeholders were or were not included
Evidence	Minutes, photos, materials, file IDs

Figure 12: Participation log template (own work)

4.6.4 Trade-off ledger as a proposed artefact component

The trade-off ledger was developed in response to a second repeated issue raised in interviews with MOR-1 and MOR-2 that value conflicts were recognised as normal in early-stage regeneration, but the compromises made to manage them were often absorbed into feasibility assumptions, phasing choices, or informal agreements. This made it difficult later to see which values had been prioritised, which levers had been used to make a compromise workable, and under what conditions the choice should be revisited.

Interviewees described recurring debates on affordability, density, public space, environmental standards, and risk that resurfaced because earlier compromises were not recorded concisely. They expressed a need for a short record that clarified what was agreed, what would change, who would carry costs or risks, and when the decision would be checked again. This feedback directly shaped the fields of the ledger template, and the same concern was reinforced in follow-up discussions where it was linked to staff changes and long delivery timelines (MOR-1 to MOR-2; DEV-1).

Like the participation log, the trade-off ledger was a proposed artefact component. It was developed through interview feedback and incorporated into the intended process design, but it was not tested as a live governance routine across multiple project gates. Its intended contribution is to reduce re-litigation by making trade-offs traceable and revisit able. A template of the trade of ledger is shown in figure 12 below.

Field	Description / Entry
Ledger ID / Date	Unique ID and date of discussion
Trade-off Statement	eg- Housing Affordability vs Availability
Affected Indicators	Indicator list
Options Considered	Option A/B/C
Impact Expected	Change in planning
Leverage Selected	Eg- Subsidy / phasing changes
Decision & Rationale	Choice negotiated by stakeholders with reasoning
Conditions	Dependencies
Revisit Date / Owner	Date and accountability
Interference Notes	Short notes to explain the negotiation

Figure 13: Trade-off ledger template (own work)

Discussion with RES-1 pointed towards problems of the loss of decisions made early in the project, unclear reasoning behind trade-offs, and difficulty tracing how participation influenced outcomes. This validated the development of the participation influence log and trade-off ledger which will help keep the project value ambitions intact.

4.6.5 Intended process for using the framework

The framework was intended to be used in a small, time-bounded decision session with the core stakeholders who carried consequences of the decision. The aim was not to repeat feasibility analysis, but to make social, environmental, and governance value visible and discussable alongside the financial feasibility already produced elsewhere.

In the intended process, the facilitator would prepare a concise evidence pack and would select the relevant indicator set. The group would review each indicator using short evidence entries and calibrated anchors and would assign a score. If evidence were incomplete, the group could record a provisional score only if the uncertainty was noted, along with a named owner and a moment to review it. Stakeholders would then assign weights separately so that differences in priorities remained visible. The framework would produce a value profile that could show where strong performance in one domain masked weaknesses in another, and where stakeholders valued the same results differently.

The discussion would then move to the key conflicts shown by the value profile. Major tensions would be recorded in the trade-off ledger, including the lever used and the conditions for revisiting the decision. Where participation input was relevant, it would be recorded in the participation influence log, linking the input to changes in indicators, scores, weights, or selected levers.

A key clarification is that this section described how the tool is intended to be used in practice, rather than describing a fully implemented governance routine within the municipality. In the context of the thesis, components of this process were demonstrated and discussed with respondents but not used in a live project cycle.

4.6.6 Adding the framework to current workflows

The framework should not be treated as a separate document that is used only at the end of a discussion. It is better understood as a decision-support tool that is added to project workflows

and used in the early project stages. This is important because ambitions, participation inputs, and early compromises can otherwise remain visible only at a formal level.

In urban regeneration, this is relevant because feasibility tools are ready to help guide the decision making in the early stages. So, the framework is most useful when it is used at the same moments where these feasibility-based formats are discussed, and approved, rather than being added afterwards. In this sense, the framework helps carry broader ambitions of soft values forward in forms that remain visible during decision-making.

The figure 9 (section 4.2) also makes clear that ambition is especially vulnerable at transition points such as the early stage moving from project initiation to scenario planning and feasibility, because broad ambitions must then be converted into program of requirements priorities. This is where the framework developed in this study becomes relevant. The Integrated Value Creation Framework was not designed to eliminate trade-offs or prevent every reduction in ambition. Rather, it was designed to make reductions in soft value ambition more explicit, traceable, and governable. The framework complements the feasibility baseline by structuring discussion across economic, social, environmental, and governance domains and by making stakeholder differences visible through separate weighting profiles instead of collapsing them into a single score.

4.6.7 Case Demonstration: Rijnhaven

The Rijnhaven case was used as a formative demonstration to test the artefact and collect feedback, not as a live decision gate. A full real-world application would have required additional evidence collection and due diligence beyond the thesis scope, and the municipal decision cycle did not align with the research window. The demonstration was therefore used to observe how practitioners interacted with the framework, which indicators and anchors were prioritised, how scoring worked when evidence varied by domain and which outputs were seen as useful for internal review.

Figure 14: Rijnhaven Area Development (Barcode Architects,2025)

Rijnhaven was selected because it represented a typical Dutch waterfront regeneration context with clear tensions between green space, sustainability, public realm quality, and financial feasibility. The maturity of the project meant documentation was available and municipal participants had relevant experience. This created a realistic but low-risk setting to test whether the framework could structure discussion without interfering in live approvals.

Value	Indicator	Municipality -1		
		Score (1-5)	Weight (0-10)	Weighted score
Economic	Long-term financial sustainability Private investment leverage			
Social	Housing availability Housing affordability Resident satisfaction Displacement risk Crime reduction			
Environmental	Energy efficiency of built stock Climate adaptation Green infrastructure			
Governance	Stakeholder participation quality Transparency Monitoring & evaluation			

Figure 15: Integrated Value Creation Framework (own work)

The framework shown in Figure 13, (Annex 3) would be used as a facilitated, in-room instrument to capture how different stakeholders prioritised the same proposal using a shared indicator set.

A second version of the framework shown in Figure 14 (Annex 3) was designed as a portfolio-level template for municipal use. The intended future use of this version was to translate outputs from single project sessions into a format that could support municipal coordination and steering across multiple projects. By using the same four domains and indicator definitions, the portfolio sheet would allow projects to be compared consistently, so that teams could identify which projects needed additional support, which were ready to progress, and where specific risks required mitigation before the next decision gate. It would also support phasing discussions, because projects scoring strongly on governance readiness and environmental resilience could be prioritised differently from projects where social risks or participation concerns remained unresolved.

Value	Indicator	Development1- Rijnhaven			Development 2- Afrikaanderwijk		
		Score (1-5)	Weight (0-10)	Weighted score	Score (1-5)	Weight (0-10)	Weighted Score
Economic	Long-term financial sustainability	5	9	45	4	7	28
	Private investment leverage	4	7	28	3	6	18

Social	Housing Availability	3	7	21	4	8	32
	Housing Affordability	3	6	18	4	8	32
	Resident Satisfaction	4	8	32	5	9	45
	Displacement Risk	3	6	18	3	9	27
	Crime Reduction	2	6	12	5	10	50
Environmental	Energy efficiency	4	8	32	3	7	21
	Climate Adaptation	5	9	45	3	7	21
	Green infrastructure	5	9	45	3	7	21
Governance	Stakeholder participation quality	3	9	27	5	10	50
	Transparency	3	9	27	4	10	40
	Monitoring & Evaluation	3	9	27	4	9	36

Figure 16: Integrated Value Creation Framework (own work)

It was shown to two municipal interviewees (MOR-1, MOR-2) in separate follow-up sessions to gather formative feedback. MOR-1 had direct experience working on the Rijnhaven development while MOR-2 had knowledge about the Afrikaanderwijk development. The scores are provided individually for each project by one interviewee only. The purpose of these sessions was to check whether the table layout, wording, and level of detail matched how municipal teams normally reviewed projects, and whether the template looked usable as a coordination tool.

The completed Rijnhaven framework indicated stronger performance on environmental and governance value, with more mixed performance on social value. This reflected the documented ambition for a waterfront park with climate adaptation and circularity measures, and a defined governance structure with a three-phase tender, and participation documentation for Block 1. Climate resilience indicators scored high because the project provided specific measures and a strong spatial anchor for assessment. Governance indicators related to transparency, and stakeholder participation had high weights because responsibilities, decision points, and tender steps were described in a way that allowed monitoring points to be identified early. However, they were scored lower because the priority of the municipality in this project was to focus on environmental values. Social values were weighted lower than environmental values because the area is already perceived as safe and socially cohesive. The plan was not to provide more affordable housing but to build more higher income homes to attract new wealthier people.

Inversely, MOR- 2 scored transparency and stakeholder participation very highly showing the difference in priorities across projects. In Afrikaanderwijk, members of the young local community were invited to give their thoughts on the required development of their area. The main focus was to build an affordable and safe neighbourhood, hence why social and governance values are weighted and scored the highest. Although the municipality want to improve the long-term

financial sustainability of the neighbourhood, housing affordability and availability is a more important concern.

