

Strategies for Developers in Urban Area Projects on Climate Change Adaptations.

Implementation of Climate Change Adaptations on a Corporate, Development, and Collaboration level

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Master's Thesis | Management in the Built Environment
MSc. Architecture, Urbanism, and Building Sciences

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01 | Introduction

Would you rather?



New articles

Water en bodem: van 'sturend' naar 'rekening houden met'

“wateropgaven worden flink groter”

“Ontwikkelaars hebben behoefte aan concrete handvatten en kennisdeling, niet alleen aan beleidsdoelen.”

“Klimaatrisico's vragen om versneld en vooral veel concreter beleid”

Introduction



Climate
Change



Water
Management



Urban Area
Development



Real Estate
Developers

Problem statement

There is a significant information gap
on the role of real estate developers in
Implementing climate adaptation strategies

- ten Brinke et al., 2022

Little research on the role and responsibility
of real estate developers on climate
change adaptation

- ten Brinke et al., 2022

There is no empirical research on the
possible contribution of private actors
in climate adaptation

-Taylor, 2022



Main research question

“What **strategies** can **real estate developers** use to implement **climate change adaptations** in urban development projects?”

02 | Research Method

Sub questions

Theoretical
Research

SQ1: What is the importance of climate change adaptation, specifically water management?

SQ2: How do developers collaborate with other stakeholders in developments?

SQ3: What is the role of a real estate developer in the context of urban development projects?

Empirical
Research

SQ4: What are development companies' corporate positions on climate change adaptation?

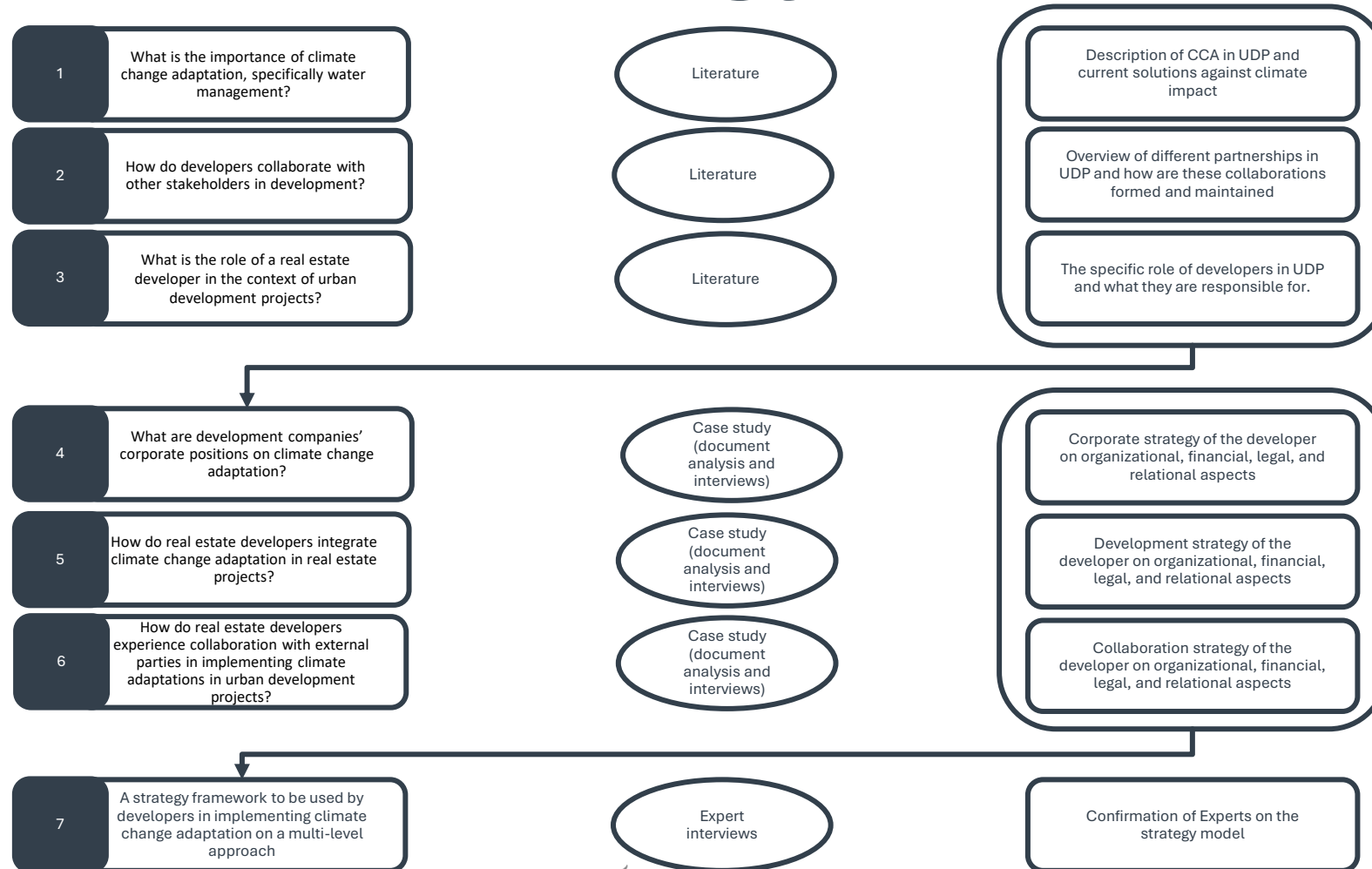
SQ5: How do real estate developers integrate climate change adaptation in real estate projects?

