

Long-distance bus and Multimodal hubs

Stakeholder and Institutional analysis through an argumentative framework

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Table of Contents

Acknowledgements	6
Abstract	7
Abbreviations, tables and figures	8
Abbreviations	8
List of Figures	8
List of Tables	8
1 Research introduction.....	9
1.1 Case Introduction	11
1.2 Research Question Structure	14
1.3 Societal and Scientific Relevance	15
1.3.1 Societal Relevance.....	15
1.3.2 Scientific Relevance	16
1.4 Outline.....	16
2 Theoretical framework & literature review	17
2.1 Current trends in the mobility field.....	17
2.2 Selected frameworks and their use.....	18
2.2.1 Pro and con arguments for picking frameworks.....	18
2.2.2 “Best fit” model	21
2.3 The 5E Model	21
2.3.1 E1: Effective mobility / Effectiveness	21
2.3.2 E2: Efficient city / Efficiency	22
2.3.3 E3: Economy	23
2.3.4 E4: Environment.....	23
2.3.5 E5: Equity.....	24
2.4 Governance and Institutions in the public transport sector	24
2.4.1 Actors in-system	25
2.4.2 Dutch public transport tendering	25
2.4.3 Governance in literature	25
2.5 Success conditions	26
2.5.1 Governance success.....	26
2.5.2 Successful public transportation projects	26
2.6 Conceptual Framework.....	27
3 Methodology	30
3.1 Research Design.....	30

3.1.1	Research Philosophy.....	30
3.1.2	Considerations within Spatial Planning.....	30
3.1.3	Research Criteria	31
3.2	Data Collection	32
3.3	Participants and sampling	32
3.4	Analysis and tools	34
3.5	Ethical considerations	34
4	Results & Interpretation	35
4.1	Domains	35
4.2	Main interview structure	35
4.2.1	Effectivity	35
4.2.2	Efficiency / Efficient city.....	36
4.2.3	Economy.....	37
4.2.4	Environment	38
4.2.5	Equity.....	39
4.3	Secondary interview structure.....	41
4.3.1	Action Arena.....	41
4.3.2	Decision-making Process.....	42
4.3.3	Success Conditions	43
5	Discussion	44
5.1	Sub-Questions	44
5.1.1	SQ-I: What characterises the current action arena regarding regional mobility (hub) development?.....	44
5.1.2	SQ-II: How do the domains of the 5E-model relate to current mobility and hub planning practises in the study area?.....	44
5.1.3	SQ-III: In what way is the decision making process currently anchored in the mobility and planning process in the study area?	45
5.1.4	SQ-IV: What prevailing criteria are in use to justify the investment into LDB projects and hub projects in the study area?.....	45
5.1.5	SQ-V: What justification conditions can be identified from current projects within field of public transportation and hubs within the study area?	45
5.2	Reflection on the results.....	45
5.2.1	Domains within the interviews	46
5.2.2	Overlapping domains.....	47
5.3	Relevant findings outside the research scope.....	48
5.4	Recommendations for future research	49
6	Conclusions	50

6.1.1	D-RQ: How can suggestions for small hubs on a new LDB-line from Arnhem to Lelystad be provided using the domains from the 5E model?	50
6.1.2	E-RQ: What conditions justify the development of a LDB-line from Arnhem to Lelystad with integrated small hubs in the rural areas of the line within an argumentative action structure? 51	
6.2	Limitations	51
6.2.1	Methodological limitations	51
6.2.2	Scope and contextual limitations	52
6.2.3	Personal reflection	52
6.3	Relevance within the mobility field	53
7	Bibliography	54
8	Appendix	60
8.1	Appendix 1. Codebook visual	60
8.2	Appendix 2. Memo list	61

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Abstract

In this thesis, the success- and justification conditions for a long-distance bus (LDB) connection with integrated mobility hub is explored within the argumentative 5E framework. In a complex concession system with multiple levels of government, tensions and barriers exist to execute these projects successfully. The research aims to understand how actors and the decision-making process frame these success conditions within five domains: Effectiveness, efficiency, economy, environment and equity based on the 5E framework by Van der Bijl & Van Oort (2015). Adopting a qualitative approach and exploratory research design, data is gathered from nine semi-structured expert interviews, with stakeholders from municipalities, province, travel providers, consultancy and advocacy, providing a complete overview of the action arena and the decision-making process.

Interpretation based on memos and axial coding through these interview transcript combined the 5E model with the domains of decision-making process and specific actor constellation. Findings indicate that all five domains from the framework exist in practise. Operationalisation of these domains differs greatly. Effectivity links back to usage of the line, and integration within the broader mobility system. Efficiency is viewed as an institutional aspect where alignment of roles and stakeholder responsibilities is important, as well as a technical aspect relating to reuse of existing infrastructure. Economy is the most important argument in achieving political buy-in, but quantifying local benefits on a rural scale was deemed to be difficult. Environment and Equity, whilst providing strong points in a discussion, lacked strength due to a lack of measurable indicators in practise. Overlaps between the domains were noticed, notably, reuse of infrastructure fits with both efficient, effective and economical solutions.