The two demonstrations show what the framework can reveal in early regeneration decisions. First, the framework makes it clear that different projects can have very different value profiles. Rijnhaven scored strongly on environmental and governance value because the plan included clear and specific measures, such as a waterfront park, climate adaptation elements, and circularity ambitions. These measures provided a strong spatial and practical basis for assessment. The governance set-up also scored well because the tender process and responsibilities were described in phases, which makes decision points and monitoring moments easier to identify.

At the same time, Rijnhaven showed more mixed social performance. This was not simply a weakness in the scoring method. It reflected the direction of the project where the plan focused less on affordability and more on attracting higher-income residents. The framework helped make this choice visible by showing where social value is limited or deprioritised. In contrast, the Afrikaanderwijk demonstration produced a different profile. Social and governance values were weighted and scored highly because the project focus was affordability and safety, and participation was treated as meaningful input. This also showed that even within one municipality, priorities can differ across projects depending on local needs and political aims.

Overall, the demonstrations suggest that the framework helps decision-making by separating priorities (weights) from expected performance (scores).

4.6.8 Limits of modelling and scoring in early-stage decision settings

Interviews indicated that translating soft values into scores was useful for structure and comparability, but it introduced risks that needed to be recognised. First, values such as social cohesion, perceived safety, and belonging could not be fully captured in a single numeric score. There was therefore a risk of false precision, where stakeholders treated scores as more objective than the available evidence justified. This risk applied to any scoring framework and was especially relevant in early stages where data and delivery mechanisms were incomplete.

Second, scoring and weighting created space for strategic behaviour. Stakeholders could become sensitive to low scores on politically salient indicators or on dimensions they felt responsible for. Discussions could shift from recognising weaknesses to negotiating better numbers for defending a preferred option. This risk of score-management was not unique to the integrated value creation framework and has been recognised in other applications of multi-criteria approaches (Cinelli et al., 2014). The design response in the framework was to keep indicators anchored, to record short reasons, and to allow separate weighting profiles rather than forcing aggregation.

Third, the framework risked adding administrative burden in an already complex planning environment. If it were treated as another compliance template, it could become a form-filling exercise rather than shaping decisions. The interviews suggested that limiting the indicator set, using the framework selectively at key gates, and keeping outputs short and portable were important to reduce tool fatigue and maintain decision relevance.

4.7 Positioning the Integrated Value Creation Framework against existing tools

This section positions the Integrated Value Creation Framework in relation to existing decision-support approaches commonly used in regeneration and public investment contexts, including multi-criteria decision analysis (MCDA), social cost–benefit analysis (SCBA), and social return on investment (SROI). The purpose is to clarify what the IVCF shares with these tools and how it differs, given its specific focus on early-stage decision gates in Dutch urban regeneration.

4.7.1 What did the Integrated Value Creation Framework build on?

The IVCF drew on the basic logic of MCDA which is using multiple indicators across domains and allowing weights to express priorities (Cinelli et al., 2014). Like many MCDA tools, it aimed to support structured comparison between options and to make trade-offs visible rather than relying on purely narrative discussion. It uses multiple indicators across domains and a scoring approach supported by short evidence notes so that different options can be compared in a way that is more organised than purely narrative discussion.

The framework also aligned with the broader aim of SCBA and SROI approaches to expand appraisal beyond narrow financial metrics by making social and environmental effects more visible. In Dutch practice, CBA guidance supports structured consideration of societal effects, but many distributional, governance, and long-term qualitative impacts remain difficult to monetise and are often handled qualitatively (Bos et al., 2022). SROI similarly aims to make social outcomes more visible, but its results depend heavily on assumptions, which can limit its justification at early decision gates (Koopmans et al., 2019). These limitations were consistent with what interviewees described such as social and governance issues were recognised but often struggled to gain comparable decision status alongside feasibility studies.

4.7.2 How did the IVCF differ from other tools for early-stage regeneration decision making?

The IVCF was positioned differently from many applications of MCDA, SCBA, and SROI because it was designed for early decision moments where programme, density, phasing, and governance conditions were still adjustable. It did not aim to calculate a final net social value or produce a definitive ranking as an endpoint. Instead, it aimed to structure early discussions by making value profiles visible while choices were still open.

Three differences were central. First, disagreement between actor groups was expected and made visible rather than compressed into a single aggregated outcome. Many decision-support tools aim to combine different preferences into one aggregated outcome, such as a single weighted score or a net present value estimate. This can be useful when the goal is to choose between alternatives based on one shared decision rule. However, regeneration governance often involves actor groups with different needs and different accountability. The IVCF therefore makes disagreement visible by using separate weighting profiles. This allows stakeholders to compare not only options, but also how those options look under different value logics. The point is not to avoid conflict, but to make it explicit so it can be negotiated transparently.

Second difference is that governance quality including participation and transparency was treated as a value domain that could shape the value profile of an option. In many appraisal approaches, governance and participation are discussed as context or process notes rather than being assessed

alongside other domains. In this research, interviews showed that governance quality influenced legitimacy, objections, and the ability to keep commitments stable over time. By giving governance a defined place in the framework, the IVCF makes it possible to evaluate an option based on the actual outcome as well as the legitimacy of the decision.

Third, the framework linked evaluation to traceability instruments: the participation influence log and trade-off ledger. These instruments responded to a repeated weakness found in interviews that early compromises and participation effects were often not recorded in a way that travelled across phases and stakeholders. The IVCF therefore extended existing decision-support logic by connecting early appraisal to short, revisit able records of trade-offs and participation influence.

Overall, the IVCF can be positioned as a light, early-stage tool to complement more formal appraisal approaches. SCBA or SROI may still be used later, when project definitions are more stable and when evidence is stronger. The IVCF is designed for the earlier phase where decisions are shaped by uncertainty, negotiation, and the dominance of feasibility formats.

4.8 Chapter synthesis

This chapter analysed how early-stage decisions in Dutch urban regeneration were structured in practice and why certain values gained influence more easily than others. Interviews showed that financial feasibility operated as the dominant baseline format at early gates, shaping what was treated as realistic and decision ready. Social, environmental, and governance values were widely recognised as important, but they often lacked a structured, portable format that could travel through decision moments and remain checkable over time. Participation was valued most when its influence on choices was visible and traceable rather than documented only as activity.

Differences between municipalities, developers, and housing associations were consistent with their mandates and risk exposure and explained why early negotiations repeatedly returned to questions of levers, conditions, and time horizons. Cross-cutting tensions emerged around public value ambitions versus private feasibility constraints and around mismatched time horizons between long-term outcomes and near-term financing logic. These dynamics produced recurring trade-offs, especially when compromises were not recorded concisely and revisited deliberately.

The analysis of the design artefact showed how the Integrated Value Creation Framework was developed through iterative cycles and how it aimed to address these observed problems through a compact indicator set, anchored scoring, visible stakeholder priority profiles, and proposed traceability instruments: a participation influence log and a trade-off ledger. The formative Rijnhaven demonstration showed that the framework could produce a structured value profile and highlight differences in evidence readiness across domains, while also revealing limits of scoring in early-stage conditions and the risk of false precision, score-management, and tool fatigue.

5
Discussions

This chapter discusses what the findings from Chapter 4 mean for early-stage decision-making in Dutch urban regeneration and for the contribution of the Integrated Value Creation Framework. While Chapter 4 focused on what was observed in interviews and its analysis this chapter interprets the significance of those findings, reflects on broader implications and clarifies the limits of what a value-creation framework can achieve.

Dutch urban regeneration is increasingly expected to deliver more than housing numbers and a balanced *grondexploitatie*. Regeneration projects are now routinely framed as multi-value interventions that must also contribute to climate resilience, public health, social equity, and the quality and identity of places while still remaining deliverable in complex public–private settings. This wider ambition has intensified scrutiny of early-stage decisions.

This chapter discusses the broader direction of decision-making in Dutch urban regeneration and what the findings of this thesis add to that debate. It places the Integrated Value Creation Framework in the context of Dutch urban regeneration planning and governance.

5.1 The direction of decision-making in Dutch urban regeneration

Dutch urban regeneration is increasingly judged on more than whether a plan can be delivered within a workable *grondexploitatie*. In many cities, regeneration is now expected to deliver housing, climate resilience, healthier public space, social equity, and legitimacy through participation often within the same project boundary and timeline. This stacking of expectations changes what early-stage decision-making is for. Early decisions are no longer only about selecting a technically feasible scheme, but they are also moments where a city decides what it will prioritise when not everything can be achieved at once.

One direction that follows from this is a gradual shift from single-project decision-making towards portfolio level decision making. Municipalities do not manage one regeneration project at a time. They manage several projects while facing limited organisational capacity and growing public scrutiny. Portfolio level management requires comparability and consistency, not because every project should be treated the same, but because cities need a way to explain why one project receives support, acceleration, or priority and another does not. This pushes practice towards decision formats that are transferable across projects and departments and formats that make the basis for choices stronger.

A second direction is that regeneration increasingly operates as multi-value delivery rather than a housing production problem. Regeneration decisions are tied to climate adaptation strategies, energy transition ambitions, circularity aims and broader social goals. A city can set ambitious targets on affordability, green space, and sustainability, but early decision-making is where the question of trade-offs appear. This is why explicit trade-off handling and transparent reasoning is becoming more important in regeneration governance.