SQ6: How do real estate developers experience collaboration with external parties in implementing climate adaptations in urban development projects?

Synthesis

SQ7: How do corporate, development, and collaboration strategies contribute to the integration of climate adaptation in urban area developments?

Research methodology



Research methodology



Literature



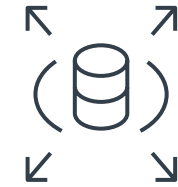
Case 1



Interviews



Documents



Strategy
framework



Experts



Case 2



Interviews



Documents

03 | Literature

Conceptual model

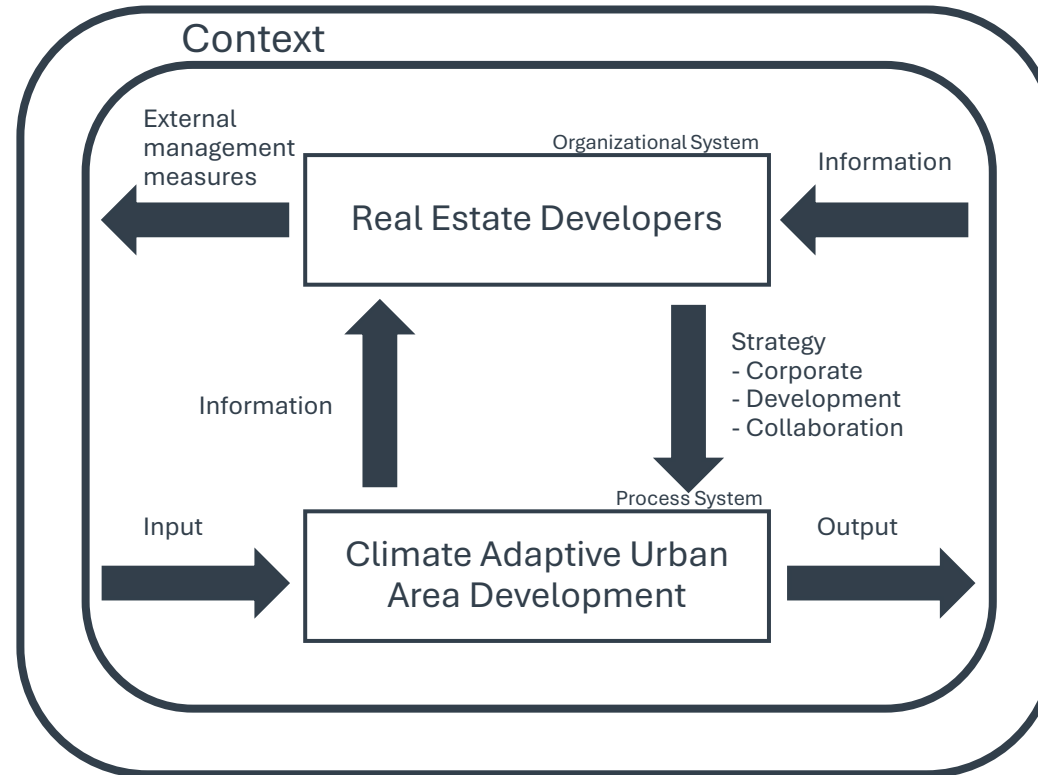
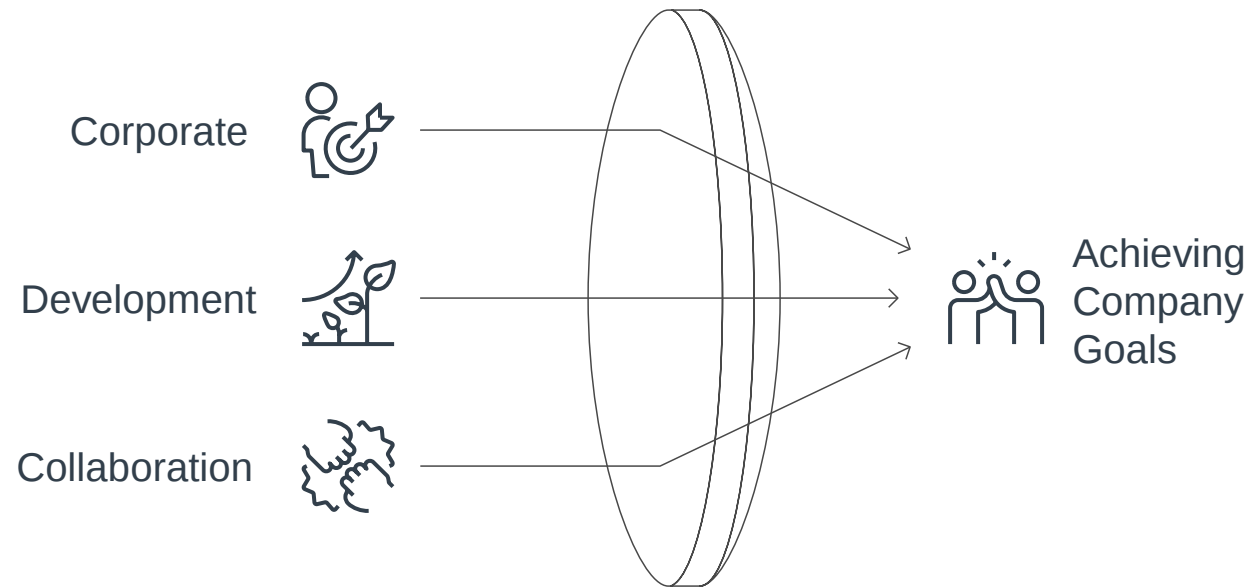


