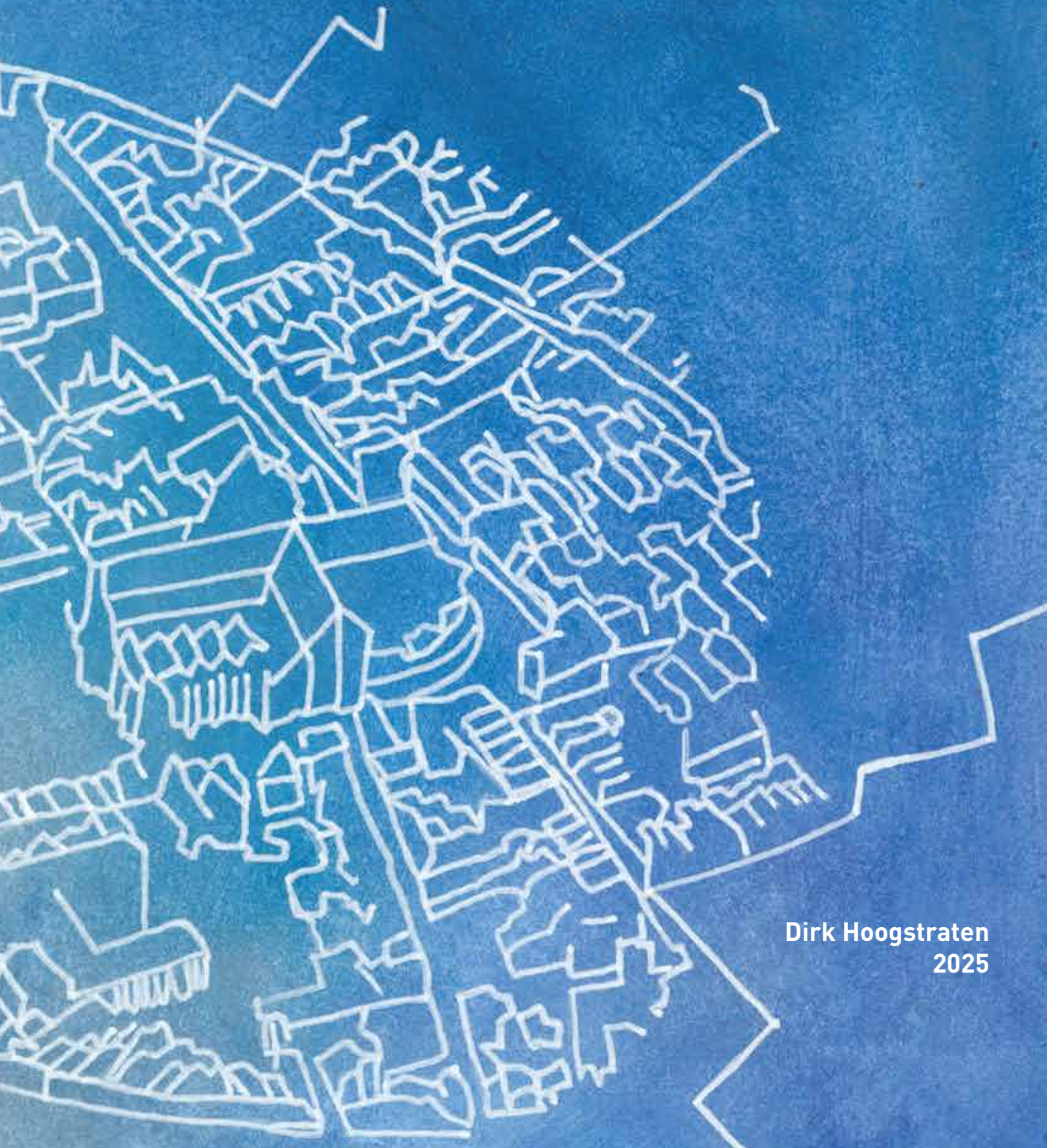
Optimizing Lead Times in Greenfield Real Estate Projects

Combining Project Analysis and Practitioner Perspectives



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MSc thesis in Construction Management and Engineering

Optimizing Lead Times in Greenfield Real Estate Projects: Combining Project Analysis and Practitioner Perspectives

Dirk Hoogstraten

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A thesis committed to the Delft University of Technology in the fulfilment for the degree of Master of Science in Construction Management and Engineering

To support the clarity and correctness of the written text, grammar and language use were reviewed with the assistance of ChatGPT Pro (OpenAI). The use of this tool was limited to language refinement and did not influence the content, data analysis, or conclusions of this thesis.
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Preface

The document in front of you, entitled " Optimizing Lead Times in Greenfield Real Estate Projects:Combining Project Analysis and Practitioner Perspectives", is my master's thesis, presenting the results of my academic efforts over the past year. This thesis forms part of the requirements for obtaining the degree of Master of Science in Construction Management and Engineering at Delft University of Technology.

My first contact with the real estate sector dates back to my earliest memories, with an interest that grew during my childhood. Over the years, my interests broadened towards the civil engineering field, yet eventually I found my way back to where it all began. What started as casual interest gradually developed, through a pragmatic perspective, into a more profound and academic approach to the discipline, as reflected in this thesis.

Throughout the research process, I received considerable support from various people, whom I would like to thank. First and foremost, I would like to thank Prof. Dr. Ir. Marcel Hertogh and Mr. Fred Hobma for their supervision of my research, and for the insights, support, and engagement, both professional and personal, that not only provided direction to my research but also served as a source of personal inspiration. I would also like to thank the professionals involved in the interviews for their participation and for sharing their valuable experience.

Finally, I wish to thank my parents, friends, and family, particularly those who feel addressed in reading these words, for your support over the past years. Not only for the time and energy you invested in supporting my academic journey, but also for the distraction and personal encouragement, just as important, if not more so.

With this thesis, I aimed to challenge myself by further exploring my personal ambition within the real estate sector, combined with addressing a socially relevant issue. I am pleased to say that I have succeeded in doing so. Therefore, I proudly present this thesis, in the hope that it provides valuable insights and is read with interest.

Dirk Hoogstraten

Delft, May 2025

Executive Summary

Since 2020, the Netherlands has been facing a growing housing shortage. In 2021, the deficit was estimated at 279,000 homes, by 2024, this figure had risen to approximately 410,000. This scarcity has driven up both purchase and rental prices significantly, making it increasingly difficult for households to find affordable and suitable housing. In response to this urgent societal challenge, the Dutch government has set the objective of adding one million homes to the housing stock by 2030. Achieving this ambition requires structural changes in the housing development process.

As part of the government's response, the Ministry of Housing and Spatial Planning was re-established in 2022, after its dissolution in 2010. Under its leadership, several programs have been launched as part of the National Housing and Construction Agenda, aiming to increase construction output to 100,000 homes annually, a level not reached since 1990.

The realization of one million homes faces multiple challenges. One of the key obstacles is the lengthy lead time of real estate development projects. On average, the process from initiation to completion takes approximately 120 months, of which only 30 months are allocated to actual construction, while the remaining 90 months are consumed by the preparatory phase. When compared to projects completed within 40 to 50 months, this raises the perception that the process takes to long.

The "long" lead time is the result of several interrelated factors, including the 2008–2011 financial crisis, which led to bankruptcies in the construction sector and the loss of skilled labor. Municipalities experienced substantial losses on their land holdings, prompting a shift from active to facilitating land policies. Simultaneously, the central government's influence on spatial planning diminished following the dissolution of the former Ministry of Housing, Spatial Planning and the Environment. In 2015, revisions to the Housing Act imposed restrictions on housing associations' land holdings and commercial activities, further constraining their investment capacity and flexibility.

In recent years, the sector has come under renewed pressure due to rising construction costs, labor shortages, an accumulation of legislative and policy changes, and the presence of a caretaker government that governed the Netherlands in 2021. As a result of this cumulative sequence of events over the past decades, not only has the capacity to realize projects diminished, but the willingness of institutional investors and developers to initiate new projects has also declined.

In this context, the thesis investigates how the lead time of housing development projects can be optimized during the preparatory phase, from project initiation to the start of physical construction. By integrating theoretical insights with practitioner experiences, the research identifies both bottlenecks and potential accelerators within the development process.

Research Objectives

The aim of this research is to gain insight, based on real-life case studies, into the factors that influence the lead time of greenfield housing development projects. These insights can subsequently be used to explore how acceleration of the realization process can be achieved.

The analysis focuses specifically on the duration of the real estate development process, from the initiation phase up to the physical commencement of construction. Although other phases may impact the total realization time, they fall outside the scope of this study.

The central research objective has led to the formulation of the following main and sub-questions:

- **MQ**: How can the process of a greenfield real estate project be accelerated?
  - *Goal*: Identify how the development process can be optimized in order to reduce the project's lead time, and to provide participants with insights into how to optimize the process.
- **SQ1**: What are the different phases in greenfield real estate projects?
  - *Goal*: Gain an understanding of the different phases of real estate development.
- **SQ2**: Which activities may influence the development process of a greenfield real estate project?
  - *Goal*: Identify the activities and characteristics that influence the lead time of the researched greenfield real estate projects.
- **SQ3**: What is the correlation between the lead times of the phases across the different case studies?
  - *Goal*: Determine how the different projects can learn from each other to optimize the real estate development process.

Methodology

The research objective is achieved by dividing the research process into three components: theoretical, empirical, and Synthesis. Figure 1 provides an overview of the research structure.

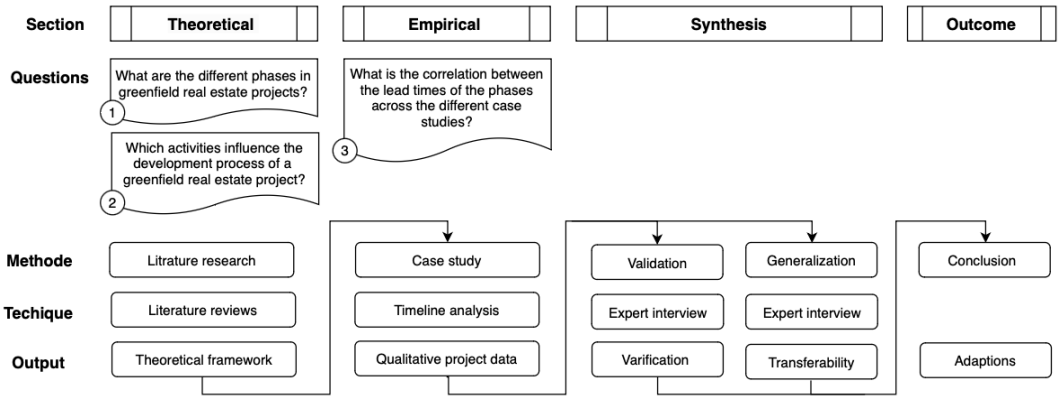

Figure 1.: Outline of the applied research design.

- **Theoretical:** Comprises a systematic literature review aimed at developing an analytical framework for assessing project lead times in the case studies. Two sub-studies were conducted: one focused on mapping the various phases within the real estate development process, and another on identifying activities that influence lead time. The findings from these literature reviews form the foundation for answering sub-questions SQ1 and SQ2.
- **Empirical:** Involves an analysis of four completed projects in the Netherlands, selected based on predefined criteria. The cases were examined through timeline analyses using publicly available documentation, supplemented by interviews with involved project developers and municipal officials. The integration of these insights allows for the systematic identification of activities that contribute to either delays or acceleration, forming the basis for answering sub-question SQ3.
- **Synthesizing:** The insights from the empirical analysis were generalized through interviews with field experts. By integrating practitioner experiences with the results of the empirical study, the applicability of the conclusions is extended to greenfield housing development projects across the Netherlands. This forms the foundation for answering the main-question.

The combination of literature review, case analysis, and practical validation ensures that the research findings are not only scientifically grounded but also practically applicable for professionals in real estate development and policymakers.

Theoretical

In the theoretical framework, the real estate development process was analysed using established process models from the literature. By integrating the insights obtained from answering SQ1 and SQ2, a practical framework was developed, structured around process phases organized around activities that influence the development lead time.

Result – SQ1: According to the Urban Land Institute Handbook, the development process consists of eight phases and is inherently dynamic in nature. For the purposes of this study, phases 1 through 5 are relevant: Inception of an Idea, Refinement of Idea, Feasibility, Contract Negotiation, and Formal Commitment.

Result – SQ2: Led to the identification of influential activities within the categories: Location, Land Acquisition, Legal Procedures, Financial Constraints, and Environmental Regulations.

During data collection, the initial starting point of the process proved difficult to determine consistently. Therefore, the adoption of the structure vision was chosen as the starting point for the analysis. The framework, presented in Figure 2, forms the basis for the timeline analysis.

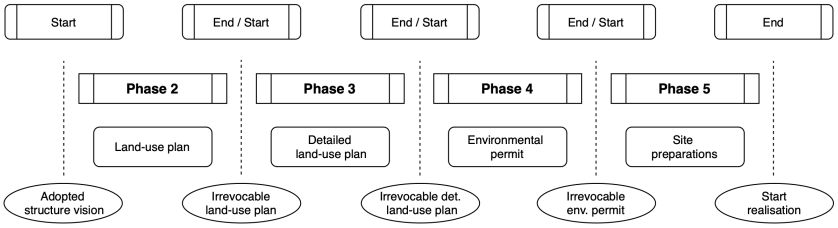

Figure 2.: Framework outlining the process phases examined within the case study.

Results

The results of the empirical part indicate that significant negative impacts the lead time in Phase 2 and Phase 3, mainly due to municipal decision-making processes, appeal procedures at the Administrative Jurisdiction Division of the Council of State, and changes in legislation and regulations. In contrast, Phase 5 shows significant positive influences, primarily resulting from the implementation of project phasing by the project team. Figures 3, 4, and 5 present the lead times for the respective phases. In some cases, two land-use plan procedures were conducted; these are indicated per case as I and II.

Land-use plan	Gem. *	Yasmijn I	Yasmijn II	Lotus I	Lotus II	Dahlia	Magnolia
Phase start - Initation	47	40	103	43	36	11	11
Initation - Adoption	33	19	22	20	63**	40***	40***
Adoption by PE	8	7	-	-	-	8	8
State Council procedure	18	14	19	-	-	21	21
Adoption - Irrevocable	3	-	-	3	2	-	-
Total duration	94	80	144	66	101	80	80

* Magnolia excluded, land-use plan equivalent to Dahlia
** With detailed planning rules
*** Including the preparation of the EIS

Figure 3.: Lead times in months for activities in all case studies within Phase 2.

Administrative Decision-making

Municipal decision-making plays a significant role in the lead time of the development process. The extent and direction of this influence are closely linked to municipal interests. This influence is particularly evident at the beginning of Phase 2 and Phase 3. It manifests within decision-making processes concerning the spatial implementation of the land-use plan and the detailed land-use plan.

The influence can be both positive and negative, as evidenced by all four case studies. In the Yasmijn case, the political sensitivity of the project location resulted in a significant delay in decision-making on the elaboration of the land-use plan, despite repeated requests by the developer. After 102 months, and a change in the political composition of the municipal council, decision was finally made. In contrast, the Dahlia case demonstrates that rapid decision-making is possible: a decision was reached within 11 months, due to an imposed resolution by a higher administrative authority.

In the Magnolia case, the decision to include the project in a municipal master plan, despite the developer's preference, resulted in significant delays. These delays stemmed from the

drafting of an environmental impact report without a finalized development plan, as well as a legal procedure before the Council of State concerning an unrelated element of the land-use plan for the Magnolia site. Additional delays occurred in Phase 3, lasting 66 months, when the municipality postponed the drafting of the detailed land-use plan in order to safeguard financial interests in another project. An appeal lodged by the developer had no effect. Only once the municipality developed its own interest in land owned by the developer was agreement reached on the elaboration of the detailed land-use plan. The findings underscore that project teams have limited influence during Phases 2 and 3, unless they possess relevant interests.

That municipal interests can also positively influence lead times is demonstrated by the Yasmijn and Lotus cases. In both cases, internally established objectives motivated the municipality to actively support the developer and to draft the detailed land-use plan within the minimum statutory lead time. This indicates that municipal interests are not limited to financial motives, but may also be driven by policy or societal considerations.

Council of State

Appeal procedures before the Administrative Jurisdiction Division of the Council of State have a significantly negative impact on the lead time of Phase 2 in the development process. The significance of this influence can be attributed to the frequency with which such procedures were observed in three out of the five land-use plan procedures, namely Yasmijn I, Yasmijn II, and Dahlia. In addition, the significance is reinforced by the duration of these procedures, which averaged 18 months. Notably, none of these appeals resulted in substantive modifications to the land-use plans.

In Phase 3, an appeal procedure against the detailed land-use plan was observed in the Lotus case. However, this was ultimately avoided through effective participation with local residents.

Legal Framework

Ongoing changes in legislation and regulations negatively influence the duration of Phases 2 and 3. In the Lotus and Dahlia cases, this is particularly due to an increased research burden during the preparation of spatial planning documents, following amendments to nitrogen-related regulations.

Delays are also experienced in the drafting of purchase or cooperation agreements between municipalities and developers. The Dahlia and Yasmijn cases show that the prior submission of clearly defined principles can positively influence lead time.

In addition to the direct consequences of changes in the legal framework, municipal officials often adopt a reserved stance in the period prior to new legislation. This hesitation is largely driven by concerns about the potential personal or political consequences of decision-making.

Detailed land-use plan			Gem.	Yasmijn	Lotus	Dahlia I	Dahlia II	Magnolia
Phase start	-	Agreement	32	13	29	19	-	66
Agreement	-	Design	19	7	24	16	30*	17
Design	-	Adoption	6	5	6	2	2	13
Adoption	-	Irrevocable	2	2	4	2	2	2
Totaal			52	27	63	39	34	98

* Duration relative to the irrevocable detailed land-use plan Dahlia I

Figure 4.: Lead times in months for activities in all case studies within Phase 3.

Project Teams

The proactive attitude of project teams plays a significantly positive role in accelerating lead times and can be attributed to the application of project phasing. The Magnolia and Dahlia cases demonstrate an acceleration of more than 20 months. Primarily, occurring in Phase 5, where activities can be carried without direct dependence on administrative authorities.

However, the Magnolia and Yasmijn cases show that a proactive attitude in Phases 2 and 3 has limited impact if no political or administrative interest is created. In such situations, acceleration fails to to be realised despite the developer's efforts. The creation of such interest appears to be a determining factor for achieving acceleration in the earlier phases of the development process, as further illustrated in the findings on administrative decision-making.

Site preparation			Gem.	Yasmijn	Lotus	Dahlia	Magnolia
Phase start	-	Land servicing	-13	-3	-3	-26	-19
Phase start	-	Pre-load	-6	-	-	-12	-12
Effective duration			1	0	1	1	3
Total duration			13	0	4	27	22

Figure 5.: Lead times in months for activities in all case studies within Phase 5.

Discussion

When interpreting the research findings, it is important to consider the limitations arising from the chosen research design. These limitations form the basis for both the results and the scope of their applicability.

- This research was conducted on projects governed by the former Spatial Planning Act. As this act has since been replaced by the Environment and Planning Act, the findings are not directly transferable.
- Due to time constraints, only four projects were analysed. To ensure representativeness of conclusion, insights from field experts were integrated with the empirical results.
- The selected projects proved to be politically sensitive, partly due to administrative and technical complexities. To address publication restrictions, anonymisation and limited disclosure of project information were applied.

Conclusion

The integration of findings from the literature review, case studies, and interviews with field experts has led to four main conclusions. The implementation of the recommendations may contribute to accelerating the lead time of greenfield real estate projects, and thereby contribute to addressing the housing shortage.

- **Administrative decision-making:** Represents the primary source of delays in Phases 2 and 3 of the development process, due to the reluctance of officials to assume responsibility, often driven by personal or reputational concerns within political parties. To reduce these delays, the following recommendations are proposed:
  - Create financial and societal interests for municipalities, for example through active land policy or public-private partnerships, to enhance reputational incentives.
  - Shift administrative responsibility to higher levels of government, so that potential negative outcomes can be absorbed at a different level of governance.
- **Council of State:** Appeal procedures represent a source of delay in Phase 2 of the development process, with an average duration of 18 months. These procedures are often initiated by stakeholders, such as local residents, but in the examined cases, they did not result in changes to the spatial plans. To enable acceleration, the following recommendations are proposed:
  - Introduce thresholds for appeal procedures, such as preliminary review or restrictions to directly affected parties, in order to free up capacity within the Council of State.
  - Expand the capacity of the Council of State to reduce the lead time of legal procedures.
- **Legal Framework:** Ongoing changes in legislation and regulations cause delays in Phases 2 and 3 of the development process. These delays result from increased uncertainty within the sector, a increase research burden during project preparation, and slower decision-making. In this context, the following recommendations are proposed:
  - Introduce a fixed assessment point for legislation and regulations in relation to the research burden in spatial planning.
  - Aim for consistent long-term policymaking, preferably under the coordination of a dedicated ministry.
- **Project Teams:** Their proactive attitude contributes significantly to shortening lead times, particularly in Phase 5 activities that can be carried out independently of administrative bodies. In Phases 2 and 3, however, this attitude only becomes effective when developers are able to provide administrative authorities with a clear incentive. Based on these findings, the following recommendation is made:
  - Increase the incentive for project teams to participate proactively in project development through active land policy, stable public policy, or a reward mechanism inspired by Best Value Procurement.

Recommendations for Future Research

- Investigate how administrative decision-making is affected by risk-averse behaviour, and explore governance models that promote shared responsibility and timely decision-making.

- Examine how long-term strategic direction from the national government, potentially through the Ministry of Housing and Spatial Planning, could enhance policy predictability in real estate development and support continuity in governance across political terms.
- Empirical testing of the effectiveness and feasibility of the proposed recommendations is advised. A phased approach is suggested: initial validation by an expert panel, followed by application in a demonstration project. Relevant research questions include:
  - How do financial and societal interests compare in their ability to accelerate administrative decision-making?
  - To what extent do performance agreements between municipalities and developers contribute to faster decision-making, and is legal formalisation of such agreements necessary?
  - What is the legal feasibility and societal impact of introducing procedural thresholds at the Administrative Jurisdiction Division of the Council of State, particularly in balancing efficiency and legal protection?

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1. Introduction

1.1. Background Information

Since 2020, there has been a housing shortage in the Netherlands (Centraal Bureau voor de Statistiek, 2022a), with fewer homes than households. Many people are unable to find affordable housing since the shortage has driven property prices, both for buying and renting, up to exceptional levels. The situation is strengthened by rising energy costs and a population increase. In 2021 the housing deficit was estimated at 279,000 homes (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b). To address the housing shortage, the property market needs to shift toward a balanced state, with a tightness indicator between 5 and 10 (van der Lee, 2023). This requires the construction of 1 million homes by 2030 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b).

In order to realize an objective of constructing 1 million houses, the government is reclaiming its leadership role in housing and spatial planning, by re-establishing the Dutch Ministry of Housing and Spatial Planning (Ministerie van Volkshuisvesting en Ruimtelijke Ordening, VRO) in 2022, after its dissolution on October 14, 2010 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2010). Numerous studies have been conducted in order to understand the housing shortage and several programs have been introduced under the "National Housing and Construction Agenda", each of which addresses specific aspects of the housing crisis. Central to this research is the "Housing Development Program", which aims to facilitate the construction of 100,000 homes per year. This program primarily focusses on the acceleration of the development process from initiative to realization (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b).

However, how realistic is the goal of achieving 100,000 houses per year, given that this target has not been met since 1990 (Centraal Bureau voor de Statistiek, 2022b)? Low realization rates may be attributed to various factors affecting the real estate sector. A major factor was the credit crisis that hit the Netherlands from 2008 to 2011 (Van Rein, Erik & Vestergaard, Renol, 2023). This crisis led to reduced investment capacity, numerous company bankruptcies, and the exit of hundreds of thousands of workers from the construction sector, which resulted in a considerable loss of knowledge and expertise (Van Rein, Erik & Vestergaard, Renol, 2023). Before the credit crisis many Dutch municipalities pursued an active land policy, instead of passive or facilitating policy. As a consequence of the credit crisis active land policies lead to a significant devaluation of the value of municipal land assets, and in many municipalities discussions on this subject became politically sensitive. As a result, municipalities adopted a more passive stance, shifting to a largely facilitating role (Deloitte Financial Advisory B.V. – Real Estate, 2021).

In 2015, after the credit crisis, the government amended the Housing Act (Woningwet 2015) in order to boost real estate development. These changes had significant implications with regard to land positions of commercial developments by housing associations. According to the 2015 legislation housing associations were only allowed to purchase land on which

a building permit had been granted, and it was no longer allowed to keep land destined for social development in portfolio for more than 60 months (Michielsen et al., 2019). As a result, many housing associations sold off their land instead of developing it but the reduction of land positions reduces the adaptability of housing associations when market conditions are changing (Brugman et al., 2022). Moreover, as housing associations are no longer allowed to develop for commercial purposes, profits have decreased and the profits from land conversions decreased when municipalities restricted their role to facilitating land policies

Achieving the objective of 1 million new houses by 2030 requires an efficient development lead time. But how long does the building process actually take? Research (Geuting & De Leve, 2018) shows an average realization period for a real estate project of approximately 120 months. According to a more detailed study (Ouwerkerk et al., 2008) roughly 30 months can be allocated to actual construction, while the remaining 90 months are taken up by various procedural steps. At first glance, this appears to be a rather long timeline, especially when compared to projects with a total duration of only 36 to 48 months (Geuting & De Leve, 2018). The extended lead time can be attributed to several factors, such as a shortage of skilled staff working for municipalities, contracting firms and the government's advisory body Council of State. Many professionals exited these organizations during the 2010 financial crisis (Rijksdienst voor Ondernemend Nederland, 2021).

Based on an average development period of approximately 120 months (Geuting & De Leve, 2018; Ouwerkerk et al., 2008), housing projects would have to be initiated before 2020 in order to achieve the objective of 1 million houses by 2030. Since the housing shortage was recognized only in 2020 it is unlikely that the need for such a rapid increase in housing projects was anticipated much earlier.

Therefore, the primary objective of my research is to address the housing shortage by accelerating the realization period of real estate projects. To achieve this objective the key research question is as follows:

"How can the process of a greenfield real estate project be accelerated?"

1.2. Problem Statement

In 2024, an increasing number of people are struggling to find suitable housing, with a shortage of 410,000 homes (Gopal et al., 2024). The proposed solution is the realization of 1 million new homes by 2030 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b). In recent years numerous studies have been conducted to introduce new policies aimed at achieving this objective. Research (Geuting & De Leve, 2018) shows that the average construction period for housing projects in the Netherlands has increased to an averaging 120 months.

In order to gain insights into the process, several studies have been commissioned by market players and government institutions (Fakton, 2022; Geuting & De Leve, 2018; Holt et al., 2022; van Randeraat et al., 2022) with the aim of mapping out the timelines of real estate development and proposing potential accelerators. One of these studies concluded (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a) that one potential solution for the housing shortage is to accelerate real estate development. These studies approach the process from a theoretical point of view.

One of the challenges in determining whether the process actually takes too much time is the lack of legally required deadlines for decision-making on documents submitted by government bodies, notably municipalities. As a result, it cannot be objectively proven that these processes take excessive time, but there is a widespread perception of sluggishness.

In order to understand which part of the development process takes a ”long” timespan a theoretical framework shall be established to identify which phases of the development process could potentially be accelerated. The framework will consist of a structured compilation of the development phases, with fixed transition points separating. Once the theoretical framework is established and the key transition points are defined, the framework will serve as the foundation for the case study analysis. The duration of each phase will be examined and analyzed in relation to the framework in order to identify areas where the process may be accelerated.

During the past two years (2022–2024), the Netherlands has been governed by a caretaker government (Rijksoverheid, 2022), resulting in a period during which new laws or regulations could not be initiated unless a national or international crisis arose. To address the urgency of issues such as affordable housing, climate goals and the energy transition, all municipalities, water boards, and provinces sent a letter to the Second Chamber of Parliament (Tweede Kamer der Staten-Generaal), urging parliament to avoid decision-making coming to a standstill (Platschorre, 2023). The central government has indicated further adjustments to housing policy. Furthermore, the instability caused by the introduction of new legislation has weakened the investment climate, prompting many foreign investors and pension funds to pull out or seek opportunities elsewhere (Vastgoedmarkt, 2024). The Association of Dutch Project Development Companies (Vereniging van Nederlandse Projectontwikkeling Maatschappijen, NEPROM) and the Association of Institutional Property Investors in the Netherlands (Institutionele Vastgoedbeleggers Nederland, IVBN) have alerted the minister and cabinet about these pressing issues, expressing a preference for consistent policies, even if the outcome is not entirely ideal (NEPROM & IVBN, 2023).

1.3. Research Scope

The scope of this study focuses on the duration of the real estate development process, specifically from the initiation phase to the start of physical construction. The scope is not intended to imply that other phases have no impact on the overall realization period; however, these will not be considered in the analysis. It must be noted that labor shortages and a lack of building materials have significantly contributed to rising construction and development costs. Additionally, the workload of utility network operators has become a delaying factor in housing construction (Rijksdienst voor Ondernemend Nederland, 2021), leading to delays and financial unfeasibility of some projects.

Case Study Selection

For an effective selection of case studies it is essential that they fall within a comparable range as this allows for a meaningful comparison of results. This approach provides relevant insights aligned with the study and will ensure a representative outcomes. Therefore, the cases are selected based on five key criteria: the Spatial Planning Act (Wet ruimtelijke ordering, Wro), the ratio of ground-based homes to apartments, housing affordability, the choice between greenfield and brownfield developments and project scale

As of January 1, 2024, the Environmental and Planning Act (Omgevingswet, Ow) came into effect in the Netherlands, replacing the Spatial Planning Act (Wro), which had been in effect since 2008. The introduction of the new Environmental and Planning Act (Ow) has led to significant changes in various procedures and regulations (Informatiepunt Leefomgeving, 2024). Transitional law stipulates that the Spatial Planning Act (Wro) remains applicable to land-use plans that had been adopted and entered into force before the new act took effect (Raad van State, 2024). To ensure consistency and comparability in my analysis, it is essential to examine projects that commenced prior to the introduction of the Environmental and Planning Act (Geonovum, 2023).

Currently, approximately 66% of all households reside in single-family homes. However, due to increasing individualization and ongoing migration, the demand for apartments is expected to increase with 40% by 2030 (Boon & van Meurs, 2021). This projected increase contrasts with findings from NEROM and WoningbouwersNL that indicate that the demand for single-family homes will dominate in the coming years, with an estimated 70% of new housing expected to be of this type (De Zeeuw & Keers, 2022). By combining insights from both studies, it can be concluded that a significant portion of future housing developments will consist of ground-level single-family homes. Consequently, case studies will focus on projects with at least 60% ground-level single-family homes.

The government aims to regain control over the housing market and has introduced the Housing Governance Strengthening Act (Wet Versterking Regie Volkshuisvesting, Wvrv). This legislation provides authorities with legal tools to promote with greater control and efficiency the construction of affordable housing. The new act requires that two-thirds of newly constructed homes must be within the affordable housing segment (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2024). Which has generated significant resistance from the market, as the segmentation influence the feasibility of many projects due to financial shortfalls. Boelhouwer (Boelhouwer, 2022) too is of the opinion that the new legal requirement will not benefit new housing production. To align the research with future developments, the required two-thirds, that is to say 66% of affordable housing will be targeted as closely as possible.

The development of rural areas located on the outskirts of cities is often classified as a greenfield development (Michielsen et al., 2019). Almost 86% of the ground owned by of the twenty-three biggest developers could be considered a greenfield (Cobouw, 2024). Research also hows that most houses are currently situated in green environments. In the coming years the ratio is expected to shift to 50/50 (Boon & van Meurs, 2021). Taking into account developers' land holdings and anticipated future trends, the selection of cases will focus on greenfield developments.

The scale of a development will affect the project's duration (Geuting & De Leve, 2018); therefore, specifying the number of housing units is essential for case selection. Research conducted by Cobouw (van Elburg, 2022) into the scale of utility development projects shows that more than 50% of the projects involve developments of at least 50 housing units. Data from the initial phase could be of use for future applications of this research, however, the scale of over 82% of the projects in the initial phase remains unknown (van Elburg, 2022). Considering the conclusions from previous research, the scope of the case studies will include projects with a minimum of 50 housing units, with a preference for similar project scales to ensure consistent and comparable results.

1.4. Research Goals & Objectives

In this study the 'lead time' of developments in real estate and possible ways to accelerate the development process are examined. The purpose of the study is to identify how the development process can be optimized in order to reduce the project's lead time, and to provide participants with the insight how to optimize the process. The primary goal is to identify opportunities and obstacles that are either unknown or have to be overcome. The objective of the analysis is to offer a methodical description of the adjustments required to speed the process up. These are the research's more detailed goals:

- To gain an understanding of the different phases of real estate development.
- To identify the characteristics that influenced the lead time of the researched greenfield real estate projects.
- To determine how the different projects could learn from each other how to optimize the real estate development process.
- To define how the optimisations of real estate development can be implemented.

1.5. Dissemination & Audience

The findings in this study provide insights into the optimization of the lead time of real estate projects from a practical perspective. Different studies have been conducted on the subject of lead times in real estate development; most studies emphasize on scientific and academic relevance. The purpose of this research is to integrate findings from the real-world cases with the theoretical framework, and in doing so find practical solutions.

By integrating the practical and theoretical disciplines this study will be a valuable resource for both fields of expertise. Both sectors may gain insights from the possibilities of optimization the lead time of the real estates process in relation to the Dutch housing market. Moreover, it will give insight into the lead time defined by the phases of real estate projects.

Because this study confronts the problem of housing shortages it will have practical relevance, as its detailed description of the optimization of the development process may help to shorten its lead time.

Additionally, it will provide insights into the stages at which delays occur. The study will recommend how to mitigate obstacles that obstruct the lead time of real estate development. These recommendations provide procedures to address the challenges outlined in the problem statement. For stakeholders involved in the real estate development process this research could be a starting point for the evaluation of current practices and a guideline for process improvement.

1.6. Data Plan

Data used for this study is gathered by means of document analysis, interviews, and practical insights based on the personal experiences and viewpoints of the interviewees. The data of natural persons will be handled with the utmost sensitivity and confidentiality. Furthermore, the data compiled in the study will be made available in order to promote knowledge and innovation, and to enable subsequent research. Conform the 4-Tu research data, the data from this study will be handled according to the FAIR Guiding Principles (Wilkinson et al., 2016).

- The research is written in the formal, accessible, and universal English language. Dutch terms will be cited once, accompanied by the original Dutch expressions in the glossary. Both terminology and data based on interviews with Dutch individuals will be translated into English.
- The thesis will be published on the educational repository of the Technical University of Delft (Tu Delft), through the following link: https://repository.tudelft.nl.
- Data not found in the publicized thesis may be requested. However, as the study involves sensitive data, some information cannot be disclosed. Only with the explicit permission of the interviewees or other persons that were so kind as to share information may additional data be made available. In other words, when data is shared, all confidential information is either concealed or excluded to ensure that no details can be traced back to any specific individual

1.7. Research Question

The paragraph outlines the research questions of the master's thesis, which contribute to achieving the research goals. The main question of the research is dealt with by a series of sub-questions, in order to break down the primary question into more manageable, specific components.

1.7.1. Main Research Question

The formulation of the problem statement has culminated in the identification of the main research (MQ) question as follows:

MQ: How can the process of a greenfield real estate project be accelerated?

Real estate projects do not have a specific lead time(Geuting & De Leve, 2018). Based on the most recent research available, the average lead time consists of 120 months (Geuting & De Leve, 2018). However, stakeholders and market parties find this too long, especially in the current housing crisis.

1.7.2. Sub-Questions

The three sub-questions (SQ1-3) substantiate the main research question. Each has its individual significance but collectively they address the central research objective.

SQ1: What are the different phases in greenfield real estate projects?

In order to provide a well-founded proposal with regard to the acceleration of the development of real estate, the various phases that make up the process have to be identified. To achieve this, a literature review will be conducted based on a well-known theory of development phases. The contribution of the first sub-question is to outline the phases that define the timeline of real estate development.

SQ2: Which activities may influence the development process of a greenfield real estate project?

In the process of real estate development, various activities may influence the overall lead time. Therefore, a literature review will be conducted to gain an understanding of how these activities affect the development lead time. The contribution of the second sub-question is to identify the activities that impact the lead time of real estate development.

SQ3: What is the correlation between the lead times of the phases across the different case studies?

By using the cases studies to construct a well-founded timeline an analysis can be conducted to determine how similar and different actions impact the overall lead time of each phase. Which contributes to a better understanding of the effect of various actions on the overall timeline of a project. The contribution of the third sub-question is to identify how these actions may influence the development process.

2. Research Method

In Chapter 2, the methodology of this Master's thesis is presented. The chapter begins by outlining the research methods employed throughout the study, followed by an explanation of how the theoretical and empirical components contribute to answering the main research question. It concludes with a description of the approach used to evaluate the research results.

2.1. Research Design

The research follows a structured approach that consists of the study's four cornerstones: Theory, Empiricism, Synthesis, and Outcome. This sequence will ensure a logical progression from literature exploration and empirical validation to the synthesis of these two principles. Each cornerstone is examined using different methodologies, all of which are aimed at addressing the key research question. Within each cornerstone, various sub-questions, numbered 1 through 3, are addressed. The research's structure may be understood through the diagram, shown in Figure 2.1.