In long regeneration timelines, trust can be lost when decisions feel opaque, when participation is perceived as symbolic, or when earlier commitments fade during later phases. This matters because legitimacy affects real outcomes. Thus, governance quality becomes part of feasibility in a broad sense, because it can influence risk, time, and acceptance. Taken together, these directions help explain why structured decision approach methods are increasingly attractive. In a context where regeneration must deliver across domains, cities need formats that make choices explainable and comparable, while still allowing place-specific reasoning.

These urban developments also affect the risk position of municipalities, especially where land development and *grondexploitatie* are used as key instruments. If regeneration is expected to deliver multiple public values, municipalities may need to accept higher or different types of risks. This can include higher costs, longer time horizons before benefits are realised, and greater uncertainty about revenues and returns. This opens the discussion about how much risks the municipalities are willing to take.

However, this municipal risk is not automatically undesirable. In some cases, public risk can be justified because it enables outcomes that the market stakeholders are unlikely to deliver on their own such as public spaces. This risk requires stronger justification and clear accountability, because costs are ultimately borne by the public sector. This includes clarifying which risks are being taken, why these risks are taken, and how risks are managed. Making risk positions visible supports transparency and helps municipalities explain decisions across projects, which is essential for portfolio level and for maintaining trust over long regeneration processes.

An important implication of this direction is that early-stage decision-making should be judged not only by how well it selects a possible option, but also by how well it retains ambition across phases. In regeneration, ambitions do not move unchanged from vision to implementation. They are translated into requirements, design choices, budgets, and contracts. The risk is therefore not only that decision makers make the wrong choice, but that initially shared ambitions around soft values weaken quietly as projects progress.

The contribution of this research extends beyond the development of a framework for evaluating value in urban regeneration. More fundamentally, it raises questions about how early-stage decision-making in urban regeneration should itself be understood. Early-stage decision-making in urban regeneration could instead be conceptualised as a process of value translation, in which ambitions, stakeholder priorities, and public objectives are progressively converted into forms that can guide, justify, and form decisions later. From this perspective, the core challenge is not only to select between competing alternatives, but also to establish a process through which relevant values can be retained across time and across phases. Many of the problems identified in this study arise not because social, environmental, or governance values are absent from the initial stages of regeneration, but because they are insufficiently translated into decision criteria.

The framework developed in this research focuses on the early stages of the project however, value retention is important throughout all the stages. The area on focus in this research is in the early stages because, if the soft value ambitions are not made clear early on, there is no chance of bringing those values back in the project later down the line.

What needs to be protected at the front end is not full certainty about every detail of the outcomes, but a shared direction, clear priorities, and a record of what should remain negotiable and what should not. Choosing a project direction too quickly can create false closure, especially when feasibility information is more formalised than soft values. In such cases, apparent agreement may hide unresolved differences in priorities rather than solve them (Cantarelli et al., 2021).

This suggests that early stages should focus first on the general direction and priority structure of stakeholders before demanding detailed optimisation. Scenario planning can help surface where ambitions are strongest, where compromise begins, and which trade-offs remain unacceptable to particular stakeholders. Therefore, good early-stage decision-making is not about eliminating uncertainty, but about structuring it so that later phases do not lose sight of why certain value ambitions mattered in the first place. The broader implication of this research is that decision quality in urban regeneration should not be judged only by the final choice that is made, but also by the quality of the process through which that choice is reached. A project may be considered successful in delivery terms while still performing poorly from a value-creation perspective if the starting ambitions were not met.

Figure 17: Value retention pathway for early-stage decision making (own work)

5.2 Broader implications of *Omgevingswet* for regeneration governance

The *Omgevingswet*'s stated aim is to combine and simplify rules for spatial projects and to support a healthier physical environment that meets societal needs. Even when the practical effects are uneven, the law signals a cultural shift with integrated decisions, earlier consideration of environmental and societal effects, and greater expectations for transparency and participation.

This matters for regeneration because early-stage decisions are the stage where integrated ambitions must be translated into choices that can travel into tenders, plans, and delivery agreements. Participation has long been part of Dutch planning practice, but the *Omgevingswet* increases the visibility of participation in formal decision-making. Importantly, the participation requirements introduced around environmental permit applications do not generally prescribe a single fixed participation model, instead a more transparent process.

Research on how participation ambitions were translated into the *Omgevingswet* has argued that participation requirements changed less than the political narrative suggested, and that binding participation requirements depend strongly on local designation and municipal choices (Hollemans, 2025). This creates a familiar Dutch reality with high expectations, but flexible implementation and variation across municipalities.

The practical direction for regeneration is therefore not simply more participation, but more defensible participation. Here, defensible participation refers to participation that is organised and documented in a way that makes decision-making accountable and explainable. In projects, trust depends not only on whether people were invited to participate, but also on whether the municipality can clearly show how input was considered and why certain choices were made. Defensible participation helps prevent participation from being perceived as symbolic, because it provides a clearer link between input and outcomes. Thus, it strengthens legitimacy of the participation. Participation disputes can lead to delay, legal challenges, reputational damage, and reduced willingness to cooperate later. Municipalities can reduce misunderstandings and clarify expectations early by making influence visible. In this sense, defensible participation contributes to feasibility in a broader sense because it can reduce implementation risks.

Participation becomes less about producing narrative recordings and more about being able to show what participation changed, what it did not change, and why. This shift aligns strongly with the type of traceability and governance routines that this thesis aimed to address through the participation influence log.

5.3 The role of standardized decision support frameworks

In the Dutch context, standardized decision support frameworks can be particularly valuable because regeneration is often negotiated through collaborative governance arrangements. Public and private stakeholders must align not only on what is desirable, but also on what is deliverable and who carries risk. Governance research on Dutch area development has long shown that contractual and process arrangements shape the room for adjustment and the way value claims are handled over time (van den Hurk & Taşan-Kok, 2020). A framework cannot remove these dynamics, but it can make them more explicit by forcing decisions to be described in a way that

others can revisit later. This is consistent with the idea that decision support in complex governance settings should function as a shared platform rather than a purely technical ranking engine.

At the same time, there is a key point about what these frameworks can realistically achieve. Many appraisal tools are designed to produce a single best option by aggregating impacts and weights (Cinelli et al., 2014). In regeneration that can be misleading because disagreements are normal and common. A structured negotiation pattern where differences in priorities are visible is needed. Therefore, the most useful frameworks in regeneration might be those that support dialogue and traceability rather than those that claim objectivity. This is where the broader contribution of an integrated value framework sits.

However integrated frameworks such as the IVCF cannot remove political conflict. They cannot guarantee fair participation, and they cannot replace judgement. They can also create risks like false precision, strategic behaviour from the stakeholders and overburden of more paperwork.

For this reason, the success of frameworks depends strongly on how they are set in the workflows. A framework used as a compliance exercise will not improve decisions but it will add paperwork. A framework used as a discussion tool at key decision gates, can strengthen decision quality.

After the discussion with RES-1, it is also understood that complementary methods may strengthen the framework. Instead of asking stakeholders directly to assign abstract weights, they can first rank preferred outcomes or respond to simple trade-off comparisons, after which their implied priorities are reconstructed. In a regeneration setting, such an approach could help stakeholders articulate value priorities before detailed options are negotiated. Working with scenario planning and then cross-checking them for trade-offs focuses discussion on direction and priorities before detailed optimisation.

5.4 Rethinking 'value' in regeneration

Value in urban regeneration goes beyond financial performance and cannot be treated as one stable or purely measurable concept. 'Soft values' such as social cohesion and safety are often central to what regeneration is meant to achieve, but they do not behave like financial variables and they are difficult to capture with precision. A key challenge for value-based planning is therefore to make these values usable in decision-making so they can be discussed, compared, documented, and revisited without pretending that they can be measured in the same way as financial numbers. Indicator-based frameworks can support this if they are used as tools for structured discussion rather than as objective measurement. Anchored indicators and short evidence notes can improve consistency and transparency while still leaving room for qualitative explanation and local context.

At the same time this research also shows that, public value in regeneration is not a fixed checklist. It is shaped through institutional mandates, political priorities, and negotiation between stakeholders who hold different responsibilities and risks. In Dutch public–private settings, defining public value is closely linked to decisions about levers, feasibility constraints, and delivery conditions. This means public value is not only stated in policy ambitions but also produced in practice through early choices about what is treated as realistic, what is postponed in the project cycle, and what is traded off. This makes transparency important. If trade-offs remain implicit,

outcomes can appear inevitable even when they reflect negotiated priorities and institutional constraints. When trade-offs are made explicit, the ethical and political point of view of regeneration becomes more discussable.

Integrated value approaches also respond to an accountability problem where municipalities are expected to show that decisions align with public ambitions while remaining deliverable and fair. In this sense, integrated formats function as accountability infrastructure, not only as analytical tools. Accountability is multi-directional and municipalities must justify decisions to councils and residents, developers to investors and delivery teams, and housing associations to tenants. A structured integrated approach supports this by making priorities visible and by showing what conditions and compromises were attached to early decisions.

5.5 Usability outside of Dutch Regeneration

Dutch urban regeneration often relies on negotiated public–private arrangements, where municipalities steer through land policy, tendering, conditions, and strategic partnerships, while private stakeholders carry major delivery and financing risks. Housing associations add a long-term affordability and management perspective. This governance structure has strengths where it can mobilise private capital, allow flexibility, and support negotiated value creation. But it also creates a structural challenge where public value ambitions must be translated into delivery terms that fit feasibility constraints and risk management, or else they remain fragile.