Success conditions were defined as achieving quick results to keep political momentum, however, long-term visioning was also necessary to ensure success. Success conditions linked most strongly to effectivity and efficiency. Finally, the action arena was recognised to be a negotiation arena with only a partial institutional backing, leading to informal networks, and the decision-making process directly opposed that as a rigid structure with fragmented roles that are cemented in an institutional framework.

The research concludes with the notion that the success of LDB and integrated hub projects depend strongly on aligning these fragmented governance roles, framing arguments effectively whilst showing quick results. Success lies in integrating needs of users, designing in a modest way and reusing infrastructure wherever possible. Future research should look into quantifying environmental and equity arguments, to create the equal argumentative structure as suggested.

Abbreviations, tables and figures

Abbreviations

Frequently used abbreviations can be found in the table below. Sparsely used abbreviations will be referred to in between brackets () in-text. Abbreviations are listed alphabetically.

Table 1: List of Abbreviations.

Abbreviation	Written-out
ANF	Arnhem-Nijmegen Foodvalley
GD	Groningen-Drenthe
ITD	Involuntary travel disadvantage(s)
LDB	Long-distance (High-quality) bus
BRT	Bus rapid transit
FLM	First- and Last-mile (connections)
HOV	Hoogwaardig Openbaar Vervoer (High-quality Public Transport)
P+R / P&R	Park and Ride
ROCOV	Regionaal Overleg Consumentenbelangen Openbaar Vervoer (Regional Committee for Consumer Stakes in Public Transport)
SUMP	Sustainable Urban Mobility Plan
TEN-T	Trans-European Transport Network

List of Figures

Figure 1: Noord-Veluwe Area (dark red, own edit) with crossing bus-lines (RRReis, 2025).....	10
Figure 2: Concession Borders 2026-2036 (Provincie Gelderland, 2024b).....	11
Figure 3: The "Five transformations" of sustainable transport (Loo & Tsoi, 2018).....	19
Figure 4: Visualised 5E-model (van der Bijl et al., 2015).....	19
Figure 5: Framework on intermodal mobility hub user needs (Bell, 2019).	20
Figure 6: Suitability of a transport system per distance (Goudappel Coffeng, n.d.).	22
Figure 7: STOMP visualised (CROW-KpVV, 2023).....	23
Figure 8: Conceptual Framework describing research structure (own work, 2025).	27
Figure 9: Occurrence of "Economy" domain over 9 interviews.....	47
Figure 10: Visual Codebook representation.	60

List of Tables

Table 1: List of Abbreviations.	8
Table 2: Proposed main stops of the LDB-line.....	12
Table 3: List of preselected frameworks.....	18
Table 4: Operationalisation of research Domains.....	28
Table 5: Overview of sampled participants	33
Table 6: Atlas.ti25 Code-Document analysis (normalised).....	46

1 Research introduction

Research problem and aim

Local bus stops in the Netherlands are dwindling. For the past five years, many smaller stops were either moved outside of town centres or removed entirely (NOS, 2023). This trend has given light to a discussion that investment should be done in those areas suffering from worsening accessibility. However, it is important to note that the above trend does not give light to the entire situation. According to Niels van Oort, associate professor Public Transport at TU Delft, the discussion should be not be about the number of bus stops, but on “core functions of public transport: connecting and providing access” (Puylaert, 2023). This is a relevant contemporary topic, as a lack of public transport *quality* has negative effects. Lack of public transport quality may lead to less development due to an inequality between rural and urban areas (van Nifterik, 2025).

In recent years, the concept of “hubs” has been rising. These hubs have provided a container term for places where modalities meet and travellers can transfer from one to another modality. Hubs in general have received a lot of attention and certain (positive) expectations are inextricably linked to this (Kwantes & Scheltes, 2022). Whereas the urban functions of hubs are broadly researched and represented in municipal mobility policies of the large cities in the Netherlands (Gemeente Amsterdam, 2021; Gemeente Rotterdam, 2021; Gemeente Utrecht, 2021), the effectiveness of implementing smaller, local hubs in rural areas is questioned due to embedded behaviour that is car-centric in nature (Kwantes & Scheltes, 2022).

The question arises whether a new bus-line creates a window of opportunity to service these rural areas, creating possibilities to travel to larger, urban areas by public transport without drastically changing behavioural patterns. An early example of a seemingly successful rural hub is P+R Gieten, in the province of Drenthe, NL. This hub was built with mostly traditional, traffic-centred values in mind (Kennisplatform CROW, 2024). This hub was adopted as a success, but later the lack of integrating societal values such as perceived safety and facility bundling became apparent. It becomes clear that, with enough initiative, even smaller municipalities might have the means to facilitate developing hubs such as the one in Gieten. Among key success factors in Gieten are hub-taxis providing manageable first and last mile transport, recognition by implementing similar structures throughout the whole province, and providing fast bus transport similar to speeds of the car (Puylaert, 2023).