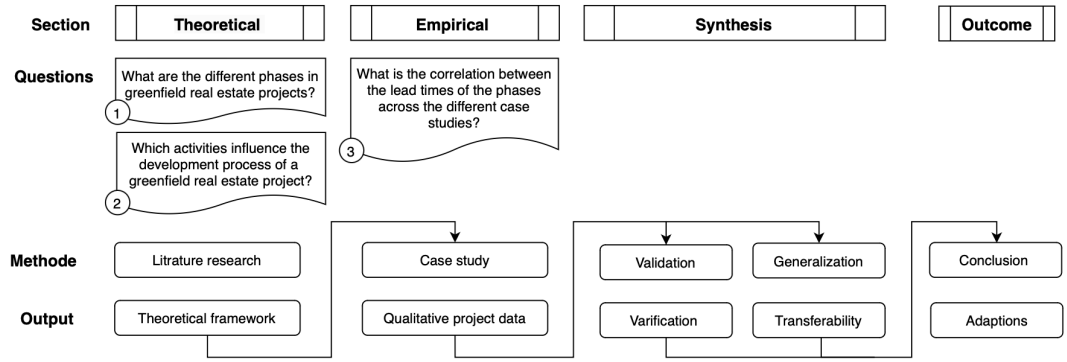


Figure 2.1.: Outline of the applied research design.

2.2. Methods and Techniques

Figure 2.2 illustrates the methods and techniques employed in this research. In order to structure the data for the case study analysis, a timeline analysis was carried out. This method systematically reconstructs the project timeline and identifies activities that have influenced the duration of the development process. The analysis is based on the phase distribution identified in the literature review and supplemented with case study data retrieved from public records.

Mapping the activities for each case provides valuable insights into the factors affecting development duration, which will improve the understanding of key processes and will highlight the potential areas for optimization.

To validate the findings, individual interviews were conducted with project management staff. Before integrating these results into the conclusion, their generalizability to projects at a national scale must be assessed. To this end, additional interviews will be conducted with project managers, focusing on their experiences across multiple projects throughout their careers.

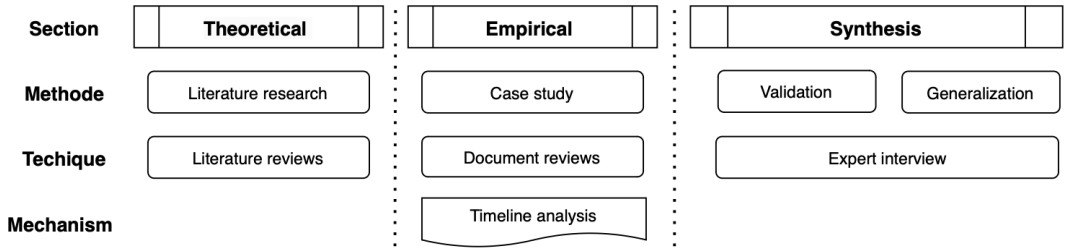


Figure 2.2.: Outline of the research methods and techniques applied.

2.3. Theoretical

The theoretical component of this thesis is based on a systematic literature review technique which is aimed at thoroughly analyzing and integrating existing theories and concepts.

To address the theoretical component of this research, two literature reviews will be conducted. The first will focus on the fundamentals of the real estate development process; the second will explore activities that are encountered during the timeline of the development process. The aim of the first review is to provide an understanding of the various approaches to the development process. The second review seeks to identify where obstacles are encountered in the current process during project execution. Together, these insights will produce a theoretical framework for the foundation of the empirical part of the research.

Since there is no universally established procedure for real estate development, the analysis begins with the handbook by Peek (Peek & Gehner, 2018), which presents various approaches to describing real estate development processes.

One of the procedures outlined in this book is the ULI Handbook by Miles et al. (Miles et al., 2007), which distinguishes itself by detailing eight phases, whereas other authors often use less. Therefore, the ULI Handbook will serve as the primary guide for the first literature review. In addition to providing a detailed phase-by-phase overview, the Handbook examines the process from the developer's perspective. Often differences in perspective between developers and government agencies arise but these perspectives should theoretically align. By using this Handbook, I also seek to improve the mutual understanding between these two parties. Let this serve as an additional contribution of my research for this thesis.

2.4. Empirical

The empirical component of this thesis is based on a case studies. Data is collected through document analyses. This methodology enables the researcher to gain in-depth insights into the relevant processes and events within the selected cases. The paragraph explains the application of the research methods and the specific ways in which the collected information contributes to the answering of the research questions.

2.4.1. Document Review

The data collection process will involve document reviews. Documents are sourced from publicly available records, such as government reports, planning documents, and project-specific documentation. These documents will provide valuable insights into the progression of the development project.

Using the collected data, a detailed timeline of each project's progress will be constructed. Through creating these timelines a clearer understanding of the overall project trajectory will be achieved, which will form a crucial part of the empirical analysis.

By identifying the factors that positively or negatively influence the project timeline and classifying them according to their origin, based on (Aleshin, 2001) distinction between endogenous and exogenous risks, valuable lessons can be learned to optimize future projects. The goal of this analysis is to help reduce the current lead times in real estate development. Gaining a deeper understanding of these influencing factors will enable the formulation of targeted recommendations. These insights can then be used to provide actionable advice to stakeholders in the Dutch building sector, ultimately contributing to more efficient project execution and improved collaboration between parties.

2.4.2. Case Collection

Case selection is a critical component of this research. Selecting projects with similar characteristics allows for the exclusion of certain variables, thereby enhancing the precision of the results. However, shared factors that may significantly influence the outcomes are carefully scrutinized to ensure the relevance and robustness of the selected cases. Beyond the research scope, time constraints and the dimensions of the study also shape the number of cases to be analyzed. For this thesis four distinct cases have been selected for examination.

The geographic location of the projects plays a pivotal role in minimizing the number of variables in the analysis. Consequently, two developments have been selected from each municipality, based solely on their alignment with the research scope, rather than on the duration of the projects. The study thus seeks to capture differences in methodologies and organizational cultures, thereby broadening the spectrum of potential research outcomes.

To ensure accurate comparisons, the four selected projects must align across various domains, as defined in the research scope. Identifying four comparable projects across two different municipalities presents a significant challenge. In the light of these constraints, any deviations from the established selection criteria will be clearly justified, including an explanation of the rationale regarding the choices and their potential impact on the analysis.

2.5. Synthesis

The synthesis of this study is established by validating and generalising the results of the case analyses through the practical experiences of experts. These contributions enable the findings of sub-question 3 to be aligned with the actual progression of the investigated cases, and allow for the formulation of a conclusion that is broadly applicable to greenfield real estate development projects in the Netherlands.

2.5.1. Validation

The validation of the research findings is accomplished by comparing the theoretical timeline analysis with practical insights obtained through interviews with key individuals directly involved in the projects. To ensure a comprehensive and representative perspective, interviews are conducted with both municipal officials and project developers.

Moreover, these interviews provide the opportunity to acquire additional insights that cannot be derived from the timeline analysis based solely on publicly available datasets. The integration of theoretical and practical perspectives contributes to the development of a more comprehensive and well-substantiated study. As a result, the research not only identifies explanatory relationships but also formulates relevant recommendations applicable to the context of greenfield real estate development.

2.5.2. Generalization

The generalisation of the results, in which both the theoretical findings and practice-based insights derived from the empirical part of the study are integrated, is achieved through expert interviews. During these interviews, experts are asked about their personal experiences with the lead time of greenfield real estate development projects, without reference to specific cases.

The core objective of this generalisation is to enhance the initially case-specific findings, which were developed within the defined research scope. Although this scope is well-founded and aligned with projected characteristics of future development projects in the Netherlands, the scope of the conclusions remains inherently limited to the four case studies analysed. By applying generalisation, this limitation is mitigated, enabling the formulation of conclusions that are more broadly applicable to the greenfield real estate development projects in the Netherlands

3. Theoretical Framework

In Chapter 3, an in-depth review and analysis of relevant literature is conducted with the aim of exploring the potential to develop a framework for analysing project lead times. By addressing the SQ1 and SQ2, a sound foundation for the framework can be established.

SQ1: What are the different phases in greenfield real estate projects?

SQ2: Which activities may influence the development process of a greenfield real estate project?

3.1. Introduction

The first part of the literature study examines the various quantifiable phases of the real estate development process. Each phase contributes to the completion of the project, from the initial concept of an idea to the final stages of property management. Each phase can be broken down into its respective goal, actions and challenges. Understanding these phases provides an essential context for analyzing the activities that influence the lead time of greenfield real estate development projects. This is the basis for addressing the first sub-question.

SQ1: What are the different phases in greenfield real estate projects?

3.2. Project Phases

A real estate development project consists of multiple phases. By dividing the process into distinct stages offers several advantages, such as providing a clear decision-making framework, facilitating evaluation opportunities, and supporting risk management. However, the standardization of this process also has its limitations. Since real estate development is fundamentally an unpredictable and creative process, projects may include unconventional and intuitive aspects that cannot be seamlessly integrated into a model (Miles et al., 2007). Nonetheless, creating a consistent framework is essential for analytical purposes. The development process begins with ”Interception of an idea” and concludes with ”managing the property”. The process phases are described by detail in the “Real Estate Development” handbook by the Urban Land Institute (ULI), which outlines eight distinct phases show in table 3.1. Although the development process can be approached in various ways.

The ULI handbook was selected because it approaches the process from the perspective of the project developer, which aligns well with the increasingly passive land policy in the real estate market (Rijksdienst voor Ondernemend Nederland, 2021). In context, the developer serves as the primary driver of the process, while landowners, end-users, and investors play supporting roles. Consequently, it is crucial for the developer to understand the motivations of the various stakeholders involved in the development.

To establish a well-founded basis regarding which phase of the development process offers potential for time optimization, it is essential to gain a clear understanding of the steps and decisions involved throughout the process. Therefore, Chapter 3.2 will describe and analyse the various phases in the greenfield real estate development process.

• 1: Inception of an idea;	• 2: Refinement of idea;
• 3: Feasibility;	• 4: Contract negotiation;
• 5: Formal commitment;	• 6: Realisation;
• 7: Completion and formal operation;	• 8: Property, asset and portfolio management.

Table 3.1.: Real estate development process: Phases 1 through 8.

3.2.1. Phase 1 - Inception of An Idea

The main goal of the first development phase is to design the concepts for a development. The origin of ideas represents a complex and multifaceted process, driven by diverse motivations and inspirational fundamentals. Concepts emerge from various perspectives, brought together to address potential opportunities and challenges. The best ideas will result in a product that benefits end-users but will also add significant value to the community and a profitable prospect for the developer (Miles et al., 2007). This phase is considered the most creative and is centered around three key drivers, shown in table 3.2. Fulfilling these drivers will not, however, guarantee a successful development concept.

• The discovery of a location that requires a specific function.
• Identifying a use while searching for a location.
• Investors seeking development opportunities.

Table 3.2.: Key drivers of real estate development within Phase 1

Risk management in the first phase depends on the developer's self-awareness, self-perception, and the skills of the project team. Weak leadership or ineffective management may lead to significant shortcomings. Successful developers are thorough in their planning, yet flexible enough to preserve the creative spark necessary for innovation (Miles et al., 2007). The phase of idea inception accounts for approximately 20% to 30% of the total development lead time in the United States (Miles et al., 2007).

Throughout this stage the project developer acts as the development process' principal motivator. Besides managing daily operations, the developer must ensure that each aspect of the concept aligns with the established vision, and that its execution meets the current structure vision. The developer must conclude this phase by assessing the project's viability through an valid calculation, and by analyzing financial feasibility and the potential risks associated with the project.

3.2.2. Phase 2 - Refinement of An Idea

Phase 2, often viewed as the core of real estate development, involves the further development or redefinition of the concept established in Phase 1. The primary goal of Phase 2 is to develop the idea into a specific project design for a particular location. Developers will initiate a series of negotiations with stakeholders such as contractors, end-users, and financial investors. The simultaneous interaction of these activities makes the second phase a highly complex one (Miles et al., 2007).

By the end of Phase 2, the initial concept can be tied to a specific location that is legally, politically, and physically fit for the realization of the project and in accordance with the current land-use plan. Provincial government and municipal bodies have become key partners for the developer, particularly because of the potential need for a imposed land-use plan or other regulatory adjustments. Often, amendments to the land-use plan or structure vision will lead to objections of stakeholders, which may significantly lengthen lead time. Ownership of development land is another critical aspect, as developers have various options to

get possession of land. One option is early land acquisition, which is in accordance with a passive land policy. This is often the most profitable approach as the land might not yet be included in the structure vision or land-use plan. However, this also increases financial risk, which conflicts with the goals of risk management. In order to mitigate this risk, developers frequently use a land option, securing the first right of purchase under the condition that government authorities will approve the development. Alternatively, developers may purchase land directly from municipalities that have adopted an active land policy; in such cases, the project location will have to be prepared for construction purposes and covered in the land-use plan or structure vision. Predetermined development parameters will help to mitigate risks but will also reduce profitability.

To finance the purchase of the land and its development, the developer has various options. Investors can be brought in either early or late in the development process. Early investors typically seek higher returns because they accept a development's potential downside. However, the participation of early investors will reduce the perceived risk for long-term financiers and this will as a consequence lead to lower interest rates for the developer. The developer's choice depends on their own financial position, the characteristics of the project, and the requirement of financial backers. When entering Phase 3 developers must decide which external investors they wish to involve in the project.

The developer can advance the process to the third phase, by aligning the concept to the majority of the factors show in table 3.3. By the end of the second phase it is essential that the developer is confident about the project's feasibility, as in the third phase substantial financial resources will be needed to secure the support of other stakeholders in the project

• Land-use Plan;	• Environmental Impact;
• Location;	• Government Facilities;
• Utilities;	• Nearby Stakeholders.

Table 3.3.: Key drivers of real estate development within Phase 2

3.2.3. Phase 3 - Feasibility Study

The primary goal of the third phase is to demonstrate the project's viability to stakeholders. This will intensify the developer's investment, both financially and emotionally, making it more challenging to exit the project. The decision to abandon the project at the end of this phase will increase risks such as financial losses and potential damage to the developer's reputation, time, business relationships, and credibility, factors that are fundamental to future developments. If at this stage the project's feasibility cannot be ascertained, developers may choose to hold onto the property until financial viability will become more likely (Brugman et al., 2022).

The feasibility study is based on the refinement of requirements set by government agencies and is established in a structure vision, a land-use plan, a detailed land-use plan, or presented in agreement with the developer. Obtaining detailed data from the development plan is the basis for the final feasibility study. The study includes market research, cost estimates, design drawings, financing conditions, policy considerations, and valuation assessments. Of

these, market research is often considered the most critical element, as it evaluates the long-term, global, national, regional, and local trends identified in the second phase. Completion of the feasibility study may extend into the early part of the fourth phase.

This phase's challenges include the increasingly dynamic and complex interaction between developers and the local community who are nowadays more involved than in the past (Miles et al., 2007). Various government agencies will be substantially involved from the earliest phases of a project. Complexity increases due to a range of factors, including evolving societal expectations and stricter or changing regulations. As a result, government agencies are seen as key partners, given their role in granting permits. Trusted developers have refined the art of collaboration with government agencies and local residents to address stakeholder interests, often by making design concessions.

Fluctuations in government agency personnel may present further challenges, as newly appointed officials may introduce different perspectives and political priorities. One potential solution is the implementation of public-private development projects. For newer developers or those without an established reputation, their position can be bolstered by involving reputable professionals in the process.

3.2.4. Phase 4 - Contract Negotiation

The activities in phases 4 and 5 are closely interconnected and are in other real estate development models often combined into a single phase (Peek & Gehner, 2018). However, (Miles et al., 2007) differentiates these phases into,contract negotiation and formal committent.

In Phase 4 the feasibility study and financial projections serves as a sales and negotiation tool, as well as a coordination instrument in contract negotiations. The introduced contracts contribute to risk management during the realization phase. By covering different facets through individual contracts, the relationships among stakeholders are clearly defined, and the collective risk is distributed among participants. However, this also reduces flexibility for design changes, resulting in high costs should modifications be necessary.

In addition to stakeholders directly involved in project realization, the involvement of local authorities remains crucial. For projects with significant impact, authorities often impose requirements related to impact fees or substantial off-site improvements as conditions for development approval. Because negotiations with authorities can result in adjustments, permits are ideally secured by Phase 3 or, at the very latest, early in Phase 4.

To conclude the fourth phase, a summary document outlining costs and benefits is prepared. Based on this information, the developer can finalize the formation of the development team, transitioning into the role of primary negotiator to bring together the various team members.

3.2.5. Phase 5 - Formal Commitment

In the fifth phase of the development process, the agreements established in the fourth phase between the project developer and other stakeholders are formalized through signing. After signing, the possibility of withdrawing from an agreement is either unavailable or involves an intensive and costly process.

Formalization of the loan agreement can only be accomplished once the financiers obtain a primary security interest in the development. In case of a land option the developer must formalize the option and repay any existing loans.

At this stage the developer's role changes from primary negotiator to full project manager who is responsible for navigating the process effectively and mitigating risks. In order to reduce endogenous risks control mechanisms are implemented and insurance policies are taken out. The control mechanisms provide a structured approach for managing and coordinating the development, with a strong emphasis on time efficiency and project management.

3.2.6. Phase 6 - Construction

The primary goal of Phase 6 is the realization of the design. This goal however comes with a heightened exposure to endogenous project risks, which often have negative financial consequences. A key distinction from earlier phases is the structured organization of the process, enabling project management tools to play a more effective role in risk control. Additionally, the factor of "time" becomes increasingly critical compared to previous stages. The start of construction involves high daily costs, so unforeseen delays can lead to substantial financial consequences. As a result, the developer is fully committed to the project and will strongly emphasize coordination and collaboration among all participants.

The feasibility study will serve as an essential tool for evaluating potential adjustments to changing market conditions. However, the contracts established in Phase 5 make such adjustments more complex and costly. For this reason, physical realization typically does not start until around 70% of the (sub)project is pre-sold (Capital Value, 2023). To reach this sales threshold, marketing activities remain a primary focus for the development team.

3.2.7. Phase 7 - Completion and Formal Opening

The seventh phase focuses on completing the development. Completion varies, depending on the purpose of the completed property, which may be intended for residential or commercial leasing or sale. Activities in this phase include utility connections, testing of technical installations, regulatory compliance checks, final marketing efforts, the official opening, and the move-in of tenants and/or residents.

3.2.8. Phase 8 - Property, Asset and Portfolio Management

In the final phase, the responsibility for the management of the completed development will be transferred from the developer to the long-term investor, with the exception of risks covered by the lease or purchase agreements. The investor may manage the property directly, hire external property management companies, or appoint the developer as the manager.

The end-user may be an individual or an organization. For organizations, management is typically divided into three forms: asset management, property management, and portfolio management, collectively known as the management triad. Private owners, on the other hand, generally handle management personally.

(Graaskamp, 1972) emphasizes the importance for developers and managers to view buildings as small businesses that must be continuously adapted to remain competitive in the real estate market. The role of the asset manager is crucial in this regard; they focus on aligning with the needs and demands of customers and tenants to ensure profitability. These considerations are often incorporated as early as the design phase. Similarly, property managers should be involved from phases 4 and 5 on to facilitate design improvements. Up to the end of Phase 7, property managers maintain an advisory role, with the feasibility study serving as a foundational guide.

3.2.9. Conclusion - Project Phases

Chapter 3.2 of this study focuses on providing an insight into the various phases involved in the realization of real estate development and addresses the first sub-question of the thesis

SQ1: What are the different phases in greenfield real estate projects?

To present the phases in a structured manner a framework has been developed, as shown in figure 3.1. The framework consists of eight phases and is structured into columns, each representing a core component essential to the development process.

In order to progress between the phases, specific activities must be completed for each core component. However, due to the dynamic nature of the process, it is not always necessary to fully complete all activities before starting work on activities in subsequent phases. Representing a dynamic process in a static model is a simplification that inevitably has its limitations, but this simplification is nevertheless essential to achieve the analytical objective.

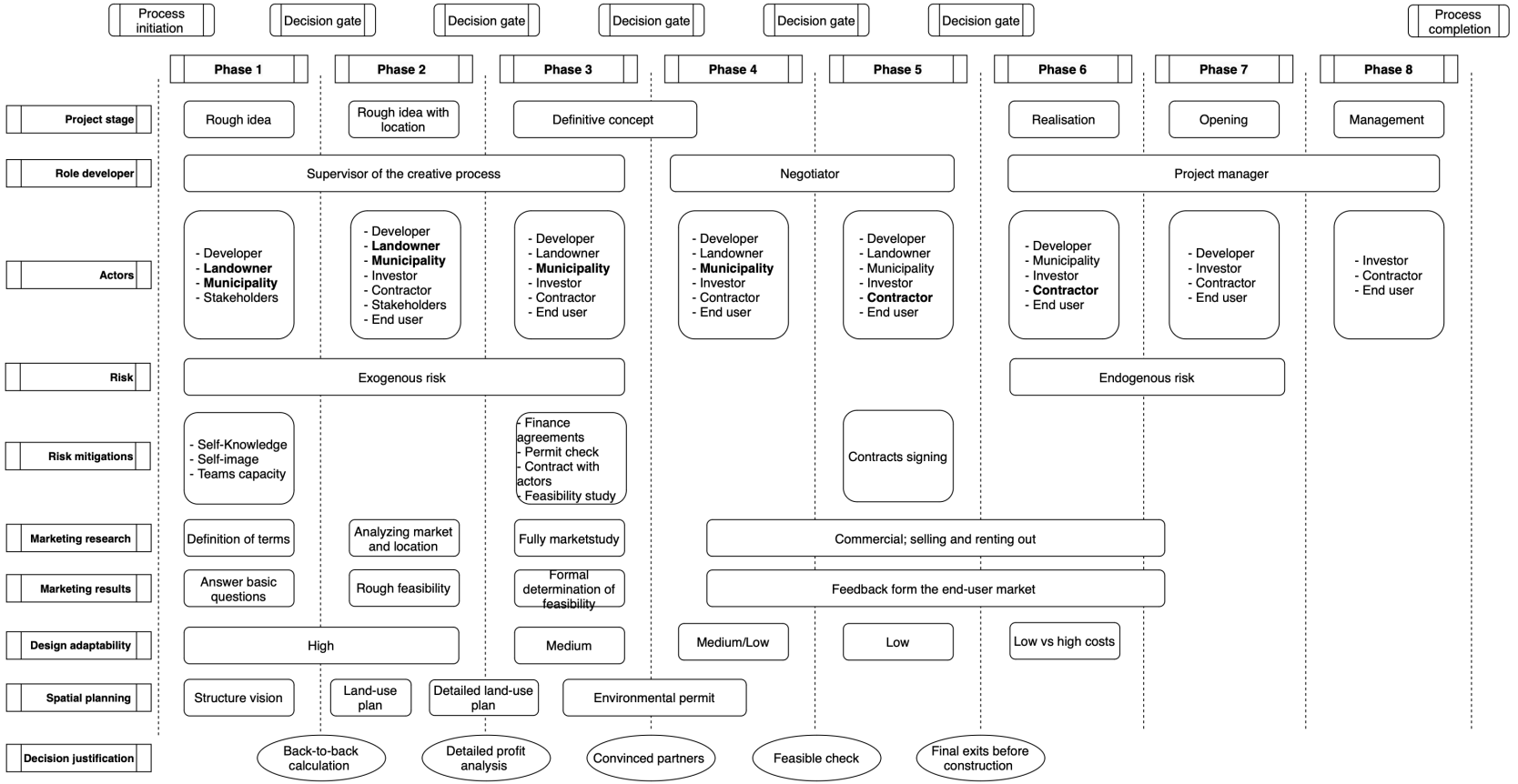


Figure 3.1.: Framework of phases and activities within the real estate development process.

3.3. Process Influences

The second part of this literature review explores the activities that influence the timeline of the real estate development process. Key topics were selected based on recurring themes identified in the literature, emphasizing their contribution to development time. The activities include location selection, land acquisition strategies, legal procedures, financial constraints, and the effects of environmental regulations. Each topic illustrates critical bottlenecks and challenges that affect the efficiency and predictability of development time. By examining these factors, this paragraph gives an overview of the influence of these activities on the overall process time of real estate development, thus forming a basis for addressing the second sub-question.

SQ2: Which activities influence the development process of a greenfield real estate project?

3.3.1. Location

After a development location is designated in the structure vision (Phase 1), a land-use plan will be further refined. Research from the Netherlands Bureau for Economic Policy Analysis (Centraal Planbureau, CPB) shows that this phase is the longest in the overall development process, primarily due to the wide range of agreements that need to be established. The duration of this period varies from 12 to over 120 months (Michielsen et al., 2019).

Development sites can be classified in various ways, such as urban versus suburban and infill versus expansion sites. Suburban areas, often labelled as expansion sites, are located outside the city and frequently converted from agricultural or natural land to residential or commercial zones. Urban areas, typically associated with infill locations, are situated within the existing city and often undergo redevelopment, with older structures being replaced by new functions (van Gent et al., 2023). Developments in urban areas tend to have a higher risk of delays, or proceed more slowly (Michielsen et al., 2019). Major contributing factors include the need to relocate businesses, reroute infrastructure, or carry out soil remediation (Koning et al., 2021). Additionally, urban projects often involve multiple landowners and technical construction challenges (Inspectie der Rijksfinanciën, 2020). From 2015 to 2018, the average lead time for infill projects in the northern, eastern and western parts of the Netherlands was approximately 12 to 24 months longer than that for expansion sites. In contrast, the lead time in the southern Netherlands for infill projects was generally shorter, mainly because municipalities in that part of the country hardly needed to acquire any land (Michielsen et al., 2019).

If a landowner does not cooperate in selling land on a designated development site, authorities by law have two options for land acquisition. Based on the Pre-emption Right Expropriation Act, these procedures are applicable to both infill and expansion locations. The expropriation may occur only when it is in the public interest and only after prior assurance of indemnification according to the regulations of the Expropriation Act (Onteigeningswet) (Hobma & Jong, 2016). After January 1st, 2024 the Expropriation Act has merged into the Environment and Planning Act (Omgevingswet, Ow). Research by the Land Registry indicates that particularly for residential construction both the number of expropriations and the number of expropriated plots have decreased since 1995. However, the total of the expropriated area did not decrease (Koek et al., 2022).

3.3.2. Land Acquisition

Land acquisition is one of the most critical components of project development: without land, a project cannot proceed. Therefore, the search for suitable land begins early in the development process. It is also an expensive component; between 2018 and 2023, the average land price accounted for 19.1% of the total construction costs (Bouwend Nederland, 2022). Land can be acquired in several ways, namely by the developer, by a government agency, or through collaboration between the two. These are the three policy approaches: active land policy, passive land policy, and public-private partnerships.

Public-private partnerships, for instance through collaboration within a Joint Development Corporation (Gemeenschappelijke Exploitatie Maatschappij, GEM) or through Building Entitlements (Bouwclaim), are often used for large-scale projects. Research shows that this form of collaboration is on the increase, as both market parties and government agencies recognize benefits such as risk sharing and the possibility to acquire fragmented pieces of land (Conijn & Heijdendael, 2024).

Municipalities used to pursue an active land policy. Since the financial crisis of 2007-2008, municipalities distanced themselves from this policy due to risk-averse considerations, reduced necessity due to the Spatial Planning Act 2008 (Wro), and limited financial resources (Middelkoop et al., 2021). Studies indicate that municipal land depositions have decreased with approximately 50% since 2010 (Deloitte Financial Advisory B.V. – Real Estate, 2021).

With the reduction of an active land policy (Conijn & Heijdendael, 2024), responsibility for the acquisition of development sites now rests with developers, resulting in a facilitating land policy. However, developers face obstacles, such as high acquisition costs and unknown infrastructural and planning constraints. This is commonly known as the "onrendabele top"(Verwoerd & Zuidema, 2015). Although the government has introduced various incentives to mitigate these unprofitable elements, the demand for an active land policy remains high, particularly for complex sites with fragmented ownership or extensive infrastructure requirements (Conijn & Heijdendael, 2024; Middelkoop et al., 2021) In an active land policy, the "grondbank" can have an important role by supporting municipal land acquisition. Research shows a significant correlation between an active land policy and housing production, with municipal land purchases accounting for approximately 12% to 15% of the variation in new housing output (Deloitte Financial Advisory B.V. – Real Estate, 2021).

3.3.3. Legal Procedures

For the project design to evolve into a detailed plan, several procedural steps must be taken. These include addressing the legal requirements laid down in the structure vision, land-use plan, detailed land-use plan, and environmental permit. The lead time for these procedures depends on the specific characteristics of the project (Koning et al., 2021). Stakeholders also have a significant impact on the timeline; raising objections to the developments might result in legal proceedings.

When the municipality and developer reach an agreement on the project's scope, the procedure to establish the land-use plan can be completed within six months (Michielsen et al., 2019). Research (Geuting & De Leve, 2018) indicates, however, that the average lead time is 36 to 48 months. This extended time frame is partly caused by the increasing burden of studies required in recent years, such as assessments related to archaeology, noise, and flora and

fauna. Additionally, a higher error margin in land-use plans results in additional work, and changes in legislation during the process can impact previously completed studies (Geuting & De Leve, 2018). During the amendment procedure, stakeholders may file objections; if these objections reach the Council of State, the procedure may be prolonged by another 12 to 36 months (Rijksdienst voor Ondernemend Nederland, 2021), which is longer than desired (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). In some cases, as a result of minor issues the entire land-use plan is rejected which causes significant delays, as the entire process must be restarted (Finance Ideas, 2022).

Once the development plan is declared irrevocable, the environmental permit can be assessed on it. If the application aligns with the development plan, this procedure is usually a formality and can be completed within six months (Michielsen et al., 2019). However, (Rijksdienst voor Ondernemend Nederland, 2021) notes that, due to the wide variation in laws and regulations, a six-month time frame is more often the exception than the rule.

A primary cause of procedural delays is the shortage of municipal staff and expert capacity (Finance Ideas, 2022; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). High workloads and limited capacity contribute to quality loss and rework within municipalities and external agencies (Geuting & De Leve, 2018). To alleviate workloads and restore capacity, additional financial resources are essential (Deloitte Financial Advisory B.V. – Real Estate, 2021; Geuting & De Leve, 2018; Rijksdienst voor Ondernemend Nederland, 2021). In response to these capacity issues, the minister introduced flex-pool arrangements to provide municipalities with supplementary expertise and support (Ministerie voor Volkshuisvesting en Ruimtelijke Ordening, 2022). In 2022 and 2024, €40 million was allocated to this initiative, primarily targeting the early phases of area development (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021b). The effects of this investment are anticipated to become apparent only in the medium term and remain challenging to quantify. Despite the limited measurable outcomes thus far, the government has confidence in the initiative, dedicating an additional €10 million in 2023 (Ministerie voor Volkshuisvesting en Ruimtelijke Ordening, 2023).

3.3.4. Financial Constraints

In real estate development, economic cycles play a significant role in project realization, impacting various stakeholders throughout the development process. focuses on three primary actors: government agencies, housing associations, and institutional investors.

Government agencies

In the Netherlands, municipalities were the primary providers of capital for housing development. In recent years, however, active land policy by municipalities has become the exception rather than the rule (Conijn & Heijdendael, 2024), this is largely due to weakened municipal financial positions. Spending on housing, spatial planning, and urban renewal fell from around 17% of municipal expenditures in 2011 to 7% in 2019 (Deloitte Financial Advisory B.V. – Real Estate, 2021). These financial resources are allocated by various ministries but are not always well-coordinated (Inspectie der Rijksfinanciën, 2020). To strengthen these investments, the "National Housing and Construction Agenda" advocates for the pooling of funds and inter-ministerial cooperation on complex area developments, such as through a Dutch Investment Agenda (Landelijke Investeringsagenda) (Aedes, 2021).

Overall, there is a need for a strong municipal apparatus with sufficient (financial) capacity (Middelkoop et al., 2021). That would enable subsidies for projects with unprofitable peaks and support active land policy (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). Without financial support, nearly 40% of the homes needed by 2030 would not be realized (Holt et al., 2022). To sustain or increase government financial support, several options for generating additional revenues have been explored. One of the most promising is the "Land Value Capture Tax" (Planbatenheffing). Currently, only the selling landowner benefits from the land value increase (land surplus), but the "Land Value Capture Tax" would allow municipalities to share in these gains. With these additional funds, municipalities could support developments where financial viability is still a challenge. If well-implemented, this levy would comply with national and international regulations and treaties (Allers et al., 2024).

Housing associations

In 2024, housing associations owned approximately 28% of the Dutch housing stock (Centraal Bureau voor de Statistiek, 2024), positioning them as key players in the development of new housing. According to the minister, housing associations will need to invest around €115 billion by 2035 to meet their development targets (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021a). However, they face a shortfall of over €24 billion in projected financial capacity (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties et al., 2020). The Economic Institute for the Construction Industry (Economisch Instituut voor de Bouw, EIB) argues that the minister's estimates are based on overly pessimistic assumptions regarding construction demands, sustainability costs, and interest rates, suggesting that the financial gaps for housing associations may be even greater (Koning et al., 2021).

How is it possible that these large organizations lack sufficient financial capacity? In addition to rising costs associated with housing improvements to meet the Energy and Climate Agreement targets, the introduction of the landlord levy posed a major obstacle. Between 2013 and 2023, the housing association sector paid over €16.7 billion in landlord levies, which could have doubled new construction output during that period (Lijzenga et al., 2022). Research by (Schilder et al., 2021) substantiates the negative impact of the levy, noting that it created uncertainty and caused housing associations to reduce new construction investments. Following the levy's implementation, the sector's contribution to new construction declined from 60% in 2013 to 18% in 2018 (Lijzenga et al., 2022).

Recognizing the adverse effects, the landlord levy was repealed as of 2023. However, restoring housing associations' financial capacity will take time, meaning the short-term benefits are unlikely to be noticeable. According to (Centraal Planbureau, 2020), abolishing the landlord levy may boost housing production in the long term, though the impact on the total housing stock is expected to be limited. Simultaneously, a survey of housing associations indicates that 60% of the freed-up funds will soon be allocated to public housing projects, which may indirectly benefit the overall housing stock (Finance Ideas, 2022). The true effects of these changes will only become evident in the coming years.

Institutional investors

Institutional investors play a crucial role in the Dutch housing market, particularly in the development of rental housing. However, due to deteriorating market conditions and a

fluctuating policy environment, they are scaling back their investments or shifting focus abroad. For example, ASR recently decided to halt investments in rental housing due to limited return prospects (NOS, 2024).

The reduction in investment capital resulted from several factors, including high capital market interest rates which reduce the profitability of many investments, especially in the mid-rental segment. This is particularly concerning, given the sustained demand for affordable housing (Capital Value, 2023). In addition to increasing interest rates, fiscal measures significantly impact the investment climate. In 2021, the transfer tax for investors was raised from 6% to 10.4% to create more opportunities for first-time buyers. Although successful in benefiting this group, studies indicate that this change has had negative consequences for both commercial and residential real estate investment (HUMINT Solutions Netherlands, 2024; Stäbler et al., 2024). It led to a decrease in rental housing supply, counterproductive to housing market recovery efforts. To increase the availability of mid-segment rentals, the transfer tax for this sector will be lowered to 8% in 2026 (Ministerie van financiën, 2024).

Another constraint is the Affordable Rent Act which took effect on July 1, 2024. While its implementation has provided clarity, it has also lowered returns for investors. This reduction in profitability is expected to lead to a decrease in new rental construction and rental housing supply (CBRE B.V., 2022, 2023). Stakeholder groups such as IVBN and NEPROM had warned in advance of these adverse effects (NEPROM, 2023), and four months after its introduction, the Dutch central bank confirmed the Affordable Rent Act's negative impacts (NOS, 2023).

Ongoing changes in fiscal measures and legislative proposals create an unstable real estate market (CBRE B.V., 2022, 2023). The fluctuating political environment, combined with the prolonged caretaker status of the Dutch cabinet, has eroded confidence in the Dutch market, prompting investors to increasingly seek opportunities abroad (Capital Value, 2023). To attract both domestic and international capital, stable long-term policies are essential (NEPROM & IVBN, 2023; Stäbler et al., 2024).

3.3.5. Environmental Regulations

Significant bottlenecks impacting the lead time of new construction developments in recent years include PFAS and nitrogen regulations. Deviations from standard values led to delays in issuing land-use plans and environmental permits (Dienst Analyse en Onderzoek, Tweede Kamer der Staten-Generaal, 2021).

PFAS has been produced since 1970 and poses considerable health risks (Smaling, 2023). Due to its wide application, the substance has been detected in the air, water, and soil across many locations in the Netherlands and world wide (NOS, 2019). Through a 2019 verdict by the Council of State it became evident that PFAS would pose challenges for the construction sector, as the verdict restricted the movement of soil with more than 0.1 micrograms of PFAS per kilogram of dry soil. This limitation led to a halt in soil and dredging activities, suspending numerous construction projects. Although the threshold was decreased later on, PFAS monitoring still requires additional work (Interprovinciaal Platform Omgevingsrecht, 2024).

In addition to the PFAS verdict in 2019, the Council of State also declared the Programmatic Approach to Nitrogen (PAS) regulations invalid (Stichting Economisch Instituut voor de Bouw, 2019). The PAS aimed to relax environmental regulations to allow construction

projects to proceed. This turned out, however, to be incompatible with European environmental protection laws, leading to its repeal and the introduction of stricter requirements, causing delays similar to those experienced prior to 2015 (Rouwendaal, 2023). In order to address these issues, the government introduced a temporary development exemption but this soon came under close scrutiny with regard to its environmental compliance (Rijksoverheid, 2020). In 2022, a Dutch Supreme Court verdict determined that the development exemption did not meet environmental standards, making individual nitrogen permits necessary for each project, as was the case before 2015. The ongoing regulatory changes extended project timelines and increased uncertainty, resulting in financial losses for construction companies and exacerbating the housing shortage (Bouwend Nederland, 2024; Raad van State, 2023).