In governance systems where public authorities develop more directly the decision baseline may not be feasibility-led in the same way. The Dutch model, by contrast, tends to make feasibility the central negotiation language because it is the shared format through which risk and deliverability are assessed. That helps explain why soft values struggle in early stages. In places where private stakeholders are in control of the developments, soft values may struggle even more.

Although the research was done in Rotterdam, the broader contribution of this thesis is not limited there. The Rotterdam case reveals a governance pattern that is likely to recur in other Dutch municipalities to a considerable extent, because the institutional conditions created by the Omgevingswet are national rather than city specific. Since the *Omgevingswet* came into force on 1 January 2024, all municipalities have had to work with stronger expectations around integrated decision-making, participation, and transparent justification. At the same time, the law leaves room for local interpretation and is built largely around duties to organise and motivate participation rather than around one uniform national participation standard. This makes the underlying governance challenge identified in this thesis relevant beyond Rotterdam.

Testing the framework against a different context helps clarify what is context-specific and what may transfer. As an example, decision making in urban development in a country from the global south like India is different from that in the Netherlands. Urban redevelopment in India often operates in a different institutional and market setting, with higher informality, large variations in state capacity, complex land tenure, and strong political involvement in planning decisions. In many cities, redevelopment project decisions are also negotiated, but the negotiation often includes additional stakeholders and constraints such as resident associations, informal settlers, political intermediaries and multiple layers of government agencies. Financing structures can differ as well, for example through floor space incentives, land pooling, public–private partnership models, or redevelopment tied to infrastructure corridors. These features affect not only how

projects are delivered, but also how ‘value’ is defined, and what types of evidence are considered legitimate in decision-making.

In such a context, the thesis approach could still be useful, but the main benefit may shift. Rather than supporting portfolio steering across municipal projects, the framework may primarily function as a device for clarity and accountability. This matters because many redevelopment conflicts are not only about outcomes, but about the process by which outcomes are decided especially when affected groups experience limited influence over choices that shape their housing, mobility and livelihoods. A tool such as the participation influence log could be particularly relevant in Indian redevelopment because participation is often present in form but limited in effect. It is not mandatory such as in the Netherlands.

A further reason the framework may matter in parts of the Global South relates to corruption risks and weak accountability. The value of transparency increases where informal payments, exceptions or politically mediated approvals are prevalent. A structured framework can provide a baseline for accountability by turning early decisions into a more legible public record. In this sense, the framework can be more than an internal decision tool. It can also be designed as a publicly available document that allows residents, civil society organisations, journalists, and other bodies to track whether decisions are consistent with stated goals and whether later phases deviate from earlier commitments. This public-facing function is important where formal checks are weak, because transparency can also strengthen external accountability through public scrutiny.

However, the same conditions that make such a framework valuable in such context also create a serious limitation that there is a high risk that it is ignored or sidelined completely. In many redevelopment settings, steering power is concentrated in actors with financial capacity and political backing, while formal project decision-makers may have limited say. This implies that transferability depends not only on the design of the framework, but also on the institutional anchoring around it. For the framework to have influence in a context like India, it would likely need to be linked to mechanisms that create incentives to use it.

Overall, this comparison suggests that the thesis contribution is not tied to Dutch instruments such as *grondexploitatie* alone. The broader contribution is the argument that early-stage decisions need formats that keep public values, risk positions, and participation influence visible and traceable, so that they remain discussable and accountable over long and contested delivery processes.

The discussion has shown that early-stage decisions in Dutch urban regeneration are shaped less by a lack of public value ambition than by the dominance of feasibility-led decision formats and the governance reality of negotiated multi-stakeholder delivery. Trade-offs are governance choices about priorities, costs, benefits, and risk distribution, even when they are presented as technical outcomes. The *Omgevingswet* raises expectations for early participation and transparency, but participation becomes defensible only when influence can be traced into decisions through local routines.

The main challenge is not to measure soft values perfectly, but to keep them alive in the decisions so that they remain discussable, revisit able, and accountable over long regeneration timelines.

6
Conclusions

This thesis examined how early-stage decision-making in Dutch urban regeneration can be better supported so that social, environmental, and governance values become as visible and usable as financial feasibility. Using a Design Science Research approach, the study combined a focused literature review with interviews and follow-up sessions with key actors in Rotterdam's regeneration context. The work mapped how early decisions are currently made, what makes certain values influential at decision gates, and what kinds of support structures practitioners consider workable. On that basis, the thesis developed and formatively demonstrated an Integrated Value Creation Framework (IVCF) as the central design artefact.

6.1 Conclusions

6.1.1 Early-stage decision-making and value trade-offs

Across the interviews, early-stage decision-making was consistently described as structured around financial feasibility. Municipal interviewees referred to the *grondexploitati*e and feasibility pack as the central reference point at initiative and pre-feasibility stages, while the developer described first testing a base case through worst–base–best scenarios and then moving to familiar levers such as land price, subsidy, phasing, programme mix, or performance requirements when the baseline was weak. This showed that feasibility was not treated as one information input among many. It functioned as the baseline format that defined what was considered realistic and decision ready. Under time pressure and uncertainty, the structured and comparable nature of feasibility outputs meant they arrived first, travelled easily across organisations, and shaped the meeting agenda and decision language.

Social, environmental, and governance values were not absent from early conversations. All actor groups described them as important, and 'soft values' such as cohesion, belonging, perceived safety, and place identity were repeatedly mentioned as central to what regeneration should achieve. However, the findings showed that these values often lacked the structured, portable form that feasibility tools provided. Municipal and housing stakeholders often expressed such values as ambitions or qualitative concerns, while the developer emphasised that they became decisive only when they were translated into delivery terms that could survive long timelines, organisational handovers, and shifting constraints. This gap between what was valued and what was carried forward helps answer why early-stage decisions tend to reproduce the same tensions: values that do not travel well through decision formats are easier to postpone or absorb implicitly into feasibility assumptions. The study's findings therefore align with the idea that early appraisal tends to privilege what can be standardised, compared, and defended quickly, while harder-to-monetise effects risk being treated as secondary narrative inputs (Beukers et al., 2014).

The research also showed that participation mattered most when influence was traceable, not when documentation was lengthy. Interviewees preferred a short record that showed what changed due to participation, what did not change, and why. This became more relevant under the *Omgevingswet*, where expectations for early participation and transparency increased, but implementation remains strongly dependent on local routines. A related insight was that stakeholders did not use the term 'participation' in one consistent way, for some municipal interviewees it also referred to internal alignment across departments and institutional stakeholders, not only engagement with residents.

The analysis also clarified that early decisions are shaped by role-based differences that are consistent with the mandates and accountability structures of the main actor groups. Municipal stakeholders prioritised comparability, resilience, and legitimacy they needed decisions that could be defended across projects and audiences and that remained readable over long timelines and staff turnover. Developers prioritised feasibility stability and risk control: they were willing to accept higher social or environmental ambition when it was paired with a clear lever and conditions that managed risk. Housing associations prioritised affordability, availability, and long-term tenant outcomes: they accepted provisional evidence and staged review because many resident outcomes mature slowly, but they wanted ownership of follow-up actions and a mechanism to prevent social aims drifting after handover. These differences explain why early

meetings do not naturally converge into a single shared definition of value. Instead, they require negotiation across different time horizons, proof standards, and preferred levers.

6.1.2 The contribution of the Integrated Value Creation Framework

The IVCF was developed to support early-stage decision-making through a standardized approach to value creation that complements the feasibility baseline rather than replacing it. The framework was designed to make non-financial values decision-ready by structuring discussion across four domains—economic, social, environmental, and governance using anchored indicators that can be scored with short evidence notes. It was also designed to keep stakeholder differences visible by using separate weighting profiles rather than collapsing priorities into one combined score. Importantly, the framework's purpose was not to claim objective measurement of soft values, but to make them governable in practice by making them discussable, traceable, and revisit able. This aligns with the wider argument developed in the discussion chapter that integrated value approaches function not only as analytic tools but as accountability infrastructure in multi-actor regeneration governance, where municipalities must justify choices to councils and residents, developers must justify commitments to investors and delivery teams, and housing associations must justify outcomes to tenants and regulators.

Two proposed components namely the participation influence log and the trade-off ledger addressed the most repeated gaps in the interview material. The participation influence log was designed to record influence rather than activity, linking stakeholder inputs to changes (or justified non-changes) in indicators, targets, design choices, and conditions. The trade-off ledger was designed to make compromises explicit by documenting the conflict, options considered, the lever selected, the rationale, and the conditions and revisit moments attached. Both components responded to the practical problem that early compromises and participation effects are often absorbed into feasibility assumptions or dispersed across narrative documents, making them difficult to reconstruct later. In the thesis, these logs were developed and refined through interview feedback and placed in the intended process design, but they were not tested as fully embedded routines across multiple live decision gates. This matters for how the claims of the research should be understood which is that the contribution is to show what kind of structure practitioners asked for and how such structure can be designed, rather than to prove long-term organisational adoption.