Figure 03: Conceptual model based on Heurkens (2012), own work

Strategy



Conceptual framework



Organisational



Financial

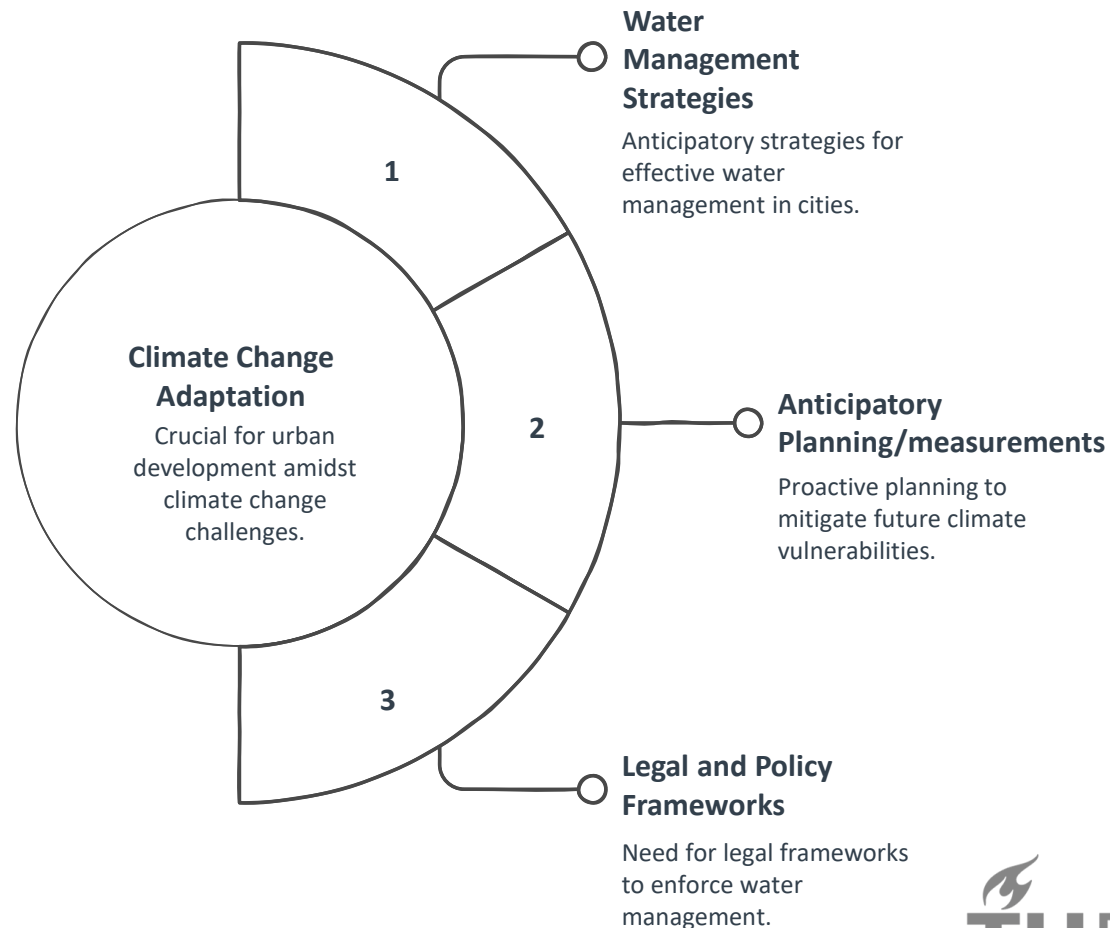


Legal



Relational

Sub-question 1 | What is the importance of climate change adaptation, specifically water management



Sub-question 2 | How do developers collaborate with other stakeholders in developments?



Developer



Municipality



Advisors /
engineers



Residents

Sub-question 3 | What is the role of a real estate developer in the context of urban development projects?



04 | Empirical Research

Would you rather?