3.3.6. Conclusion - Process Influences

Chapters 3.3 of the study provides insights into the activities that influence the lead time of the real estate development process, thus addressing the first sub-question of the research:

"Which activities influence the development process of a greenfield real estate project?"

Chapter 3.3 demonstrates that most activities are being influenced during the initial three phases of the development process. The most affected activities include the creation of the land-use plan and the detailed land-use plan, where a broad scope is refined into a more specific and detailed plan. Objection periods, the submission of viewpoints, and the introduction of new regulations or revisions to existing ones significantly affect the duration of these processes. Below, the key points of the core themes are outlined to justify the conclusion.

Location

Research (Michielsen et al., 2019) indicates that the development plan (Phase 2 and 3) of a location typically will take up the most time within the first 7 development phases period, ranging from 12 to over 120 months. On average, the lead time for infill locations is approximately 12 to 24 months longer than that for expansion locations, due to complexity (Inspectie der Rijksfinanciën, 2020).

The implications of location-related challenges primarily manifest themselves during the first three phases of the development process, as these phases involve shaping the development plans for the location.

Land Acquisition

Studies reveal that since 2010 municipal land ownership was significantly reduced, with a reduction of approximately 50% (Deloitte Financial Advisory B.V. – Real Estate, 2021; Middelkoop et al., 2021), This resulted in a shift toward more facilitative land policies. However, market players face obstacles, such as the so-called "unprofitable top" (Verwoerd & Zuidema, 2015) which has resulted in a decline in developments. Large-scale, high-risks projects are more and more taken on by public-private partnerships (Conijn & Heijdendael,

2024). However, active land policies may contribute to more efficient land utilization, as shown by (Deloitte Financial Advisory B.V. – Real Estate, 2021; Middelkoop et al., 2021).

The impact of land acquisition policies is most prominent in the first and second phase of the development process, because in these stages land agreements are being formulated.

Legal Procedures

Administrative and legal procedures can significantly prolong project lead times. For example, the average duration of procedures for drafting a land-use plan is estimated to range between 36 and 48 months (Geuting & De Leve, 2018). The filing of objections to the Council of State can extend these timelines by an additional one to three years (Rijksdienst voor Ondernemend Nederland, 2021). These delays are largely caused by a shortage of government staff and expert capacity (Finance Ideas, 2022; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023) and an increased demand for research in recent years (Geuting & De Leve, 2018).

Administrative legal procedures are particularly relevant to the first three phases of the development process, encompassing the preparation of the structural vision, land-use plan, and detailed development plan.

Financial Constraints

Expenditures on housing, spatial planning, and urban renewal decreased from approximately 17% to 7% of municipal budgets between 2011 and 2019 (Deloitte Financial Advisory B.V. – Real Estate, 2021). Consequently, municipalities have less capacity to support development projects. To address this, either revenues must be increased, or government stimulus must be provided (Middelkoop et al., 2021). Various measures have been implemented in the real estate market that have led to deteriorated market conditions for housing corporations and institutional investors. The financial capacity of parties might be restored by withdrawing certain regulations (Centraal Planbureau, 2020). The continual changes to fiscal policies contribute to an unstable real estate market (Capital Value, 2023; CBRE B.V., 2022, 2023), which has led to a decline in domestic and foreign capital. A stable long-term policy is essential for a well-functioning market (NEPROM & IVBN, 2023; Stäbler et al., 2024). The impact of these fiscal measures is noticeable in the first two phases of the development process. During these phases, projects are assessed for financial feasibility, and agreements with investors are finalized.

Environmental Regulations

Changes in laws and regulations, particularly regarding PFAS and nitrogen, have significantly impacted the timelines of new developments in recent years. Following rulings by the Supreme Court and the related new regulations, delays have occurred in issuing land-use plans and environmental permits. These delays also incur substantial financial costs (Bouwend Nederland, 2024; Dienst Analyse en Onderzoek, Tweede Kamer der Staten-Generaal, 2021; Raad van State, 2023). The additional studies required to prepare land-use and development plans are relevant during the first three phases of the development process.

3.4. Conclusion - Theoretical

The conclusion of Chapter 3 aims to integrate the insights gained from the two conducted studies in Chapter 3.2 and 3.3 in which the first two sub-questions have been answered.

SQ1: What are the different phases in greenfield real estate projects?

SQ2: Which activities may influence the development process of a greenfield real estate project?

The knowledge gathered from addressing the first two sub-questions led to the development of a framework that systematically represents the phases of greenfield real estate projects, with a specific focus on the phase where the activities involved have the greatest impact on the lead time of the project. The framework presented in 3.2, is the core conclusion of the literature study and can be used as a guideline for analyzing the timelines of the case studies, thereby contributing to answering the third sub-question of this thesis.

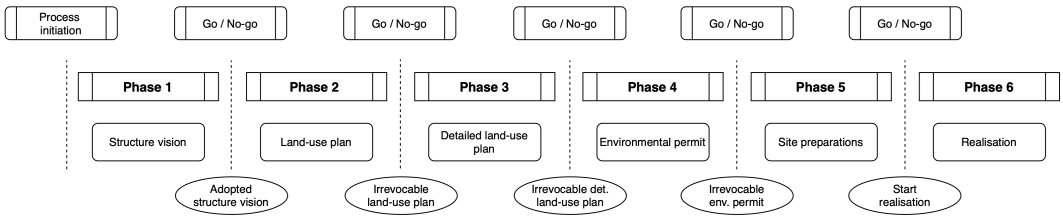


Figure 3.2.: Concluding framework of phases within the real estate development process.

4. Empirical Research

In Chapter 4, four completed greenfield real estate development projects are analyzed. A timeline analysis is conducted to determine how various activities have influenced the lead time of each case. In addition, practical insights are obtained through interviews with key project members involved in the projects. By integrating these theoretical and empirical perspectives, a deeper understanding is gained of the activities affecting project lead times. These findings contribute directly to the answering of the third sub-question.

SQ3: What is the correlation between the lead times of the phases across the different case studies?

4.1. Introduction

The four case studies were not selected based on project duration, but rather on their alignment with the research scope defined in Chapter 1.3. To ensure confidentiality, all cases have been anonymized. Each case analysis begins with an introduction and background context, followed by a detailed examination of each process phase, supported by interviews with key project stakeholders.

4.1.1. Timeline

The timelines of the case studies are based on the framework from Chapter 3, as shown in Figure 3.2. Applying this framework makes it possible to gain insight into the activities that influence the development lead time. However, during data collection, it became evident that determining the initial starting point of the projects is challenging, as it originate from municipal interpretations of the Nota Ruimte. For this reason, the moment of adopting the structural vision has been chosen as the starting point for the analysis. The adjusted framework serves as the foundation for the analysis, as shown in Figure 4.1.

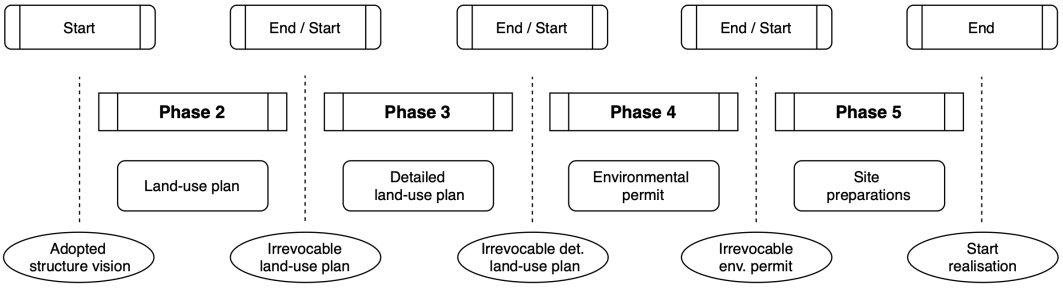


Figure 4.1.: Framework outlining the process phases examined within the case study.

4.1.2. Influencing Activities

To structure the activities that influence the projects lead time, they have been categorized into different factors. These factors are primarily derived from the literature review, see Chapter 3.3. However, new insights emerged during the case study analysis, leading to the addition of factors.

The influence of these factors can either positively or negatively impact the lead time. Additionally, a distinction can be made based on the origins of the activities: external or internal. This distribution originates from the allocation of project risks by (Aleshin, 2001), where external risks are defined as factors that arise outside the project and over which project management has little direct control. Internal risks, on the other hand, originate within the project and can be influenced by the project team.

Exogenous - External

- **Public Consultation and Appeals (PCA)**: The legal and administrative procedures that allow stakeholders to express their views on spatial planning, as discussed in Chapter 3.3.3.
- **Mandatory Research (MR)**: The mandatory research and assessments required to facilitate spatial planning. Identified in Chapter 3.3.3 as a negative influence to project lead times.
- **Legal Framework (LF)**: All legal frameworks related to real estate projects, including their continuous amendments, partially discussed in Chapter 3.3.4 and 3.3.5.
- **Land Policy (LP)**: Activities resulting from the applied land policy or the chosen land policy approach. The various implications are discussed in Chapter 3.3.2.
- **Administrative Policy (AP)**: The political-administrative policy process in the Netherlands, for example, the procedure leading to the irrevocable adoption of a land-use plan.
- **Administrative Decision (AD)**: The formal decision-making process by governing bodies regarding spatial planning and related matters, partially addressed in Chapter 3.3.3.

Endogenous - Internal

- **Project-Based (PB)**: Activities resulting from the physical characteristics of the project.
- **Project Team (PT)**: Activities arising from the the project team, both on the municipal side and the developer's side.

4.2. Case Study - Yasmijn

The development project "Yasmijn" is located in the municipality of Meerhout, in the province of South Holland. The project lies on the southeastern edge of the village, bordered by the provincial road to the east and the Country Estate to the north, which gave the project its name.

The Nota Ruimte, a policy framework for spatial planning drafted by the national government, marks the starting point of the Yasmijn development. In 1996, the framework was incorporated into the regional plan "Zuid-Holland West", prepared by the Province of South Holland, which outlined objectives for new housing projects. After evaluating multiple locations, the Yasmijn site was selected in 1999. Following this decision, work began on a land-use plan I, which was adopted in 2001. A lengthy period of inactivity, lasting over 100 months, preceded the drafting of a revised land-use plan. Land-use plan II permits the construction of 750 homes, with a minimum of 30% allocated to social housing, to be realised within multiple phases. Both land-use plans proceeded through the Administrative Jurisdiction Division of the Council of State to become irrevocable.

The initial agreement concerning the project location was signed in 2001, establishing development rights between the developer and the municipality. Negotiations conducted in 2014 and 2015 updated and aligned these agreements with land-use plan II. In 2016, the joint venture was established as a collaboration between two developers to realise the first phase, consisting of 250 dwellings, 68 of which were designated as social rental housing. Figure 4.2 provides an overview of the project.

Figure 4.2.: Overview of the project location, 'Yasmijn'

4.2.1. Timeline

The overall development of the project took 264 months, measured from the adoption of the regional plan to the start of the construction. Although the regional plan initially proposed the 'Camelia' location for development. However, 40 months after its implementation, a decision was made to shift the development to the 'Yasmijn' site. Figure 4.3 presents an overview of the timeline for the development of Phases 2 through 5, as defined in Figure 4.1. A detailed timeline is provided in Appendix A.

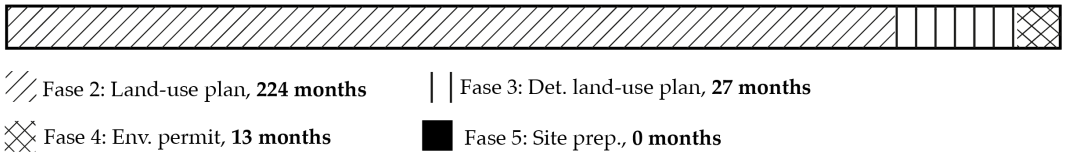


Figure 4.3.: Project timeline segmented by analyzed process phases, 'Yasmijn'

Notable Observation

Based on the detailed timeline in Appendix A, several activities have been identified that may influenced the project's timeline. These are outlined below:

- **Two legal proceedings**: Ensuring the legal validity of both land-use plans through procedures at the Administrative Jurisdiction Division of the Council of State.
- **Dutch Noise Abatement Act**: Establishing higher permissible noise limits due to exceeded maximum dB levels, stated in Dutch Noise Abatement Act (Wet geluidhinder, Wgh).
- **Legislative change**: Reconducting the ecological assessment due to the introduction of the new Nature Conservation Act (Wet natuurbescherming, Wnb).
- **Developer agreement**: Revising the existing agreement to account for obsolescence and alignment with the updated land-use plan.
- **Exploitation plan**: Revising the exploitation plan as a result of the legal proceedings at the Administrative Jurisdiction Division of the Council of State.
- **Approval by provincial authorities**: Obtaining approval for the first land-use plan from the Provincial Executive of South Holland after the municipal council's endorsement. The procedure changed following the changes of the Spatial Planning Act (Wro) in 2008.

4.2.2. Analysis

The goal of the timeline analysis is to identify bottlenecks and opportunities for process improvement within each phase, as outlined in Figure 4.1. By presenting the main activities within the analysed phases in a Gantt chart, as shown in Figure 4.4, the visualization supports the identification of potential areas for optimization within phases, as well as areas where acceleration has already occurred.

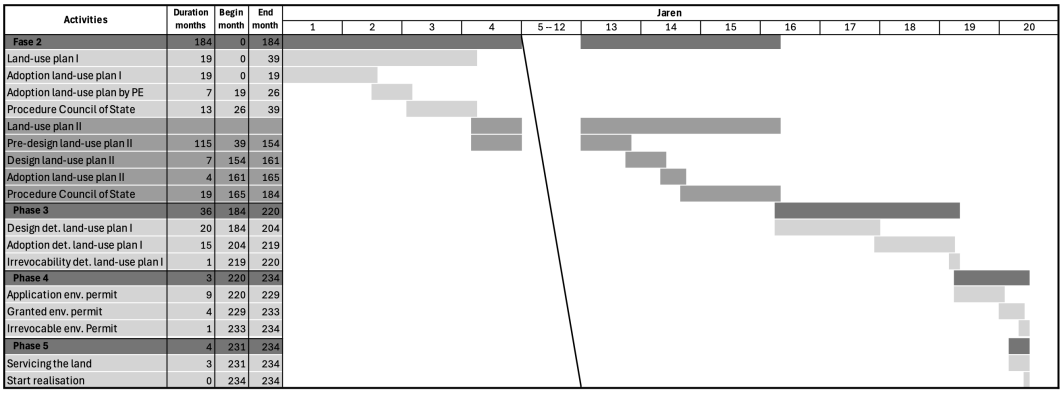


Figure 4.4.: Gantt chart illustrating the analyzed project lead time, 'Yasmijn'

Phase 2 - Land-Use Plan

Phase 2, representing the period in which two land-use plan became irrevocable, lasted 224 months and was the most time-intensive phase within the analysed period. The time frame can be divided into three parts, which will form the basis for the further analysis. The first part, lasting 40 months, was dedicated to the selection of the development location. The subsequent 39 months were spent on making the land-use plan I irrevocable. The final part, of 145 months, focused on making the land-use plan II irrevocable. Figure 4.5 shows the number of months required to reach the key milestones within Phase 2.

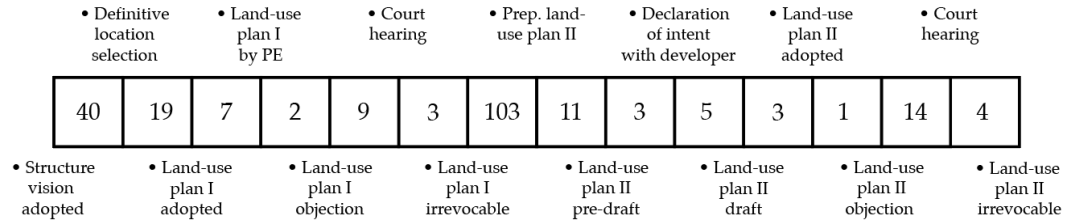


Figure 4.5.: Visualization of activities and their durations within Phase 2, 'Yasmijn'.

Phase 2 - Part 1: Development Location

The first part of Phase 2, lasted 40 months, and were attributable to the choice of location. Although the initial plan for development focused on the 'Camelia' locatio, the municipal executive ultimately decided in favour of the Yasmijn site. Prior to the adoption of the regional land-use plan, discussions within the municipality had already centred on determining the most suitable location for development.

The choice for the 'Yasmijn' location was influenced by several factors. First, the Provincial Executive expressed willingness to initiate a revision of the regional land-use plan, thereby significantly reducing procedural obstacles. Second, the location allowed for the retention of the provincial road, which offered critical infrastructural advantages. Additionally, the site provided the opportunity to realize an extra 100 housing units. Ultimately, the decision was motivated by the ambition to uphold the principles of the Pact of Green, an intermunicipal agreement aimed at preserving agricultural land, which played a guiding role in the decision-making process.

While sufficient data is available regarding the reasons for the delay, identifying improvements in the administrative process to accelerate decision-making remains challenging.

Phase 2 - Part 2: Land-Use Plan I

After the municipal executive decided on the project location, the process of drafting the land-use plan was initiated. The 39-month can be divided into three sections. The first section involved the adoption of the land-use plan by the municipality, which took 19 months to complete. The second section consisted of approval of the land-use plan by the Provincial Executive of South Holland, a process that lasted 7 months. Finally the procedure before the Administrative Jurisdiction Division of the Council of State to render the land-use plan irrevocable, which spanned 14 months.

Phase 2 - Part 2.1: Adoption Land-Use Plan I - Municipality

In the 19 months required for the adoption of the land-use plan, limited data is available, as this process occurred between 1999 and 2001. However, data from the procedure followed before the Administrative Jurisdiction Division of the Council of State indicates that this period was primarily spent compiling the studies necessary for the preparation of the land-use plan.

Although insufficient data exists to propose measures for acceleration, this information can serve as a benchmark for the lead tome required to develop a land-use plan, in the early 2000's.

Phase 2 - Part 2.2: Adoption Land-Use Plan I - Provincial Executive

After the municipality adopted land-use plan I, the plan required approval from the Provincial Executive of South Holland. The process lasted 7 months due to minor adjustments needed to align with provincial policy changes.

Under the regulations in place at the time, the province was obligated to assess the proposed land-use plan against its established legal framework. The 2008 amendment of the Spatial Planning Act (Wro) introduced a new approach. Since that time, the province sets the framework in advance, providing the municipality with a guideline to follow. The adjustment has streamlined the process and minimized procedural delays.

Phase 2 - Part 2.3: Appeal Land-Use Plan I - Council of State

An appeal was lodged against the province's adoption of the land-use plan. The entire process, including the objection period, lasted 14 months: 2 months for the objection period, 9 months for the proceedings, and 3 months until the ruling. The appellants, a local association and nearby residents, argued that the implementation of the land-use plan would have negative spatial and social impacts within the municipality. However, the appellants lost the case, as their objections were deemed unfounded or partly inadmissible.

During this period, two opportunities for acceleration can be identified. First, by preventing an appeal by stakeholder participation in the development of the land-use plan. The extent to which this was done during the period cannot be determined based on the available data. The second opportunity concerns accelerating the procedure before the Council of State, particularly the time taken to reach a ruling. Given that the procedure took place over 20 years ago, this lead time can serve as a benchmark for resent procedures.

Phase 2 - Part 3: Land-Use Plan II

The period between the irrevocability of land-use plan I and that of land-use plan II took 144 months. To facilitate a more comprehensive analysis, it can be structured into three distinct sections. The first section, covering the period from the irrevocability of land-use plan I to the preliminary announcement of its revision, spanned 103 months. A subsequent 22-month period was required for the adoption of land-use plan II and the accompanying exploitation plan. The final phase involved the land-use plan II becoming irrevocable through a procedure before the Council of State, which lasted 19 months.

Phase 2 - Part 3.1: Incentive Land-Use Plan II

The first 103 months after land-use plan I became irrevocable were dedicated to political discussions regarding the development location to settle. The exact underlying reasons are not directly relevant to this thesis. Due to internal goals set by municipal executives had an incentive for development the land-use plan, by the time it was decides to continue the implementation the land-use plan,, its validity had expired. As the land-use plan must remain within a validity period of ten years to be considered executable, in accordance with the Spatial Planning Act (Wro).

The period illustrates how lead times may be affected by factors deriving from political dynamics as well as from legal and regulatory frameworks.

Phase 2 - Part 3.2: Adoption Land-Use Plan II - Municipality

The second section focuses on the adoption of the land-use plan and the exploitation plan. This 22-month period can be divided into three segments. The first segment, which lasted 11 months, entailed the drafting of the preliminary version of the land-use plan, during which four studies were conducted. The second segment, lasting 8 months, was dedicated to preparing the draft version of land-use plan II and the exploitation plan, during which seven additional studies were completed. Both drafts received only one formal objection. The final segment, spanning 3 months, was devoted to the adopting of land-use plan II and the exploitation plan. During the 3 months, two supplementary studies were submitted to support the finalization of both plans.

By implementing a phased approach to land-use plan design, involving both pre-draft and draft stages, the municipality aimed to facilitate stakeholder participation. Nevertheless, this approach did not prevent stakeholders from submitting formal objections. Whether the absence of this method would have resulted in a greater number of objections cannot be determined based on the available data.

Potential acceleration in this part could be achieved by improving the planning of the required studies. The interval between the submission of the first and last report was 12 months.

Phase 2 - Part 3.3: Appeal land-use plan II - Council of State

After the adoption of land-use land II and the exploitation plan by the municipal council, an appeal was lodged with the Administrative Jurisdiction Division of the Council of State. The procedure, including the objection period, lasted 19 months. The appellants, including local residents and a developer from an later phase, argued that the "Yasmijn" land-use plan and exploitation plan infringed upon their interests. Their objections included the enclosure of their homes, an unreasonable requirement for 30% social housing, an undervaluation of land, and a disproportionate allocation of costs. The appellants lost the case, as the Council of State ruled that the land-use plan was reasonable and lawful. However, the exploitation

plan had to be partially revised due to incorrect valuations and insufficient transparency in the cost calculation.

To expedite the process of making the land-use plan and exploitation plan irrevocable, their adoption could have been pursued through two separate procedures. Combining both plans, however, can save time and resources and might have been necessitated by limited capacity. If an appeal is lodged, it impacts both plans. Another potential acceleration could be achieved within the Council of State procedure, for instance, by streamlining the process leading to a ruling.

Phase 3 - Detailed Land-Use Plan

Phase 3, spanning the period from the irrevocability of the land-use plan to the irrevocability of the detailed land-use plan, lasted 27 months. The phase can be divided into two parts. The first part involved the drafting of the detailed land-use plan, which lasted 20 months. The second part consisted of the plan's adoption and its becoming irrevocable, requiring 7 months. Figure 4.6 illustrates the number of months required to reach the key milestones in Phase 3.

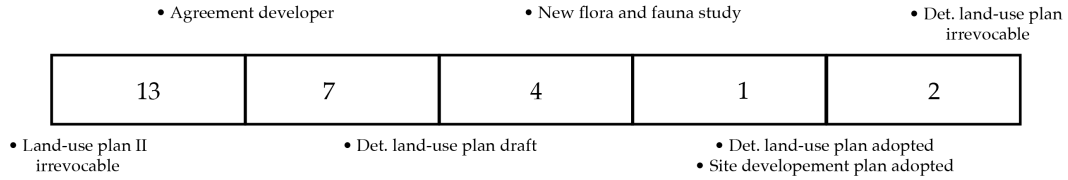


Figure 4.6.: Visualization of activities and their durations within Phase 3, 'Yasmijn'.

Phase 3 - Part 1: Draft - Detailed Land-Use Plan

After land-use plan II became irrevocable, it took 20 months to develop the draft detailed land-use plan. During this period, four studies were conducted to support the preparation of the detailed land-use plan, and a collaboration agreement was signed between developers. A view was submitted with respect to the detailed land-use plan, but it did not lead to any modifications

Acceleration may be achieved by delivering the reports earlier, which can be achieved through improved planning. Either by initiating the preparatory reports at an earlier stage or by adopting a parallel approach. Since the reports were submitted by different departments within the same organization, it is assumed that no delays were encountered in their preparation.

Phase 3 - Part 2: Irrevocable - Detailed Land-Use Plan

After the publication of the draft detailed land-use plan, three additional studies were conducted within a period of 4 months. These included an addendum to the flora and fauna study due to changes in regulations. In the same period the approval for an increase in permissible noise levels under the Noise Abatement Act (Wgh), was granted. The detailed land-use plan was adopted in the subsequent month and became irrevocable within the legally prescribed period.

A potential optimization during this period could involve submitting the required reports earlier and obtaining approval for the noise level increase at an earlier stage, as this approval had already been granted in 2001.

Phase 4 - Environmental Permit

Phase 4 covers the period from the moment the detailed land-use plan became irrevocable to the moment at which the first environmental permit became irrevocable. The phase lasted 13 months and can be divided into two parts: 9 months until the permit applications was submitted and 4 months until the permits became irrevocable. Figure 4.7 illustrates the number of months required to reach the key milestones in Phase 4.

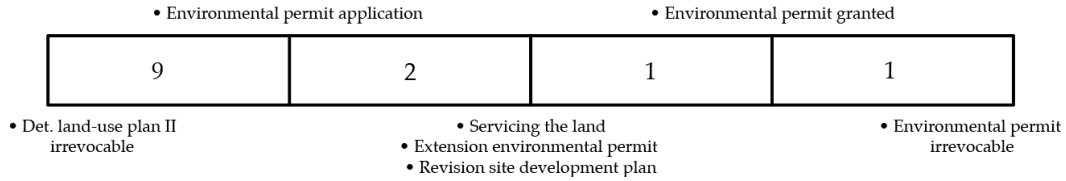


Figure 4.7.: Visualization of activities and their durations within Phase 4, 'Yasmijn'.

Phase 4 - Part 1: Application - Environmental Permit

The first 9 months of the phase are explained by the delay in submitting the permit application. Multiple permits related to groundwork activities were requested and approved within this time frame. Identifying the precise cause of the nine-month delay in applying for the environmental permit proves challenging with the data available. A plausible explanation is the need for this period to finalize the new exploitation plan, which was adopted 2 months after the environmental permit application. To accelerate this process by revising the site development plan at an earlier stage.

Phase 4 - Part 2: Irrevocable - Environmental Permit

2 months after the permit application, an extension decision was issued. Which likely resulted from the need for additional documentation or clarification. At the same moment the developer initiated land servicing activities and published the revision of the site development plan. The permit was granted one month after the extension decision's publication and became irrevocable in the following month.

A minor optimization could involve finalizing the permit approval without requiring an extension decision. Scheduling a preliminary consultation with the municipality to discuss the application in advance may help prevent such delays.

Phase 5 - Site Preparation

Phase 5, spans from the irrevocable environmental permit to the start of construction. Which is the shortest phase in the analyzed phase, lasting 0 months. The contractor began foundation work immediately after the permit became irrevocable. Figure 4.8 illustrates the number of months required to reach the key milestones within Phase 5.

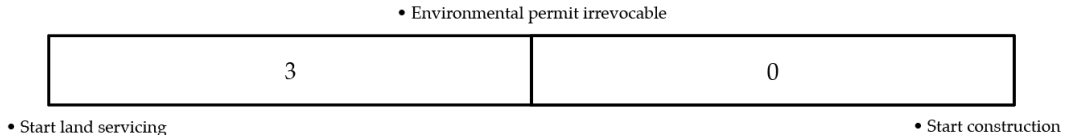


Figure 4.8.: Visualization of activities and their durations within Phase 5, 'Yasmijn'.

Construction work began immediately after the environmental permit became irrevocable, representing the most efficient approach possible. Preparatory activities conducted earlier in Phase 4 made this rapid commencement possible.

The ability to begin construction at the same time as the permit's becomes irrevocable highlights a strong example of process optimization. Dependence on the schedules and coordination of third parties, however, remains a risk the developer cannot control.

4.2.3. Expert Interview

In this section, the project's timeline is analysed through interviews with key individuals directly involved in the development process. By incorporating perspectives from both the developer and the municipal authority, the interview provides a comprehensive understanding of the activities that influenced the project's duration. A summary of the key activities is presented for each interviewee, while the full interviews are included in the Appendix F and G.

Municipality

The interviewee served as a project manager within the municipality and has been closely involved in the development since 2015. Since then, the municipality has devoted additional attention to the project's progress in order to meet internal goals.

Positive - Influences

- **Visual Quality Plan**: The developer presented a visual quality plan consistent with the legal framework.
- **Attention/Focus**: The municipal project team was closely involved in shaping the development, which positively contributed to the project's lead time in various aspects.
- **Collaboration**: The transparent and constructive cooperation between both parties accelerated the decision-making process.

Negative - Influences

- **Land policy**: The three different land policies—active, facilitating, and passive—made it challenging to align all landowners.
- **Soil properties**: During the excavation of the watercourse, a significant portion of the sand was found to be unsuitable for reuse within the area. This led to additional investigations, which revealed that a soil layer needed to be removed, causing a slight delay.

- **Administrative and legal procedures**: Their negative impact was evident at multiple stages of the project, particularly in the initial phase. Ans mainly involved public objections, appeals, and legal proceedings.
- **Changes in legislation and regulations**: Such changes led to a revision of the business case, including the need for new studies and the renewal of agreements.
- **Changes in political composition**: These changes influenced the priorities of the political agenda and policy objectives.

Summary

When concluding the the project's timeline, the development period can be divided into two phases. Before 2015, the process progressed slowly, primarily due to administrative and legal procedures. The potential for acceleration during this period was largely determined by external factors, which were difficult to influence under the prevailing policies in the Netherlands at the time.

After 2015, with the land-use plan having become irrevocable, the development process proceeded significantly more efficiently within the applicable legal frameworks. While further acceleration might have been possible had certain aspects of the soil conditions been better understood, the potential time savings would have been minimal, estimated at only one to two weeks, and would therefore not have resulted in a substantial reduction of the overall lead time.

Notably, factors that positively influenced the timeline were primarily internal processes that could be controlled by the project team. In contrast to, factors that negatively impacted the timeline were often external, such as changes in legislation and regulations, political decisions, and unforeseen soil conditions.

Developer

The interviewee served as a project developer within the development company, which later became part of the consortium, and was involved in the process from the early 2000's onward

Positive - Influences

- **Collaboration**: The transparent and constructive cooperation between both parties accelerated the decision-making process.

Negative - Influences

- **Administrative procedures**: A long period past before a decision was made to initiate the development. As a result, the project was put on hold for several years.
- **Legal procedures**: During the adoption of both land-use plans, procedures were followed before the Administrative Jurisdiction Division of the Council of State. Primarily a concern of the municipality, due to the land policy.

Summary

When summarizing the project's timeline, it can be divided into two phases. The first phase concerns the decision on the renewal of the land-use plan, during which the process progressed slowly, primarily due to administrative procedures. The municipal executives did

not reach a decision to initiate the development detailed land-use plan, despite multiple requests from the developer. A potential acceleration during this period could have been achieved through greater political consensus on residential development.

Followed after the decision on the development, the land-use plan had to be redrafted due to expiration, leading to an appeal procedure. However, after the ruling, the further elaboration of the project progressed rapidly. Despite the appeal procedure, this second phase was significantly faster than the first. A potential acceleration could have been achieved by making an earlier decision on the development, which might have prevented the need to renew the land-use plan and possibly also the appeal procedure.

Throughout the development process, internal process management contributed positively to the project's timeline. However, these positive contributions did not outweigh the negative impacts on the timeline. These were beyond the developer's control and related to administrative and legal procedures.

4.2.4. Conclusion - Yasmijn

By concluding the case study 'Yasmijn', the activities identified are outlined per phase and categorised according to the influencing factors described in Chapter 4.1.2. Additionally, it is indicated whether each activity had a positive or negative impact on the project's lead time.

The analysis reveals that the most significant negative impacts occurred during Phases 2 and 3. These primarily concerned external factors beyond the project team's direct control, allowing only for proactive anticipation. In addition to the project team's efforts, the elimination of the land-use plan adoption procedure by the provincial executive had a positive influence on the project's lead time.

In the final two phases, both negative and positive activities were observed, originating from within the project environment. However, their impact on the overall lead time was limited, as the project team was able to anticipate them. Phase 5, in particular, illustrates how the developer's proactive mindset enabled solutions to be identified, including the use of project phasing to accelerate the process.

To further substantiate the findings presented above, each phase is explained in more detail below.

Phase 2 - Land-Use Plan

The lead time of Phase 2 was severely delayed, primarily due to not going forward on the elaboration of the land-use plan, despite multiple requests from the developer. Changes in the political composition eventually led to the plan's elaboration. However by that time the land-use plan had expired and had to be redrafted. Which resulted in a second procedure at the Administrative Jurisdiction Division of the Council of State. Additionally, the diverse land policies presented a challenge in satisfying all landowners.

Influence	Activity	Factor	Interview	Analysis
-	Provincial Executive adoption of the land-use plan	AP	-	I
-	Council of State procedure on the land-use plan I	PCA	II	I
-	Expiration of the land-use plan I	AD	II	I
-	Council of State procedure on the land-use plan II	PCA	II	I
-	Diversified land policy on project site	LP	I	-
+	Change in political composition	AP	I	I
+	Focus of the municipal project team	PT	I	-

Figure 4.9.: Key activities influencing the lead time within Phase 2, 'Yasmijn'.

Phase 3 - Detailed Land-Use Plan

Phase 3 was influenced both negatively and positively. The positive effects were primarily identified through interviews, which revealed that the municipal project team aimed to complete the process of the detailed land-use plans as efficiently as possible within the legal framework. However, this goal was delayed by changes in legislation, requiring the renewal of research.

Influence	Activity	Factor	Interview	Analysis
-	Regulatory changes related to spatial planning	LF	II	I
-	Coordination of research planning	PT	-	I
+	Collaboration, Municipality project team and developer	PT	II	-
+	Completed visual quality plan by the developer	PT	I	-
+	Focus of the municipal project team	PT	I	-

Figure 4.10.: Key activities influencing the lead time within Phase 3, 'Yasmijn'.

Phase 4 - Environmental Permit

Phase 4 was influenced both positively and negatively by project-related activities. The negative impact involved additional excavations due to poor soil conditions. However, this had no significant effect, as the work was carried out in parallel with other ground works. Additionally, the land exploitation did not cause delays, as it belonged to a different phase. Due to proactive project management applied potential negative impacts have been mitigated.

Influence	Activity	Factor	Interview	Analysis
-	Unidentified LPound characteristics	PB	I	-
-	Completion of the land exploitation plan	LP	-	I
+	Collaboration, Municipality project team and developer	PT	II	-
+	Project phasing	PT	II	I

Figure 4.11.: Key activities influencing the lead time within Phase 4, 'Yasmijn'.

Phase 5 - Site Preparation

In Phase 5, the positive influences resulted from project phasing. By completing land servicing in Phase 4 and aligning the permit application process, construction could begin immediately after the permit became irrevocable.

Influence	Activity	Factor	Interview	Analysis
+	Project phasing	PT	II	I

Figure 4.12.: Key activities influencing the lead time within Phase 5, 'Yasmijn'.

Based on the first case study, activities with a significant negative impact occur in Phases 2 and 3. These are primarily external factors beyond the project team's direct control, allowing only for proactive anticipation. In addition to the project team's efforts, the elimination of the process of adoption the land-use plan by the provincial executive positively influenced the lead time .

In the final two phases, both negative and positive activities were observed, originating within the project environment. However, their impact on the overall lead time was minimal, as the project team could anticipate them. Phase 5 shows that developers pro-active mindset seek solutions to accelerate the process through project phasing.

4.3. Case Study - Lotus

The development project 'Lotus' is located on the outskirts of the village centre of De Rijp, adjacent to the provincial road and near the Natura 2000 area. De Rijp is located in the province of South Holland. The village had its own municipal administration until 2019, when it merged with the municipality of Meerhout.

The origins of the project date back to 2007 when former alderman Hertogh initiated efforts to create additional housing. In 2010, the development of 'Lotus' was incorporated into the structural vision, which emphasized the need for housing for both starters and the elderly. Based on this vision, a new land-use plan came into effect in September 2013. The plan provides the spatial and legal framework for the development, aiming to deliver a diverse range of housing for various target groups. To achieve this, existing sports fields had to be relocated, and the available space needed to be utilized more efficiently while ensuring seamless integration between existing and new structures.

The development includes the construction of 130 homes, a supermarket, and a healthcare centre, divided into four phases. Of these homes, 18 are designated as social rental housing for the housing association. In 2016, a purchase and collaboration agreement was signed between the municipality and the developer, which is responsible for the project's execution. An addendum to the agreement was added in 2018, and later that year, the detailed land-use plan for 98 of the 130 homes was approved. For the remaining 32 homes, as well as the healthcare centre and supermarket, a separate land-use plan with detailed planning rules was drafted in 2021, covering both the southern and northern sections of the project. Figure 4.13 presents an overview of the project location.

Figure 4.13.: Overview of the project location, 'Lotus'

4.3.1. Timeline

The total development of the project took 135 months, measured from the adoption of the structural vision to the start of the first phase of construction. Figure 4.13 presents an overview of the timeline for the development of Phases 2 through 5, as defined in Figure 3.2. A detailed timeline is provided in Appendix B.