At the same time, the research identified clear limits of modelling and scoring in early-stage settings. Interviewees recognised that scoring could create false precision if numbers are treated as objective measurements of complex social realities. They also raised the risk of strategic behaviour, where stakeholders negotiate scores and weights rather than the substance of trade-offs, a risk also recognised in wider MCDA practice (Cinelli et al., 2014). Finally, there is a risk of tool fatigue if frameworks become additional compliance templates rather than meaningful decision routines. The broader conclusion is that a framework's value depends heavily on how it is used and can be beneficial to strengthen clarity, comparability and accountability.

6.1.3 Answering the research questions

Overall, the research answers the central question by showing that early-stage decision-making in Dutch urban regeneration can be supported through a standardized value creation approach when that approach matches the realities of early decision environments such as time pressure, uncertainty, multi-actor negotiation, and a feasibility baseline that sets the agenda. A standardized framework can help social, environmental, and governance values become more influential not

by trying to monetise them fully or replace feasibility, but by providing a decision-ready structure that allows these values to be compared, discussed, documented, and carried forward as checkable commitments. In this thesis, that structure took the form of the Integrated Value Creation Framework with anchored indicators, visible stakeholder priority profiles, and proposed traceable instruments for participation influence and negotiation decisions.

The thesis therefore concludes that the main barrier to integrated value creation in Dutch urban regeneration is a visibility and traceability problem. Financial value remains dominant partly because it is already formalised, portable, and auditable. Social, environmental, and governance values become weaker when they remain broad ambitions, when they are disconnected from early decision routines, or when they are not carried forward using accountable decisions. Supporting early-stage decision-making thus requires a practical infrastructure for retaining value across phases.

In addition to answering the main research question, the findings and the design artefact also address each sub-research question. Together, the literature review, interviews, and formative demonstration explain what is missing in current decision practice and how a standardised framework can respond.

Sub-question 1: What frameworks are currently used to support decision-making in urban regeneration, and to what extent do they enable the integration of social, environmental, governance, and financial values in early stages?

The literature review and interview findings show that early-stage decision-making is currently dominated by financial feasibility tools, especially the *grondexploitatie* and feasibility packs. These tools perform well on comparability, speed, and organisational portability, which makes them influential at decision gates. However, the study also confirms the limits identified in the literature which are common appraisal approaches tend to privilege what can be quantified, monetised, or standardised, while social, environmental, and governance effects are often treated as qualitative add-ons or ambitions. This sub-question is answered by showing that the main weakness is not a total absence of non-financial goals, but the absence of a shared early-stage format that can structure and document those goals in the same decision space as feasibility.

Sub-question 2: Who are the stakeholders involved in Dutch urban regeneration, and how do they define and prioritise value?

The interviews show that the main actor groups in the studied context: municipal departments, developers, and housing associations who share broad ambitions but differ in how they define value and what they prioritise in early decisions. Municipal actors emphasised legitimacy, comparability across projects, and long-term resilience; while developers emphasised feasibility stability and risk control and housing associations emphasised affordability, long-term tenant outcomes, and safeguarding commitments after handover. This sub-question is answered by mapping these role-based value logics and showing why early meetings do not naturally produce one shared definition of value.

Sub-question 3: What trade-offs emerge between economic, social, and environmental values in Dutch urban regeneration projects?

The analysis identifies recurring trade-offs that emerge under feasibility constraints and negotiated delivery. Interviewees described how affordability requirements, climate adaptation

measures, higher environmental performance, and social goals such as preventing displacement can conflict with project viability, phasing, or acceptable risk exposure. These tensions are not simply technical. They are shaped by governance choices about who bears costs and risks, what is prioritised now versus later, and what is made binding in delivery terms. This sub-question is answered by showing that trade-offs often remain implicit because they are absorbed into feasibility assumptions or dispersed across narrative documents.

Sub-question 4: How can value assessment approaches be aligned with the requirements of the Omgevingswet?

The study argues that the Omgevingswet increases the governance importance of transparency, integrated consideration, and participation, but leaves significant discretion to municipalities in how participation is organised and documented. This creates variation across local practice and increases the value of routines that allow decisions to be explained and reconstructed later. This sub-question is answered by translating the *Omgevingswet's* governance implications into a practical requirement that participation needs to become defensible, meaning that influence should be traceable into decisions.

Sub-question 5: How can stakeholder assessments of usability and relevance be captured, and reflected within the framework to support early-stage decision-making?

The framework was tested for workability through follow-up sessions and feedback loops. Stakeholders emphasised that any tool must be simple enough to use under time pressure, must not create an extra compliance burden, and must avoid false precision. This sub-question is answered by showing how usability feedback shaped the framework design. The IVCF uses short evidence notes, anchored indicators, and limited scoring to support structured judgement rather than claiming measurement accuracy. It also keeps the logs lightweight and focused on decision relevance.

Taken together, the answers to the sub-questions show that early-stage decision-making can be supported through a standardised approach when it (1) complements feasibility rather than replaces it, (2) makes stakeholder priorities explicit, (3) documents trade-offs and participation influence in short and portable formats, and (4) fits the transparency expectations of the Omgevingswet without creating unrealistic claims of precision. More broadly, this thesis shows that early-stage decision-making does not reflect the pure value ambitions of stakeholders in a direct way. Instead, those ambitions are filtered through political priorities, institutional constraints and differences in negotiating power between actors. Along the way, many of these soft value ambitions weaken, not necessarily because stakeholders no longer care about them, but because there is often no proper structure to record, translate, discuss, and carry them through the project lifecycle.

In conclusion, the thesis shows that the main barrier to integrating social, environmental, and governance values in early-stage regeneration decisions is not a lack of ambition, but a lack of decision-ready structure and traceability. The proposed standardized approach supports early decisions by addressing that barrier directly where it gives soft values a format that can travel through decision gates, makes stakeholder differences explicit rather than hidden, and provides short records that improve transparency over long timelines. This strengthens the conditions under which integrated value can become visible and usable in practice, while remaining honest about the limits of scoring and the continuing need for judgement and negotiation in urban regeneration decision-making.

6.2 Recommendations

This chapter presents practical recommendations to improve early-stage decision-making in urban regeneration based on the findings of this study. The overall aim is to make decisions clearer, fairer, and easier to follow over time, while recognising that municipalities, developers, and housing associations operate under different mandates, incentives, and constraints. The recommendations therefore focus less on removing conflict and more on improving how conflicts and trade-offs are handled, documented, and revisited throughout long regeneration timelines.

First recommendation is that trade-offs should be made explicit at every decision-making stage. In current practice, compromises are often hidden under feasibility assumptions or remain implicit in narrative documents. This makes it difficult to reconstruct later why choices were made and what was promised. For early decisions to remain accountable, supporting documents should state the trade-off clearly and in plain language. They should explain what conflict triggered the choice, what options were considered, and which lever was selected to manage the tension.

Secondly, time horizons should be treated as a core part of decision making. Many social and environmental benefits develop slowly, while feasibility pressures appear early and can dominate attention. Early decisions should therefore consider near, medium, and long-term effects explicitly. If time horizons are not addressed directly, slow benefits such as social cohesion, perceived safety, biodiversity, or climate resilience are more easily downgraded during later negotiations.

Participation can also be made more systematic by treating it as a process of participate, translate, integrate, and accelerate. Participation should start with a clear statement of the scope of influence and the objective of engagement. Inputs should then be translated into a small set of decision-relevant categories, integrated into the indicator set and trade-off ledger, and used to accelerate rather than delay decisions by making changes, non-changes, and responsibilities visible.

Municipalities and partners should also spend more time clarifying stakeholder priorities and acceptable directions at the start of the process, before locking projects into detailed programme choices. A light scenario planning approach can help reveal where compromise begins and which trade-offs require explicit governance decisions.

Early regeneration decisions are shaped not only by formal objectives but also by who holds steering power. In negotiated public–private delivery, one stakeholder's priorities can dominate when that actor controls key resources or when other actors depend on them for delivery. Decision quality improves when this is acknowledged rather than treated as neutral. Making these relations explicit helps stakeholders understand which trade-offs are genuinely negotiable.

A final recommendation is to make learning across projects more continuous through short feedback loops. Regeneration often repeats similar debates because discussions remain informal and are lost through staff turnover or long timelines. Decision-making can be strengthened if municipalities and partners create small routines to capture learning at key moments, such as after tendering, after participation rounds, and after major approvals. This improves decision quality over time because early meetings start from stronger assumptions and clearer understanding of what has worked before, rather than repeatedly negotiating from scratch.

6.3 Future Research

This study developed and formatively demonstrated the Integrated Value Creation Framework, but it did not test long-term adoption or routine use across multiple live projects. Future research should therefore focus on whether the framework performs well under real conditions and whether it improves decision quality beyond the design setting.

The first step is to test the framework in live early-stage decision meetings in Dutch regeneration projects. Pilot trials would allow researchers to observe how the framework performs under time pressure, incomplete information, political scrutiny, and competing priorities. Such pilots could examine practical questions such as how much preparation time is required, whether meeting duration changes, and whether participants find the outputs useful. They could also assess output quality by examining whether decision notes become clearer, whether trade-offs and rationales are more explicit, and whether conditions and revisit moments are actually used in later phases. This is important because the value of the framework depends not only on its design, but also on whether it becomes part of the decision routine rather than an extra document.