Case study



De Glasfabriek, Schiedam

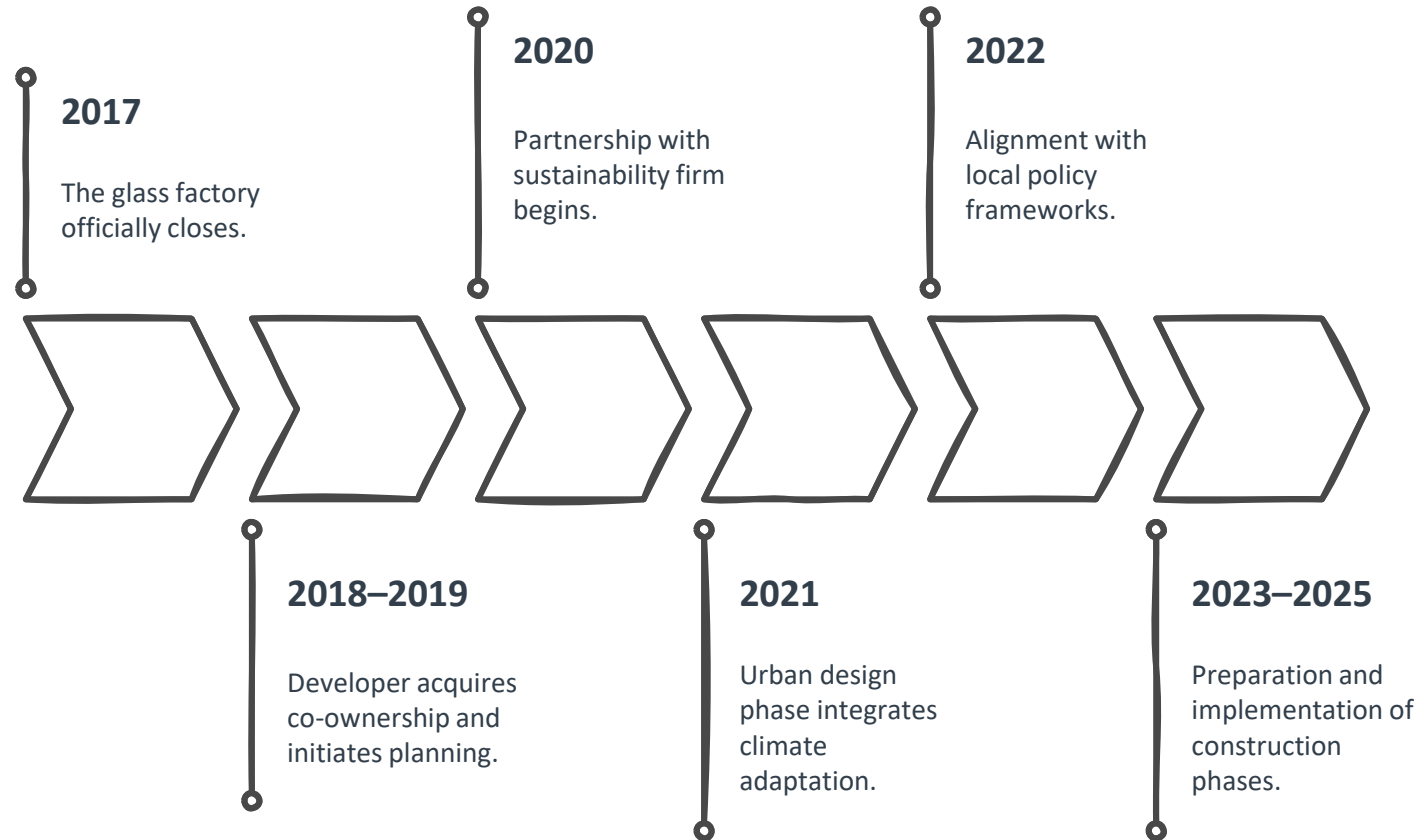


Erasmusveld, Den Haag

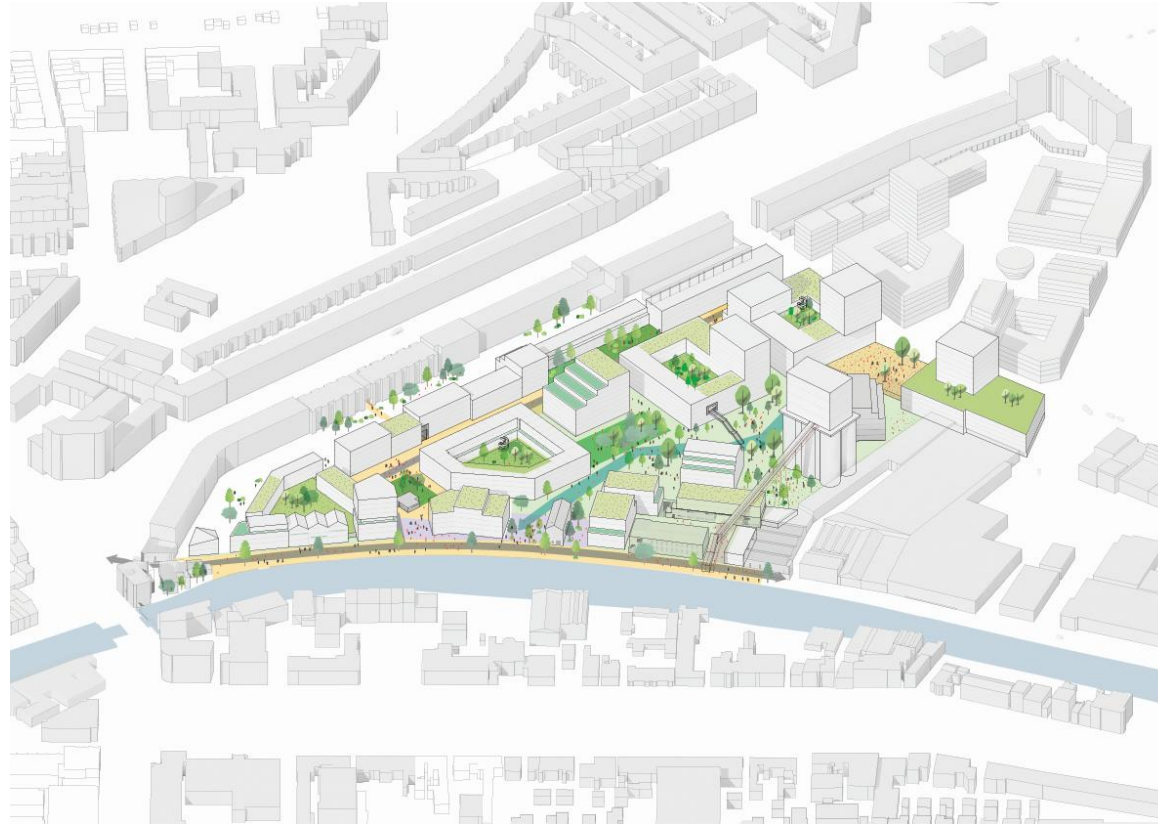
Case study | Project comparison

Characteristic	Project A	Project B
 Location	Netherlands	Netherlands
 Climate relevance	Water management	Water management