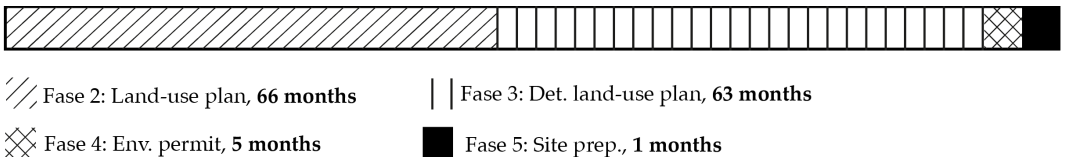


Figure 4.14.: Project timeline segmented by analyzed process phases, 'Lotus'

Notable Observation

Based on the detailed timeline in Appendix B, several activities have been identified that may influenced the project's timeline. These are outlined below:

- **Dutch Noise Abatement Act**: Establishing higher permissible noise limits due to exceeded maximum dB levels, stated in Dutch Noise Abatement Act (Wet geluidhinder, Wgh).
- **Flora and fauna assessment**: The ecological assessment had to be redone due to the introduction of the new Nature Conservation Act (Wnb).
- **Supermarket**: The developer had to secure a new operator for the supermarket.
- **Addendum to the agreement**: The collaboration agreement between the developer and the municipality was amended through an addendum to accommodate changes in the housing market.
- **Additional land-use plan**: The visual quality plan conflicted with certain provisions of the applicable land-use plan. As a result, a new land-use plan with detailed planning rules was drafted to support the desired development, including 32 homes and the supermarket.

4.3.2. Analysis

The goal of the timeline analysis is to identify bottlenecks and opportunities for process improvement within each phase, as outlined in Figure 4.1. By presenting the main activities within the analysed phases in a Gantt chart, as shown in Figure 4.15, the visualization supports the identification of potential areas for optimization within phases, as well as areas where acceleration has already occurred.

Activities	Duration months	Begin month	End month
Phase 2	66	0	66
Drafting land-use plan I	60	0	60
Adoption land-use plan I	3	60	63
Irrevocability land-use plan I	3	63	66
Decision land-use plan I	1	101	101
Pre-draft land-use plan II	22	101	123
Drafting land-use plan II	40	123	163
Adoption land-use plan II	3	163	166
Irrevocability land-use plan II	2	166	168
Phase 3	63	66	129
Design det. land-use plan	55	66	121
Adoption det. land-use plan	6	121	127
Irrevocability det. land-use plan	2	127	129
Phase 4	3	131	134
Application env. permit	0	131	131
Granted env. permit	2	131	133
Irrevocable env. Permit	1	133	134
Phase 5	4	131	135
Servicing the land	4	131	135
Start realisation	1	134	135

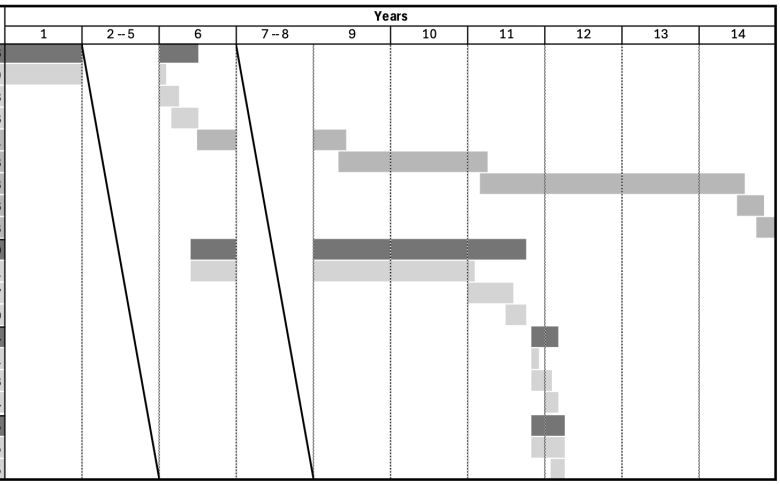


Figure 4.15.: Gantt chart illustrating the analyzed project lead time, 'Lotus'

Phase 2 - Land-Use Plan

Phase 2 concerns the development of the irrevocable land-use plan. During the project two procedures where followed; one for a standard land-use plan, second one with implementation rules. so a second detailed land-use plan was not needed. The reason for this approach was that the visual quality plan conflicted with certain provisions of the prevailing land-use plan.

The formation of the land-use plan can be divided into two main parts. The first part lasted 66 months and focused on making land-use plan I irrevocable. The second part spanned 92 months and resulted in the irrevocability of land-use plan II, which included detailed planning rules. Figure 4.16 presents the number of months required to reach the key milestones in Phase 2.

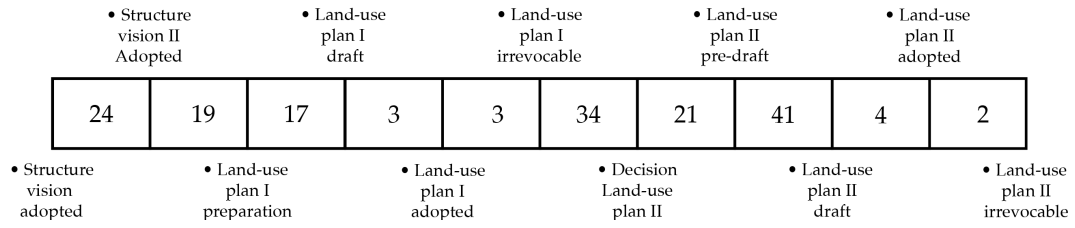


Figure 4.16.: Visualization of activities and their durations within Phase 2, 'Lotus'.

Phase 2 - Part 1 - Land-Use Plan I

The establishment of land-use plan I was essential for the realization of the first two realisation phases of the project. The procedure spanned a total of 66 months and can be divided into three sections.

The first section, lasting 43 months, involved decision-making by the municipal council concerning the conceptual development. The subsequent 17 months were devoted to drafting

the design of land-use plan I. The final section, in which the plan was formally adopted and became irrevocable, took 6 months.

Phase 2 - Part 1.1: Preparation – Land-Use Plan I

The first section of 43-month, followed on the adoption of the structural vision in 2008, and was dedicated to drafting a revised structural vision (2011) and conducting a comprehensive urban planning study. The 2011 structural vision reaffirmed the development plans for the location, explicitly referring to the 2008 structural vision as the starting point for the village's restructuring. The exact reason for drafting a new structural vision cannot be determined based on the available data.

Developing the second structural vision took 24 months, accounting for the largest portion of the 43-month period. The following 15 months were spent on the urban planning study. Ultimately, the municipal council selected Variant 2 as the preferred approach for the urban study implementation. Four months after the decision of Variant 2, the council decided to initiate the preparation of land-use plan I.

A significant acceleration in this section could have been achieved by starting the urban planning study earlier and excluding the second structural vision. The exact motives behind drafting the second structural vision cannot be directly inferred from the available data, though a political rationale may have played a role. Leaving out the second structural vision could have resulted in reducing the timeline by, 24-months.

Phase 2 - Part 1.2: Draft - Land-Use Plan I

During the 17-month between the preliminary decree on the land-use plan and the publication of its draft, three studies were conducted regarding the land-use plan. The first study was not delivered until 12 months after the decision to proceed with preparations.

Acceleration could have been achieved by conducting the studies at an earlier moment, as the first site visit took place 10 months after the decision to initiate preparations. However, determining the exact time savings remains challenging, since preliminary research was also required. Beyond this, significant acceleration does not appear feasible. A comparison between the public review date of the preliminary land-use plan and the submission date of the final study shows a difference of only seven days, suggesting that the final report had only a limited impact on the draft version.

Phase 2 - Part 1.3: Irrevocable – Land-Use Plan I

The period between the public review of the design land-use plan and its irrevocability lasted 6 months. Within this time span, two additional studies were conducted to complete the plan. In addition, the ministry granted an exemption from a provision under the Flora and Fauna Act (Wnb).

Several views were submitted during the public review of the design land-use plan, resulting in minor modifications. Three months after the review period, the plan was adopted, and after another 3 months, it became irrevocable. The total processing time exceeded the legally prescribed period, though no clear explanation for this delay can be determined based on the available data.

A significant acceleration within this period does not appear feasible. The interval between adoption and the plan becoming irrevocable might have been shortened, but the reasons for the delay the remains unclear.

Phase 2 - Part 2: Land-Use Plan II

The second part of Phase 2 spans the period from the moment land-use plan I became irrevocable to the moment land-use plan II attained irrevocable status. This period lasted a total of 102 months and can be divided into four sections. The first section, lasting 34 months, involved decision-making on the implementation of a second land-use plan. This was followed by a 21-month period dedicated to drafting the preliminary design. The next section, spanning 41 months, focused on preparing the draft land-use plan. Finally, the plan became irrevocable after 5 months.

Phase 2 - Part 2.1: Decision – Land-Use Plan II

The 34 months between land-use plan I becoming irrevocable and the decision on the land-use plan II can be divided into two segments. Important to note is that land-use plan II with detailed planning rules, eliminating the need for a detailed land-use plan.

The first segment, lasting 29 months, ended with the signing of the purchase and cooperation agreement between the municipality and the developer. During this period, five studies were conducted for the detailed land-use plan, which were also applied to land-use plan II. The reports were delivered between the 4th and 24th month of this segment.

The second segment, spanning 5 months, began with the presentation of a visual quality plan by the developer. This plan prompted several submissions, though these did not result in substantive changes. Also, a participation meeting was held to involve local residents in the development process. The phase concluded with the municipal council's decision to proceed with drafting land-use plan II, as the visual quality plan conflicted with the regulatory framework for phases 3 and 4 of the land-use plan.

Acceleration in the first segment may have been possible by aligning the delivery dates of the studies. Despite their interdependence, a more structured schedule could have resulted in time savings of up to 7 months. Although, the actual acceleration remains uncertain, as this part of Phase 2 also involved negotiations and the finalisation of the purchase and cooperation agreement. For the second segment, earlier decision-making regarding the development of land-use plan II might have shortened the lead time. Nevertheless, this proved challenging, as further development planning required time, and a deliberate and careful approach was prioritised.

During this section, Optimizations also was realized though the utilization of the studies for the detailed land-use plan and land-use plan II.

Phase 2 - Part 2.2: Pre-Draft – Land-Use Plan II

The second section spans the period from the decision on land-use plan II to the publication of its pre-draft. During this time, activities related to both the detailed land-use plan and land-use plan II were conducted.

For the detailed land-use plan, efforts focused on the adoption of the visual quality plan and the completion of three studies. For land-use plan II, research was conducted to assess the feasibility of an informal Environmental Impact Assessment (EIA). A draft of the second visual quality plan was also presented. In addition, five studies were completed, three of which supported the developer of the detailed land-use plan.

Identifying possible acceleration within this section is challenging, as the various parties worked simultaneously on both the detailed land-use plan and land-use plan II. However,

optimizations were achieved by applying the studies to both plans, potentially accelerating the lead time of the project.

Phase 2 - Part 2.3: Draft – Land-Use Plan II

The 41 months time frame between the pre-draft and the draft land-use plan II, six additional studies were conducted, three of which had to be revised compared to the detailed land-use plan due to expiration. During this period, it was also decided that the development was exempt from an environmental impact assessment, and the draft decision on higher noise limits under the Noise Abatement Act (Wgh) was made available for public consultation. Furthermore, the province objected to the inclusion of an 850 m² non-residential space, as it did not align with their policy.

A significant acceleration is possible within this section, particularly because several studies had to be repeated. If the draft land-use plan had been made available for public consultation earlier, renewing these reports might not have been necessary. Additionally, earlier coordination with the municipality regarding the non-residential space could have expedited the process. However, available data indicate that the developer primarily focused on the initial phases of the project during this period. This appears to have been a deliberate choice, as the available capacity of both the developer and the municipality could only be allocated once. Interviews may provide further insights into the process.

Phase 2 - Part 2.4: Irrevocable – Land-Use Plan II

The six-month period between the public review of the draft land-use plan and its irrevocability can be divided into two segments. The first segment, spanning 4 months, was dedicated to addressing the submitted views, although these did not result in any modifications to the plan. During this time, the updated Natura 2000 study was published, as the previous version had become outdated. Additionally, approval was received for higher noise limit values under the Noise Abatement Act (Wgh). The municipal council subsequently adopted the land-use plan.

The second segment began after the statutory period had elapsed, at which point land-use plan II became irrevocable. In both segments, no significant acceleration was considered feasible.

Phase 3 - Detailed Land-Use Plan

Phase 3, concerns the development of the irrevocable detailed land-use plan, spanned 63 months. During this period, both land-use plan II and the detailed land-use plan were developed. However, this section focuses exclusively on the timeline of the detailed land-use plan. And can be divided into three main parts. The first part, lasting 29 months, involved the establishment of the purchase and cooperation agreement between the municipality and the developer. This was followed by a 24-month period dedicated to drafting the detailed land-use plan. In the final part, which lasted 10 months, the plan became irrevocable. Figure 4.17 presents the number of months required to reach the key milestones in Phase 2.

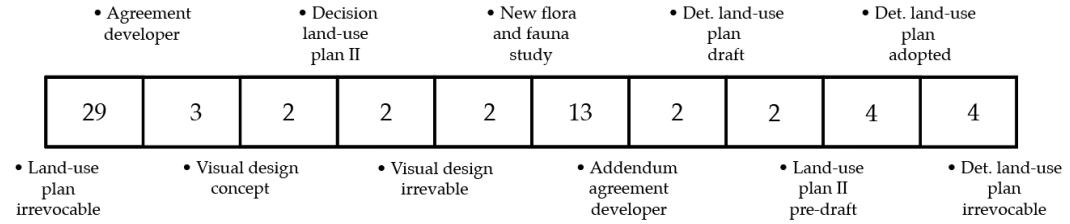


Figure 4.17.: Visualization of activities and their durations within Phase 3, 'Lotus'.

Phase 3 - Part 1: Agreement – Developer & Municipality

After the adoption of the land-use plan, a time span of 29 months was required to reach an agreement between the developer and the municipality. During this period, the municipality conducted five studies concerning the development of the detailed land-use plan. Four of these studies were interdependent and focused on soil-related aspects. The reports were delivered over a 20-month period. Simultaneously, negotiations took place between the developer and the municipality regarding the purchase and cooperation agreement. As the start date of the negotiations is unknown, the potential for acceleration cannot be evaluated.

Acceleration in the first part of Phase 3 could have been achieved by better aligning the delivery of the study reports. A more coordinated schedule might have resulted in time savings of approximately 7 months. One optimisation undertaken by the municipality was the early initiation of essential studies for the detailed land-use plan, prior to the signing of the agreement with the developer.

Phase 3 - Part 2: Draft – Detailed Land-Use Plan

The 24 months period following the agreement between the developer and the municipality was dedicated to drafting the draft detailed land-use plan. This period can be divided into two sections. The first section, lasting 7 months, focused on the adoption of the visual quality plan as irrevocable. The second section, spanning 17 months, was dedicated to the development of the draft detailed land-use plan.

Phase 3 - Part 2.1: Irrevocable – Visual Design

The first section, lasted seven-month period required to render the visual quality plan irrevocable can be described as follows. In the first 3 months, the developer and the architect presented the draft visual quality plan. Two views were made, however, these did not lead to any modifications. To ensure community involvement, a public participation was organized 2 months after the reviewing period, allowing residents to provide input on the final design.

Acceleration within this section appears challenging, as developing a suitable visual quality plan requires significant resources and careful coordination.

Phase 3 - Part 2.2: Draft – Detailed Land-Use Plan

During the 17-month followed after the irrevocability of the visual quality plan, the municipality commissioned six new studies to the development of the detailed land-use plan. One of these studies concerned the flora and fauna assessment, which had to be renewed due to expiration.

In addition to these activities, the developer and the municipality signed an addendum to the original agreement to revise the design principles and project phasing in response to developments in the housing market. One month after signing this agreement, the draft detailed land-use plan was made available for public consultation.

Acceleration within this section could have been achieved through a more efficient execution of the studies. The most time-consuming process was the 12 months required to renew the flora and fauna assessment. Stakeholders were aware that this study would expire. If a finalized detailed land-use plan had been completed earlier, this renewal might have been avoided. Additionally, the study itself could have been conducted sooner.

Further acceleration could have been achieved by conducting the remaining studies in parallel with the flora and fauna assessment, potentially saving 5 months. The municipality had already implemented some optimization by applying certain studies to both the detailed land-use plan and land-use plan II.

Phase 3 - Part 3: Irrevocable – Detailed Land-Use Plan

The final 10 months of the Phase 3 were dedicated to making the detailed land-use plan irrevocable, and can be divided into two sections.

The first section, spanning 6 months, focused on processing the submitted views on the draft plan. Additionally, a positive recommendation was issued regarding the increase in noise limit values. At the same time as the adoption of the detailed land-use plan, the municipal council also approved these higher limits.

The second section, lasting 4 months, was required for the plan to become irrevocable. This period exceeded the legally prescribed time frame, though no clear explanation can be derived from the available data. During this interim period, the sale of Phase 1 commenced, with the developer confident that the plan would be declared irrevocable.

Acceleration could have been achieved within the first section, as the submitted views led only to minor technical adjustments. Faster processing of these changes could have saved up to 2 months. Additionally, the period for the plan to become irrevocable was relatively long. Since no legal proceedings were initiated, this period should have been limited to approximately 1.5 months. Interviews will be conducted to clarify the reason for this discrepancy.

Phase 4 - Environmental Permit

Phase 4 spans the period between the adoption of the irrevocable detailed land-use plan and the approval of the first irrevocable permit application, with a total duration of 5 months. Figure 4.18 presents the number of months required to reach the key milestones in this process.

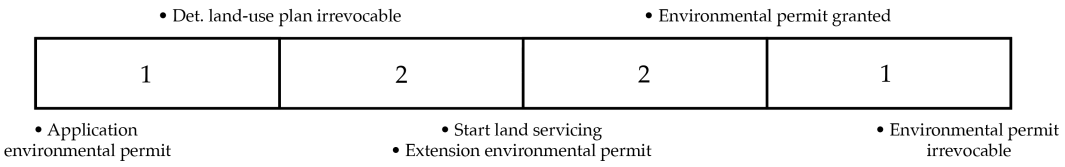


Figure 4.18.: Visualization of activities and their durations within Phase 4, 'Lotus'.

The developer submitted the application for the environmental permit for the first construction phase shortly before the detailed land-use plan became irrevocable. However, the exact date remains unknown, as the notification was not published in the Staatscourant, possibly due to the merger of the two municipalities.

Upon reviewing the submitted permit, the municipality found that certain information was missing, preventing a complete assessment. To allow the missing data to be provided within the same application, the municipality issued a decision to extend the review period.

Following the submission of the missing documents, the permit was granted 2 months after the extension decision and became irrevocable after the legally prescribed period. In the same period, the developer commenced servicing the land.

The incomplete submission of the permit led to the extension decision, which might have been avoided had the application been reviewed by the municipality at an earlier stage. However, it possible that the deficiency in the permit was identified during a more thorough assessment. A timely review could have resulted in a two-month acceleration.

Phase 5 - Site Preparation

Phase 5 corresponds to the period described in 4.1. This is the shortest phase in the entire process, with a duration of only one month. Figure 4.19 presents the number of months required to reach the key milestones in this process.

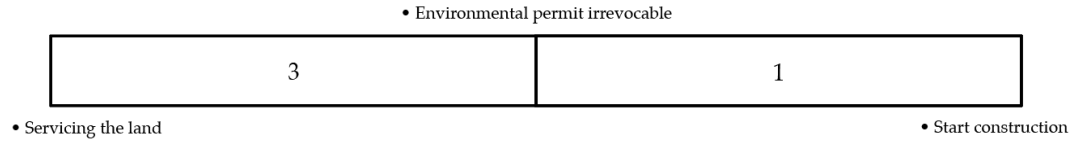


Figure 4.19.: Visualization of activities and their durations within Phase 5, 'Lotus'.

By initiating land servicing work during Phase 4, the development could begin one month after the permit became irrevocable. The reduction of the phase's duration was due to a well-coordinated schedule with subcontractors.

Further acceleration could have been achieved if the permit had been granted immediately in Phase 4. The developer efficiently utilized the available time by carrying out preparatory work in advance. Which contributed to a shorter duration and a more efficient progression of the Phase 5.

4.3.3. Expert Interview

In this section, the project's timeline is analysed through interviews with key individuals directly involved in the development process. By incorporating perspectives from both the developer and the municipal authority, the interview provides a comprehensive understanding of the activities that influenced the project's duration. A summary of the key activities is presented for each interviewee, while the full interviews are included in the AppendixH and I.

Municipality

The interviewee served as a project manager within the municipality and has been closely involved in the development since 2019. The municipality has established a project office for spatial projects.

Positive - Influences

- **Project phasing**: Allowed various complications to be resolved along the way, preventing delays during the development of the detailed land-use plan.
- **Stakeholder participation**: Through participation with local residents, the developer was able to prevent an appeal procedure against detailed land-use plan.
- **Consultancy Firm**: Which ensured that more knowledge and resources were available to address technical and administrative complications, thereby minimizing additional delays and costs.
- **Responsibility**: By taking responsibility to meet housing objectives, the municipality actively contributed to resolving complications that did not formally fall under its responsibility within the land policy.

Negative - Influences

- **Technical and administrative complications**: The project location presented several complex factors that made development challenging. The combination of the nearby provincial road, the adjacent Natura 2000 area, and the high groundwater level led to various complications, both technically and administratively.
- **Changes in legislation and regulations**: The revision of nitrogen policy required an adjusted approach for the realization of the second part of the project. Previously, a nature permit under the Nitrogen Registration System (Stikstofregistratiesysteem, SSRS) could be used to achieve a feasible solution within the applicable regulations.
- **Urban development plan**: There was no comprehensive elaboration of the entire planning area. Instead, due to uncertainties regarding the realization of part of the area, a phased approach was adopted. What required additional time and effort from the municipal project team.
- **Land policy**: Various project characteristics, combined with a passive land policy, led to multiple complications that could have been partially prevented through an active land policy. As a result, the municipal project organization actively supported the development, although this came at the expense of other projects.

Summary

The project's timeline can be divided into two phases, by the development of land-use plan I and II. The overall progress of the development proceeded smoothly. However, the approach to the urban development plan should have been structured differently. The adopted urban development plan did not comply with the detailed land-use regulations. As a result, a new land-use plan had to be drafted, leading to the project's division into two parts.

The phase of the land-use plan progressed relatively quickly, despite technical and administrative complications. Issues concerning local residents were deferred to the development of land-use plan II, where they were addressed through public participation. As a result, appeals against the detailed land-use plan were prevented. In contrast, the second phase of the project experienced moderate progress due to changes in policy regulations, particularly

concerning nitrogen. Additional time was required to resolve technical and administrative complications.

Factors that positively influenced the project's timeline were primarily internal, such as stakeholder participation and project phasing. Factors that had a negative impact were both internal and external. Internal factors included conflicts and the complexity of the project location, while external factors involved legislative changes and the administrative process.

Developer

The interviewee holds the position of developer within the development company. The developer purchased the land from the municipality and has since been closely involved in the further implementation of the project.

Positive - Influences

- **Merger of municipalities**: The unification of the two municipalities provided additional expertise in resolving various complications.
- **Participation**: Through engagement with local residents, we as developers were able to prevent an appeal procedure against detailed land-use plan.
- **Collaboration**: The transparent and constructive cooperation between both parties ensured flexibility in the implementation process.

Negative - Influences

- **Visual quality plan**: The visual quality plan was found to be inconsistent with the detailed planning rules of the applicable land-use plan, requiring a new land-use plan for part of the project. This significantly complicated and prolonged the implementation.
- **Changes in laws and regulations**: Due to various amendments during the implementation period, particularly while drafting the second land-use plan, several aspects had to be revised. This led to additional time and costs.

Summary

The overall project duration was considerably long, partly due to technical and administrative complications. Since a second land-use plan had to be drafted, various regulations had changed in the meantime, making it complex to realize the project within the legal framework.

By deciding to draft a second land-use plan, an appeal procedure against the detailed land-use plan of the first land-use plan was prevented through participation with local residents, resulting in significant time savings. Due to the prolonged process, the housing market situation also changed, which was anticipated in collaboration with the municipality.

Several factors negatively impacted the project's duration during implementation. These were primarily external issues, supplemented by some internal technical complications. Due to the proactive approach of both the municipal and the developer's project teams, internal technical complications were addressed during the project's phasing. This helped prevent major delays or further disruptions. In addition, external factors were minimised through the proactive efforts of both parties.

4.3.4. Conclusion - Lotus

By concluding the case study 'Lotus', the activities identified are outlined per phase and categorised according to the influencing factors described in Chapter 4.1.2. Additionally, it is indicated whether each activity had a positive or negative impact on the project's lead time.

The analysis reveals that the negative impacts on the project's lead time primarily stemmed from external factors during Phases 2 and 3. In addition, several negative internal influences were identified during these phases. The complications that contributed to these delays emerged during the elaboration of the detailed land-use plan and land-use plan II. The late discovery of these issues suggests that insufficient preliminary research had been conducted on the project location. Many of the delays could potentially have been avoided through the implementation of an alternative land policy.

Despite these setbacks, Phases 2 and 3 also demonstrated positive internal influences, particularly resulting from the proactive approach of the project team in mitigating negative effects. In Phases 4 and 5, the project's lead time was positively influenced by internal factors, primarily due to the application of project phasing.

To further substantiate the findings presented above, each phase is explained in more detail below.

Phase 2 - Land-Use Plan

During Phase 2, both positive and negative influences were observed during the development of the two land-use plans. Significant negative influences stemmed from the drafting of the second structural vision, applicable legislation, and the land policy in place. In retrospect, the municipality would have preferred a different land policy to avoid various technical and administrative complications. Moreover, the municipality actively contributed beyond its formal responsibilities in order to achieve internally set housing objectives. Positive influences are also reflected in the dual application of studies in both land-use plan II and the detailed land-use plan.

Influence	Activity	Factor	Interview	Analysis
-	Formation of the second structurevision	BBS	-	I
-	Regulatory complications regarding the project site	LF	II	-
-	Implemented land policy due to complex project site	LP	I	-
-	Regulatory changes related to spatial planning	LF	II	I
-	Objection Provincial Executive, land-use plan II	BBS	-	I
-	Coordination of research planning, land-use plan II	PT	-	I
-	Technical complications regarding the project site	PB	II	-
-	Phased implementation of the urban develoPBent plan	PT	I	I
+	Collaboration, Municipality project team and developer	PT	II	-
+	Parallel process of detailed land-use plan and land-use plan II	PT	-	I
+	Prevention of Council of State procedure, land-use plan II	PT	II	-
+	Involving consultancy for technical challenges, land-use plan II	PT	II	-
+	Active contributions by municipality project team on matters outside their responsibility, land-use plan II	PT	II	-

Figure 4.20.: Key activities influencing the lead time within Phase 2, 'Lotus'.

Phase 3 - Detailed Land-Use Plan

Phase 3 was influenced by both internal and external factors, which had both positive and negative effects. A significant negative internal factor was the phased elaboration of the urban development plan combined with a conflicting visual quality plan. This necessitated dividing the project into separate parts and drafting a second land-use plan. However, this approach also had positive outcomes, as it enabled the integration of objections raised by local residents against the detailed land-use plan. Consequently, a legal procedure before the Administrative Jurisdiction Division of the Council of State was avoided.

Other influences showed similarities with Phase 2, as the development of both the detailed land-use plan and land-use plan II was carried out simultaneously. A positive contribution from the municipal project team was their willingness to anticipate changing market conditions by concluding an addendum to the existing agreement, thereby ensuring better alignment with the current market situation.

Influence	Activity	Factor	Interview	Analysis
-	Regulatory changes related to spatial planning	LF	II	I
-	Conflicting visual quality plan	PT	I	I
-	Regulatory complications regarding the project site	LF	II	-
-	Coordination of research planning	PT	-	I
-	Phased implementation of the urban develoPBent plan	PT	I	I
-	Technical complications regarding the project site	PB	II	-
+	Start of research for signing aLPeement with developer	PT	-	I
+	Addendum to the aLPeement due to changed circumstances	PT	-	I
+	Involving consultancy for technical challenges	PT	II	-
+	Develop phasing to address known complications in realisation phase	PT	I	I
+	Active contributions by municipality project team on matters outside their responsibility	PT	II	-

Figure 4.21.: Key activities influencing the lead time within Phase 3, 'Lotus'.

Phase 4 - Environmental Permit

In Phase 4, both negative and positive influences were observed as a result of internal factors. A negative influence due to an incomplete application for the environmental permit, which led to an extension decision. However, the influence had no significant impact relative to the overall duration of the project.

Influence	Activity	Factor	Interview	Analysis
-	Extension decision environmental permit	PT	-	I
+	Collaboration, Municipality project team and developer	PT	II	-

Figure 4.22.: Key activities influencing the lead time within Phase 4, 'Lotus'.

Phase 5 - Site Preparation

In Phase 5, positive influences were observed due to the application of project phasing, which had been established in Phase 3 to limit the impact of technical complications. Addi-

tionally, site servicing activities began during Phase 4, which helped reduce the duration of Phase 5.

Influence	Activity	Factor	Interview	Analysis
+	Project phasing	PT	II	I

Figure 4.23.: Key activities influencing the lead time within Phase 5, 'Lotus'.

4.4. Case Study - Dahlia

The development project ”Dahlia” is located within the municipality of Veenzicht, in the province of South Holland. The project originates from the Nota Ruimte, a policy framework for spatial planning drafted by the national government. The policy nota was translated in 2003 into the regional plan “Zuid-Holland West”, developed by the Province of South Holland, which designated the area south of the village center as a transformation site. Based on this regional plan, the municipality adopted the structural vision in 2004, aimed at 2020. The vision proposed large-scale project development. The aim was to transform outdated horticultural areas into a high-quality residential environment featuring 2,000 to 2,500 dwellings over a 20 year period.

To realise part of the vision, a European tender was issued and awarded to a development consortium in August 2012. In November 2012, the municipality and the consortium signed a cooperation agreement, after which a Public-Private Development Company (Gemeenschappelijke Exploitatiemaatschappij, GEM) was established. Both the municipality and the consortium hold a 50% stake in the entity. The project entails the construction of approximately 1,150 homes, divided into 30% social rental housing, 40% mid-range housing, and 30% high-end housing. Development is scheduled over a 15 year period and is divided into multiple realisation phases.

The first realisation phase named ”Dahlia”, consisted of the construction of 213 homes, including 44 social rental housing developed for the housing association. The construction company responsible for the relativisation, both subsidiaries of the development consortium. The development site is located south of the village center. A significant portion of the land is owned by the GEM, while the remainder will be acquired during the development process through expropriation procedures. During the development two detailed land-use plans have been drafted, covering 180 and 35 homes respectively, named “Dahlia I” and “Dahlia II. Figure 4.24 presents an overview of the project location.

Figure 4.24.: Overview of the project location, ‘Dahlia’

4.4.1. Timeline

The total development of the project spanned 156 months, measured from the adoption of the structural vision to the start of the first construction phase. Figure 4.3 presents an overview of the timeline for the development of Phases 2 through 5, as defined in Figure 4.1. Phase 3 in Figure 4.25 excluded the irrevocable detailed land-use plan II to avoid distorting the timeline of the other phases. A more detailed timeline is available in Appendix C.

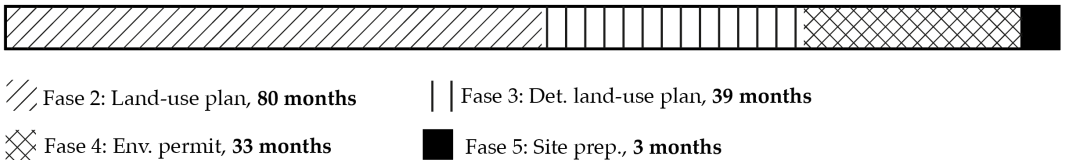


Figure 4.25.: Project timeline segmented by analyzed process phases, 'Dahlia'

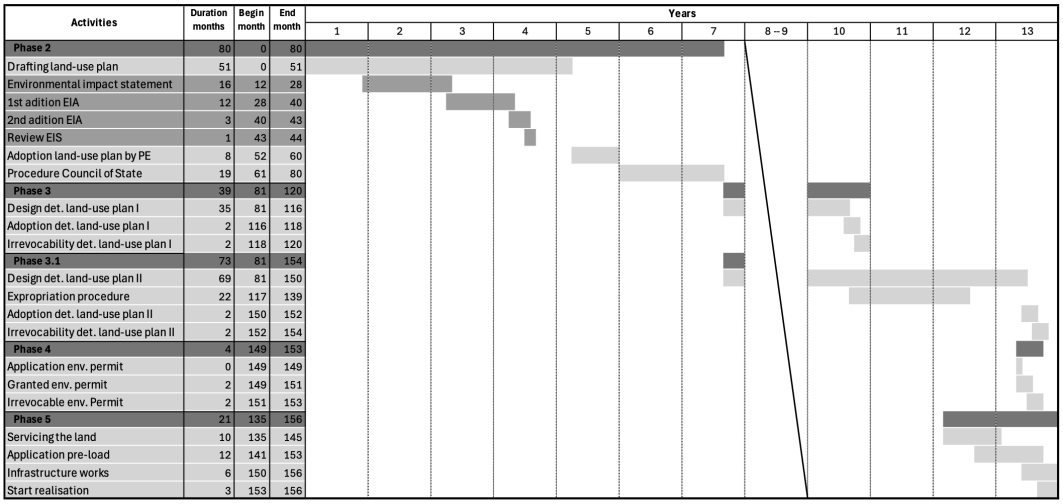
Notable Observation

Based on the detailed timeline in Appendix C, several activities have been identified that may influenced the project's timeline. These are outlined below:

- **Legal proceedings**: Finalizing the land-use plan as an irrevocable land-use plan at the Administrative Jurisdiction Division of the Council of State.
- **Dutch Noise Abatement Act**: Establishing higher permissible noise limits due to exceeded maximum dB levels, stated in Dutch Noise Abatement Act (Wet geluidhinder, Wgh).
- **Environmental Impact Statement** : Preparing the land-use plan necessitated an Environmental Impact Statement due to the number of homes exceeding the exemption threshold.
- **Municipal Preferential Rights Act**: Certain plots were not yet owned by the municipality, prompting the application of the Munipal Pre-emption Act (Wet voorkeursrecht gemeenten, Wvg).
- **Second detailed land-use plan**: Additional plots not owned by the municipality required the drafting of an extra detailed land-use plan.

4.4.2. Analysis

The goal of the timeline analysis is to identify bottlenecks and opportunities for process improvement within each phase, as outlined in Figure 4.1. By presenting the main activities within the analysed phases in a Gantt chart, as shown in Figure 4.26, the visualization supports the identification of potential areas for optimization within phases, as well as areas where acceleration has already occurred.



Activities	Duration months	Begin month	End month
Phase 2	80	0	80
Drafting land-use plan	51	0	51
Environmental impact statement	16	12	28
1st adition EIA	12	28	40
2nd adition EIA	3	40	43
Review EIS	1	43	44
Adoption land-use plan by PE	8	52	60
Procedure Council of State	19	61	80
Phase 3	39	81	120
Design det. land-use plan I	35	81	116
Adoption det. land-use plan I	2	116	118
Irrevocability det. land-use plan I	2	118	120
Phase 3.1	73	81	154
Design det. land-use plan II	69	81	150
Expropriation procedure	22	117	139
Adoption det. land-use plan II	2	150	152
Irrevocability det. land-use plan II	2	152	154
Phase 4	4	149	153
Application env. permit	0	149	149
Granted env. permit	2	149	151
Irrevocable env. Permit	2	151	153
Phase 5	21	135	156
Servicing the land	10	135	145
Application pre-load	12	141	153
Infrastructure works	6	150	156
Start realisation	3	153	156

Figure 4.26.: Gantt chart illustrating the analyzed project lead time, 'Dahlia'

Phase 2 - Land-Use Plan

Phase 2, which concerned the formation of the irrevocable land-use plan, accounted for 80 months of the development process, making it the most time-intensive phase. The time frame can be divided into three main parts, which form the basis of the analysis. The first part, lasting 11 months, involved a waiting period prior to the start of the Environmental Impact Assessment (EIA). The subsequent 34 months were dedicated to drafting the Environmental Impact Statement. The final part took 35 months and focused on rendering the land-use plan irrevocable. Figure 4.27 illustrates the number of months required to achieve the key milestones in Phase 2.

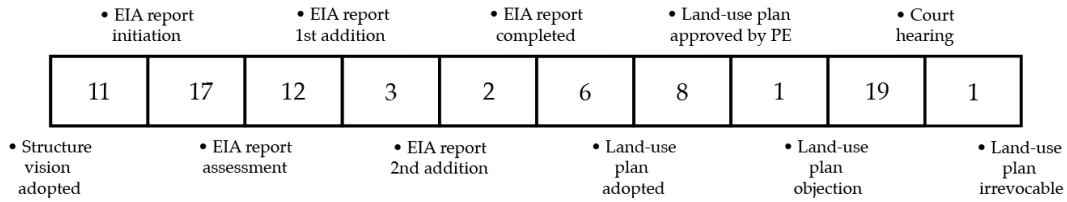


Figure 4.27.: Visualization of activities and their durations within Phase 2, 'Dahlia'.

Phase 2 - Part 1: Start Notification EIA

Following the adoption of the structural vision, 11 months passed before the announcement of the start of the Environmental Impact Assessment was published. This preparation period appears relatively long. However, based on the available data, no further activities during this time can be identified. Potential optimization could have been achieved by initiating the EIS process more promptly.