Future research could also compare how the framework fits different municipal templates. Municipalities already have decision packs, feasibility formats, and departmental review procedures. Future research should therefore examine whether the framework can be embedded within these systems rather than added as a separate layer.

Future research could also test whether the patterns found here in Rotterdam hold across more Dutch cities and project types. A broader, multi-city sample would show if the same trade-offs and process gaps appear under different markets, governance styles, and neighbourhood profiles. Comparative studies could match similar projects with different delivery models to see which combinations lead to clearer choices and steadier outcomes. Another important point for future research is external validation of the findings and framework with additional municipal researchers or process specialists outside Rotterdam.

7
Limitations

This research has several limitations that shape the findings and the proposed framework. These limitations do not reduce the relevance of the research, but they do set clear boundaries for what can be claimed.

First, the research focused on three stakeholder groups that are developers at municipality, a private developer perspective, and a housing association perspective. These were relevant actors for examining early-stage regeneration decisions, but they do not represent the full range of stakeholders involved in such processes. Urban regeneration involves many other stakeholders such as residents, local businesses, community organisations, investors and politicians. These groups were not included systematically. This means the findings primarily reflect how the institutional stakeholders mentioned above experience early decisions, rather than how broader affected groups experience or evaluate them.

An important limitation of this research concerns the scope of stakeholder perspectives represented in the empirical work. Although the interviewees reflected a range of organisational positions, including municipality, a private developer, a housing association representative, they were all situated on the side of formal decision-making, project steering, or risk-taking. The study primarily captures the perspectives of stakeholders who are directly involved in shaping projects, negotiating trade-offs, and carrying organisational, political, or financial responsibility for project outcomes. This has provided valuable insight into how value is understood and operationalised within project environments, but it also means that the findings are weighted toward the perspectives of decision-makers and institutional risk-takers.

Residents, community organisations, or stakeholders within the municipality who handle the social side of projects often experience the consequences of regeneration without holding comparable decision-making power or formal project responsibility. Their perspectives on value, fairness, legitimacy, and acceptable trade-offs may differ greatly from those of decision makers. Since these perspectives were not included in the research, the study does claim to represent the full stakeholder landscape of urban regeneration.

A related limitation is that the insights reflect participants' professional roles, mandates, and organisational lenses. Municipal stakeholders, developers and housing associations each see projects through their own responsibilities and risks, and this shapes what they describe as important, realistic or problematic. While these role-based differences were central to the analysis, they also mean that the study may overlook perspectives that fall outside those roles, including more critical or lived-experience perspectives.

The interviews were limited in number and were purposefully selected to reach people with direct responsibility and insight into early-stage decisions. This supported depth, role-specific detail and the ability to identify recurring themes across interviews. However, it also limits representativeness. Most participants also worked in and around Rotterdam. The study cannot make strong claims about how widespread certain practices or views are across Dutch urban regeneration as a whole, nor can it estimate how often particular tensions or trade-offs occur across municipalities. The findings should therefore, be read as a focused account of how early-

stage decision-making works in a particular professional setting, not as a statistical description of national practice.

The study is also limited by its time frame. The research focuses on early-stage decision-making, especially the initiative and pre-feasibility phases. One of the central arguments of the thesis is that ambitions can weaken over time as projects move across phases. However, this process was not followed in live projects. This research can thus, identify points where ambition is lost, but it cannot fully demonstrate how ambitions evolve across the full lifecycle of a project.

The research is also about Dutch planning law, institutions, and market practice, particularly in the context of the *Omgevingswet* and the way regeneration is commonly delivered through negotiated public–private arrangements. This makes the findings highly relevant to Dutch settings, but it limits direct generalisation to other countries. In different legal frameworks or delivery models the same decision patterns may not be present. The broader idea of making non-financial values more structured and traceable will transfer across, but the indicators, anchors, and governance routines would need to be adapted to local rules, norms, and practices.

Finally, the framework was walkthrough-tested and demonstrated rather than applied in actual decisions during the study period. The Rijnhaven case was used to test usability and clarity but it was not a real decision moment where outcomes, budgets, and political commitments were actively on the line. The participation influence log and trade-off ledger were developed and refined through interview feedback, but they were not implemented as ongoing routines across multiple stages of a project. As a result, evidence about real-world performance remains indicative. This research therefore offers a practically informed proposal, but further testing in live decision settings would be needed to validate impacts over time and across different municipal contexts.

8
Reflection

I started this course and thus, this thesis as a design architect from Mumbai, India who wanted to move towards investment and development. My design background and development interests shaped how I look at projects in the built environment which is to be feasible as well as have good public outcomes.

My research study is based around improving decision making regarding 'soft values' particularly social, environmental and governance values in urban regeneration projects. It aligns closely with the value and valuation in management in the built environment theme of the graduation lab. The research addresses making intangible indicators visible next to the financial indicators. In the MBE context, my work contributes by helping municipalities and developers make better decisions about value creation. It addresses a core MBE concern which is balancing values in project evaluations instead of letting only feasibility and returns dominate. From the broader AUBS perspective, it complements urban studies by making governance, participation, and legitimacy more visible in day-to-day project choices.

Methodologically, I followed Design Science Research (DSR). I moved through problem framing, objectives, artifact building, demonstration, and reflection. The work delivered two main outputs, first, design-theory discussions about how decisions can be more transparent, comparable, and legitimate; and second a framework (Annex 3) that turns those ideas into a usable practice. Together, these outputs produced both theoretical insights about multi-value decisions and practical insights. Design science research proved to be an appropriate method in the case of this study.

The framework was developed for early planning stages; to surface transparent cross-domain trade-offs so stakeholders can negotiate clear conditions, and to align with the *Omgevingswet.* It seeks comparability and consistency through a shared indicator dictionary enabling faster interpretation across options. The framework is intended to be used by enablers and initiators of Urban Regeneration (primarily municipality and developers) to facilitate better decision making in multi-stakeholder meetings. The framework was demonstrated on Rijnhaven area development not to evaluate the project, but to understand what could be improved. The framework can also be modified to work on projects of smaller scale with multi-actor involvement.

I started this thesis project wanting to research investment potential in Dutch urban regeneration projects. With suggestions from my mentor and through doing academic research I shifted more towards researching decision making in early stages of the project. There was an initial difficulty in accessing and landing interviews for qualitative data collection but was possible through suggestions from the mentors. They also suggested narrowing down the scope and focusing on the process of the research. My timeline didn't go the way I planned. Some reasons were positive, and some were not. I'm still glad I pushed through summer and secured interviews which grounded the framework.

I tested the framework with feedback routines instead of idealised workshops. Which means did not manage to run a live session with multiple stakeholder groups in the same room; my testing

stayed inside a municipal evaluation frame. That means my claims about public-sector usability and effects on negotiation are still to be proven.

Academically, the work offers a practical account of how to make multi-value reasoning visible at the same time as financial checks. It is a way to hold different considerations on the same page so that decisions are traceable. The scope is early decision making in Dutch regeneration projects; that is where the fit is strongest. On transferability, the core practices such as brief decision records, anchored scales, visible value judgements, and dated conditions travel well across Dutch municipalities because the governance setting is similar. Outside the Netherlands they can still work but need re-anchoring to local rules and habits. In settings that are more informal and trust-based, like large Indian projects I know, the light documentation elements could be the right entry point because they add structure without heavy paperwork.

Coming from an architecture background in Mumbai, I used to think in terms of delivering a 'better design'. In the Netherlands, my focus shifted to how investment decisions are actually made, who decides, on what information, and with which trade-offs on the table. I arrived expecting a market-first logic like India with limited tenant focus, and little attention to long-term performance. Instead, I found decision processes that try to weigh long term goals equally. This made me rethink my role which not just proposing options, but structuring choices so that investors, municipalities, and developers can see risks, benefits, and conditions clearly.

Overall, I've gained not only a stronger academic grasp of urban regeneration, but also a clearer view of how equitable outcomes are won or lost through real decision making. This changes how I see the role of a developer. In the Dutch real estate context, I now know my job is not just to design or finance a project, but to structure choices so that the city, investors, and communities can agree to them. The learnings from this thesis give me practical tools to take on a multi-stakeholder situation in the industry.

References

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory, 18*(4), 543–571. https://doi.org/10.1093/jopart/mum032

Apollo, M., & Brzezicka, J. (2014). Sources of investment risk in urban regeneration projects. *Czasopismo Techniczne*, 1, 167–174.

Arce-Gomez, A., Donovan, J. D., & Bedggood, R. E. (2015). Social impact assessments: Developing a consolidated conceptual framework. *Environmental Impact Assessment Review, 50*, 85–94. https://doi.org/10.1016/j.eiar.2014.08.006

Beukers, E., Bertolini, L., & te Brömmelstroet, M. (2014). Using cost–benefit analysis as a learning process: Identifying interventions for improving communication and trust. Transport Policy, 31, 61–72. https://doi.org/10.1016/j.tranpol.2013.12.002

Bisschops, S., Beunen, R., & Hollemans, D. (2023). Institutionalizing ideas about citizens' initiatives in planning: Emerging discrepancies between rhetoric and assurance. *Land Use Policy, 124*, 106425. https://doi.org/10.1016/j.landusepol.2022.106425

Bos, F., Hof, B., & Tijm, J. (2022). *Maatschappelijke kosten-batenanalyse en brede welvaart: Een aanvulling op de algemene MKBA-leidraad*. CPB/PBL.