 Development phase	Early	Completed
 Strategy sharing	Willing	Willing
 Scale	Urban area	Urban area

Case A | project timeline



Case A | Project overview



Case A | Project overview

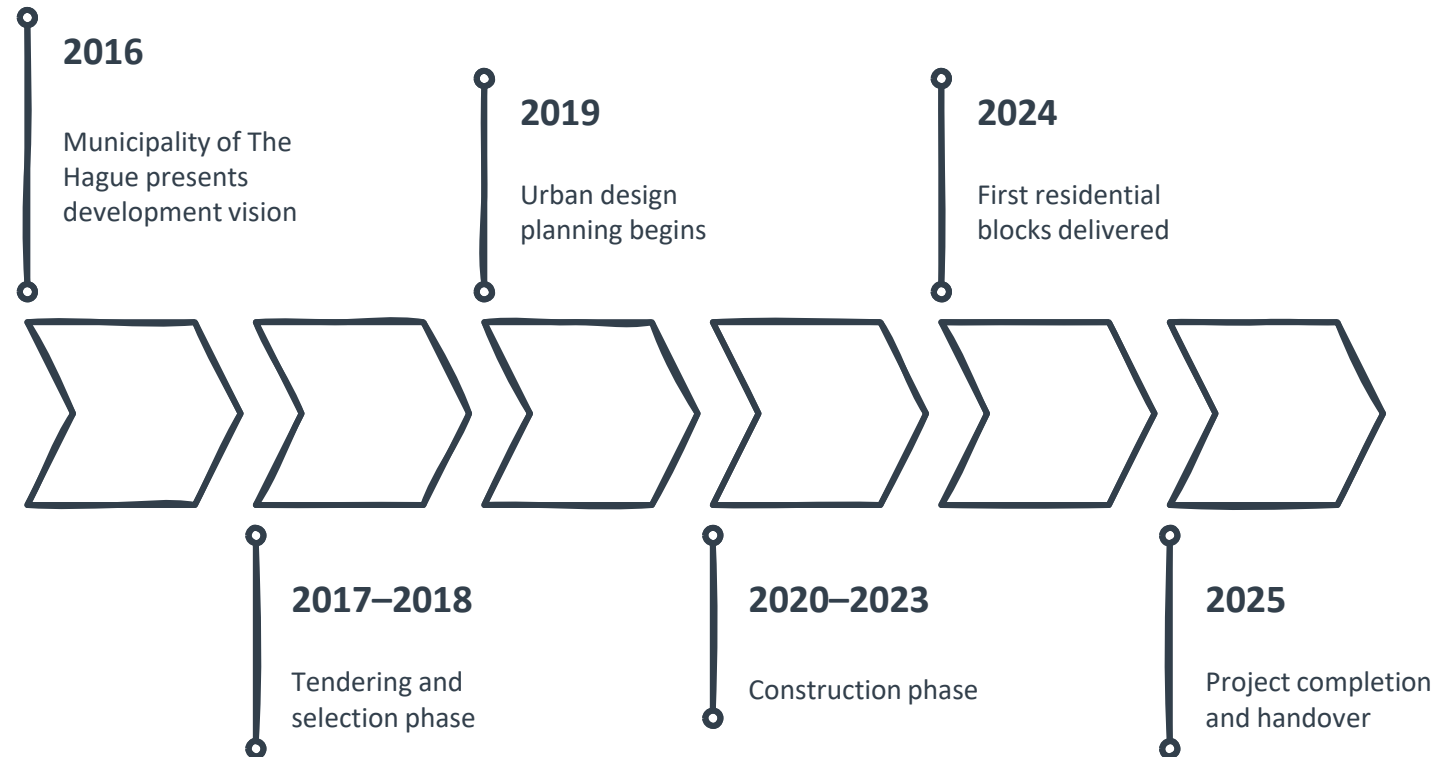
*We want to create something exemplary, a **reference project**.”*
Interviewee 1