Phase 2 - Part 2: Composition of The EIS

The approval process by the EIS Commission took 34 months. During this period, the first 16 months were required to prepare the initial report. Subsequently, two supplements were

made. The first supplement was necessary because the report was not fully aligned with the updated development plans, requiring 12 months to complete. During the review of this supplement, the EIS Commission identified missing critical data related to the Provincial Ecological Main Structure and hydrological effects. Which resulted in a second supplement, submitted 3 months later. The report was approved one month after the submission of this second supplement.

Although supplements are sometimes unavoidable, the initial lack of alignment between the report and the updated plans led to additional costs and delays. An optimization could be achieved by ensuring that the EIS is better aligned with the conceptual design of the project.

Phase 2 - Part 3: Land-Use Plan

After the approval of the EIS, the necessary studies were completed to proceed with the adoption of the land-use plan. The period from the approval of the EIS to the finalization of the irrevocable land-use plan lasted 35 months and can be divided into three sections. The first section involved the adoption of the land-use plan by the municipality, which took 6 months. The second section was the approval by the Provincial Executive of South Holland, a process that lasted 8 months. Finally, the procedure at the Administrative Jurisdiction Division of the Council of State to make the land-use plan irrevocable took 21 months.

Phase 2 - Part 3.1: Adoption Land-Use Plan I - Municipality

The period between the approval of the EIS and the adoption of the land-use plan lasted 6 months. A possible explanation for this time frame is the preparation of the necessary reports and the drafting of the land-use plan. However, due to a lack of data, the exact activities during this period cannot be determined

Phase 2 - Part 3.2: Adoption Land-Use Plan I - Provincial Executive

After the municipality adopted the land-use plan, approval was required from the Provincial Executive of South Holland. Which took 8 months, primarily due to minor adjustments that needed to be made to the land-use plan.

Prior to 2008, the province was required to review proposed land-use plans against its legal framework. However, following the amendment of the Spatial Planning Act (Wro) in 2008, this procedure was revised. Since then, the province has established the legal framework in advance, which serves as a guideline for municipalities. This change has improved the process by eliminating the need for a provincial review after municipal adoption.

Phase 2 - Part 3.3: Appeal Land-Use Plan I - Council of State

After the Provincial Executive adopted the land-use plan, an appeal was lodged against this decision. The total duration, including the objection period, spanned 14 months: 2 months for the objection period, 9 months for the review process, and 3 months until the verdict was issued. The appellants The appellants consisted of an association, a foundation, local residents, and a developer not involved in the project. And argued that the implementation of the land-use plan would negatively impact their personal, commercial, and social interests

A specific objection regarding the adoption of high noise limits was upheld by the Council of State because no research had been conducted into the cumulative effects of noise sources. The other appeals were dismissed, after the ruling the land-use plan became irrevocable.

An optimisation of this section could be achieved by accelerating the procedure at the Council of State, with focusing on reducing the time required for case handling. Since the objection period is legally set at 1.5 months and the verdict is typically issued one month after the hearing, further optimisation in these stages is not considered necessary.

Phase 3 - Detailed Land-Use Plan

During the development of 'Dahlia', two procedures were followed, lasting 39 and 73 months, respectively. The second detailed land-use plan was required because some plots were not yet owned by the Public-Private Development Company (GEM). To acquire these plots, the Municipal Preferential Rights Act (Wvg) was applied. The analysis will address the establishment process for both detailed land-use plan. Figure 4.28 shows the number of months required to reach the key milestones in Phase 3.

The decision to draft two detailed land-use plans initially appeared to offer significant acceleration, as the first plan became irrevocable 34 months earlier, allowing the realization phase to begin sooner. However, land servicing activities for the owned plots only started 14 months after detailed land-use plan I became irrevocable. Which resulted in a net acceleration of 20 months.

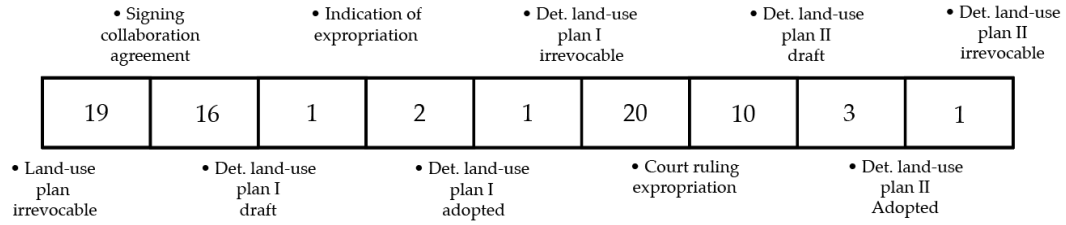


Figure 4.28.: Visualization of activities and their durations within Phase 3, 'Dahlia'.

Phase 3 - Part 1: Detailed Land-Use Plan I

The process of rendering detailed land-use plan I irrevocable applied exclusively to the plots owned by the Public-Private Development Company and took a total of 35 months. This period can be divided into two parts: the establishment of the Public-Private Development Company, which lasted 19 months, and the subsequent 16 months required to render detailed land-use plan I irrevocable

Phase 3 - Part 1.1: Agreement Public-Private Development Company

The initial part of 19 months was spent on establishing the Public-Private Development Company, in which both the developer and the municipality held a 50% stake. The period can be further divided into two section: first, the announcement of the European tender for the master plan, followed by the final 3 months required to sign the agreement between the two parties.

No acceleration is possible in this section, as the land-use plan serves as the foundation for the development area. To shorten this period, the focus would need to shift to completing Phase 2 earlier.

Phase 3 - Part 1.2: Irrevocable - Detailed Land-Use Plan I

After the establishment of the Public-Private Development Company, it took 16 months to draft the detailed land-use plan. During this period, three studies were conducted to support the drafting process. Subsequently, 13 submissions were received, leading to minor adjustments in the draft. Three months later, the detailed land-use plan was adopted by the municipality, during which an additional study was conducted. After the legally described period of the adoption of detailed land-use plan, it became irrevocable.

An acceleration could potentially be achieved by better aligning the delivery of reports through effective planning.

Phase 3 - Part 2: Detailed Land-Use Plan II

The development of the detailed land-use plan II involved a more complex process. The period from the irrevocable adoption of the land-use plan to the irrevocable status of detailed land-use plan II spanned a total of 69 months. The period can be divided into three main sections. The first section involved the initiation of the expropriation procedure, which began 36 months after the irrevocable adoption of the land-use plan. Followed by the judicial expropriation process, lasting 23 months. The the final section, lasting 14 months, was dedicated to making detailed land-use plan II irrevocable.

Phase 3 - Part 2.1: Start Expropriation - Detailed Land-Use Plan II

After the adoption of the land-use plan, it took 36 months before the expropriation request was submitted. The available data do not provide a clear explanation for this delay. A plausible reason could be that the municipality waited for the establishment of the Public-Private Development Company, which occurred 19 months after the land-use plan became irrevocable. However, the remaining 17 months remain unexplained.

An acceleration could have been achieved by submitting the expropriation request at an earlier stage. The necessity for expropriations within the development area had already been known 66 months earlier, at the time of the land-use plan's adoption. However, when the urban development plan has not yet been finalized, and even afterward, determining the exact plots remains challenging. Due to missing data, providing a precise acceleration estimate is difficult, but based on the pre-design detailed land-use plan, it is approximately 1-3 months.

Phase 3 - Part 2.2: Expropriation Procedure - Detailed Land-Use Plan II

The period from designation to the court ruling took 23 months and can be divided into two segments. The first segment, spanning from designation to the issuance of the summons, lasted 18 months. During this period, numerous requests and decisions were made by government agencies to shape the final procedure The second segment, from summons to the ruling, took only 5 months. The court ruled in favour of the municipality, which had fulfilled its legal obligations, and granted the expropriation request. Compensation was set at 100% of the originally offered amount.

Two options could potentially accelerate this process. The first concerns the period from designation to summons. Simplifying the required documentation or increasing staffing levels could potentially shorten the 18-month duration. However, it is challenging to quantify the possible acceleration, as all steps in the expropriation process must be carefully executed. The second option involves initiating the designation procedure earlier, which could more straightforwardly contribute to a faster overall process.

Phase 3 - Part 2.3: Irrevocable - Detailed Land-Use Plan II

After the court ruling in the expropriation procedure, three new studies were conducted over a period of 10 months to draft the detailed land-use plan. The first 5 months were spent preparing the reports, followed by 5 months for drafting the detailed land-use plan. One view was made regarding the draft plan, but it was dismissed. Subsequently, an additional 4 months were required to make detailed land-use plan II irrevocable.

A potential acceleration could have been achieved by preparing the study reports earlier, either aligned with the court ruling date or even during the judicial process. Additionally, allocating extra personnel might have expedited the preparation of the reports.

Phase 4 - Environmental Permit

Phase 4 refers to the period spanning from the irrevocability of the detailed land-use plan I to the irrevocable of the first environmental permit, with a total duration of 33 months. The reasoning for beginning with detailed land-use plan I, is that it pertains to the initial part of the development to which the first environmental permit application applies.

The phase can be divided into two parts: 29 months for submitting the permit application, followed by 4 months for the permit to become irrevocable. Figure 4.29 illustrates the number of months required to achieve the key milestones in this process.

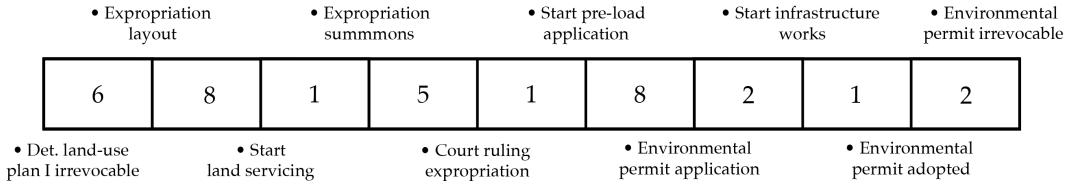


Figure 4.29.: Visualization of activities and their durations within Phase 4, 'Dahlia'.

Phase 4 - Part 1: Application - Environmental Permit

The first 29 months of Phase 4 can be divided into two sections: preparatory activities and the expropriation process. These procedures were closely intertwined and mutually dependent, as the developer could not start activities on plots not owned. Which highlights the expropriation process as a central thread throughout Phase 4.

Analysing the process timeline, the developer sought to optimize the current situation by starting land servicing on plots already owned during the expropriation process. The approach the connection between the court ruling and the start of preloading is improved. It could be argued that preloading on the available land might have started earlier, but this would incur high costs for relatively limited time savings. Additionally, it might have affected the settlement process.

The settlement period lasted 12 months, meaning that submitting the permit application earlier would have contributed little to accelerating the process. Moreover, by scheduling infrastructure work for a later stage, the developer was able to better distribute the workload.

Phase 4 - Part 2: Irrevocable - Environmental Permit

The 4 months following the permit application were spent waiting for the permit to become irrevocable. During this period, the developer began constructing the necessary infrastructure.

The available data indicate that the Public-Private Development Company optimized this part by distributing the workload and advancing certain tasks. The permit application was submitted only after sufficient progress had been made with preparatory activities. While it was technically feasible to start land servicing and preloading on the already owned plots earlier, doing so during the ongoing expropriation process would have required additional resources and introduced higher risks.

A potential acceleration in this part was limited to one week, related to a correction of the permit due to an error in the application number assigned by the municipality. To achieve significant acceleration in Phase 4 as a whole, the expropriation procedure would have needed to start earlier.

Phase 5 - Site Preparation

Phase 5 corresponds to the period between the irrevocability of the environmental permit and the start of construction. It is the shortest phase of the analysed period, with a duration of 3 months. Figure 4.30 illustrates the number of months required to achieve the key milestones in Phase 5.

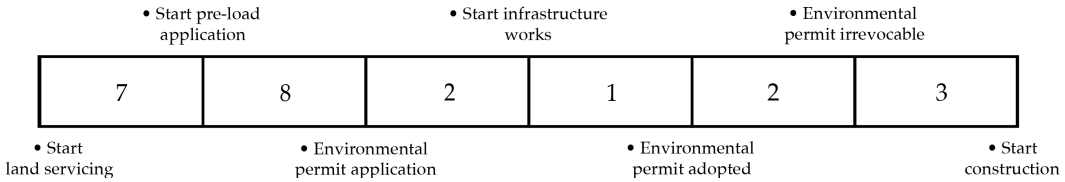


Figure 4.30.: Visualization of activities and their durations within Phase 5, 'Dahlia'.

During Phase 5, preparatory activities were completed, including land servicing, preloading, and infrastructure installation. These activities had begun 22, 15, and 6 months earlier, respectively, than the start of construction. By initiating these activities in Phase 4, the developer made a significant contribution to optimizing the project lead time. Furthermore, the requirement of achieving 70% sales of the development was met 5 months prior to the start of construction, which did not delay the start of realization.

To optimise the duration of Phase 5, preparatory activities would need to commence earlier in Phase 4. However, the start of these activities is dependent on the expropriation procedure within Phase 4. As a result, acceleration of Phase 5 is only possible through optimisations implemented in the expropriation process during Phase 4.

4.4.3. Expert Interview

In this section, the project's timeline is analysed through interview with the project developer involved in the process. A request for participation was submitted to the municipal

authority, however no response was received. The interview offers a comprehensive understanding of the activities that influenced the project's duration. A summary of the key activities discussed by the interviewee is presented, while the full interview transcript is included in the Appendix J.

Developer

The interviewee served as a real estate developer, both within his employer's organization and as part of the joint venture responsible for the project's realization. Although he was not involved in the entire development period, he thoroughly prepared for the interview by reviewing process Phases 2 through 5. Since the municipality initiated and finalized the development of the land-use plan, the interviewee only provides an overview of the main aspects of Phase 2.

Positive - Influences

- **Collaboration**: The municipality was part of the joint development company and actively contributed to the project's development. Additionally, the alderman supported the initiative.
- **Project phasing**: Dividing the master plan ensured that activities subject to external influences impacted only part of the project, providing flexibility in response to changing laws and regulations.
- **Additional detailed land-use plan**: Splitting the project into two detailed land-use plans allowed for a faster start of implementation and better anticipation of potential objections.

Negative - Influences

- **Land expropriation**: Part of the land within the subproject had to be expropriated, which was a lengthy process in itself and affected other processes, such as the detailed land-use plan.
- **Changes in laws and regulations**: These necessitated a revision of the business case, leading to new studies and the renewal of agreements.
- **Administrative and legal procedures**: Their impact was particularly evident in the initial phase of the project due to viewpoints, objections, and appeal procedures.

Summary

The project's duration can be divided into two phases. The first phase concerns to the master plan, which has progressed slowly and, as of 2025, remains under development. This is primarily due to administrative and legal complications that have continued throughout the entire development period. Accelerating this process is challenging, as the external factors causing delays are difficult to influence. While active support from the municipality helps to mitigate delays, administrative and legal procedures remain difficult to expedite without changes in national policy.

The second phase concerning to the subproject 'Dahlia', which proceeded at a moderate pace. The main reason for this was the initiation of the expropriation procedure, which was not the preferred course of action. Drafting the second detailed land-use plan contributed only marginally to accelerating the process. The administrative process of expropriation is inherently time-consuming, which is justified given the need for careful handling when

depriving property owners of their land. While there are ways to speed up this process, it must be done with due caution.

Factors that positively influenced the project timeline were mainly related to project management, such as the project phasing and collaboration introduced by the Public-Private Development Company. This contrasts with factors that had a negative impact, such as external circumstances, including administrative procedures, changes in laws and regulations, and unforeseen risk events. Throughout the project, these negative external factors had a greater impact on the overall lead time than the positive internal measures.

4.4.4. Conclusion - Dahlia

By concluding the case study 'Dahlia', the activities identified are outlined per phase and categorised according to the influencing factors described in Chapter 4.1.2. Additionally, it is indicated whether each activity had a positive or negative impact on the project's lead time.

The analysis reveals that the activities with the most significant impact occurred during Phases 2 and 3. The most significant negative influences stemmed from poor decision-making by municipal executives, legal appeal procedures against the land-use plan, and expropriation processes. In contrast, Phase 2 also showed a significant positive influence, resulting from active guidance and intervention by the provincial authorities through the designation of the area as a transition location.

In the third ans the project team was able to anticipate some of the negative impacts by implementing project phasing and actively cooperating with the expropriated party, e during Phases 3 and 4. Within the limits of their influence, the project team's proactive approach contributed positively to the project's overall lead time.

Due to the extended duration of Phase 3, the developer was able to carry out several activities from Phases 4 and 5 already during Phase 3. In addition, the project team actively collaborated with the expropriated party, which helped to partially prevent the expropriation. These positive developments during the project were reinforced by the municipality's vested interest in the project through its involvement in the Public-Private Development Company.

To further substantiate the findings presented above, each phase is explained in more detail below.

Phase 2 - Land-Use Plan

Phase 2 was influenced exclusively by external factors, all of which had a significantly negative impact on the phase's lead time. The AD-related delay resulted from the decision of the municipal executives to initiate the Environmental Impact Assessment prior to the definitive development of the project design. As a consequence, the Environmental Impact Statement no longer aligned with the final project design, necessitating two revisions and causing a delay of more than 15 months.

In addition, an appeal procedure was initiated before the Administrative Jurisdiction Division of the Council of State, following the adoption by the Provincial Executive. This procedure was partly triggered by the improper introduction of the master plan within

the municipality. The land-use plan revealed which plots were to be acquired or expropriated—information that had not been previously disclosed to the affected residents.

Influence	Activity	Factor	Interview	Analysis
-	Provincial Executive adoption of the land-use plan	AP	-	I
-	Council of State procedure on the land-use plan	PCA	I	I
-	Master plan elaboration during EIA preparation	AD	-	I
+	Provincially imposed transformation of the location	AP	-	I

Figure 4.31.: Key activities influencing the lead time within Phase 2, 'Dahlia'.

Phase 3 - Detailed Land-Use Plan

Phase 3 was influenced both negative and positive, with negative influences being more prominent. The most significant negative impact came from the expropriation procedure required for the realisation of detailed land-use plan II. In addition, the lengthy duration of this phase resulted in multiple changes in laws and regulations. As a consequence, several studies had to be reassessed, which negatively affected the lead time of Phase 3.

Positive influences arose from the project team, which attempted to mitigate the impact of negative factors through project management skill. As a result of this, two separate detailed land-use plans were drafted, limiting the change of regulatory to only part of the project. Furthermore, through active participation with the parties subject to expropriation, a portion of the expropriation process could be avoided. These efforts were strongly supported by the constructive collaboration between the municipality and the Public-Private Development Company (GEM).

Influence	Activity	Factor	Interview	Analysis
-	Regulatory changes related to spatial planning	LF	I	-
-	Expropriation procedures, detailed land-use plan II	AP	I	I
-	Coordination of research planning, detailed land-use plan II	PT	-	I
+	Collaboration, municipality and GEM	PT	I	-
+	Participation with landowners prior to expropriation	PT	-	I
+	Project phasing	PT	I	I

Figure 4.32.: Key activities influencing the lead time within Phase 3, 'Dahlia'.

Phase 4 - Environmental Permit

Phase 4 was influenced by both positive and negative internal factors, although their impact on the lead time was minor. The duration of this phase was largely dependent on the expropriation procedure conducted during Phase 3. Following the court ruling, the developer was able to commence land servicing on the project site. Subsequently, the settlement period of the preloading became the determining factor for the remainder of Phases 4 and 5, as construction activities could only begin upon its completion. As a result, the rectification related to the environmental permit application number had no effect on the lead time of phase 4.

Influence	Activity	Factor	Interview	Analysis
-	Retification, environmental permit application number	PT	-	I
+	Collaboration, municipality and GEM	PT	I	-
+	Project phasing	PT	I	I

Figure 4.33.: Key activities influencing the lead time within Phase 4, 'Dahlia'.

Phase 5 - Site Preparation

In Phase 5, only positive internal influences were observed due to the application of project phasing. This approach made it possible to begin land servicing during Phase 4 and to apply the preloading immediately after the expropriation procedure. As a result, the duration of Phase 5 could be reduced, as the realisation phase started directly after the settlement period.

Influence	Activity	Factor	Interview	Analysis
+	Project phasing	PT	I	I

Figure 4.34.: Key activities influencing the lead time within Phase 5, 'Dahlia'.

4.5. Case Study - Magnolia

The 'Magnolia' development project is located in the municipality of Veenzicht, in the province of South Holland. The origins of the development date back to 1992, when the developer acquired the land. At that time, the developer had no urgency to start with the. In 2002, after a positive recommendation from the municipal council, the developer took the initiative to advance the development. However, this initiative was put on hold when the regional land-use plan 'Zuid-Holland West' designated the area south of the village centre as a transformation zone. Based on this regional plan, the municipality adopted a Structural Vision in 2004, targeting the year 2020. Which included a large-scale project development aimed at transforming outdated greenhouse horticulture areas into a high-quality residential environment, comprising 2,000 to 2,500 homes over a 20-year period. During the development of this master plan, the municipality included the project site within the designated transformation area, despite objections from the developer.

The development of 'Magnolia' was incorporated into the master plan's land-use plan in 2008, which became irrevocable in 2011 following a ruling by the Administrative Jurisdiction Division of the Council of State. The development of this land-use plan required an Environmental Impact Statement. For the realisation of 'Magnolia', two detailed land-use plans were drafted. The first, in 2019, included a decision on exemption from an Environmental Impact statement. The second plan, prepared in 2020, involved a revision, as the original plan did not align with the physical plot boundaries of the project site.

In 2016, an agreement was concluded between the municipality and the developer, which involved a land exchange and accelerated the implementation of 'Magnolia' by ten years. The following year, two developers entered into a joint development agreement for the project's realisation. The development involves the construction of 238 homes, divided into six phases, including 60 social rental units developed for the housing association. After the land was serviced, each developer became responsible for the implementation of their respective sub-areas, overview of project location, see Figure 4.35. The development site is situated between the southern edge of the village centre and the provincial roads located to the south.

Figure 4.35.: Overview of the project location, 'Magnolia'

4.5.1. Timeline

The total development of the project took 181 months, measured from the adoption of the structural vision to the start of the first phase of construction. Figure 4.36 presents an overview of the timeline for the development of Phases 2 through 5, as defined in Figure 4.1. Within Phase 3 the establishment of the irrevocable detailed land-use plan II is excluded, as it did not impact the project's realization. A detailed timeline is provided in Appendix D.

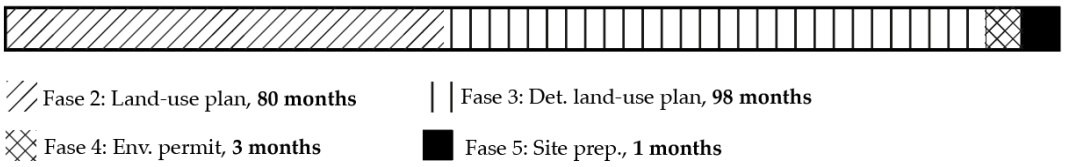


Figure 4.36.: Project timeline segmented by analyzed process phases, 'Magnolia'

Notable Observation

Based on the detailed timeline in Appendix D, several activities have been identified that may influenced the project's timeline. These are outlined below:

- **Legal proceedings:** Finalizing the land-use plan as an irrevocable land-use plan at the Administrative Jurisdiction Division of the Council of State.
- **Noise Pollution Act compliance (Wgh):** Exceeding the maximum dB levels required the establishment of higher permissible limits.
- **Environmental Impact Assessment :** The creation of the land-use plan required an EIS due to the number of homes exceeding the exemption threshold. The detailed land-use plan was exempted from the EIS requirement.
- **Detailed land-use plan:** A second detailed land-use plan was necessary because the initial plan did not align with the actual on-site conditions.
- **Negotiations:** A conflict between the municipality and the developer occurred regarding the acquisition of land.

4.5.2. Analysis

The goal of the timeline analysis is to identify bottlenecks and opportunities for process improvement within each phase, as outlined in Figure 4.1. By presenting the main activities within the analysed phases in a Gantt chart, as shown in Figure 4.37, the visualization supports the identification of potential areas for optimization within phases, as well as areas where acceleration has already occurred.

Activities	Duration months	Start month	Eind month
Phase 2	80	0	80
Drafting land-use plan	51	0	51
Environmental impact statement	17	11	28
1st adition EIA	12	28	40
2nd adition EIA	3	40	43
Review EIS	2	43	45
Adotion land-use plan	6	52	58
Procedure Council of State	20	60	80
Phase 3	98	80	178
Design det. land-use plan I	83	80	163
Adoption det. land-use plan I	13	163	176
Irrevocable det. land-use plan I	2	176	178
Phase 3.1	117	80	197
Design det. land-use plan II	104	80	184
Adoption det. land-use plan II	12	184	196
Irrevocable det. land-use plan II	1	196	197
Phase 4	5	176	181
Application env. permit	0	176	176
Granted env. permit	4	176	180
Irrevocable env. Permit	1	180	181
Phase 5	27	155	182
Servicing the land	20	155	175
Application pre-load	10	170	180
Start realisation	1	181	182

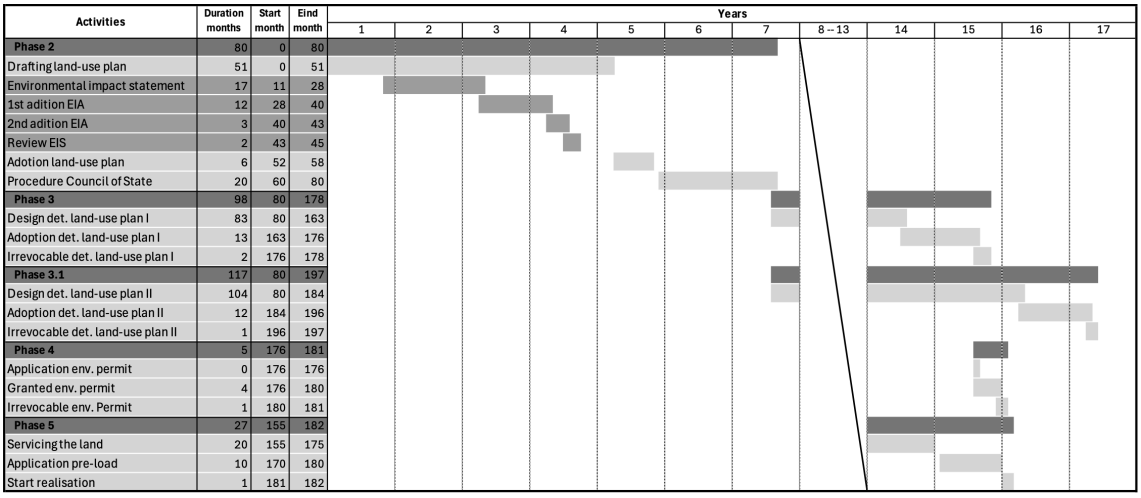


Figure 4.37.: Gantt chart illustrating the analyzed project lead time, 'Magnolia'

Phase 2 - Land-Use Plan

Phase 2, concerning the formation of the irrevocable land-use plan, lasted 80 months within the total 181-month analysed. The procedure in this phase is identical to that of Phase 2 in the 'Dahlia' project. Therefore, no further analysis of Phase 2 is included in this section. For more details, refer to Chapter 4.4.2. Figure 4.38 illustrates the number of months required to reach the key milestones in Phase 2.

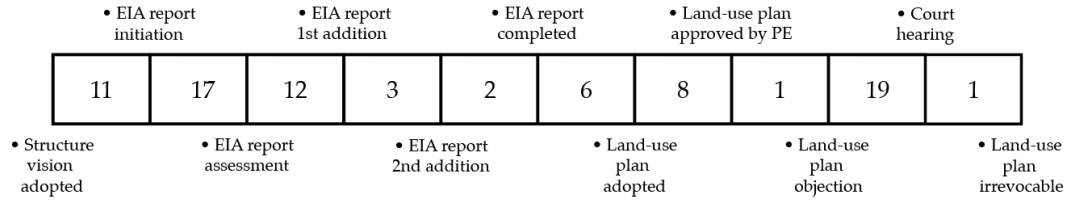


Figure 4.38.: Visualization of activities and their durations within Phase 2, 'Magnolia'.

Phase 3 - Detailed Land-Use Plan

Phase 3, concerning the formation of the irrevocable detailed land-use plan, spanned 117 months and involved the development of two plans. The phase can be divided into three main parts, which form the basis of the analysis. The first part, lasting 67 months, focused on establishing an agreement with the municipality involving a land exchange and the early initiation of the project's realisation. Followed by a 31-month period in which detailed land-use plan I became irrevocable. The final part, lasting 19 months, concerned the irrevocability of detailed land-use plan II. Figure 4.39 illustrates the number of months required to reach the key milestones in Phase 3.

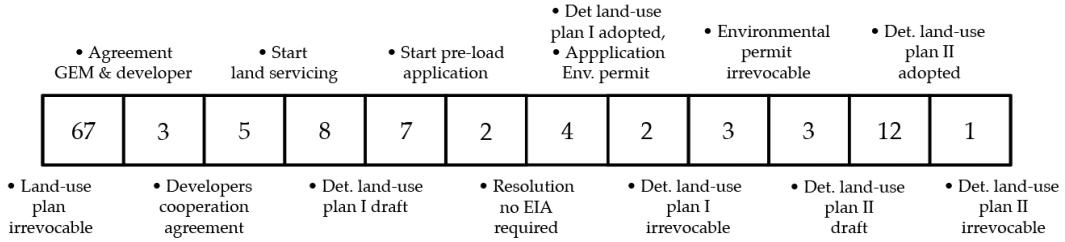


Figure 4.39.: Visualization of activities and their durations within Phase 3, 'Magnolia'.

Phase 3 - Part 1: Agreement - Developer & Municipality

The first 67 months of Phase 3 were spent negotiating the start of the detailed land-use plan's development. Disputes arose when the developer and the municipality failed to reach an agreement, ultimately leading to a lawsuit against the municipality. The claim argued that the municipality had not fulfilled its commitment to draft a detailed land-use plan. The Council of State eventually ruled that the municipal executive has discretionary authority in the elaboration of such plans and found no evidence of any breach of obligations. As a result, the appeal was dismissed.

Subsequently, the municipality required land owned by the developer to enable further realisation of the Public-Private Development Company (GEM).The situation enabled an opportunity to reach a new agreement between the municipality and the developers, which resulted in a land exchange. In return, the development schedule for 'Magnolia' was accelerated by ten years. One of the conditions of this agreement was the construction of 22 additional social rental dwellings.

A potential acceleration could have been achieved if an agreement between the parties had been reached earlier. However, negotiations began 20 months before the land-use plan became irrevocable, leaving limited room for further optimization.

Phase 3 - Part 2: Irrevocable - Detailed Land-Use Plan I

The 31 months required for detailed land-use plan I to become irrevocable can be divided into two sections. The first section, the drafting of the design detailed land-use plan, lasted 16 months. The second section, the process of making the detailed land-use plan irrevocable, took 15 months.

Phase 3 - Part 2.1: Draft - Detailed Land-Use Plan

In the first section, seven reports were prepared to support the draft detailed land-use plan. Additionally, developer entered into a collaboration with the second developer, a process that lasted 3 months. Five months after finalizing the joint development agreement, the developers began land servicing activities.

An acceleration could potentially have been achieved by conducting the studies simultaneously, which would significantly reduce the reporting timeline. Furthermore, the developers effectively utilized Phase 3 by initiating preparatory activities from Phase 5. Such proactive measures are crucial for optimizing the project lead time.

Phase 3 - Part 2.2: Irrevocable - Detailed Land-Use Plan I

In the second section, which lasted 15 months, four reports were prepared to support the definitive detailed land-use plan. Additionally, 6 months after the design version of the land-use plan was made available for public review. The developers began preloading the project location. Three months prior to the submission of the definitive plan, the sale of dwellings was initiated.

The 13 month, between the design and the definitive detailed land-use plan can partly be explained by the time required to complete the flora and fauna report. In addition, land servicing activities may have contributed to, although this is not observable in the available data.

A potential time reduction of 3 to 4 months could have been achieved by conducting the studies simultaneously, assuming land servicing was not the determining factor in the time-line. However, from the moment preloading was applied, the settlement period became the determining factor in the time remainder of Phase 3 until the end of Phase 5.

Phase 3 - Part 3: Irrevocable - Detailed Land-Use Plan II

Rendering the second detailed land-use plan irrevocable took 19 months, measured from the moment detailed land-use plan I became irrevocable. The preparation of the second plan did not affect the project's lead time, as it was intended solely to align the boundaries of the cadastral plots with those of the prevailing land-use plan.

No analysis was conducted to determine whether acceleration of the second detailed land-use plan was possible, given that it had no impact on the project's lead time. However, the plan did result in a reduction of municipal capacity and financial resources and might have been unnecessary if the first plan had been executed properly.

Phase 4 - Environmental Permit

Phase 4 focuses on the period from the moment detailed land-use plan I became irrevocable to the irrevocability of the environmental permit. Which spans 3 months and can be divided into two parts: the two-month period leading up to the permit becoming irrevocable, and the subsequent one-month period. Figure 4.29 shows the number of months required to reach the key milestones in Phase 4.

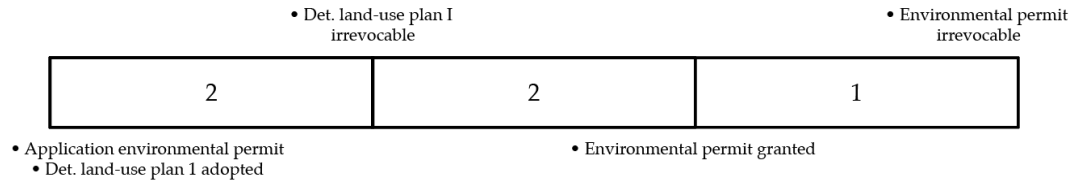


Figure 4.40.: Visualization of activities and their durations within Phase 4, 'Magnolia'.

The effective duration of Phase 4 was 3 months, as the environmental permits were applied before the adoption of the detailed land-use plan. This enabled the municipality to grant the permits within the prescribed time frame, immediately after the plan became irrevocable. Once granted, the permits themselves also became irrevocable within the legally required

period. However, applying for permits before the detailed land-use plan becomes irrevocable involves the risk that objections may be raised, potentially resulting in design adjustments.

An optimization of Phase 4 could hardly be realized as the. The permit could be It should also be noted that the early submission of permit applications allows the municipality to identify and rectify any potential errors in the application at an early stage.

Phase 5 - Site Preparation

Phase 5 covers the period from the irrevocability of the environmental permit to the start of construction. This phase represents the shortest lead time of the entire development, lasting just one month, and can be divided into two parts. The first part concerns the period leading up to the environmental permit becoming irrevocable, which took place during Phases 3 and 4 and lasted 26 months. The second part reflects the actual duration of Phase 5, lasting one month. Figure 4.41 illustrates the number of months required to achieve the key milestones in Phase 5.

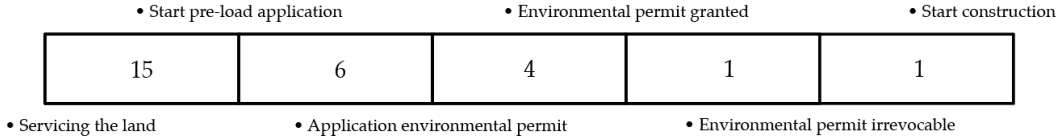


Figure 4.41.: Visualization of activities and their durations within Phase 5, 'Magnolia'.

The activities related to Phase 5 had already commenced during Phase 3. Eight months before the draft detailed land-use plan was made available for public review, the developers began servicing the location. After, 7 months from the the public review period, preloading was initiated, with a settlement period of 12 months. This period became the determining factor for the lead time of the following phases.

The total lead time of Phase 5 spans to 27-month, although only one month can be considered as the actual duration. This underlines the developers' proactive attitude and their willingness to take risks to accelerate the process. The activities in this phase were carried out independently by the developers, and through the use of project phasing, significant acceleration was achieved.

A possible optimisation may be found in the 15 months, between the start of site servicing and the initiation of preloading. Although, the reason of the interval cannot be derived from the available data. But when taking into account the developers' proactive approach, further optimisation of Phase 5 does not appear feasible.

4.5.3. Expert Interview

In this section, the project's timeline is analysed through interview with the project developer involved in the process. A request for participation was submitted to the municipal authority, however no response was received. The interview offers a comprehensive understanding of the activities that influenced the project's duration. A summary of the key activities discussed by the interviewee is presented, while the full interview transcript is included in the Appendix K.

Developer

The interviewee served as the lead project developer and holds final responsibility for the entire development process of the project. With 40 years of experience in the sector across various positions, the interviewee has gained extensive expertise in real estate development

Positive - Influences

- **Project phasing**: Servicing the land before the detailed land-use plan became irrevocable.
- **Parallel processing**: Aligning the environmental permit process with the detailed land-use plan, allowing both procedures to proceed simultaneously.
- **Land position**: Due to dependence on land positions and increasing pressure to realize the project, the municipality faced a growing need for land exchange.

Negative - Influences

- **Administrative policy**: The municipality prioritized another project, causing the project to be put on hold twice due to competition.

Summary

The analysed project duration can be divided into two phases: the period leading up to the agreement with the municipality in 2016 and the period thereafter.