Bovens, M. (2007). Analysing and assessing accountability: A conceptual framework. *European Law Journal, 13*(4), 447–468. https://doi.org/10.1111/j.1468-0386.2007.00378.x

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbook of research methods inpsychology (Vol. 2, pp. 55–71). American Psychological Association.

Buitelaar, E. (2010). Cracks in the Myth: Challenges to Land Policy in the Netherlands. Tijdschrift voor Economische en Sociale Geografie, 101(3), 349-356. https://doi.org/10.1111/j.1467-9663.2010.00604.x

Cantarelli, C. C., Oglethorpe, D., & Van Wee, B. (2021). Perceived risk of lock-in in the front-end phase of major transportation projects. *Transportation*, *49*(2), 703–733. https://doi.org/10.1007/s11116-021-10191-7

Cinelli, M., Coles, S. R., & Kirwan, K. (2014). Analysis of the potentials of multi-criteria decision analysis methods to conduct sustainability assessment. *Ecological Indicators, 46*, 138–148. https://doi.org/10.1016/j.ecolind.2014.06.011

Colantonio, Andrea & Dixon, Timothy. (2011). Urban Regeneration & Social Sustainability: Best Practice from European Cities. 10.1002/9781444329445.ch2.

Couch, C., Fraser, C., & Percy, S. (2003). Urban regeneration in Europe. Wiley. https://doi.org/10.1002/9780470690604

Cyclomedia, Helft van de Nederlanders tast in het duister over bouwprojecten. (2023, November 13). https://www.cyclomedia.com/nl/resources/news/helft-van-de-nederlanders-tast-duister-over-bouwprojecten

Doucet, B., & Koenders, D. (2018). 'At least it's not a ghetto anymore': Experiencing gentrification and 'false choice urbanism' in Rotterdam's Afrikaanderwijk. *Urban Studies, 55*(16), 3631–3649. https://doi.org/10.1177/0042098018761853

European Environment Agency. (2025, November 28). *Net land take in cities and commuting zones in Europe* (Indicator). https://www.eea.europa.eu/en/analysis/indicators/net-land-take-in-cities

Fujiwara, D., Dass, D., King, E., Vriend, M., Houston, R., & Keohane, K. (2022). A framework for measuring social value in infrastructure and built environment projects: An industry perspective. *Proceedings of the Institution of Civil Engineers – Engineering Sustainability, 175*(4). https://doi.org/10.1680/jensu.21.00029

Gemeenten kritisch op participatieregels Omgevingswet. (2025, May 1). Gemeente.nu. https://www.gemeente.nu/ruimte-milieu/gemeenten-kritisch-op-participatieregels-omgevingswet/ Gemeente.nu

Government of the Netherlands. (n.d.). *Environment and Planning Act*. https://www.government.nl/topics/environment-and-planning-act

Government of the Netherlands. (n.d.). *Mitigating climate change*. https://www.government.nl/topics/climate-change/mitigating-climate-change

Heurkens, E. W. T. M., & Hobma, F. A. M. (2014). Private sector-led urban development projects: Comparative insights from planning practices in the Netherlands and the UK. *Planning Practice & Research, 29*(4), 350–369. https://doi.org/10.1080/02697459.2014.932196

Hollemans, D., Bisschops, S., & Beunen, R. (2025). Including participation requirements into planning law: Experiences from the Netherlands. *European Journal of Spatial Development, 22*(1), 33–61. https://doi.org/10.5281/zenodo.16091834

Hupe, P. L. (2011). The Thesis of Incongruent Implementation: Revisiting Pressman and Wildavsky. *Public Policy and Administration*, *26*(1), 63-80. https://doi.org/10.1177/0952076710367717

IPLO (Informatiepunt Leefomgeving). (n.d.). *Environment and Planning Act of the Netherlands (Omgevingswet)*. https://iplo.nl/regelgeving/omgevingswet/english-environment-and-planning-act/

Jonkman, A., Meijer, R., & Hartmann, T. (2022). Land for housing: Quantitative targets and qualitative ambitions in Dutch housing development. *Land Use Policy, 114*, 105957. https://doi.org/10.1016/j.landusepol.2021.105957

Klijn, E. H., & Koppenjan, J. (2015). *Governance networks in the public sector*. Routledge. https://doi.org/10.4324/9781315887098

Koopmans, C., Heyma, A., & Hof, B. (2019). *Werkwijzer MKBA in het sociale domein: Hoofdrapport*. Den Haag: Ministerie van Financiën.

Leefbaarometer. (n.d.). *Leefbaarometer (official platform)*. https://www.leefbaarometer.nl/

Louali, S., Ročak, M., & Stoffers, J. (2022). Social cost–benefit analysis of bottom-up spatial planning in shrinking cities: A case study in the Netherlands. *Sustainability, 14*(11), 6920. https://doi.org/10.3390/su14116920

Mak, Ariënne & Stouten, Paul. (2014). Urban Regeneration in Rotterdam: Economic and Social Values. European Spatial Research and Policy. 21. 101-122. 10.2478/esrp-2014-0008

Manganelli, B., Tataranna, S., & Pontrandolfi, P. (2020). A model to support the decision-making in urban regeneration. *Land Use Policy, 99*, 104865. https://doi.org/10.1016/j.landusepol.2020.104865

MASTERPLAN RIJNHAVEN ROTTERDAM - Barcode. (2024, May 15). Barcode. https://barcodearchitects.com/projects/masterplan-rijnhaven-rotterdam/

Moorhead, M., Byrne, P., & McAllister, P. (2024). Real estate development feasibility and hurdle rate. *Buildings, 14*(4), 1045. https://doi.org/10.3390/buildings14041045

Nationaal Programma Rotterdam Zuid. (n.d.). *NPRZ (official program site)*. Retrieved February 6, 2026, from https://www.nprz.nl/

Nevescanin, A. (2023). Contemporary Urban Planning –Urban Regeneration, Rotterdam Case Study. BUILDER, 317(12), 70–74. https://doi.org/10.5604/01.3001.0054.0128

Newig, J., & Fritsch, O. (2009). Environmental governance: Participatory, multi-level—and effective? *Environmental Policy and Governance, 19*(3), 197–214. https://doi.org/10.1002/eet.509

Nieuwbouw zucht onder bezwaarmakende burgers. (2024, April 9). Binnenlands Bestuur. https://www.binnenlandsbestuur.nl/ruimte-en-milieu/bouwen-en-wonen/nieuwbouw-zucht-onder-bezwaarmakende-burgers

OECD. (2017). *The governance of land use in the Netherlands: The case of Amsterdam*. OECD Publishing.

Organisation for Economic Co-operation and Development (OECD). (2017). The governance of land use in the Netherlands: The case of Amsterdam. OECD Publishing.

Peffers, K., Tuunanen, T., Rothenberger, M. A., & Chatterjee, S. (2007). A design science research methodology for information systems research. Journal of Management Information Systems, 24(3), 45–77. https://doi.org/10.2753/MIS0742-1222240302

Platform31, Kennis en netwerk voor stad en regio. (2026, February 16). *Woningprogrammering in Rivierenland: een adaptieve oogst - Platform31 | Kennis en netwerk voor stad en regio*. Platform31 | Kennis En Netwerk Voor Stad En Regio. https://www.platform31.nl/artikelen/woningprogrammering-in-rivierenland-een-adaptieve-oogst/

Priemus, H. (2006). *Regeneration of Dutch post-war urban districts: The role of housing associations*. Journal of Housing and the Built Environment, 21(4), 365–375.researchgate.netresearchgate.net

Raad van State. (2022, November 2). *Uitspraak 202105613/1/R3 (Tweebosbuurt Zuid-Oost)*. https://www.raadvanstate.nl/uitspraken/%40133572/202105613-1-r3/

Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation, 141*(10), 2417–2431. https://doi.org/10.1016/j.biocon.2008.07.014

Rijksoverheid. (2024). De Omgevingswet. Retrieved January 5, 2026, from https://www.rijksoverheid.nl/onderwerpen/omgevingswet

Roberts, Peter & Sykes, Hugh & Granger, Rachel. (2017). Urban Regeneration. 10.4135/9781473921788.

Romijn, G., & Renes, G. (2013). *General guidelines for cost–benefit analysis*. Den Haag: CPB/PBL.