*“We bring up issues in **the steering group** before they escalate, but approvals can still be slow.”* Interviewee 1

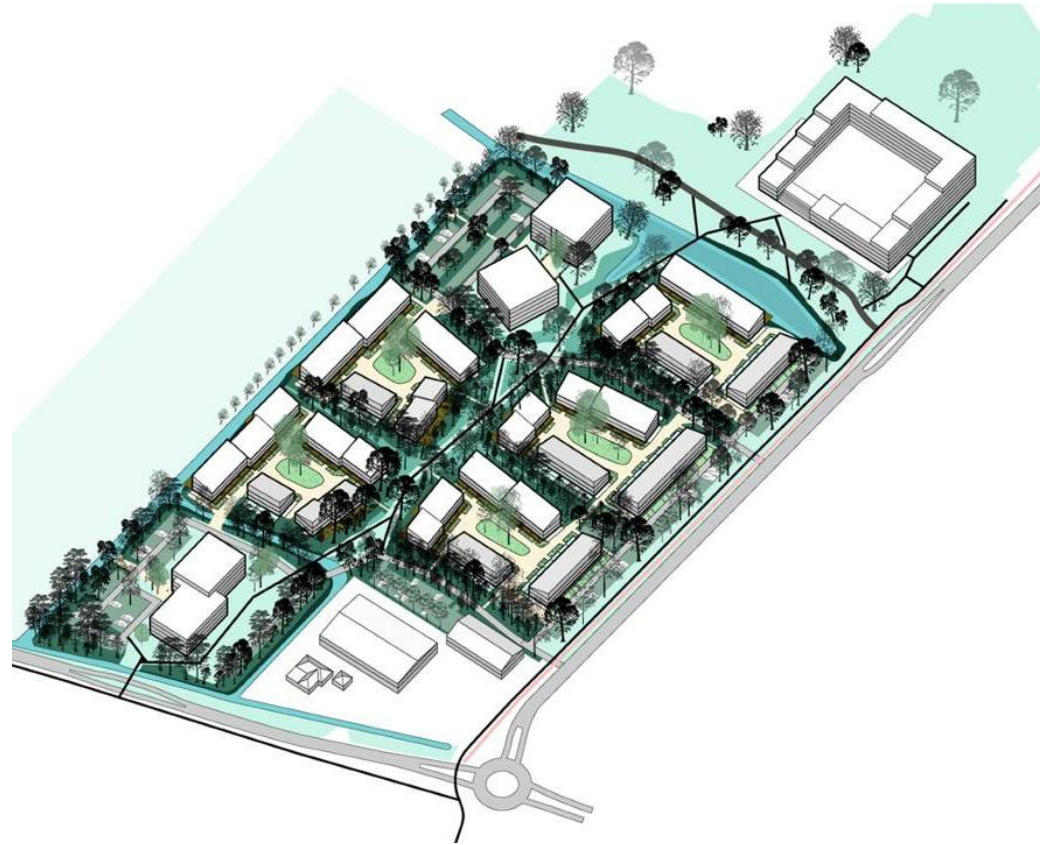
*We work with consultants who know our **ambitions**, they’re part of the team.”* Interviewee 3