The first phase was primarily influenced by external factors, resulting from decisions made by the municipal executives. In 1992, the developers purchased the land without immediate plans for development. In 2002, the municipal council responded positively to the proposed project. However, in 2005, the province designated another area within the municipality as a transformation zone. As a result, the municipality aligned its priorities with the province's preference, thereby delaying the Magnolia project. Magnolia was later included in the transformation zone, a decision opposed by the developers. Following, due to the 2008 financial crisis, further development within the transformation zone stalled, placing the project on hold once again. In 2012, a Public-Private Development Company (GEM) was established to realise a substantial part of the transformation zone.

In 2016, the municipality required land owned by the developer to enable further implementation of the project managed by the Public-Private Development Company (GEM). This created an opportunity for a land exchange and ultimately led to the establishment of a development agreement. Between 2002 and 2016, the developer frequently requested that the municipality initiate the drafting of the detailed land-use plan. The developer also initiated an appeal procedure against the municipality. However, this did not result in a favourable outcome.

During the second phase of the project, we as developers actively stimulated various internal processes to accelerate the development as much as possible, such as servicing the land before the detailed land-use plan became irrevocable and aligning permit procedures with the detailed land-use plan. These activities certainly contributed to speeding up the process,but they could not fully offset the total project duration, given the significant influence of external factors

4.5.4. Conclusion - Magnolia

By concluding the case study 'Magnolia', the activities identified are outlined per phase and categorised according to the influencing factors described in Chapter 4.1.2. Additionally, it is indicated whether each activity had a positive or negative impact on the project's lead time.

The analysis reveals that the activities with the most significant negative impact occurred during Phases 2 and 3. These activities primarily concerned municipal decision-making processes, over which the developer had no decisive influence and could only anticipate. This is clearly demonstrated by the various attempts and procedures initiated by the developer before the Administrative Jurisdiction Division of the Council of State in an effort to compel the municipality to commence drafting the detailed land-use plan.

The developer's proactive attitude and positive influence were evident throughout all phases. However, these efforts proved to be most effective during Phases 4 and 5, in which the activities fell entirely under the developer's responsibility. In earlier phases, the developer's active approach had little effect, as the municipality had no direct interest in advancing the project. It was only when the developer's landholdings began to affect the progress of a GEM-related project that the municipality developed an incentive to enter into an agreement with the developer.

To further substantiate the findings presented above, each phase is explained in more detail below.

Phase 2 - Land-Use Plan

The lead time of Phase 2 was significantly negatively influenced by various decisions made by the municipal executives. The project location was included in the municipal master plan against the developer's wishes. This resulted into two major delays. The first occurred when the municipality decided to initiate an Environmental Impact Assessment while the final design of the master plan had not yet been established. Subsequently, a procedure was initiated before the Administrative Jurisdiction Division of the Council of State, following objections to the land-use plan associated with the master plan.

Since this appeal procedure did not concern the project location itself, the developer repeatedly requested the municipality to initiate the drafting of a detailed land-use plan. However, these requests were not acted upon, as the municipality prioritised the development managed by the Public-Private Development Company (GEM), in which it held a 50% ownership stake and therefore had a direct interest in its completion.

Influence	Activity	Factor	Interview	Analysis
-	Municipality unwillingly adds project to master plan	AD	I	I
-	EIA required due to plan scale	AD	I	I
-	Master plan elaboration during EIA	AD	I	I
-	Provincial Executive adoption of the land-use plan	AP	-	I
-	Council of State procedure on the land-use plan	PCA	I	I
-	Project on hold, municipality prioritizes elsewhere	AD	I	I
+	Pressuring municipality, start of detailed land-use plan	PT	I	-

Figure 4.42.: Key activities influencing the lead time within Phase 2, 'Magnolia'.

Phase 3 - Detailed Land-Use Plan

Phase 3 was significantly influenced by the decisions of the municipal executives, which held greater interests in projects associated with the Public-Private Development Company (GEM). A municipal memo recorded an initiative concerning the elaboration of the detailed land-use plan for Magnolia. In response, the developer initiated legal proceedings before the Administrative Jurisdiction Division of the Council of State, in an attempt to compel the municipality to commence the elaboration of the plan. However, the ruling was in favour of the municipality. Eventually, the municipality accommodated the developer, given the latter's substantial land position, which was essential for the continued development of the GEM-related project. As a result, an agreement was concluded that included a land exchange and the early elaboration of the detailed plan, as the municipality had originally intended to carry this out around 2029.

Influence	Activity	Factor	Interview	Analysis
-	Project on hold, municipality prioritizes elsewhere	AD	I	I
+	Council of State procedure, start of detailed land-use plan	PT	I	I
+	Strong land position, enabling elaboration municipality	PT	I	-
+	Project phasing	PT	I	I

Figure 4.43.: Key activities influencing the lead time within Phase 3, 'Magnolia'.

Phase 4 - Environmental Permit

Phase 4 was positively influenced by internal factors resulting from the applied project phasing strategy. The environmental permit was submitted by the developer during Phase 3, prior to the adoption of the detailed land-use plan. This approach entailed certain risks, as objections could still be lodged against the plan at that stage. The effectiveness of this strategy is debatable, given that the municipality did not issue a decision until six weeks after the plan became irrevocable. Nevertheless, the applied phasing allowed the duration of Phase 3 to be reduced to the statutory minimum of 3 months.

Influence	Activity	Factor	Interview	Analysis
+	Project phasing	PT	I	I

Figure 4.44.: Key activities influencing the lead time within Phase 4, 'Magnolia'.

Phase 5 - Site Preparation

Phase 5 was significantly influenced in a positive manner by internal factors. The developer's high-risk project phasing strategy resulted in a significant acceleration of the process. While the detailed land-use plan was being drafted, the developer simultaneously initiated land servicing activities. Shortly after the public review of the draft plan, preloading of the site was initiated. The subsequent settlement period became the determining factor for the start of the construction phase. For this reason, it is essential to initiate this stage as early as possible.

Influence	Activity	Factor	Interview	Analysis
+	Project phasing	PT	I	I

Figure 4.45.: Key activities influencing the lead time within Phase 5, 'Magnolia'.

4.6. Conclusion - Empirical

The conclusion of Chapter 4 provides empirical insights into the activities that influence the lead time of greenfield real estate projects. These insights are based on the answer to the third sub-question.

SQ3: What is the correlation between the leads time of the phases across the different case studies?

The results of SQ3 are derived from the timeline analysis which was performed on the framework introduced in Chapter 3. To enrich this analysis, practical insights were gathered through interviews with key stakeholders directly involved in the selected case studies. The integration of the findings has resulted in the conclusions presented below. A distinction is made between positive and negative influences on the project lead time, as well as the degree of impact of the respective activities. The term 'significant' denotes a strong influence, while 'minor' indicates a limited effect.

- Phase 2:
  - Significantly influenced by municipal decision-making, both negatively and positively.
  - Significantly negatively influenced by appeal procedures at the Administrative Jurisdiction Division of the Council of State.
    - Average duration: 20 months.
  - Negatively influenced by the adoption of the land-use plan by the Provincial Executive.
    - Average duration: 8 months.
  - Negatively influenced by continuous changes in laws and regulations.
  - Influenced by the applied land policy:
    - Positive, active land policy and public-private partnerships;
    - Negative, passive land policy.
- Phase 3:
  - Significantly influenced by municipal decision-making, both negatively and positively.
  - Negatively influenced by continuous changes in laws and regulations.
  - Influenced by the applied land policy:
    - Positive, active land policy and public-private partnerships;
    - Negative, passive land policy.
- Phase 4:
  - Minor positively influenced by the application of project phasing.
- Phase 5:
  - Significantly positively influenced by the application of project phasing by the project team.

To provide further substantiation of the findings above, a detailed explanation is given below for each phase, focusing on the correlation between activities and lead times across the case studies.

4.6.1. Conclusion - Phase 2

To support the explanation of the results in Phase 2, Figure 4.46 is used to present the various lead times, while Figure 4.47 displays the observed influences on these lead times. The average lead time excludes case Magnolia, due to the identical land-use plan procedure shared with case Dahlia.

Land-use plan	Gem. *	Yasmijn I	Yasmijn II	Lotus I	Lotus II	Dahlia	Magnolia
Phase start - Initation	47	40	103	43	36	11	11
Initation - Adoption	33	19	22	20	63**	40***	40***
Adoption by PE	8	7	-	-	-	8	8
State Council procedure	18	14	19	-	-	21	21
Adoption - Irrevocable	3	-	-	3	2	-	-
Total duration	94	80	144	66	101	80	80

* Magnolia excluded, land-use plan equivalent to Dahlia
** With detailed planning rules
*** Including the preparation of the EIS

Figure 4.46.: Lead times in months for activities in all case studies within Phase 2.

Phase Start - Initiation

The first part of Phase 2 accounts for 50% of the total lead time, making it the longest segment within this phase. According to the interviewees, this stage also offers the greatest potential for acceleration. The possibility of acceleration is supported by the substantial variation in lead times observed across the case studies. In the case of Dahlia, the lead time was only 11 months due to the province's imposed designation of the project location as a transformation location. In contrast, Yasmijn II experienced a significantly longer lead time of 103 months, primarily due to the political sensitivity of the project location. This extended duration was eventually broken by a change in the political composition of the municipal council.

Out of the beginning of Phase 2, two key conclusions can be drawn: first, the imposition of spatial planning directives by higher governmental authorities can positively impact decision-making durations; second, local political leadership plays a decisive role in the pace of such decision-making processes. The significant influence of the municipal executive was also evident in the Magnolia case, where the developer was compelled, under protest, to have the project location included in the municipal master plan. The negative influence of the decisions by municipal executive (AD) and the positive contribution of the re-election of the municipal council (AP) had a considerable impact on the project's overall lead time in the begin of phase 2.

Initiation - Adoption

The duration from initiation to adoption by the municipality averages 31 months. However, this figure is not considered representative due to additional activities that affected the lead time in the Dahlia and Lotus II cases. In the case of Dahlia, the lead time was negatively influenced by the drafting of the Environmental Impact Statement (EIS), which proceeded without a finalized project design. In the case of Lotus II, the land-use plan, including

detailed planning regulations, was negatively influenced by changes in legislation and the regulatory framework.

When these two cases are excluded, the average duration from initiation to adoption is 20 months. This accounts for less than 25% of the total lead time in Phase 2. Based on the 20 month lead time, combined with the influence of public consultation on the preliminary and draft plans as identified in the interviews, it can be concluded that drafting the land use plan is completed relatively quickly.

Adoption by the Provincial Executive

Under the Spatial Planning Act (Wro) prior to 2008, the land-use plan adopted by the municipal council had to be adopted by the Provincial Executive. This procedure took an average of 8 months and was identified as a negative AP influence on the lead time. With the introduction of the revised Spatial Planning Act (Wro) in 2008 , this process was changed, contributing to the optimisation of lead times. Other influences of the Spatial Planning Act (Wro) on the development process have not been taken into consideration.

State Council Procedure

The average lead time of procedures at the Administrative Jurisdiction Division of the Council of State was 18 months during the period 2003–2015. Across the four case studies, three appeal procedures were initiated, while one was successfully avoided. Both the frequency and extended duration of these procedures explain the significant negative impact of the PCA factor. However, in none of the cases did these procedures result in amendments to the adopted zoning plan.

Based on these findings, it can be concluded that spatial plans are generally developed in accordance with applicable laws and regulations. Nevertheless, the resources devoted to such procedures do not contribute to the quality or appearance of the development and negatively affect the interests of both the appealing and defending parties. The negative impact of legal procedures on project development was also confirmed during the interviews.

While participation can help prevent appeal procedures, its effectiveness is highly dependent on the stakeholders involved. In the case of Yasmijn, the same grounds for appeal were submitted again during the procedure for the second zoning plan, after the first had expired. Furthermore, the case studies indicate that, between 2003 and 2015, the average duration of such procedures increased by 6 months.

Adoption - Irrevocable

The period between adoption by municipality and irrevocability represents the legally defined time frame during which objections may be submitted against the land-use plan This period may vary slightly depending on the publication date recorded in the dataset. If an appeal is lodged with the Council of State, the spatial plan becomes irrevocable only after the court has issued its ruling.

Phase 2 - Influencing factors

Phase 2	Total	Yasmijn		Lotus*		Dahlia		Magnolia	
Negative		Interview	Analysis	Interview	Analysis	Interview	Analysis	Interview	Analysis
AD	14	2	1	-	2	-	1	4	4
PCA	10	4	2	-	-	1	1	1	1
LF	6	1	-	4	1	-	-	-	-
AP	3	-	1	-	-	-	1	-	1
LP	2	-	1	1	-	-	-	-	-
PB	3	-	-	2	1	-	-	-	-
PT	3	-	-	1	2	-	-	-	-
Positive									
PT	11	1	-	8	1	-	-	1	-
AP	2	1	1	-	-	-	-	-	-

* The second land-use plan in project Lotus includes detailed implementation rules

Figure 4.47.: Factors affecting project lead time across all case studies within Phase 2.

In Phase 2, both positive and negative influences are observed. The most significant negative impacts, in terms of both magnitude and frequency, originate from the factors AD and PCA. These are followed by LP and LF, which were observed in the drafting of the land-use plan with planning regulations in the Lotus II case. However, the indication of their influence may be misleading, as AP has not been applicable since the introduction of the revised Spatial Planning Act (Wro) in 2008. Although LP occurs infrequently, its potential impact is considerable. Interviews revealed that the application of active land policy in the Lotus case could have prevented project-related complications. Moreover, such a policy contributes to a more proactive attitude among municipalities, as project progress becomes aligned with their own financial interests through land ownership.

Positive influences have also been identified, stemming from both external and internal factors. An example of an external positive influence is AP, which played a significant role in the context of municipal elections. Internal positive factors are primarily related to the management of project-specific complications. While these complications largely originate internally, they are often associated with external factors such as PCA. As a result, the appeal procedure was avoided. However, internal factors appear to have no influence on the procedures or decisions originating from administrative bodies.

4.6.2. Conclusion - Phase 3

To support the explanation of the results in Phase 3, Figure 4.48 is used to present the various lead times, while Figure 4.49 displays the observed influences on the lead time.

Detailed land-use plan			Gem.	Yasmijn	Lotus	Dahlia I	Dahlia II	Magnolia
Phase start	-	Agreement	32	13	29	19	-	66
Agreement	-	Design	19	7	24	16	30*	17
Design	-	Adoption	6	5	6	2	2	13
Adoption	-	Irrevocable	2	2	4	2	2	2
Totaal			52	27	63	39	34	98

* Duration relative to the irrevocable detailed land-use plan Dahlia I

Figure 4.48.: Lead times in months for activities in all case studies within Phase 3.

Phase start - Agreement

In the first part of Phase 3, an agreement is established between the municipality and the developer, which may take the form of either a purchase or cooperation agreement when active land policy is applied. In cases of passive land policy, this phase involves the agreement to initiate the detailed land-use plan process. This period has an average duration of 32 months, accounting for approximately 60% of the total lead time in Phase 3.

In the Magnolia case, this period extended to 66 months, primarily due to the municipality's decision to temporarily halt project development because of its vested interests in the Public-Private Development Company (GEM). Even an appeal procedure initiated by the developer at the Council of State had no influence on this decision. However, when GEM required land owned by the developer to proceed with its own project, an agreement was ultimately reached. Illustrating that developers have little to no influence over decision, making processes at the local political level, unless they are able to present interests that align with those of the municipality. Moreover, decisions made by municipal executives can significantly impact project lead times.

The complications experienced during this period are supported by the interviewees, who describe it as time-consuming and heavily influenced by municipal decision-makers. One frequently mentioned negative factor is LF, particularly due to the possibility of imposing additional requirements beyond those set out in the Building Decree. The tendency to incorporate political preferences or personal ideals into the project design also has a negative effect, as it unnecessarily prolongs the development process in every phase. Adhering to predefined requirements, such as in the Building Decree is therefore considered more efficient, as demonstrated in the Yasmijn and Dahlia cases. In these cases, relatively short lead times were achieved, due to the use of a European tendering procedure in Dahlia and the renewal of an existing agreement in Yasmijn. Nonetheless, the process in Yasmijn remained complex due to the large number of landowners and the use of varying land policies.

Agreement - Design

The period of drafting the detailed land-use plan, along with the required studies, had an average duration of 19 weeks. Notably, the duration in the Yasmijn case was only 6 months. This shorter time frame can be attributed to the proactive attitude of the municipal project team and the use of a visual quality plan that was aligned with predefined frameworks. Additionally, the ability to initiate various studies prior to the formal establishment of the agreement contributed to the overall time savings.

The longest duration was observed in the Dahlia II case, which, despite the application of project phasing, was heavily affected by the expropriation process. Although this was partially mitigated through stakeholder participation, it still had a significant impact on the timeline.

Throughout this period, all cases experienced negative impacts due to evolving legislation and regulations, particularly regarding nitrogen policy. The continuous changes also limited the ability to conduct research activities in parallel, thereby restricting opportunities for process acceleration.

Design - Adoption

Following the publication of the draft plan, an average period of 6 months elapses before the formal adoption by municipality takes place. In the case of Magnolia, however, this period lasted twice as long, primarily because several reports had not been completed, as the assignments for these could not be issued before the signing of agreement.

During this stage, notable negative influences from PCA and LF were observed. Due to changes in legislation, some of the reports had to be revised. Additionally, the processing of viewings required considerable attention; however, in none of the cases did this lead to substantial modifications to the draft plan.

Adoption - Irrevocable

The period between adoption by municipality and irrevocability represents the legally defined time frame during which objections may be submitted against the detailed land-use plan. This period may vary slightly depending on the publication date recorded in the dataset. If an appeal is lodged with the Council of State, the spatial plan becomes irrevocable only after the court has issued its ruling.

Phase 3 - Influencing factors

In Phase 3, both positive and negative influences were observed, originating from internal as well as external factors. A considerable number of negative impacts on the project team were identified. However, this perception is biased due to the strong presence of negative influences in the Lotus case. These were largely the result of complications stemming from previously implemented land policy and decision-making during Phase 2. At the same time, numerous positive contributions by project teams were identified, aimed at mitigating both internal and external complications, as also encountered in the other cases.

The significant negative influences during this phase primarily originate from external factors, such as LF. These lead to increased research requirements, mainly due to changing nitrogen legislation. Although the frequency of negative influences from AD and AP is relatively low, their impact on the project lead time was substantial.

The AD influence in the Magnolia case was caused by the municipality's substantial interest in another project, which led to delays in the elaboration of the detailed land-use plan. The AP influence was linked to the expropriation procedure. Although such a procedure adversely affects the project lead time, it requires a high degree of sensitivity, given the consequences of removing someone's property rights.

Phase 3	Total	Yasmijn		Lotus		Dahlia		Magnolia	
Negative		Interview	Analysis	Interview	Analysis	Interview	Analysis	Interview	Analysis
LF	9	2	1	4	1	1	-	-	-
PT	7	-	1	2	3	-	1	-	-
AD	2	-	-	-	-	-	-	1	1
PB	2	-	-	2	-	-	-	-	-
AP	2	-	-	-	-	1	1	-	-
Positive									
PT	21	4	-	5	3	2	2	3	2

Figure 4.49.: Factors affecting project lead time across all case studies within Phase 3.

4.6.3. Conclusion - Phase 4

Phase 4 results are limited to the period up to granting the permit, as all permits became irrevocable within the statutory term. To support the results, Figure 4.50 presents the various lead times, while Figure 4.51 shows the observed influences on the lead time. Activities that commenced prior to the start of Phase 4 are represented using negative values.

Environmental permit	Gem.	Yasmijn	Lotus	Dahlia	Magnolia
Phase start - Application	9	9	0	29	-2
Applicaction - Granted	3	3	4	3	2
Granted - Irrevocable	1	1	1	2	1
Effective duration	14	13	5	34	3
Total duration	14	13	5	34	5

Figure 4.50.: Lead times in months for activities in all case studies within Phase 4.

Phase start - Application

The period from the start of the phase up to the permit application averaged 9 months. This duration was primarily influenced by extended lead times in the Dahlia and Yasmijn cases, due to the expropriation procedure in Dahlia and an unknown cause in Yasmijn. In the other two cases, project phasing had a positive effect on lead time, as permit applications were submitted either prior to or simultaneously with the finalisation of the detailed land-use plan.

The positive influence of internal factors is clearly evident in this context. However, the negative impact of the expropriation process observed in Phase 3 also extended into Phase 4.

Application - Granted

If the permit application meets the established requirements, it can be granted within the legally prescribed period. However, in the cases of Lotus and Yasmijn, an extension decision was issued due to incomplete applications, which negatively impacted the lead time of this phase. Nevertheless, the impact was not significant in relation to the overall project duration. Insights from three interviews indicated that strong collaboration between the municipal project team and the developer has a positive influence on mitigating intern negative influences.

Phase 4 - Influencing factors

In Phase 4, most influencing factors originate from the project team, generally contributing positively to the lead time, particularly through the application of project phasing. However, the effectiveness of this contribution appears to be limited, as progress in this phase largely depends on municipal decision-making. Furthermore, the case studies demonstrate that the assessment of permit applications typically takes place only after the detailed land-use plan has become irrevocable. In addition, negative influences have also been identified in this phase, primarily due to the submission of incomplete permit applications.

Phase 4	**Total**	**Yasmijn**		**Lotus**		**Dahlia**		**Magnolia**	
Negative		Interview	Analysis	Interview	Analysis	Interview	Analysis	Interview	Analysis
PT	3	-	-	-	1	-	1	-	1
PB	1	1	-	-	-	-	-	-	-
LP	1	-	1	-	-	-	-	-	-
Positive									
PT	12	4	1	2	-	2	1	1	1

Figure 4.51.: Factors affecting project lead time across all case studies within Phase 4.

4.6.4. Conclusion - Phase 5

Due to the relative simplicity of Phase 5, the results are presented in a single, cohesive explanation. To support this, Figure 4.52 shows the various lead times, while Figure 4.53 displays the observed influences on the lead time. Activities that commenced prior to Phase 4 are represented with negative values.

Site preparation	**Gem.**	**Yasmijn**	**Lotus**	**Dahlia**	**Magnolia**
Phase start - Land servicing	-13	-3	-3	-26	-19
Phase start - Pre-load	-6	-	-	-12	-12
Effective duration	1	0	1	1	3
Total duration	13	0	4	27	22

Figure 4.52.: Lead times in months for activities in all case studies within Phase 5.

Phase 5	**Total**	**Yasmijn**		**Lotus**		**Dahlia**		**Magnolia**	
Positive		Interview	Analysis	Interview	Analysis	Interview	Analysis	Interview	Analysis
PT	10	2	1	2	1	1	1	1	1

Figure 4.53.: Factors affecting project lead time across all case studies within Phase 5.

Phase 5 only encountered positive influences on the lead time. In all case studies, project phasing was applied extensively, with activities formally assigned to Phase 5 already initiated in earlier phases, starting as early as Phase 3. In the case of Magnolia, a significant risk was taken by carrying out activities in parallel with the preparation of the draft detailed land-use plan in Phase 3. The activities within Phase 5 fall entirely under the responsibility of the developer. Combined with nationally defined permit-free construction activities, this encourages developers to take calculated risks to accelerate the development process.

In the case studies, it was found that after the completion of these activities, the soil settlement period became the determining factor for the lead time leading up to the start of

construction. This highlights the importance of initiating such preparatory activities as early as possible in the development process.

5. Field Experts' Contribution

In Chapter 5, the general practical experiences of field experts' concerning activities that negatively affect the lead time of greenfield real estate projects are gained. The aim of this chapter is to contribute to the generalisation of the answer to the main research question, as formulated in Chapter 1.7.

5.1. Introduction

The interviews were conducted with the same individuals who previously participated in the case study interviews. However, they now were asked to respond based on their full career experience, rather than solely their involvement in the specific case study. By integrating the professional experience of the six interviewees, deeper insights were gained into the activities that influence the lead time of real estate projects in the Netherlands. This broader perspective contributes to the generalisation of the answer to the main research question, enhancing the applicability of the recommendations.

During the interviews, respondents were asked to identify the three most critical activities that, in their opinion, negatively impact the lead time of real estate projects. Furthermore, they were asked to suggest appropriate measures to mitigate these delays.

To structure the results, they were categorized according to the same factors used in the case study in Chapter 4.1. In addition, an classification was added based on the political level at which these obstacles are experienced. This distinguishes a difference between the national and local levels. The full interview transcripts are included in Appendix L.

5.2. Results

The results are presented in Figure 5.1. To provide clarification, each factor is accompanied by a brief explanation of the underlying issue and the corresponding proposed measures.

Factor	Level	Number of constraints
Legal Framework	Local	3
	National	2
Public Consultation and Appeals	Local	4
Administrative Decision	Local	3
	Both	1
Administrative Policy	National	2
	Local	1
Mandatory Research	Local	1
	National	1

Figure 5.1.: Factors affecting project lead time as experienced by field experts'.

Legal Framework

- **Problem**:
  - The lack of national uniformity and the continuous changes in laws and regulations.
- **Measures**:
  - Legislation that prevents the imposition of additional requirements on top of the Building Decree.
  - Eliminating inconsistencies between current legislation and housing objectives.
  - Long-term policy as a guiding principle in the introduction or revision of legislation and regulations.

Public Consultation and Appeals

- **Problem**:
  - The significant degree of public participation in spatial planning and the resulting appeal procedures before the Administrative Jurisdiction Division of the Council of State.
- **Measures**:
  - Preliminary review by a lower court to assess the admissibility and merit of an appeal, in line with the German model.
  - Introduction of a threshold for initiating procedures before the Council of State.
  - Compensation of expenses for the opposing party when objections are considered groundless.
  - Raising awareness that participation offers only limited influence.
  - Limiting participation rights to directly affected parties.
  - Preventing the repeated submission of the same grounds for appeal.

Administrative Decision

- **Problem**:
  - The protracted nature of decision-making by governmental officials.
- **Measures**:
  - Legal provision to establish performance agreements with political authorities.
  - Abolishing the requirement for re-evaluation when spatial planning changes are made at the request of municipal executives.

  - Raising awareness that the greatest delays occur in the administrative decision-making process.
  - Long-term policy as a framework for both new policy and policy revisions.
  - Strengthening mutual trust within political institutions at both the local and national levels.
  - Obtaining greater political consensus on the current housing crisis.
  - Elevating the housing challenge on the political agenda through increased awareness.

Administrative Policy

- **Problem**:
  - The absence of long-term strategic direction by national government.
- **Measures**:
  - Raising awareness that the greatest delays occur within the administrative process.
  - Obtaining greater political consensus on the issue of the housing crisis.
  - Implementation of long-term policy through the re-establishment of the Ministry of Housing, Spatial Planning and the Environment (VROM).

Mandatory Research

- **Problem**:
  - Extensive reporting obligations, reinforced by continuous changes in laws and regulations.
- **Measures**:
  - A more efficient approach to ecological policy.
  - Consistent policy on nitrogen and ecological issues.

6. Conclusion

In Chapter 6, the main research question is addressed by integrating the results of the sub-questions, thereby enabling a systematic and well-founded conclusion. To support this analysis, the research is structured into three interrelated components:

- **Theoretical:** This part consists of a literature review aimed at exploring the potential to develop a framework for analysing project lead times. To address this objective, SQ1 and SQ2 were formulated.
- **Empirical**: This part consists of an analysis of case studies aimed at identifying the activities that influence project lead times. The case analysis integrates insights from the timeline analysis, which is based on the framework developed in the theoretical part of the study, and is supplemented with insights obtained from interviews with key stakeholders involved in the projects. To address this objective SQ3 was formulated.
- **Synthesis and Conclusion:** In the final part, the insights derived from the empirical analysis are generalised using contributions from field experts. This generalisation enables the formulation of an answer to the MQ, with applicability across greenfield real estate projects in the Netherlands.

SQ1: What are the different phases in greenfield real estate projects?

SQ2: Which activities may influence the development process of a greenfield real estate project?

SQ3: What is the correlation between the lead times of the phases across the different case studies?

MQ: How can the process of a greenfield real estate project be accelerated?

6.1. Theoretical

6.1.1. Sub-Question 1

To substantiate the possibilities for accelerating greenfield real estate projects, it is essential to gain insight into the phases that form the development process. This insight was derived from the findings related to SQ1.

SQ1: What are the different phases in greenfield real estate projects?

The result of SQ1 is based on the theoretical principles outlined by (Miles et al., 2007) elaborated in Chapter 3.2. This approach demonstrates that the development process consists of eight phases and is inherently dynamic in nature. Within the scope of this study, phases 1 through 5 are of primary relevance. These phases are incorporated into the framework as presented in Figure 4.1.

Although representing a dynamic process within a static model entails certain limitations, this simplification is necessary to serve the analytical objectives associated with the answer to SQ3. The framework, comprising the process phases and their corresponding activities, serves as the foundation for answering SQ2.

6.1.2. Sub-Question 2

To substantiate the possibilities for accelerating greenfield real estate projects, it is essential to gain insight into the activities that influence the lead time of this process. This insight was derived from the findings related to SQ2.

SQ2: Which activities influence the development process of a greenfield real estate project?

The response to SQ2 follows from the conclusion of SQ1 and builds on literature concerning activities that influence the development process of greenfield real estate projects. The framework enabled a targeted analysis of the activities that have a significant impact on the lead time of the analysed phases. This resulted in the identification of activities within the categories of location, land allocation, legal procedures, financial constraints, and environmental legislation. Chapter 3.3 provides a detailed explanation of how these activities influence the lead time of the development process.

6.1.3. Conclusion - Theoretical

The insights obtained through answering the first two sub-questions enabled the development of an analytically applicable framework. This framework is composed of process phases, structured around the activities that exert the greatest influence on the lead time of the development process. The framework, as presented in Figure 6.1, represents the conclusion of the theoretical part of this study and serves as the foundation for the empirical part, in which the correlation between the lead time of the phases in the case studies is analysed.

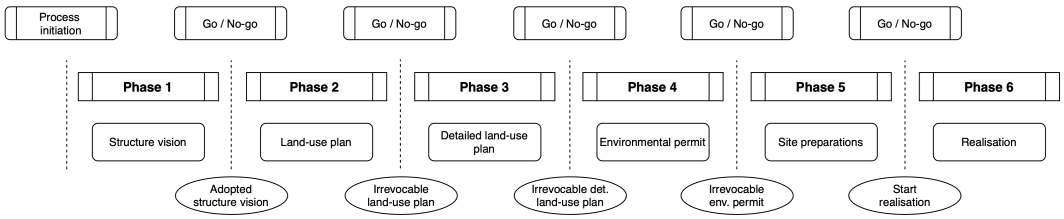


Figure 6.1.: Concluding framework on phases within the real estate development process.

6.2. Empirical

6.2.1. Sub-Question 3

To substantiate the possibilities for accelerating greenfield real estate projects, it is essential to gain insight into the activities that have contributed to the development of the timeline of the selected case studies.

SQ3: What is the correlation between the lead time of the phases across the different case studies?

The results of SQ3 are derived from the timeline analysis conducted using the framework introduced in Chapter 3. To enrich this analysis, practical insights were gathered through interviews with key stakeholders who were directly involved in the selected case studies.

The integration of these insights has led to a deeper understanding of the relationship between the lead time of process phases and the underlying activities that influence them, presented in Chapter 4.6. In the results, a distinction is made between positive and negative influences on project lead time, as well as the degree of impact of the respective activities. The term 'significant' denotes a strong influence, whereas 'minor' refers to a limited effect.

- Phase 2:
  - Significantly influenced by municipal decision-making, both negatively and positively.
  - Significantly negatively influenced by appeal procedures at the Administrative Jurisdiction Division of the Council of State.
    - Average duration: 18 months.

  - Negatively influenced by the adoption of the land-use plan by the Provincial Executive.
    * Average duration: 8 months.
  - Negatively influenced by continuous changes in laws and regulations.
  - Influenced by the applied land policy:
    * Positive, active land policy and public-private partnerships;
    * Negative, passive land policy.
- Phase 3:
  - Significantly influenced by municipal decision-making, both negatively and positively.
  - Negatively influenced by continuous changes in laws and regulations.
  - Influenced by the applied land policy:
    * Positive, active land policy and public-private partnerships;
    * Negative, passive land policy.
- Phase 4:
  - Minor positively influenced by the application of project phasing.
- Phase 5:
  - Significantly positively influenced by the application of project phasing by the project team.

6.3. Main-Question

The fulfilment of the research objective, accelerating greenfield real estate projects, derives from the outcome of the main research question.

MQ; How can the process of a greenfield real estate project be accelerated?

The outcome of the main research question is substantiated by the insights derived from the integration of results from sub-questions 1 through 3, as elaborated in Chapters 3 and 4. These insights should be interpreted within the context of the defined research scope, as outlined in Chapter 1.3, and the characteristics of the selected case studies.

To enhance the general applicability of the research conclusions to greenfield real estate projects within the Netherlands, a generalisation was applied by integrating the research findings with insights from field specialists, as presented in Chapter 5. In addition to this integration, the measures proposed by these experts to accelerate the development process have also been incorporated into the recommendations.

The answer to the main research question has led to the following insights and opportunities for accelerating the development process.

Administrative Decision-making

Municipal decision-making wields a significant influence on the lead time of greenfield real estate projects. Although this influence is predominantly negative, it may become positive when appropriate incentives are provided to the municipality. This impact is particularly pronounced in the beginning of Phases 2 and 3 of the development process

The negative influence, i.e. delay, stems from a reluctance to take responsibility, driven by the fear that decisions may have adverse consequences for the personal reputation of individual officials or their affiliated political parties. Conversely, a positive influence, i.e. acceleration, could result from decisions that enhance such reputations. These findings are supported by all case studies and further corroborated by the contributions of field experts.

To accelerate municipal decision-making, the following conclusions can be drawn from the research results:

- Creating a financial or societal interest for municipalities in the development project could contribute to faster decision-making and increase the willingness to take responsibility for activities that support such acceleration. These interests may include:
  - Internally defined municipal policy objectives, e.g. Lotus and Yasmijn;
  - Development through public-private partnerships, e.g. Magnolia;
  - Active land policy, in which:
    - Municipal planning objectives can be imposed directly;
    - Financial benefits accrue to the municipality.
- Shifting responsibility for decision-making to ensure that potential negative consequences do not directly affect the reputation of individual officials:

  - For example, by involving a higher-level administrative body in the decision-making process, e.g. Dahlia and Magnolia.
- Legally enabling the establishment of performance agreements with municipalities to ensure greater administrative commitment to the development process. *Note:* Avoid imposing strict deadlines, as these may result in the approval of inadequately substantiated plan concepts.
- Preventing renewed planning assessments following modifications made at the request of the municipal executive.
- Increasing political consensus on the urgency of the housing crisis:
  - By raising awareness that municipal decision-making constitutes the most time-consuming component of the development process;
  - By prioritizing the housing agenda more prominently in political discourse;
  - By fostering mutual trust among policymakers.

Council of State

The consequences of appeal procedures before the Administrative Jurisdiction Division of the Council of State have a significantly negative impact on the lead time of the development process. This significance is attributable to the duration of these procedures, averaging 18 months, and their frequency: three cases were processed, and one was prevented. An important results is that none of the appeal procedures resulted in adjustments to the spatial planning.

The negative influence, i.e., delay, is experienced exclusively during Phase 2, as demonstrated in the cases of Yasmijn, Dahlia and Magnolia. Field experts further indicate that procedures also occur during Phase 3, though to a lesser extent in the case of Lotus, a procedure was prevented during this phase. Moreover, they observe an increase in the number of such procedures in recent years, resulting in a vicious cycle: lead times continue to grow due to the limited processing capacity of the competent authorities.

Based on the findings, it can be concluded that allocate additional capacity at the Administrative Jurisdiction Division of the Council of State is essential to accelerate the development process. The following recommendations are made in this regard:

- Reducing the number of legal appeals before the Administrative Jurisdiction Division of the Council of State by:
  - Promoting early stage participation of municipalities and developers with stakeholders, as implemented in the cases of (detailed land-use plan) and Dahlia (expropriation procedure);
  - Introducing thresholds for initiating legal appeals, such as:
    * Preliminary assessment by a lower court on the admissibility and prospects of success of the appeal, German model;
    * Limiting appeals to directly affected stakeholders;
    * Restricting the repeated submission of identical grounds for appeal;
    * Imposing consequences for grounds of appeal that are declared inadmissible or unfounded.

- Increasing the processing capacity of the Administrative Jurisdiction Division of the Council of State, e.g., by allocating additional financial resources, appointing extra legal staff.

Legal Framework

The research findings indicate that continual changes in legislation and regulations adversely affect the development process. This impact is reflected in an increased administrative workload within spatial planning, particularly due to recent environmental legislation such as nitrogen policies. Furthermore, confidence in the real estate sector is eroded, as developers are no longer able to evaluate their business cases based on stable long-term projections. In addition, the practice of municipalities imposing supplementary, legally unenforceable requirements results in additional delays during front-end engineering.

This negative influence, i.e., delay, primarily manifests in the second and third phases of the development process, during which the elaboration of the structural vision takes place, business cases are assessed, and cooperation or purchase agreements are concluded. This influence is clearly observable in the cases of Yasmijn, Lotus and Dahlia.

Beyond the direct consequences of reassessment, field experts report significant reluctance among civil servants to assume responsibility for decision-making in anticipation of the introduction of new legislation and regulations. The underlying cause of this hesitation has been previously outlined in the conclusion regarding administrative decision-making.