Sax, D. L., Nesbitt, L., & Quinton, J. (2022). Improvement, not displacement: A framework for urban green gentrification research and practice. *Environmental Science & Policy, 137*, 373–383. https://doi.org/10.1016/j.envsci.2022.09.013

Smith, N. (2002). New globalism, new urbanism: Gentrification as global urban strategy. Antipode, 34(3), 427-450. https://doi.org/10.1111/1467-8330.00249

Sonnenberg, C., & vom Brocke, J. (2012). Evaluations in the Science of the Artificial – Reconsidering the Build-Evaluate Pattern in Design Science Research (pp. 381–397). https://doi.org/10.1007/978-3-642-29863-9_28

Sørensen, E., & Torfing, J. (2021). Accountable government through collaborative governance? *Administrative Sciences, 11*(4), 127. https://doi.org/10.3390/admsci11040127

Systemiq Analysis Ginkgo Advisor. (2024). *URBAN REGENERATION: TURNING OBSOLESCENCE INTO VALUE FOR SOCIETY, NATURE, CLIMATE - AND INVESTORS*. https://www.systemiq.earth/wp-content/uploads/2024/10/URBAN-REGENERATION-Systemic-Sustainable-Investing_WhitePaper2024.pdf

te Riele, N., & van Liefland, S. (2012). *[Diagram in "WET VAN VERLIES VAN AMBITIE"]* [Diagram]. In N. te Riele, *WET VAN VERLIES VAN AMBITIE* [Video]. YouTube. https://www.youtube.com/watch?v=oYcFEFjY36Y

Then, V., Schober, C., Rauscher, O., & Kehl, K. (2017). Social Return on Investment analysis. In Springer eBooks. https://doi.org/10.1007/978-3-319-71401-1

Turok, I. (2004). Cities, regions and competitiveness. Regional Studies, 39(9), 949–962. DOI:10.1080/0034340042000292647

Van Den Brand, P. (2024, March 14). *Groeiende zorgen om participatie onder de Omgevingswet*. Gemeente.nu. https://www.gemeente.nu/ruimte-milieu/omgevingswet/groeiende-zorgen-om-participatie-onder-de-omgevingswet/

van den Hurk, M., & Taşan-Kok, T. (2020). Contractual arrangements and entrepreneurial governance: Flexibility and leeway in urban regeneration projects. *Urban Studies, 57*(16), 3217–3235. https://doi.org/10.1177/0042098019894277

vom Brocke, J., Hevner, A., & Maedche, A. (2020). Introduction to Design Science Research (pp. 1–13). https://doi.org/10.1007/978-3-030-46781-4_1

Annex 1

Semi-structured interview guide

A1.1 Municipal stakeholders

1. Can you describe your role and responsibilities in urban regeneration projects?
2. Which recent urban regeneration projects have you overseen or contributed to?
3. What methods/frameworks do you use to assess value and impacts?
4. What shortcomings or challenges do you see in current methods ? (where soft values drop out)
5. How are residents, businesses, and developers typically engaged in the process?
6. What challenges arise when balancing conflicting demands and stakeholder interests?
7. How has the *Omgevingswet* reshaped planning/evaluation in practice?
8. Which aspects of Omgevingswetare most challenging or beneficial?
9. Which indicators would you prioritise across the economic, social, environmental, and governance domains?
10. How could a structured and integrated tool such as the IVCF support daily planning decisions?
11. At which stage of the project timeline do you think such a framework would be most useful?

A1.2 Private Developers

1. Can you provide an overview of your role and responsibilities in regeneration projects?
2. What types of regeneration projects have you recently developed/invested in and why?
3. What is the top criteria guiding investment in urban regeneration?
4. How do you assess financial feasibility and risk?
5. How much do social equity and environmental sustainability influence decisions?
6. How do you manage trade-offs between returns and social/environmental aims?
7. What are the typical challenges collaborating with municipalities?
8. What are the practices that make collaborations succeed?
9. How would a comprehensive framework like the IVCF influence your decision making process?
10. Which indicators/criteria must it include to fit private-sector realities?
11. Which levers can unlock social value without undermining project feasibility?

A1.3 Housing Association Representatives

1. Can you describe your role and responsibilities in regeneration or social housing projects?
2. Which recent projects have you overseen or contributed to?
3. How do you assess success on affordability and social inclusion?
4. What are the main challenges to keep affordability/inclusivity central?
5. What are the most effective methods to engage residents meaningfully?
6. What are the key challenges in fostering genuine involvement?
7. How does collaboration with municipalities and developers work in practice?
8. What are the success/failure factors in multi-actor projects?

9. How would a structured tool support decision making for affordability and inclusion?
10. Which social indicators should be emphasised?

A1.4 Policy Advisor (*Omgevingswet*)

1. What is your role and experience advising on the *Omgevingswet* and regeneration.
2. What are the most significant changes the *Omgevingswet* brings to regeneration practice.
3. What are the common misconceptions or application challenges for municipalities/ developers.
4. How effectively is mandatory participation currently being integrated into practice?
5. What recommendations would you make to improve transparency and governance quality?
6. How could the IVCF support compliance, transparency, and due process under the Omgevingswet?
7. Which governance indicators should be prioritised in order to align with the Act and strengthen legitimacy?

Annex 2

Domain	Indicator	Reasoning
Economic	Property value uplift	Regeneration improves infrastructure, amenities, and safety, raising property values and attracting investment.
Economic	Rental yield	Rising demand in regenerated areas boosts rents, reflecting market attractiveness and socio-economic change.
Economic	Private investment leverage	High private-to-public funding ratio signals investor confidence and reduces fiscal burden on government.
Economic	Business activity growth	Regeneration revitalizes local economies by attracting firms, jobs, and entrepreneurial activity.
Economic	Return on investment	Investments in transit, utilities, and green infrastructure yield long-term returns exceeding initial costs.
Economic	Land use efficiency	Redeveloping derelict or underused land into high-value mixed-use projects maximizes scarce land use.

Economic	Cost-benefit ratio	CBA provides a structured tool to test whether regeneration benefits outweigh costs.
Economic	Long-term financial sustainability	Projects are viable when they generate sustained revenues (e.g., taxes) without long-term subsidies.
Social	Housing affordability	Cost of housing relative to income is key for social inclusivity and preventing displacement.
Social	Social cohesion	Renewal seeks to improve trust and reduce segregation; mixed housing may foster cohesion.
Social	Cultural preservation	Adaptive reuse protects identity and heritage, maintaining sense of place in regeneration.
Social	Crime reduction	Physical renewal and community programs reduce crime and improve safety perceptions.
Social	Access to public services	Regeneration enhances service access (schools, healthcare, transit), improving liveability.
Social	Educational attainment	Social programs in regeneration aim to improve schooling outcomes and long-term empowerment.
Social	Equity in participation	Inclusive stakeholder involvement enhances democratic legitimacy and fairness.
Social	Resident satisfaction	Surveys capture perceived improvements in well-being and liveability post-regeneration.
Environmental	Green infrastructure	Parks, trees, and green roofs contribute to climate resilience and health.
Environmental	Energy efficiency	Renovation improves building performance and reduces emissions (e.g., EPC, BREEAM).
Environmental	Waste management efficiency	Recycling and circular practices reduce landfill waste from construction and operations.

Environmental	Urban heat island reduction	Greening reduces heat stress, lowering surface and air temperatures.
Environmental	Climate adaptation features	Flood defences, permeable pavements, and water squares enhance resilience.
Environmental	Sustainable transport	Mode share shifts to walking, cycling, and transit reduce emissions.
Governance	Early stakeholder involvement	Omgevingswet requires early, meaningful engagement of communities.
Governance	Transparency	Public access to budgets and decisions improves trust and legitimacy.
Governance	Legal compliance	Projects must align with *Omgevingswet* and local zoning/planning policies.
Governance	PPP collaboration quality	Balanced public-private partnerships improve efficiency and outcomes.
Governance	Institutional accountability	Monitoring and evaluation mechanisms keep projects on track and responsive.
Governance	Degree of co-creation	Co-design and citizen partnerships foster transparency, mutual learning, and legitimacy.

IVCF Value indicators

Annex 3

Value	Indicator	Time Horizon	Municipality -1			Municipality -2			Developer			Housing Association			Community groups			Combined	
		(0-10-30 years)	Score (1-5)	Weight (0-10	Weighted score	Score (1-5)	Weight (0-10	Weighted score	Score (1-5)	Weight (0-10)	Weighted score	Score (1-5)	Weight (0-10	Weighted score	Score (1-5)	Weight (0-	Indicator	Score
Economic	Long-term financial sustainability Private investment leverage																	
Social	Housing availability Housing affordability Resident satisfaction Displacement risk Crime reduction																	
Environmental	Energy efficiency of built stock Climate adaptation Green infrastructure																	
Governance	Stakeholder participation quality Transparency Monitoring & evaluation																	

Multi-actor version of Integrated Value Creation framework

Value	Indicator	Time Horizon	(Development-1) Rijnhaven			Development-2 (Afrikaanderwijk)			Development -3(Katendrecht)		
		(0-10-30 years)	Score (1-5)	Weight (0-10)	Weighted score	Score (1-5)	Weight (0-10)	Weighted score	Score (1-5)	Weight (0-10)	Weighted score
Economic	Long-term financial sustainability		5	9	45	4	7	28			
	Private investment leverage		4	7	28	3	6	18			
Social	Housing availability		3	7	21	4	8	32			
	Housing affordability		3	6	18	4	8	32			
	Resident satisfaction		4	8	32	5	9	45			
	Displacement risk		3	6	18	3	9	27			
	Crime reduction		2	6	12	5	10	50			
Environmental	Energy efficiency of built stock		4	8	32	3	7	21			
	Climate adaptation		5	9	45	3	7	21			
	Green infrastructure		5	9	45	3	8	24			
Governance	Stakeholder participation quality		3	9	27	5	10	50			
	Transparency		3	9	27	4	10	40			
	Monitoring & evaluation		3	9	27	4	9	36			

Municipal version of Integrated Value creation framework