Case B | Project timeline



Case B | Project overview



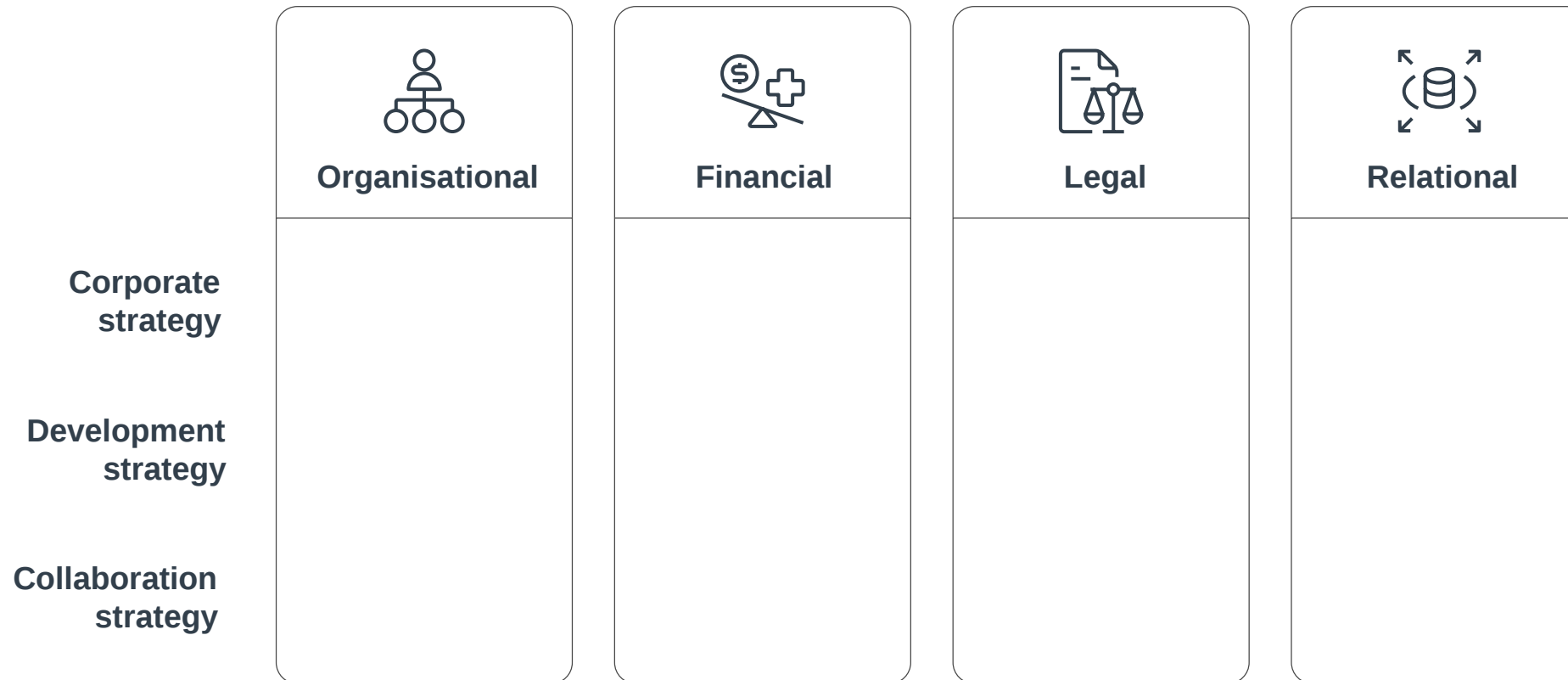
Case B | Project overview

*“We want Erasmusveld to be a **reference project** a proof point for what’s possible.” - Interviewee 7*

*“We **don’t revisit** projects structurally after five years to see how they perform.” - Interviewee 8*



Case analysis



Cross-case analysis

	 Organisational	 Financial	 Legal	 Relational
Corporate strategy	Both embed climate goals across organisation	Both struggle with cost-reward imbalance	No strict internal legal enforcement, fragmentation	Trust-based partner selection in both firms
Development strategy	Both integrate climate adaptation early in design	Both lack specific funding for climate adaptation	Both face fragmented legal requirements	Both value early collaboration, Company 2 more formal
Collaboration strategy	Company 1 more formal; Company 2 more network-based	Similar cost pressures, but Company 1 is more adaptive	Both formalise roles, but in different structures	Both build on trust; Company 2 more regionally consistent

05 | Synthesis

Strategy framework

Corporate

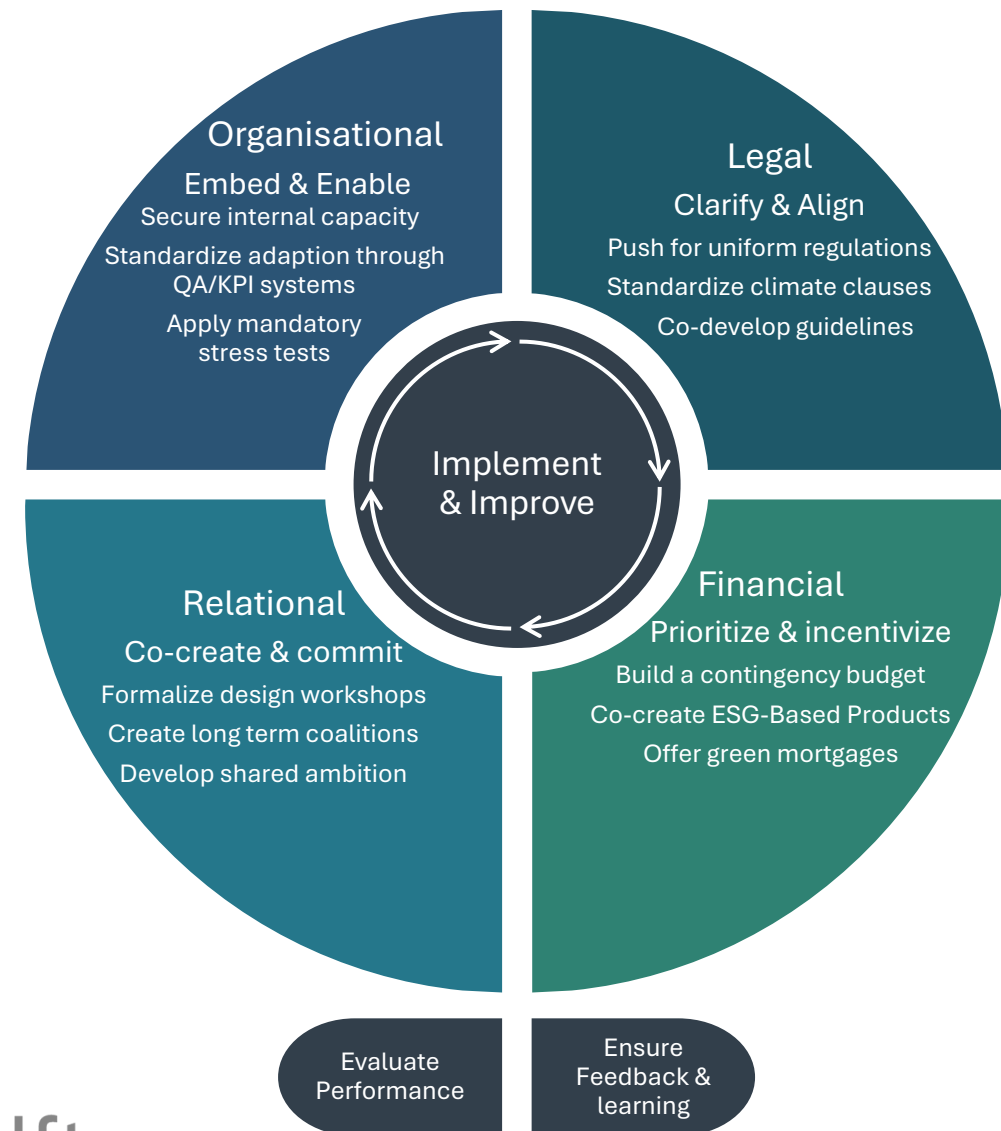
Long-term embedding of climate adaptation into the core business