To mitigate the negative impact of changes in legislation and regulations, the research findings suggest the following recommendations:

- Enhancing predictability within the development process, resulting in increased confidence, stimulation of parallel research processes, and an improved investment climate. This can be achieved by:
  - Introducing a fixed assessment point for legislation and regulations pertaining to the regulatory requirements in spatial planning, with a limited validity period. This measure creates a strong incentive for timely decision-making;
  - Implementing consistent long-term policies under the direction of the Ministry of Housing, Spatial Planning and the Environment (VROM);
  - Communicating new legislation and regulations in a timely manner;
  - Reducing complexity when entering into cooperation or purchase agreements, including:
    * Establishing nationwide uniformity in project development frameworks, ensuring that municipalities do not impose additional requirements beyond the prevailing Building Decree, thereby facilitating standardization and industrialization;
    * Applying public tender procedures, e.g. Dahlia.

Project Teams

The proactive attitude of project teams contributes significantly to optimizing the lead time in the current development process. This significance is evidenced by the observation that activities advanced by more than 20 months ultimately remained decisive for the commencement of the construction phase.

The proactive attitude of developers stems from incentives linked to the interests associated with the accelerated realization of projects. The case studies of Magnolia, Lotus, and Dahlia illustrate that such proactive behavior is most evident in activities where developers can act independently of municipal decision-making, particularly in Phase 5. Acceleration in Phases 2 and 3 can only be achieved when developers are able to offer a concrete interest to governmental actors. The impact of introducing such interests into the decision-making process is elaborated upon in the first conclusion.

To stimulate and sustain this proactive stance among developers, the research findings suggest that offering incentives based on mutual interests is essential. In this context, the following recommendations can be made:

- Enhancing predictability within the real estate sector, resulting in increased trust and an improved investment climate. This can be achieved by:
  - Implementing active land policy or establishing public-private partnerships;
  - Pursuing consistent long-term policy, potentially supported by the reintroduction of the Ministry of Housing, Spatial Planning and the Environment (VROM);
  - Promoting political consensus on the urgency of the housing challenge;
  - Establishing nationwide uniformity in project development frameworks to enable standardization and industrialization.
- Introducing a reward system to promote proactive behavior within development processes, inspired by principles of Best Value Procurement.

6.4. Recommendations for Future Research

The findings of this study have resulted in valuable insights into accelerating the lead time of greenfield real estate development projects. However, several topics remain that require further exploration, particularly due to the study's limitations and observations made during the research process.

- In view of the substantial body of relevant literature published during the course of this study, an update of the theoretical framework is recommended. Integrating recent insights will enable future research to better align with evolving policy agendas and societal challenges.
- Expanding the empirical component through snowball sampling may lead to new perspectives. Continuing this iterative process until theoretical saturation is reached could result in a broader and more comprehensive set of insights.
- With regard to transferability, it is important to investigate the extent to which the insights developed under the Spatial Planning Act (Wro) remain applicable within the context of the new Environment and Planning Act (OW). This would facilitate an assessment of the generalisability of the findings.
- As public-private partnerships and active land policy demonstrably contribute to process acceleration, further research is advised into how the willingness and capacity of municipalities and developers to engage in such collaborations can be strengthened. This includes identifying barriers such as risk aversion or limited resources, as well as identifying enabling conditions that foster effective cooperation.
- The study has shown that administrative decision-making is often delayed due to risk-averse behaviour. Follow-up research should examine the effects of this behaviour on decision-making timelines and investigate governance models that promote shared responsibility and timely decision-making.
- It is also recommended to investigate how long-term strategic direction from the national government, potentially through the Ministry of Housing and Spatial Planning (VROM), could contribute to policy predictability in area development and foster continuity in governance across administrative terms.
- Finally, the empirical testing of the effectiveness and feasibility of the proposed recommendations is advised. This could follow a phased approach: first through validation by an expert panel, then through application in a demonstration project. Relevant research questions may include:
  - How do financial and societal interests compare in their potential to accelerate administrative decision-making?
  - To what extent do performance agreements between municipalities and developers contribute to faster decision-making, and is legal formalisation of such agreements necessary?
  - What is the legal feasibility and societal impact of procedural thresholds at the Administrative Jurisdiction Division of the Council of State, particularly in balancing efficiency and legal protection?

7. Discussion

In Chapter 7, the process is evaluated and critically examined based on the study's relevance and an assessment of its limitations. Finally, based on these limitations and the conclusions from Chapter 6, recommendations for further research are provided.

7.1. Relevance

The research contributes to both scientific and societal knowledge. From a societal perspective, it addresses an urgent issue related to one of the fundamental constitutional principles: the promotion of adequate housing. In recent years, the urgency of providing sufficient and affordable housing for the Dutch population has significantly increased. According to the Constitution, it is the government's responsibility to ensure the provision of housing.

The housing crisis remains a widely discussed topic, yet despite repeated attention, little noticeable progress has been made. The supply of new housing remains limited, causing property prices to continue rising and making it increasingly difficult for residents to meet their housing needs.

After years of minimal government involvement in public housing, the government regained control over Housing and Spatial Planning in 2022. This shift followed a period when intervention was widely seen as essential due to the construction crisis. Awareness among policymakers has since increased, resulting in action plans to expand housing supply and shorten lead times. The research offers recommendations to accelerate the early phases of greenfield developments, making new homes available more quickly.

After years of limited government involvement in housing policy, despite the recognized need for intervention during the 2012–2015 construction crisis, the government restored its role in housing and spatial planning in 2022. Since then, awareness of the issue among civil servants has increased, leading to the implementation of various action plans aimed at expanding the housing supply and reducing lead times. This research contributes by examining ways to shorten the period between the adoption of the structural vision and the start of construction, thereby enhancing housing provision.

From a scientific perspective, this research enhances the existing body of knowledge on the lead times of greenfield developments. Currently, only a limited number of studies have examined this process on a phase-by-phase basis. This study distinguishes itself not only by quantitatively mapping the timelines of the various phases, including the activities that influence them, but also by integrating the expertise of project stakeholders into the analysis. As a result, theoretical insights are validated through practical knowledge.

7.2. Limitations

This section outlines the study's limitations, beginning with the theoretical constraints related to the literature review, followed by the limitations concerning the case study selection.

7.2.1. Theoretical Limitations

As the housing shortage in the Netherlands has become a prominent political issue and an urgent societal challenge in recent years, there has been a significant increase in relevant literature. Consequently, it was not possible to incorporate all recent publications into the literature review. To partially mitigate this limitation, the findings of two recent studies have been included in the conclusion. Too enhances the relevance of the research results, despite the ongoing developments in theoretical knowledge.

Additionally, during the writing of this study, the new Environmental and Planning Act (Ow) was introduced, replacing the former Spatial Planning Act (Wro). As a result, the findings of this research are not directly applicable to the new regulatory framework. The decision to focus on the Spatial Planning Act was driven by the current lack of available information on procedural developments under the new Environmental and Planning Act, as well as the absence of practical experience from project stakeholders. An aspect in which the research specifically distinguishes itself from other studies.

Moreover, transitional provisions allows land-use plans and further elaborations within the spatial planning process to be implemented under the Spatial Planning Act (Wro). Which ensures that the research findings remain relevant for comparable projects within the previous legal framework, while future studies can focus on the effects of the Environmental and Planning Act (Ow).

7.2.2. Case Selection

Despite the housing shortage in the Netherlands, many real estate projects have been completed that could have served as the basis for analysis. However, due to time constraints, only four projects were examined, making it impossible to conduct a fully representative analysis. To compensate for this limitation, expert interviews were conducted. During these interviews, the bottlenecks identified in the case studies were evaluated for similarities with other projects based on the experts' experience. This approach enhances the broader applicability of the research findings to greenfield real estate projects in the Netherlands.

The selection of case studies followed a representative approach, based on relevant principles for future developments. However, during the in-depth analysis of information and project timelines, it became evident that the selected projects were politically sensitive. The sensitivity arose from both administrative and technical complications within the projects. As a result, interviewees were unable to share all details fully and transparently. To minimize the impact of these limitations, both the project names and the interviewees have been anonymized. Additionally, the exact project timelines will not be disclosed. These measures ensure confidentiality while maintaining the research's value for broader application within the real estate sector.

8. Reflection

In Chapter 8, the research process and the experience of conducting the study are reflected upon. The chapter begins with a discussion of the topic selection, followed by an evaluation of the chosen research methodology, and concludes with a personal reflection on the overall research experience.

8.1. Topic Selection

With this research, I aimed to contribute to a possible solution for the housing shortage in the Netherlands. Central to this was the addition of new housing to the real estate market. In my view, increasing the housing supply represents a socially relevant issue, which is, however, highly complex due to the influence of government policy. Even in 2025, the housing market remains under considerable pressure. As a result of the lack of effective solutions and ongoing population growth, the housing shortage is expected to increase further.

This research was initiated with the idea of accelerating the realization of housing projects. When I became acquainted with the process of greenfield development, my interest was immediately sparked. Not only because acceleration within this process can help alleviate the housing shortage, but also because of the broader connections with policy-making in the real estate sector, which has a direct impact on the realization of housing.

The objective of this study is to reduce the lead time of housing development projects, from the initial concept to the start of construction. To achieve this, the research first focused on gaining insight into the processes involved in project development, with specific attention to the activities that influence lead time. Subsequently, potential solutions were explored by analysing the correlation between lead times in various case studies. Implementing the research findings may lead to acceleration of the development process, ultimately contributing to an increase in the housing supply. In this way, the research provides a valuable contribution to promoting sufficient housing availability in the Netherlands.

8.2. Methodology

The aim of the literature review was to become familiar with the process of development within a greenfield context. This theoretical exploration aimed to map out the different phases of project development and provide insight into the activities that influence the lead time of the development process. Describing the process of creating greenfield developments proved challenging, as real estate development is inherently dynamic. To represent this process in a static model, the decision was made to apply the most comprehensive description available, as found in the Urban Land Institute's development handbook.

In addition, the literature study focused on identifying the activities that impact the duration of the development process. During the exploration of an extensive variety of sources, it became clear that the core influences could be traced back to five overarching categories. These factors were found to have a significant impact and were largely related to external events beyond the direct influence of the developer. Although additional influencing factors could have been considered, it was a thoughtful choice to maintain focus on these five key categories due to time constraints.

Based on the insights gained in the second part of the literature study, the original framework developed in the first part was simplified to serve as the basis for the timeline analysis conducted in the empirical section. The case studies included in this section were selected according to the criteria outlined in the research scope. Following the random selection of completed development projects, it became evident that all four cases presented elements of political sensitivity. In each instance, the lead time was negatively affected by various influencing activities. Due to the political sensitivity of the cases, the decision was made to anonymise the projects and to restrict public access to certain parts of the data. The fact that all four randomly selected cases exhibited political sensitivity suggests that this may not have been coincidental.

In order to conduct the timeline analysis, it was necessary to define consistent phases in advance. These periods were based on the structure proposed in the framework in the theoretical part. However, it proved difficult to determine the formal initiation date of the projects, as follows from the interpretation based on national spatial planning(nota van ruimte). Therefore, the decision was made to use the adoption of the structural vision as the starting point of the timeline. While this choice may be debatable due to the phased inclusion of projects within the structure vision, it offered a necessary and clear boundary for comparative analysis.

To supplement the theoretical assessment of the cases, interviews were conducted with key stakeholders from both the municipal and private development sides. These interviews presented valuable insights into influences of the project lead time that were not visible in the dataset. One of the involved municipalities declined to participate in the interviews, and as a result, their perspective could not be included in the lead time assessment.

Since the empirical findings of this study are based on only four case studies, they cannot be considered fully representative of greenfield real estate developments in the Netherlands. The limited number of cases is a direct result of the time constraints of this study. Due to the time-intensive nature of analysing four cases in combination with conducting multiple interviews, the initial research schedule was exceeded.

To increase the relevance of the results to a broader range of greenfield developments in the Netherlands, a generalisation of the findings was applied in the synthesis. This was achieved by integrating insights obtained through interviews with field experts. In total, six interviews were conducted with the same individuals who had also been involved in the case studies. However, the focus of these interviews was explicitly on the respondents' general experience with project development, beyond selected case studies. As a result, the insights gathered were mostly consistent with those derived from the case studies, supporting the fact that the identified influences from the case are experienced broadly across real estate developments.

In addition to insights regarding activities that influence development lead times, the interviewed experts also proposed measures that could contribute to accelerating real estate

development. Following the integration of insights from the sub-questions and expert interviews into the synthesis, several recommendations were formulated. These recommendations aim to contribute to addressing the housing shortage in the Netherlands, a societal issue with considerable impact on the Dutch population.

8.3. Research process

The paragraph reflects on my personal experience of conducting the research to optimizing the lead time of greenfield reals estate projects and is thereby written from a personal perspective.

I experienced selecting a graduation topic as a challenging task, partly due to my broad interest in the technical domain. This choice became even more difficult because of the versatility and wide applicability of the Construction, Management and Engineering master's curriculum. After completing my coursework, I explored a range of subjects, varying from offshore wind farms to housing development. Despite the time and effort I invested, I found it difficult to formulate a research question that aligned both with the expectations of the university or an external supervisor, and with my personal ambition to address a socially relevant issue.

This changed when I had a conversation with Mr. Hobma, during which the topic of accelerating housing development came up. I immediately felt a strong connection with this subject, partly because I experience changes in the housing market through my work, and from my fellow students, who increasingly struggles to find a room to live in their university towns. At that point, I was confident that my thesis would allow me to combine my interest in real estate with the opportunity to contribute to a pressing societal issue.

In consultation, the topic of my thesis was then narrowed down to the acceleration of the development process prior to the physical construction of housing. With this broad scope, I began drafting my research proposal, in which the research objectives and questions were outlined and which provided direction to the study. As the proposal took shape, I also needed to find a chairperson for my graduation committee in addition to my supervisor. Throughout my studies, I had always hoped to graduate under the guidance of Professor Hertogh, given his professional background.

After the official kick-off, I began developing the theoretical framework for my thesis. I invested a considerable amount of time in this phase, largely due to the extensive volume of literature available on the subject. As a result, my focus occasionally shifted to broader themes in the real estate market, at the expense of direct relevance to my research.

Upon completing the literature review, I developed a timeline for the case studies. This turned out to be a time consuming and diligent task, as one of my supervisors described it: "real monk's work." I then moved on to analysing the timelines, which proved to be one of my strengths during the thesis process. I was able to identify connections and bring structure to complex information. To add further depth to the analysis, I conducted interviews with key project stakeholders. I found this part of the research particularly engaging, as it gave me a deeper understanding of how certain processes unfold in practice. Additionally, I felt comfortable initiating contact and discussing substantive issues, a skill that proved valuable during this phase of the research. After completing the empirical component, my thesis period came to an end.

Looking back on the entire process, it ultimately took longer than expected, partly due to my deep engagement with the topic and the fact that I worked alongside my studies. This required extra effort from both myself and my supervisors, for which I am truly grateful. Throughout the thesis journey, I have grown both professionally and personally, especially in how I approach academic questions. Furthermore, I have been able to further develop my skills in analysis, communication, and connecting insights.

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A. Detailed Timeline Yasmijn

Due to the anonymisation of the investigated cases, Appendix A is not publicly accessible, as its content may still be traceable to specific projects and involved organisations.

B. Detailed Timeline Lotus

Due to the anonymisation of the investigated cases, Appendix B is not publicly accessible, as its content may still be traceable to specific projects and involved organisations.

C. Detailed Timeline Dahlia

Due to the anonymisation of the investigated cases, Appendix C is not publicly accessible, as its content may still be traceable to specific projects and involved organisations.

D. Detailed Timeline Magnolia

Due to the anonymisation of the investigated cases, Appendix D is not publicly accessible, as its content may still be traceable to specific projects and involved organisations.

E. Interview Protocol

Datum: 00-00-25, 00:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: -
Functie: -
Project: -

Toelichting

Hartelijk dank voor uw deelname aan mijn onderzoek naar de optimalisatie van de doorlooptijden in vastgoedontwikkeling. Dit onderzoek maakt deel uit van mijn afstudeerproject voor de masteropleiding *Construction Management and Engineering* aan de Technical university of Delft.

Gedurende dit onderzoek wordt de doorlooptijd van vastgoedontwikkeling geanalyseerd, van initiatie tot de start van de ontwikkeling. Hierbij worden de activiteiten die invloed hebben op dit proces inzichtelijk gemaakt. Door te identificeren welke activiteiten een positieve of negatieve invloed hebben op de doorlooptijd, kan het proces worden geoptimaliseerd. Het uiteindelijke doel is om de doorlooptijd van vastgoedontwikkeling te verkorten en zo bij te dragen aan het verkleinen van het woningtekort in Nederland.

Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
- Wat is uw rol in het ontwikkelproces van vastgoed?
- Heeft u invloed op de doorlooptijd van projecten?

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslag en waarom?
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?
- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?
- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
- Hoe kan de doorlooptijd van dit project worden beschouwd in vergelijking met andere projecten waarbij u betrokken bent geweest? (kort, gemiddeld of lang)

F. Interview Municipality Yasmijn

Datum: 16-01-25, 10:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: Gemeente
Functie: Projectleider
Project: Yasmijn

Toelichting

Hartelijk dank voor uw deelname aan mijn onderzoek naar de optimalisatie van de doorlooptijden in vastgoedontwikkeling. Dit onderzoek maakt deel uit van mijn afstudeerproject voor de masteropleiding *Construction Management and Engineering* aan de Technical university of Delft.

Gedurende dit onderzoek wordt de doorlooptijd van vastgoedontwikkeling geanalyseerd, van initiatie tot de start van de ontwikkeling. Hierbij worden de activiteiten die invloed hebben op dit proces inzichtelijk gemaakt. Door te identificeren welke activiteiten een positieve of negatieve invloed hebben op de doorlooptijd, kan het proces worden geoptimaliseerd. Het uiteindelijke doel is om de doorlooptijd van vastgoedontwikkeling te verkorten en zo bij te dragen aan het verkleinen van het woningtekort in Nederland.

Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - Mijn functie was projectleider bij de gemeente gedurende het project.
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Mijn rol omvat het coördineren van processen, het opstellen en bewaken van de planning, documentbeheer, het aansturen van de projectgroep en het beoordelen van uitgevoerde onderzoeken.
- Heeft u invloed op de doorlooptijd van projecten?
  - Ja, maar met beperkingen. Politieke processen en wetgeving zijn belangrijke factoren die niet beïnvloedbaar zijn. Wel is het mogelijk om binnen de wet- en regelgeving naar creatieve oplossingen te zoeken.

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - De doorlooptijd van dit soort projecten is afhankelijk van het aantal betrokken stakeholders, met name bij bezwaren van omwonenden. De doorlooptijd varieert per project.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslag en waarom?
  - Het opstellen en herzien van stedenbouwkundige plannen kost veel tijd, hoewel dit niet altijd zichtbaar is in de tijdlijn. Vooral door de vele betrokken partijen op verschillende niveaus ontstaan discussies over kleine ontwerpdetails. Vaak streven ontwerpers naar een idealistisch ontwerp, waarbij minder wordt gedacht aan de praktische uitvoerbaarheid, leefbaarheid en de financiële consequenties.
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
  - Ja, beleidswijzigingen dragen bij aan langere doorlooptijden. Het herzien van gemaakte afspraken en beleid betekent dat deze opnieuw moeten worden afgestemd met partijen, zoals in het geval van stikstofregelgeving. Daarnaast is de politieke wens voor een plangebied vaak groter dan wat binnen de wet- en regelgeving mogelijk is, waardoor niet alles haalbaar blijkt binnen een ontwikkeling. Bovendien heeft de openstelling van bezwaarprocedures een negatieve invloed op de doorlooptijd, zoals bij project Lotus.

- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - Het parallel laten verlopen van processen kan efficiënt zijn, maar brengt ook risico's met zich mee. Wanneer plannen herzien moeten worden en er al aanzienlijk is geïnvesteerd, moeten die kosten alsnog worden gedekt. Daarnaast vormt capaciteit een uitdaging bij parallel schakelen.
- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
  - Beperken van het aantal bezwaarprocedures, zodat niet dezelfde beroepsgrond herhaaldelijk wordt ingediend bij het voorontwerp, ontwerp en de vaststelling;
  - Duidelijke en stabiele regelgeving op alle vlakken, die niet voortdurend verandert;
  - De gemeente de regie over de onderzoeken laten nemen, zodat processen sneller verlopen. Vaak hebben onderzoeksbureaus onvoldoende kennis van de daadwerkelijke situatie, wat leidt tot herzieningen in de onderzoeken. Door als gemeente zelf de opdrachtverstrekking te doen, kan er naast juistheid ook beter worden gestuurd op de opleverdatum.
- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?
  - Het vrijgeven van het ontwerpbestemmingsplan door de gemeenteraad neemt vaak veel tijd in beslag. Omdat de raad niet regelmatig overlegt en leden beperkte tijd hebben, worden belangrijke beslissingen vaak pas na lange tijd genomen. Dit zorgt voor extra druk en kan onnodige vertraging veroorzaken.
- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
  - Kostenbeheersing en het tijdig voldoen aan de woonbehoefte in de regio.
- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?
  - Ja, wanneer gemeenten te veel projecten tegelijk starten, moeten externe deskundigen en gemeentelijke projectleiders zich over meerdere projecten verspreiden, wat de kwaliteit en voortgang niet ten goede komt.

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?
  - **Positief:**
    - **Stedenbouwkundigplan**: De aanwezigheid van een concreet stedenbouwkundig plan;
    - **Intzet**: De focus van het projectteam op het project;
    - **Samenwerking**: De soepele samenwerking met de ontwikkelaar;
    - **Fasering**: Het parallel uitvoeren van verschillende projectfases.
  - **Negatief:**
    - **Grondbeleid**: De diversiteit aan grondeigenaren: tijdens de ontwikkeling was er sprake van zowel actief, deels faciliterend als passief grondbeleid, waardoor het moeilijk was om alle partijen op één lijn te krijgen;
    - **Juridische procedure**: Beroepsperiode bij de Raad van State op het bestemmingsplan;
    - **Grondeigenschappen**: Onverwachte grondkenmerken, waardoor extra onderzoeken en afgravingen nodig waren;
    - **Bestuurlijke procedure**: Politieke procedures en wisselingen van beleid droegen niet bij aan de versnelling van het project.
- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
  - Nee, binnen de juridische kaders is de doorlooptijd maximaal verkort;
  - Technisch gezien werden we verrast door een onverwachte bodemopbouw. Om dit te voorkomen, zou een integratie van bodembeheer en bodemkwaliteit wenselijk zijn.
- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?
  - Dit project had een snelle doorlooptijd, ondanks de tegenvallers met betrekking tot de grondopbouw. In 2015 kwam de houder van de bouwclaim met een plan, in 2016 werden de eerste contracten getekend en in 2019 ging de eerste paal de grond in.

G. Interview Developer Yasmijn

Datum: 17-02-25, 11:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: Ontwikkelaar
Functie: Senior vastgoedontwikkelaar
Project: Yasmijn

Toelichting

Hartelijk dank voor uw deelname aan mijn onderzoek naar de optimalisatie van de doorlooptijden in vastgoedontwikkeling. Dit onderzoek maakt deel uit van mijn afstudeerproject voor de masteropleiding *Construction Management and Engineering* aan de Technical university of Delft.

Gedurende dit onderzoek wordt de doorlooptijd van vastgoedontwikkeling geanalyseerd, van initiatie tot de start van de ontwikkeling. Hierbij worden de activiteiten die invloed hebben op dit proces inzichtelijk gemaakt. Door te identificeren welke activiteiten een positieve of negatieve invloed hebben op de doorlooptijd, kan het proces worden geoptimaliseerd. Het uiteindelijke doel is om de doorlooptijd van vastgoedontwikkeling te verkorten en zo bij te dragen aan het verkleinen van het woningtekort in Nederland.

Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - Geïnterviewde had de rol als projectontwikkelaar, en is betrokken geweest bij groot deel van het proces, aangeizen de lange tijdsduur.
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Het ondersteunen van ontwikkelaars binnen de organisatie en het uitwerken van ontwikkelingen binnen de bestaande portefeuille. Daarnaast heeft de geinterviewse meer dan 40 jaar ervaring in de vastgoedsector.
- Heeft u invloed op de doorlooptijd van projecten?
  - Gedeeltelijk, wanneer de ontwikkeling het stadium van bestuurlijke besluitvorming passeert en er wordt besloten om deze locatie te ontwikkelen, kan een projectontwikkelaar bijdragen aan de versnelling. Echter, wij hebben geen invloed op het bestuurlijke proces, dat naar mijn gevoel lang duurt.

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - Afhankelijk van de locatie, maar over het algemeen verloopt de ontwikkeling sneller dan bij binnenstedelijke projecten, vanwege de lagere complexiteit. Let echter op de invloed van Natura 2000-gebieden en andere natuurparken, aangezien deze cases complexer kunnen maken.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslagen waarom?
  - Het nemen van een besluit op lokaal niveau om een ontwikkeling te starten. Na het nemen van dit besluit komt iedereen in beweging. Vaak duurt de periode tot het nemen van dit besluit langer dan de tijd die nodig is voor onderzoek en eventuele bezwaar- of beroepsprocedures, die bovendien erg kostbaar kunnen zijn. De essentie is dat zodra de formele procedure wordt opgestart, er fatale termijnen van kracht zijn. Alles daarvoor is niet tijdsgebonden vanuit de overheid en kan daardoor lang duren.
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
  - Deze hebben vaak al een negatieve invloed gehad, ondanks dat ze met de beste intenties zijn ontstaan. Iedereen die nieuw beleid introduceert, doet dat met de beste bedoelingen. Echter, niemand kan in de toekomst kijken en voorspellen welke gevolgen de samenloop van omstandigheden met zich meebrengt. Daarnaast vormt de opstapeling van wetgeving en eisen een probleem. Eén afzonderlijke regel is vaak te overzien, maar de combinatie ervan wordt door de overheid niet altijd voorzien.

- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - Het streven naar uniformiteit binnen de politiek is een uitdaging, omdat iedereen op zijn eigen eiland zit en dit zo goed en sterk mogelijk wil vertegenwoordigen. Wanneer deze standvastige standpunten samenkomen, wordt de uitvoering ervan echter erg complex, tijdrovend en mogelijk haalbaar.
- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
  - Uniformiteit en standaardisering binnen de gehele bouwsector, zoals bij leges, duurzaamheidseisen en andere regelgeving, kan het proces aanzienlijk versnellen. Dit geldt niet alleen voor de fysieke realisatie van projecten, maar vooral voor de totstandkoming van overeenkomsten tussen gemeenten en ontwikkelaars.
  - Politieke consensus, het hoger plaatsen van de bouwopgave op de politieke agenda. Hierin is al een verbetering zichtbaar door het grote woningtekort.
  - De afgelopen jaren hebben we ons teveel gefocust op de verkeerde versnelling: de daadwerkelijke bouw van woningen. Echter, de grootste tijdswinst is te behalen in de periode vóór de daadwerkelijke realisatie. Graag zou ik zien dat deze focus verschuift.
- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?
  - Het beperken van bepaalde onderdelen van de participatie. Omwonenden overzien vaak niet het geheel van het project en kijken voornamelijk vanuit hun eigen belang. Wanneer zij te vroeg worden betrokken, kan er onbegrip ontstaan als zij het gevoel hebben niet gehoord te worden.
- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
  - Continuïteit is essentieel. Wij hebben een ontwikkel- en bouwbedrijf. Voor een puur sang ontwikkelaar is een fluctuerend werkaanbod niet hinderlijk, maar voor het bouwbedrijf is een constant aanbod van opdrachten cruciaal om fluctuatie in het werknemersbestand te voorkomen.
- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?
  - Op dit moment is er in de hele markt een arbeidskrapte. Uiteraard kan het altijd sneller, maar de grootste versnelling zit niet in deze hoek. Daarom maak ik mij hierover minder zorgen.

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn eractiviteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?
  - **Positief:**
    - **Samenwerking**: Een fijne samenwerking met de gemeente;
  - **Negatief:**
    - **Bestuurlijkeproces**: Heeft erg lang geduurd voordat er een besluit is genomen om de ontwikkeling te starten. Hierdoor heeft het project meerdere jaren stilgelegen. Na een verandering in de politieke samenstelling is uiteindelijk dit besluit genomen;
    - **Juridische proces**: De procedures bij de Raad van State, dit was voornamelijk een zorg van de gemeente.
- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat snellerzou verlopen?
  - Het sneller overgaan tot het besluit om een ontwikkeling te starten is wenselijk. Echter, in dit bestuurlijke proces is er als ontwikkelaar weinig sturing mogelijk, aangezien de gemeente hierin een machtspositie heeft.
- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?
  - Over de gehele periode, vanaf de initiatie van het project tot de oplevering, was de doorlooptijd erg lang. Dit kwam voornamelijk doordat de gemeente lange tijd geen besluit nam over de start van de ontwikkeling. Hierdoor moest het bestemmingsplan vervolgens worden vernieuwd, met de bijbehorende complicaties.;
  - Vanaf het moment dat het bestemmingsplan onherroepelijk werd, is het proces tot de oplevering snel verlopen.

H. Interview Municipality Lotus

Datum: 07-02-25, 10:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: Gemeente
Functie: Projectleider
Project: Lotus

Toelichting

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Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - Mijn functie tijdens het project was projectleider bij de gemeente;
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Mijn rol bestond uit het coordineren van processen, het opstellen en bewaken van de planning, documentbeheer, het aansturen van de projectgroep en het beoordelen van uitgevoerde onderzoeken. Gezien het passieve grondbeleid vielen deze taken eigenlijk niet binnen de verantwoordelijkheid van de gemeente.
- Heeft u invloed op de doorlooptijd van projecten?
  - Mijn invloed op de doorlooptijd was beperkt. Omdat het project een passief grondbeleid betrof, had de gemeente voornamelijk een controlerende rol. Echter, door complicaties op de projectlocatie en interne doelstellingen binnen de gemeente, zoals de woonopgave, hebben wij als gemeente de ontwikkelaar intensief ondersteund bij het oplossen van bestuurlijke en technische vraagstukken. De tijd die dit in beslag nam, kon niet worden besteed aan andere projecten.

Algemeen vragen Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - De doorlooptijd verschilt per situatie en wordt sterk beïnvloed door de complexiteit en de politieke achtergrond van een project. Over het algemeen behoren dit soort ontwikkelingen tot de minder complexe processen.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd inbeslag en waarom?
  - Het opstellen van een stedenbouwkundig plan neemt veel tijd in beslag vanwege de betrokkenheid van diverse partijen, zowel politiek als commercieel. Dit leidt op verschillende niveaus tot discussies over ontwerpdetails, waardoor het proces langdurig is en het bereiken van overeenstemming vertraagd wordt.
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
  - Deze ontwikkelingen hebben vooral een negatieve impact gehad. Door veranderende wet- en regelgeving moeten businesscases worden herzien, wat niet alleen tot vertraging leidt, maar ook extra kosten met zich meebrengt, met name door de stikstofregeling.
- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - De politieke verdeeldheid, zowel lokaal als landelijk, vormt een grote uitdaging Na elke zittingsperiode kunnen beleidsdoelen veranderen, terwijl vastgoedontwikkeling een proces is dat meerdere bestuursperiodes beslaat. Stabiliteit en consistentie van beleid zijn hierbij van groot belang voor de voortgang.

- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
  - Een vast bestuurlijk beleid op het gebied van stikstof en ecologie is essentieel. Dit omvat een stabiele rekenmethode voor stikstof die niet voortdurend verandert en een efficiëntere ecologische aanpak. Gronden die door langdurig onderzoek braak liggen, kunnen namelijk nieuwe flora en fauna ontwikkelen, wat extra complicaties met zich meebrengt;
  - Parallelle uitvoering van onderzoeken is alleen haalbaar wanneer de gemeente zekerheid heeft over de ontwikkeling en er een stabiel bestuurlijk beleid is vanuit de landelijke politiek. In andere gevallen brengt deze werkwijze aanzienlijke financiële risico's met zich mee, die niet opwegen tegen de beoogde versnelling;
  - Aanpassen van inspraakprocedures. Er zijn veel mogelijkheden voor inspraak en beroepsprocedures tijdens de uitwerking van een project. Met name in de fase van de structuurvisie en bij de keuze van lokale partijen is de invloed groot. Naarmate het project verder in de uitvoeringsfase komt, wekt participatie de indruk dat belanghebbenden nog invloed hebben, terwijl dit in veel gevallen slechts een informerende rol betreft. Daarnaast kan tijdens een planologische procedure meerdere keren een inspraakreactie, zienswijze of beroep worden ingediend op basis van dezelfde beroepsgrond. Dit geldt bijvoorbeeld voor het vooronтwerpbestemmingsplan, het ontwerpbestemmingsplan, het bestemmingsplan en, indien van toepassing, het ontwerpuitwerkingsplan en het uitwerkingsplan. Ongeacht de uiteindelijke uitspraak is dit een zeer tijdrovend proces van twee à drie jaar en brengt het voortdurend kosten met zich mee. Vooral de herhaling van dezelfde argumenten zou beperkt moeten worden om het proces efficiënter te maken. .
- Als u een activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?
  - Overmatige milieustudies, zoals onderzoeken naar bodembeheer en bodemkwaliteit, evenals ecologische studies, moeten vaak herhaald worden, terwijl de daadwerkelijke impact soms minimaal is. Een voorbeeld hiervan is akkerbouw, waar flora en fauna voortdurend worden verstoord door agrarische werkzaamheden. Zodra het gebied echter de bestemming "wonen" krijgt, zijn uitgebreide onderzoeken vereist.
- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
  - De gemeente heeft er belang bij de woningdruk te verlagen en in de woonvraag te voorzien. Daarnaast speelt kostenbesparing een rol, aangezien een lange doorlooptijd extra kosten met zich meebrengt.
- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen
  - Doordat de gemeente een grotere rol op zich nam dan was afgesproken binnen de samenwerkingsovereenkomst, kon er minder aandacht worden besteed aan andere projecten. Dit werd mede veroorzaakt doordat de onderaannemers van de ontwikkelaar gedurende het project geen adequate oplossingen vonden voor bepaalde vraagstukken, terwijl de ontwikkelaar als opdrachtgever hierin sturend had moeten optreden.

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?
  - **Positief:**
    * **Participatie**: Door overleg en afspraken tussen de ontwikkelaar en omwonenden is een bezwaarprocedure tegen het tweede bestemmingsplan voorkomen;
    * **Fasering**: Door de gefaseerde uitvoering van het project konden tussentijdse engineeringcomplicaties worden beheerst, waardoor vertragingen in de voortgang van de woningbouw werden voorkomen;
    * **Projectenbureau**: Professionalisering van de projectorganisatie;
    * **Verantwoordelijkheid**: Door de verantwoordelijkheid van de gemeente om aan de woondoelstelling te voldoen, heeft zij actief bijgedragen aan het verhelpen van complicaties die verder gingen dan haar rol binnen het gevoerde grondbeleid.
  - **Negatief:**
    * **Technische en bestuurlijke complicaties**: Met betrekking tot de locatie moest rekening worden gehouden met de nabijheid van een Natura 2000-gebied, een gecompliceerde waterhuishouding en de nabijgelegen provinciale weg;
    * **Uitwerkingsregels**: Het stedenbouwkundig plan bleek in strijd te zijn met de uitwerkingsregels van het geldende bestemmingsplan, waardoor voor het tweede deel van het project een nieuw bestemmingsplan moest worden opgesteld;
    * **Stikstofregelgeving**: Bij het tweede bestemmingsplan was intern salderen niet meer mogelijk, waardoor gebruik moest worden gemaakt van de stikstofbank. Dit maakte de voortzetting van de realisatie mogelijk, maar bracht echter ook een aanzienlijke hoeveelheid extra werk met zich mee;
    * **Grondbeleid**: Door verschillende projecteigenschappen in combinatie met het passieve grondbeleid ontstonden diverse complicaties, die bij een actief grondbeleid deels in een eerder stadium voorkomen hadden kunnen worden. Daarom heeft de gemeente ervoor gekozen de ontwikkeling actief te ondersteunen, waardoor minder aandacht kon worden besteed aan andere projecten.
- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
  - Het hanteren van een ander grondbeleid, waarbij is overgestapt van een passieve naar een meer faciliterende of zelfs actieve benadering. Dit gewijzigde beleid bracht extra werkzaamheden met zich mee binnen de gemeente, mede vanwege de complexiteit van de locatie en de gefaseerde uitwerking.
- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?

- Naar mijn mening is de ontwikkeling op te splitsen in twee delen: een relatief snelle en een gemiddelde doorlooptijd, gerekend vanaf de ondertekening van het contract. De snelle doorlooptijd heeft betrekking op de eerste twee fasen, terwijl de gemiddelde doorlooptijd geldt voor de oplevering van de laatste twee fasen. Tijdens het tweede deel deden zich echter meerdere complicaties voor, zoals bezwaren van omwonenden, uitdagingen met betrekking tot de nieuwe stikstofregeling en andere technische obstakels;
- Daarnaast vind ik het lastig om de vorming van de structuurvisie en het bestemmingsplan mee te nemen in de doorlooptijd, aangezien een structuurvisie alle plannen omvat die geleidelijk worden uitgevoerd. Het project start pas op het moment dat het bestuur een plan aanwijst als project of wanneer het als particulier initiatief wordt ingebracht.

I. Interview Developer Lotus

Datum: 17-02-25, 12:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: Ontwikkelaar
Functie: Vastgoedontwikkelaar
Project: Lotus

Toelichting

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Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - De geïnterviewde had de rol van projectontwikkelaar en was betrokken bij het gehele proces.
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Dit omvat acquisitie en de uitwerking van nieuwe ontwikkelingen.
- Heeft u invloed op de doorlooptijd van projecten?
  - Deels. Als ontwikkelaar heb ik invloed op de projectmatige onderdelen, maar niet op de besluitvorming binnen het bestuurlijke proces, waarvan ik afhankelijk ben.