Development

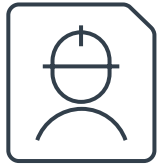
Concrete actions throughout the urban development process

Collaboration

Structures for working with others over time



Expert validation



City developer
Municipality



Climate
Advisor



Developer

Expert validation



Internal
Expertise



Standardization



Long-Term
Coalition



Monitoring
and Feedback



Usable in
Practice

Corporate strategy

Corporate	Long-term embedding of Climate Adaptation into the core business
Organisational	Create a climate adaptation team (or designate experts in-house); embed goals in the company's KPI system and strategic roadmap (e.g. in annual OGCM-type reports). Promote shared learning across projects.
Legal	Anticipate regulatory shifts by standardising internal criteria based on national/international frameworks (e.g. NAS, EU taxonomy). Advocate for national uniformity.
Financial	Link climate ambitions to ESG finance metrics. Develop internal financial thresholds for adaptation investments (e.g. min. % of public realm budget).
Relational	Build and maintain a preferred partner network with aligned ambitions. Use early-stage alignment tools (e.g. sustainability charters). Foster internal collaboration across teams.

Development strategy

Development	Concrete actions throughout the urban development process			
	Initiation	Design	Realisation	Post delivery
Organisational	Perform climate stress test and baseline scan	Apply adaptive design principles and iterative loops	Align contractor specs with adaptation targets	Plan for monitoring and feedback collection
Legal	Map local regulations and permit constraints	Integrate adaptation measures into permit design	Ensure delivery is legal compliant (e.g. LIOR)	Establish long-term VvE and public space agreements
Financial	Draft financial scenarios with and without adaptation	Budget for green/blue infra in the public realm	Monitor cost deviations; validate added value	Include O&M adaptation costs in VvE fees
Relational	Involve key stakeholders early (e.g. municipality, water board)	Co-design with experts, architects, and local community	Maintain joint steering groups, regular site reviews	Involve residents in feedback and stewardship mechanisms

Collaboration framework

Collaboration	Structures for working with other stakeholders over time
Organisational	Set up joint boards or consortia where public/private actors co-decide on adaptation measures. Ensure continuity in roles beyond project life cycles.
Legal	Use clear development agreements (e.g. anterior contracts) with performance clauses. Include maintenance and monitoring provisions.
Financial	Align business case expectations with partners. Explore shared investment models (e.g. land value capture, public-private co-financing).
Relational	Invest in trust and continuity by building long-term partnerships with advisors and local authorities. Create governance tools for conflict mediation and ambition setting.

06 | Discussion

Discussion

Characteristic	Theory	Practice
 Role of developers	Strategic actors	Often reactive
 Partnerships	Essential for adaptation	Varying success
 Legal frameworks	Guide strategy	Fragmented rules
 Strategy	Deliberate	Emergent and adaptive

Discussion

Characteristic	Barriers	Drivers
 Organisational	Lack of expertise	Internal advisors
 Legal	Fragmented standards	Nation-wide ambitions
 Financial	No clear ROI	Contingency budgeting
 Relational	Partner misalignment	Early co-creation

07 | Conclusion

Conclusion | What strategies can real estate developers use to implement climate change adaptation in urban development projects?



Policy and KPIs

Integrate adaptation into policy and key performance indicators.



Early Involvement

Involve advisors early in the design phase.



Legal Standardisation

Advocate for legal standardisation in adaptation efforts.



Maintenance Plans

Formalise long-term maintenance plans for adaptation measures.



Build Coalitions

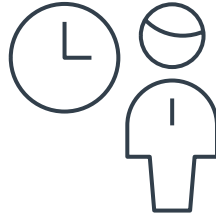
Build coalitions based on shared values for adaptation.

08 | Recommendations

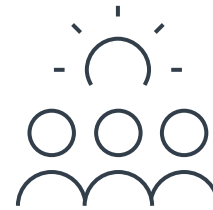
Limitations



Scope



Timing



Availability



Interpretation

For practice



Embed
adaptation



Involve
advisors



Push
standardisation



Formalise
agreements



Form
coalitions

For research



Investors and
Lenders



Performance
Evaluation



Resident
Involvement



International
Comparison

Questions?



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