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - Deze duur is afhankelijk van de complexiteit, maar is over het algemeen korter dan in een bebouwde omgeving, waar veel stakeholders betrokken zijn. Wat niet vergeten mag worden, is dat zowel landelijke als lokale beperkingen de ontwikkeling van een greenfieldproject complex kunnen maken, zoals Natura 2000-gebieden en andere lokale regelgeving.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslag en waarom?
  - De besluitvorming voorafgaand aan het opstellen van het bestemmingsplan bepaalt het startpunt van de procedure. Zodra deze beslissing is genomen, komt de gehele procedure op gang en wordt de resterende doorlooptijd beter te overzien.
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
  - Negatief. Door de veranderingen moeten businesscases opnieuw worden herzien. Voor beleidsmakers is het bovendien lastig om de toekomst te voorspellen. Bijvoorbeeld: in eerste instantie was overeengekomen om gedurende enkele jaren slechts 7 tot 10 woningen per jaar op te leveren vanwege de lage vraag. Enkele jaren later bleek echter dat we het gehele project, met 130 woningen, binnen korte tijd konden uitverkopen. Uiteindelijk hebben we daarom de fasering aangepast.
- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - Het initiëren van een ontwikkeling door de gemeente is de eerste stap. Zodra dit besluit is genomen, volgt de rest. Hiervoor zijn termijnen vastgesteld; deze zijn niet fataal, maar er is wel een doorlopend proces.
- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?

  - Uniformiteit en standaardisering van gebiedsinvulling op het gebied van duurzaamheid, leges en andere aspecten spelen een belangrijke rol. Gemeenten hebben vaak een machtspositie ten opzichte van ontwikkelaars en leggen extra eisen op, mede vanuit hun politieke achtergrond. Ontwikkelaars accepteren deze extra eisen omdat zij de ontwikkeling willen starten, mede vanwege oplopende kosten en de noodzaak om continuïteit in het bouwbedrijf te waarborgen;

  - Het besluit om een ontwikkeling te starten moet worden versneld; deze taak ligt bij het lokale bestuurlijke orgaan. Dit bestuurlijke proces neemt veel tijd in beslag;

  - Onderzoeken zijn tijdrovend en vooral erg kostbaar. Hoewel hierin versnelling mogelijk is, beschouw ik dit niet als een doorslaggevende factor. In plaats daarvan zou meer aandacht moeten worden besteed aan het bestuurlijke proces.

- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?

  - Het beperken van deelname aan participatieprocessen kan soms noodzakelijk zijn, omdat omwonenden vaak niet het geheel van de ontwikkeling overzien en vooral vanuit hun eigen belang redeneren. Wanneer zij op het verkeerde moment worden betrokken, kan dit leiden tot onbegrip en het gevoel niet gehoord te worden. Het grote voordeel hiervan is dat de financieringstermijnen korter zijn, wat resulteert in minder risico en lagere kosten. Dit komt het project ten goede en verhoogt de investeringsbereidheid van marktpartijen, die een groot deel van de bouwopgave verzorgen. **Begrijp me niet verkeerd**: in de betreffende projecten hebben we door middel van participatie juist een beroep kunnen voorkomen!

- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?

  - Het creëren van consistentie zorgt voor een continue werkstroom binnen onze bouwtak, waardoor deze efficiënt kan worden aangestuurd.

- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?

  - De bouwsector kampt met een tekort aan vakmensen, maar handarbeid en ambachtelijk werk worden tegenwoordig steeds vaker vervangen door de industriële productie van woningen.

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?

  - **Positief:**

    * **Fusie gemeente**: Zorgde voor extra inbreng op het gebied van kennis en inzicht in de complexiteit van het project;

    * **Samenwerking**: Door open communicatie tussen partijen konden we mede de fasering realiseren;

    * **Participatie**: Voorkwam een bezwaarprocedure tegen het uitwerkingsplan.

  - **Negatief:**
    * **Uitwerkingsregels**: Het beeldkwaliteitsplan bleek in strijd te zijn met de uitwerkingsregels van het geldende bestemmingsplan, waardoor voor het tweede deel van het project een nieuw bestemmingsplan moest worden opgesteld. Dit maakte de realisatie erg ingewikkeld en tijdrovend.;
    * **Wijziging wet-regelgeving**: Hierdoor moesten we diverse onderzoeken herzien.

- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
  - -

- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?
  - Lang. De totale doorlooptijd is aanzienlijk, mede door complicaties met het bestemmingsplan en veranderende regelgeving, zoals de stikstofregels.

J. Interview Developer Dahlia

Datum: 30-01-25, 14:00
Interviewer: Dirk Hoogstraten
Duur: 60 minuten

Bedrijf: Ontwikkelaar
Functie: Vastgoedontwikkelaar-
Project: Dahlia

Toelichting

Hartelijk dank voor uw deelname aan mijn onderzoek naar de optimalisatie van de doorlooptijden in vastgoedontwikkeling. Dit onderzoek maakt deel uit van mijn afstudeerproject voor de masteropleiding *Construction Management and Engineering* aan de Technical university of Delft.

Gedurende dit onderzoek wordt de doorlooptijd van vastgoedontwikkeling geanalyseerd, van initiatie tot de start van de ontwikkeling. Hierbij worden de activiteiten die invloed hebben op dit proces inzichtelijk gemaakt. Door te identificeren welke activiteiten een positieve of negatieve invloed hebben op de doorlooptijd, kan het proces worden geoptimaliseerd. Het uiteindelijke doel is om de doorlooptijd van vastgoedontwikkeling te verkorten en zo bij te dragen aan het verkleinen van het woningtekort in Nederland.

Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - Mijn functie is vastgoedontwikkelaar binnen een ontwikkelbedrijf dat deel uitmaakt van een groter concern.
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Mijn rol omvat het gehele traject: vanaf acquisitie, het ontwikkelen van bestemmingsplannen, tot overleg met gemeenten en architecten en de uiteindelijke realisatie en verkoop van projecten. Dit is vaak afhankelijk van de omvang van het project.
- Heeft u invloed op de doorlooptijd van projecten?
  - Ja, tot op zekere hoogte. Ik kan snel reageren op aanvragen en bezwaarprocedures versnellen, maar juridische trajecten en gemeentelijke goedkeuringen bepalen vaak de snelheid. Een betrokken gemeente als partner, zoals bij Dahlia, kan een positieve invloed hebben op de doorlooptijd.

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - Zelf ben ik hier minder direct bij betrokken, maar over het algemeen zijn greenfieldontwikkelingen, qua locatie minder complex en daarom sneller dan brownfieldontwikkelingen, omdat er minder stakeholders zijn en minder bezwaarprocedures spelen.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslag en waarom?
  - Juridische procedures, zoals bezwaren en beroepszaken tot aan de Raad van State, kosten veel tijd.
  - Het saneren en voorbereidende werkzaamheden (voorbelasten, infra, bouwrijpmaken) van project locaties duren vaak lang.
  - Het 'laaghangende fruit' voor snelle ontwikkeling is geplukt, waardoor complexere situaties overblijven. Wanneer de gemeente en de ontwikkelaar op één lijn zitten, kan dit het ontwikkelproces versnellen. Echter, opstapeling van bezwaar- en beroepsprocedures zorgen vaak voor vertragingen.
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?
  - Veranderende regelgeving, zoals de stikstofwetgeving en betaalbare huurverplichtingen, beïnvloeden de doorlooptijd, omdat ze businesscases gedurende het ontwikkelproces veranderen en plannen herzien moeten worden. De overgang naar de Omgevingswet heeft ook impact, zij het in mindere mate, omdat dit vooral een kwestie is van inleren in een nieuw proces.

- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - Het parallel laten verlopen van processen kan efficiënt zijn, maar brengt ook risico's met zich mee. Als plannen herzien moeten worden en er al flink is geïnvesteerd, moet werk mogelijk overnieuw en kosten alsnog gedekt worden. Daarnaast is capaciteit een uitdaging bij parallel schakelen.
- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
  - Een Duits model waarbij een lagere rechter beoordeelt of een beroep kans maakt. Dit zou de werkdruk bij de Raad van State verminderen.
  - Meer standaardisering van bouw- en duurzaamheidseisen op nationaal niveau. Dit mogen hoge eisen zijn, zolang ze eenduidig zijn, zodat er meer gestandaardiseerd en geïndustrialiseerd kan worden.
  - Duidelijke regelgeving omtrent stikstof en minder wisselend beleid. Er ontbreekt een concrete koers.
- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?
  - Een tweede bezwaarprocedure na vaststelling van een bestemmingsplan zou kunnen worden weggelaten. oftewel, na vaststelling bestemmingsplan maar 1 uitspraak over bezwaar tegen vergunning die binnen bestemmingsplankaders past. Dit zou juridische trajecten minder vertraging laten oplopen. Omwonenden klagen vaak over het uiterlijk van een ontwikkeling, terwijl wij als ontwikkelaars juist een esthetisch verantwoord project willen neerzetten. De middelen die nu aan juridisch conflict worden besteed, komen niet ten goede aan het project.
- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
  - Geld en efficiëntie. Kortere doorlooptijden zorgen voor lagere kosten en maken het mogelijk om meer in de kwaliteit van het project te investeren.
- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?
  - Ja, vooral bij gemeenten is er een tekort aan planologen en wisselingen in personeel, wat soms leidt tot lange wachttijden en vertragingen in procedures. Bijvoorbeeld; Bij een project in een grote gemeente heeft dit voor een vertraging van drie kwart jaar gezorgd, aangezien niemand in de functie aanwezig was. Ook bij nutsbedrijven merken we een tekort: zij willen vroegtijdig met de ontwikkeling betrokken zijn, maar schuiven concrete actie op de lange baan omdat het nog geen 'hard' plan is. **(Eigenlijk kampt de hele branche met krapte)**

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief of negatief hebben beïnvloed?
  - **Positief:**
    - **Samenwerking**: Betrokkenheid van de gemeente met een wethouder die actief voor inzette. Gemeente is 50% aandeelhouder in de GEM.
    - **Fasering**: Het opdelen van het project in kleinere uitwerkingsdelen zorgde voor meer flexibiliteit en betere inspeling op veranderende wet- en regelgeving.
  - **Negatief:**
    - **Onteigeningsprocedure**: De onteigeningsprocedure on de laatste gronden in eigendom te krijgen, dit is een lang proces. Het werd te laat duidelijk dat er geen minnelijke overeenstemming getroffen kon worden;
    - **Black swan-risico's** : De onverwachte ontdekking van vervuilde grond, in combinatie met de beschadiging van een cruciale kabeltracé tijdensiwerkzaamheden, veroorzaakte aanzienlijke vertragingen en leidde tot zowel juridische als bestuurlijke complicaties.
- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
  - Dit is lastig te beïnvloeden, aangezien veel zaken afhangen van het bestuurlijke proces, zoals de onteigeningsprocedure en de procedure bij de Raad van State.
- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?
  - Het overkoepelende project heeft een lange doorlooptijd, voornamelijk door de juridische en bestuurlijke complexiteit.
  - Het deelprojct heeft een lange doorlooptijd, voornamelijk door de ontegeningsprocedure.
  - In beide gevallen, wordt de pro-actieve houding van de gemeente als versnelling op de tijdsduur ervaren.

K. Interview Developer Magnolia

Datum: 24-02-25, 13:00
Interviewer: Dirk Hoogstraten

Bedrijf: Ontwikkelaar
Functie: Senior Projectontwikkelaar
Project: Magnolia

Toelichting

Hartelijk dank voor uw deelname aan mijn onderzoek naar de optimalisatie van de doorlooptijden in vastgoedontwikkeling. Dit onderzoek maakt deel uit van mijn afstudeerproject voor de masteropleiding *Construction Management and Engineering* aan de Technical university of Delft.

Gedurende dit onderzoek wordt de doorlooptijd van vastgoedontwikkeling geanalyseerd, van initiatie tot de start van de ontwikkeling. Hierbij worden de activiteiten die invloed hebben op dit proces inzichtelijk gemaakt. Door te identificeren welke activiteiten een positieve of negatieve invloed hebben op de doorlooptijd, kan het proces worden geoptimaliseerd. Het uiteindelijke doel is om de doorlooptijd van vastgoedontwikkeling te verkorten en zo bij te dragen aan het verkleinen van het woningtekort in Nederland.

Het doel van dit interview is om meer inzicht te verkrijgen in uw ervaring en visie op het tijdsverloop binnen vastgoedontwikkeling in het algemeen. Daarnaast vraag ik u uw ervaringen te delen met betrekking tot het bovengenoemde project. Het benoemen van belemmeringen en kansen voor versnellingen in het proces is een waardevolle aanvulling op de theoretische analyse van het tijdsverloop van dit project. Op basis hiervan zal ik aanbevelingen formuleren om de doorlooptijd te optimaliseren.

Bij het beantwoorden van de vragen zijn er geen goede of foute antwoorden: uw persoonlijke ervaring staat centraal en draagt bij aan dit onderzoek. Mocht u zich ongemakkelijk voelen bij het beantwoorden van bepaalde vragen, dan bent u vrij om deze over te slaan. U kunt mij op elk moment onderbreken. De resultaten van dit interview worden eerst met u teruggekoppeld en vervolgens volledig geanonimiseerd.

Interviewvragen

Professionele achtergrond

- Welke functie vervult u binnen de organisatie met betrekking tot het project?
  - e geïnterviewde vervult de functie van senior projectontwikkelaar en is al meer dan 40 jaar werkzaam in de sector. Door de jaren heen heeft hij verschillende functies bekleed.
- Wat is uw rol in het ontwikkelproces van vastgoed?
  - Mijn rol binnen het ontwikkelproces is zeer breed en omvat de eindverantwoordelijkheid voor het gehele traject. Dit begint bij de eerste fase van contractvorming met de gemeente en loopt door tot de definitieve uitvoering van het project. Tot de taken behoren onder andere het opstellen van contracten, het aansturen van architecten en civiele aannemers, evenals het bewaken van de voortgang van het project..
- Heeft u vanuit uw functie invloed op de doorlooptijd van projecten?
  - Ja, voor zover mogelijk. Binnen het ontwikkelingsproces probeer ik de doorlooptijd zo veel mogelijk te beïnvloeden door sturing te geven aan interne processen. Echter, externe factoren zoals gemeentelijke procedures, bezwaren van belanghebbenden en politieke besluitvorming kunnen de voortgang van een project aanzienlijk vertragen, waarop ik geen invloed heb.

Algemeen vragen
Deze vragen hebben betrekking op uw ervaringen met doorlooptijden van projecten waarbij u betrokken bent geweest.

- Hoe ervaart u de doorlooptijd van greenfieldontwikkelingen?
  - De doorlooptijd hangt af van de complexiteit van het project, maar over het algemeen duren greenfieldontwikkelingen te lang. Vanaf het moment dat er overeenstemming is met de gemeente, duurt het meestal vijf tot zes jaar voordat de eerste paal de grond in gaat. Het proces om alle procedures te doorlopen, inclusief de bijbehorende uitdagingen, neemt simpelweg te veel tijd in beslag.
- Welke activiteiten tijdens het ontwikkelproces nemen naar uw ervaring veel tijd in beslag en waarom?
  - Dat verschilt per project; bijna geen enkel project is hetzelfde. De doorlooptijd hangt echter sterk af van de mate waarin de gemeente meewerkt. De termijn, die vaak veel tijd in beslag neemt, kan in twee delen worden opgesplits:
    - Het tot stand komen van koop- of samenwerkingsovereenkomsten kan sterk variëren. In sommige gevallen kan dit binnen drie maanden worden afgerond, terwijl het in andere situaties jaren kan duren;
    - Het realiseren van een onherroepelijk bestemmingsplan, bijvoorbeeld door een procedure bij de Raad van State, neemt veel tijd in beslag. De gemeente heeft hierop doorgaans slechts beperkte invloed;
- Hoe hebben wijzigingen in wet- en regelgeving in de afgelopen jaren volgens u invloed gehad op de doorlooptijd?

  - Negatief.
    * Ambtenaren nemen vaak een afwachtende houding aan wanneer er nieuwe wetgeving wordt verwacht, waardoor de besluitvorming tijdelijk stil komt te liggen;
    * Het voortdurend veranderende stikstofbeleid, dat om de paar maanden wijzigt, dwingt tot regelmatige herziening van de businesscase
    * Inspraak: Voorheen konden indirect betrokkenen geen inspraak leveren, maar door een recente uitspraak van de Raad van State is dit nu weer mogelijk;
    * IHet gebruik van de Omgevingswet zou het ontwikkelingsproces moeten versnellen en vereenvoudigen. Echter, in de praktijk is van deze verbeteringen nog weinig merkbaar.

- Welke uitdagingen ziet u bij het optimaliseren van de doorlooptijd van greenfieldontwikkelingen?
  - De grootste uitdaging ligt bij de Raad van State:
    * De Raad van State zou bij zijn uitspraken meer rekening moeten houden met wat landelijk noodzakelijk is. Dit betekent niet dat individuele belangen gebagatelliseerd moeten worden, aangezien deze soms terecht zijn. Echter, er lijkt een grote neiging te zijn om met het individu mee te denken, wat bredere belangen vertraagt of zelfs stagneer;
    * Door de lange doorlooptijd van bezwaarprocedures kan een veranderende marktvraag tijdens dit proces aanpassingen in het ontwerp noodzakelijk maken.

- Als u drie oplossingen mocht aandragen om doorlooptijden te versnellen, welke zouden dat zijn?
  - Het realiseren van een wettelijke mogelijkheid om prestatieafspraken met de gemeente te maken, in de vorm van planningsafspraken. Een fatale termijn is geen oplossing, dit zou betekenen dat een verkeerd plan doorgang vindt als de ambtelijke afhandeling niet tijdig plaatsvindt;
  - De invoering van een drempel voor procedures bij de Raad van State, zodat niet iedereen zomaar bezwaar kan maken, bijvoorbeeld in de vorm van het Duitse model of een kostenvergoeding wanneer een beroep ongegrond wordt verklaard. Wij ervaren een merkbaar verschil in de aard en frequentie van bezwaren voor en na de coronaperiode;
  - Politieke aandacht, de herinvoering van het Ministerie van VROM is wenselijk. Wanneer er een ministerie is, wordt er beter gestuurd op langetermijnbeleid. Het huidige woningtekort is veroorzaakt door falend beleid tijdens de banken- en eurocrisis toen de woningmarkt volledig instortte. Daarbovenop kwam verhuurdersheffing waardoor ook corporaties de hand op de knip hielden. Hierdoor zijn er over een periode van bijna 10 jaar minder woningen gebouwd en is de bouwsector met meer dan 30% ingekrompen. Dit heeft er weer voor heeft gezorgd dat de bouwprijzen sinds die tijd met zo'n 60% zijn gestegen. Dit had kunnen worden voorkomen door betere sturing vanuit de overheid.

- Als u één activiteit uit het bestaande ontwikkelproces zou kunnen weglaten, welke zou dat zijn, en waarom?

  - Er zijn geen specifieke stappen die zomaar kunnen worden weggelaten; het stedenbouwkundig plan vormt de basis voor zowel het bestemmingsplan als het uitwerkingsplan. Wel zou het proces veel efficiënter kunnen verlopen als er met gemeenten procesafspraken worden gemaakt en er een vangnet wordt gecreëerd voor bezwaarprocedures bij de Raad van State. In dat geval zou ik het huidige proces gewoon behouden.

- Wat zijn voor uw organisatie de belangrijkste redenen om de doorlooptijd van projecten te verkorten?
  - De belangrijkste reden is kostenbeheersing.

- Ervaart u bij samenwerkingspartijen een hoge werkdruk, waardoor bepaalde processen vertragen of afspraken niet worden nagekomen?
  - Ja, met name bij gemeenten. Er is vaak onvoldoende capaciteit en kwaliteit binnen de gemeentelijke organisatie, waardoor bepaalde procedures langer duren dan noodzakelijk en de kwaliteit daaronder lijdt.

Projectmatig vragen
De onderstaande vragen hebben betrekking op de doorlooptijd van het bovengenoemde project.

- Zijn er activiteiten geweest die de tijdsduur positief en/of negatief hebben beïnvloed?
  - **Positief:**
    * **Fasering**: We zijn op eigen risico alvast gestart met de voorbelasting van het terrein. Dit stelde ons in staat om eerder te beginnen met de voorbereidende werkzaamheden, waardoor het project is versneld;
    * **Parallel schakelen**: De aanvraag voor de omgevingsvergunning liep parallel aan het uitwerkingsplan. Hierdoor konden beide procedures tegelijkertijd worden doorlopen, wat een aanzienlijke tijdsbesparing opleverde;
    * **Grondpositie**: Vanwege de afhankelijkheid van de grondpositie en de toenemende druk op de realisatie van andere projecten, nam de noodzaak tot grondruil toe. Dit heeft ertoe geleid dat er snel een overeenkomst over de gronden werd bereikt;
    * **Participatie omwoonde**: Vanwege de afhankelijkheid van de grondpositie en de toenemende druk op de realisatie van andere projecten, nam de noodzaak tot grondruil toe. Dit heeft ertoe geleid dat er snel een overeenkomst over de gronden werd bereikt;
  - **Negatief:**
    * **Bestuurlijk beleid**: Vanwege concurrentie met een ander project binnen dezelfde gemeente werd dit project twee keer on hold gezet. De gemeente had een groter belang bij het andere project en was bang dat beide projecten met elkaar zouden concurreren.

- Hoe zou u het project anders aanpakken als het nu opnieuw zou starten, zodat sneller zou verlopen?
  - Nee.

- Hoe verhoudt de doorlooptijd van dit project zich tot andere projecten waarbij u betrokken bent geweest? Zou u dit kunnen toelichten in termen van kort, gemiddeld of lang?
  - De doorlooptijd van het project kan in twee fasen worden ingedeeld:
    * Vanaf de aankoop van de grond in 1996 tot het bereiken van overeenstemming met de gemeente heeft dit proces lang geduurd, met name omdat de ontwikkeling vanuit de gemeente lange tijd in de koelkast werd gezet;
    * Na de overeenkomst met de gemeente verliep het proves echter gemiddeld in vergelijking met andere projecten, 5 jaar tot oplevering.

L. Field Experts' Contribution Transcripts

	Belemmering	Cat.	Lokaal/ Landelijk	Maatregel
Interview I	De lange duur van juridische procedures als gevolg van bezwaren en beroepszaken tot aan de Raad van State zorgt voor aanzienlijke vertragingen. Doordat projectlocaties steeds complexer worden, neemt het aantal procedures toe. Naast de langere doorlooptijd brengen deze processen ook hoge kosten met zich mee voor ontwikkelaars, wat ten koste kan gaan van de kwaliteit en de uitstraling van het project.	PCA	Lokaal	Het invoeren van een drempel voor het starten van een procedure bij de Raad van State kan helpen om de werkdruk te verminderen en de doorlooptijd van zaken te verkorten. Een mogelijk voorbeeld is het Duitse model, waarbij een lagere rechter eerst beoordeelt of een beroep kansrijk is voordat het bij een hogere instantie wordt behandeld. Dit voorkomt onnodige procedures en verlaagd daarmee de druk bij de Raad van State.
	De mogelijkheid voor de lokale politiek om extra bouweisen op te leggen, bijvoorbeeld op het gebied van duurzaamheid, vereist maatwerk in alle fasen van het proces. Dit brengt extra tijd en kosten met zich mee en kan de haalbaarheid van projecten bemoeilijken. Daarnaast kunnen deze aanvullende eisen ertoe leiden dat de businesscase niet rendabel is, waardoor ontwikkelingen vertragen of zelfs geheel niet doorgaan.	LF	Lokaal	Het vastleggen dat op lokaal niveau geen extra eisen kunnen worden opgelegd en dat gestandaardiseerde bouw- en duurzaamheidseisen op nationaal niveau leidend zijn, zorgt voor duidelijke uitgangspunten. Dit bespaart tijd in zowel de engineering- als de uitvoeringsfase van projecten en draagt bij aan de industrialisatie van het bouwproces.
	Wijzigingen in wet- en regelgeving op landelijk niveau zorgen voor onzekerheid en maken de markt terughoudend. Door het fluctuerende beleid moeten businesscases opnieuw worden getoetst, wat zowel tijdrovend als kostbaar is. Voorbeelden hiervan zijn de stikstofregelgeving en de Wet middenhuur, die grote impact hebben op de haalbaarheid en voortgang van projecten.	LF	Landelijk	Het hanteren van een stabiel beleid met betrekking tot wet- en regelgeving die de vastgoedsector beïnvloedt, maakt het mogelijk businesscases op de lange termijn te toetsen. Dit biedt marktpartijen meer zekerheid en vertrouwen.
Interview II	De grote hoeveelheid inspraakmogelijkheden tijdens de ontwikkeling van een project leidt tot langdurige procedures. Tijdens de planologische procedure worden vaak meerdere keren zienswijzen of beroepen ingediend op basis van dezelfde beroepsgrond. Ongeacht de uitspraak resulteert dit in een lang en tijdrovend traject, wat de voortgang van projecten aanzienlijk vertraagt.	PCA	Lokaal	Het aanpassen van de inspraakprocedures door herhaling van dezelfde argumenten beperken/wegnemen. Daarnaast is het belangrijk burgers te informeren dat inspraak bij de structuurvisie en de keuze van politieke partij een grote invloed hebben op toekomstige ontwikkelingen. Naarmate het proces vordert, verschuift de rol van participatie steeds meer naar een informatieve functie.
	Overmatige milieustudies, zoals onderzoeken naar bodembeheer, bodemkwaliteit en ecologie, worden vaak herhaald door veranderend beleid, terwijl de impact hiervan in veel gevallen minimaal is. Bijvoorbeeld, bij akkerbouw worden gronden continu verstoord door mechanische bewerking, waardoor diepgaande milieustudies vaak weinig toegevoegde waarde hebben.Daarnaast hebben langdurige procedures een negatieve invloed, omdat braakliggende gronden in de tussentijd nieuwe flora en fauna kunnen aantrekken, wat extra complicaties met zich meebrengt. Een voorbeeld van overmatige milieustudies is de stikstofregelgeving van de afgelopen jaren, die heeft geleid tot aanzienlijke vertragingen en extra onderzoekslasten binnen de sector.	MR	Landelijk	Een consistent bestuurlijk beleid op het gebied van milieu, met name voor stikstof en ecologie, inclusief een stabiele rekenmethode voor stikstof en een efficiëntere ecologische aanpak. Dit zorgt voor meer voorspelbaarheid en biedt daarbij zekerheid.
	Het bestuurlijke proces binnen de politiek, zowel op lokaal als landelijk niveau, verloopt traag, waardoor belangrijke beslissingen, zoals het vrijgeven van ontwerpbestemmingsplannen, lang op zich laten wachten. De politieke verdeeldheid verergert dit probleem, doordat partijen vaak vasthouden aan hun eigen standpunten. Daarnaast kunnen beleidsdoelen na elke zittingsperiode veranderen, terwijl vastgoedontwikkeling een langdurig proces is dat meerdere bestuursperiodes beslaat. Dit gebrek aan continuïteit belemmert de voortgang en zorgt voor onzekerheid binnen de sector.	AD	Beide	Het creëren van wederzijds vertrouwen, zowel in de lokale als landelijke politiek, en het voeren van consistent beleid zijn van groot belang om het bestuurlijke proces te versnellen. Hierdoor wordt niet alleen de besluitvorming versneld, zoals bij een wijziging van een planologisch plan waarbij een volledige toetsing (B&W → advies → gemeenteraad) kan worden vermeden, maar ook durven marktpartijen hierdoor meer risico's te nemen. Dit maakt onder andere het parallel schakelen van processen mogelijk en vergroot de investeringsbereidheid.
Interview III	De trage besluitvorming op lokaal niveau, zoals het nemen van een besluit om een ontwikkeling te starten, kan soms jaren duren. De politieke samenstelling speelt hierbij een grote rol, aangezien veranderingen binnen het gemeentebestuur invloed hebben op de snelheid van het proces. Een belangrijk probleem is dat het ontwikkelingsproces vaak meerdere ambtstermijnen beslaat, waardoor wisselingen in bestuurders kunnen leiden tot vertragingen of herzieningen van eerder gemaakte plannen.	AD	Lokaal	Het prioriteren van de bouwopgave op de politieke agenda, zodat er politieke consensus ontstaat, en het creëren van een langetermijnvisie, zodat projecten die in ontwikkeling zijn niet stilgezet worden bij veranderingen in het politieke landschap.
	De lokale politiek heeft de mogelijkheid om extra eisen te stellen bovenop de vastgestelde wet- en regelgeving. Dit maakt het realiseren van businesscases tijdrovend en uitdagend. Het lokale bestuur heeft hierbij een sterke machtspositie, aangezien ontwikkelaars graag willen bouwen en daardoor vaak genoodzaakt zijn mee te gaan in de gestelde eisen.	LF	Lokaal	Het vaststellen van landelijke uniformiteit en standaardisering op het gebied van bouweisen zorgt ervoor dat elke ontwikkeling vanuit dezelfde uitgangspositie start. Dit leidt tot versnelling en kostenbesparing in het volledige ontwikkelproces, van de vereenvoudiging van het opstellen van overeenkomsten tot het mogelijk maken van industriële woningproductie.
	De afgelopen jaren lag de focus voornamelijk op het versnellen van de verkeerde fase binnen het realisatieproces, namelijk de constructiefase. Echter, deze fase heeft nooit de grootste tijdsduur binnen de totale doorlooptijd van een project gekend, waardoor de mogelijke versnelling beperkt is. De meeste vertragingen – en daarmee de grootste kansen voor versnelling – bevinden zich juist in de bestuurlijke fase.	AP	Landelijk	Er moet meer aandacht komen voor het feit dat de lange doorlooptijd van woningbouwprojecten zich voornamelijk voordoet in de fases vóór de realisatie. Het is essentieel dat beleidsmakers en bestuurders zich hiervan bewust worden, zodat het bestuurlijke proces en mogelijk ook de wetgeving hierop kan worden aangepast.

Interview IV	De ruime mogelijkheden voor bezwaar, van zienswijzen tot procedures bij de Raad van State, zorgen niet alleen voor lange doorlooptijden, maar brengen ook hoge kosten met zich mee. Er is veel inspraak mogelijk in hoe een gemeente zich ontwikkelt, vanaf de keuze voor een politieke partij tot aan de mogelijkheid om bezwaar te maken tegen vergunningen. Echter, vaak worden dezelfde beroepsgronden herhaaldelijk aangevoerd, wat het proces alleen maar vertraagt zonder daadwerkelijk invloed te hebben op het ontwerp.	PCA	Lokaal	Het beperken van bezwaarmogelijkheden door te voorkomen dat dezelfde beroepsgronden herhaaldelijk worden ingebracht. Hiermee kan onnodige besluitvorming worden weggenomen, waardoor de werkdruk wordt verlaagd.
	De constant veranderende wet- en regelgeving zorgt binnen de sectoren voor veel onzekerheid. Door deze fluctuaties moeten ontwikkelaars en gemeenten hun businesscases continu herzien, wat leidt tot een verhoogde onderzoekslast en extra kosten. Een belangrijke factor hierin is het steeds wisselende stikstofbeleid. Bovendien is de lokale politieke ambitie voor een plangebied vaak groter dan wat binnen de geldende wet- en regelgeving haalbaar is, wat verdere vertragingen en complicaties veroorzaakt	LF	Landelijk	Het voeren van een uniform beleid met een langetermijnvisie, waarbij extra eisen of afspraken op lokaal niveau niet mogelijk zijn. Dit biedt de sector zekerheid en maakt het nemen van risico's mogelijk, zoals het parallel laten verlopen van processen, mits er voldoende capaciteit beschikbaar is.
	Tijdens het uitvoeren van de benodigde onderzoeken leveren onderzoekende partijen regelmatig rapporten aan die door verkeerde interpretatie of een gebrek aan kennis van de projectlocatie niet overeenkomen met de werkelijkheid. Dit leidt tot beperkingen in de capaciteit en kan vertragingen in het proces veroorzaken.	MR	Lokaal	Gemeenten moeten de regie over de onderzoeken zelf in handen nemen. De gebruikte input en conceptuele eindrapportages kunnen dan gecontroleerd worden op de juistheid van de locatie-interpretatie, om de foutmarge in de rapporten te verminderen.
Interview V	Het besluitvormingsproces om een ontwikkeling te starten binnen de lokale politiek kan soms jaren duren. Door de snel veranderende markt sluit bepaalde regelgeving bij intreding niet altijd meer aan op de actuele situatie. Daarnaast kan de samenstelling van het gemeentebestuur na verkiezingen veranderen, waardoor projecten minder prioriteit krijgen of zelfs stil komen te liggen als de nieuwe bestuurders hier geen interesse in hebben.	AD	Lokaal	Het verhogen van de prioriteit van de bouwopgave op de politieke agenda, zodat er beter inzicht komt op waar het echte probleem(vertraging)in het proces plaats vind(bestuurlijke proces). Met als gevolg dat er meer politieke consensus is op dit onderwerp er sneller over word gegaan op besluitvorming en aanpassing in het huidige beleid. Sinds 2024 is er al meer aandacht voor dit onderwerp, wat positief is. Let op: Hierbij doel ik niet op uit beleid zoals de onderzoek verplichtingen, weliswaar tijdrovend en kostbaar, het proces is doorgaans in dit stadium al op gang en vindt het zijn weg.
	De langdurige procedures binnen het bestuurlijke proces, zowel op landelijk als lokaal niveau, zijn omslachtig en nemen te veel tijd in beslag voordat er uiteindelijk een besluit wordt genomen. De combinatie van deze trage besluitvorming en de snel veranderende markt zorgt ervoor dat regelgeving vaak niet meer aansluit op de actuele marktsituatie.	AP	Beide	Zie bovenstaand
	Divers beleid in wet- en regelgeving stelt lokale overheden in staat om extra eisen bovenop het bestaande beleid te hanteren. Dit leidt tot veel maatwerk en maakt procedures tijdrovend. Bovendien draagt de grote hoeveelheid regelgeving niet altijd bij aan een efficiënter proces en kan deze soms zelfs onderling strijdig zijn. Een voorbeeld hiervan is de Ladder voor duurzame verstedelijking (2012), die enkele jaren na invoering door de markt als tegenstrijdig werd ervaren en pas recent is afgeschaft. Deze regelgeving leidde tot veel juridische procedures om projecten alsnog doorgang te laten vinden, waarbij uitspraken vaak in het voordeel van de ontwikkeling uitvielen.	LF	Lokaal	Het landelijk overeenkomen van uniformiteit en standaardisering op het gebied van bouweisen, zodat deze op lokaal niveau niet aangepast kunnen worden. Daarnaast is het essentieel om de strijdigheid binnen de huidige wetgeving te vereenvoudigen en weg te nemen. Hoewel iedereen binnen de politiek zijn positie zo sterk mogelijk wil verdedigen, is het noodzakelijk om op bepaalde punten concessies te doen om tot concrete resultaten te komen.
Interview VI	De lange doorlooptijden van bezwaar- en beroepsprocedures, met name bij de Raad van State, worden veroorzaakt door het grote aantal ingediende procedures. Gedurende deze lange trajectperiode verandert de marktsituatie, waardoor het stedenbouwkundig plan mogelijk niet meer aansluit op de actuele marktbehoefte. Daarnaast is er een duidelijke toename van procedures merkbaar sinds de coronapandemie, wat de druk op de besluitvorming verder vergroot.	PCA	Lokaal	De invoering van een drempel voor het starten van een procedure bij de Raad van State kan helpen om de druk op deze instantie te verminderen en daarmee de doorlooptijd te verkorten. Mogelijke opties hiervoor zijn: het Duitse model, waarbij bepaalde voorwaarden gelden voordat een bezwaarprocedure kan worden gestart; een kostenvergoeding voor de wederpartij wanneer een bezwaar ongegrond wordt verklaard; en het beperken van inspraak tot direct betrokkenen.
	Falend(ontbreken) overheidsbeleid is terug te herleiden naar de periode van de banken- en eurocrisis, met als gevolg dat de volledige bouwsector instortte. Hierop volgde de invoering van de verhuurdersheffing, die een gigantische impact had op de markt. Daarnaast ontbreekt het aan een langetermijnvisie, waardoor beleid sterk fluctueert en de sector onvoldoende stabiliteit en zekerheid	AP	Landelijk	Het introduceren van een langetermijnbeleid en meer politieke aandacht voor de vastgoedsector. De herinvoering van het Ministerie van VROM zou een passende oplossing kunnen bieden. Met een ministerie kan er beter worden gestuurd op langetermijnbeleid, wat bijdraagt aan meer stabiliteit en samenhang in de sector.
	Het uitblijven van lokale besluitvorming is een groot probleem. Leidinggevenden, zoals wethouders en ministers, vertrekken vaak na vier jaar, terwijl ambtenaren blijven zitten en daardoor meer invloed hebben op het verloop van projecten. Dit wordt versterkt door een gebrek aan capaciteit en kwaliteit binnen gemeenten. Daarnaast nemen ambtenaren vaak een afwachtende houding aan wanneer nieuwe wetgeving wordt verwacht, wat verdere vertragingen in de besluitvorming veroorzaakt.	AD	Lokaal	Het creëren van een wettelijke mogelijkheid om prestatieafspraken met gemeenten te maken in de vorm van planningsafspraken. Dit zorgt ervoor dat procedures binnen gemeenten efficiënter verlopen, wat bijdraagt aan een snellere besluitvorming.