This research focuses on the implementation of these small hubs in a rural area, specifically the area of Noord-Veluwe, the heavily forested area north of highway A1. This area is not well-connected to larger cities, as the Veluwe is a National Park and only has one crossing east-west railway line from Apeldoorn to Amersfoort. The villages are connected through local bus lines, which snake their way through the villages and stop at local bus stops, as can be seen in Figure 1. As discussed before, small bus stops are dwindling and stops are moved to the edge of villages. To make use of bus-stops moving to edges of villages, the concept of small hubs could be useful for this area. ROCOV Gelderland has shown interest in a bus-line with a long-distance character (LDB, or lange-afstandsbus (LAB) in Dutch) from Arnhem to Lelystad via Apeldoorn and Harderwijk. This line should cross the Veluwe in a North-Southerly fashion and therefore provide an opportunity of integrating small hubs on this LDB-line in the area of the northern Veluwe.

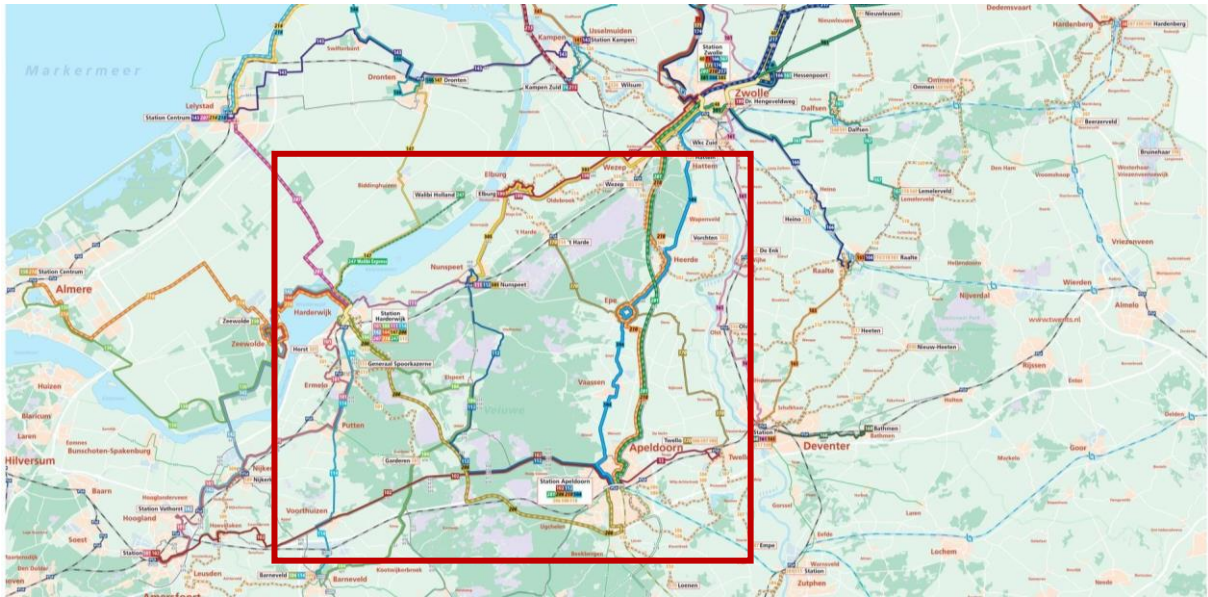


Figure 1: Noord-Veluwe Area (dark red, own edit) with crossing bus-lines (RRReis, 2025).

Building on definitions of LDB from the standard work “Betere Bus” (van der Bijl & Van Oort, 2024), This thesis aims to provide suggestions for implementing small hubs on a new LDB-line, using an argumentative framework. Argumentation is necessary to provide one of the key factors of successful implementation of public transport: Financial backing (De Jong et al., 2011; van der Bijl & Van Oort, 2024). To achieve proper argumentation, the 5E-model (van der Bijl et al., 2015) is used. This methodology attempts to quantify the value(s) of public transport using five domains: Effective Mobility, Efficient city, Economy, Environment and Equity. With this methodology, this research aims to provide transparent and transferable argumentation for the implementation of small hubs on an intercity LDB-line. Subsequently, attention for the underlying actor systems and their wants and needs will be researched, as to provide design requirements and recommendations.

1.1 Case Introduction

Introducing the case is necessary to provide a clear description, ensuring the scope of the case becomes transparent. First of all, the concession system for Dutch public transport will be briefly explained. Afterwards, the scope of the research area will be defined and prerequisites and external factors that could influence results will be touched upon. This chapter will touch upon the specifics for the proposed LDB-line and point out chances and pitfalls with this case. Lastly, a comparison case from the Netherlands will be introduced to compare aspects of the proposed case with.

The Dutch public transport system uses a concession structure where only a certain designated company can provide public transport in predetermined concessions. Within this system, only the province can choose these companies via public tender (Wet Personenvervoer 2000, 2024). The current concessions in the study area are Arnhem-Nijmegen, Veluwe Zuid, and IJssel-Vecht. The first two concessions will converge and form Arnhem-Nijmegen-Foodvalley (ANF) from 2026 onwards. The borders for IJssel-Vecht (green) and ANF (dark-blue) can be seen in Figure 2. The proposed line runs from Lelystad through green municipalities to Apeldoorn, following in the ANF-concession towards Arnhem. Lines in these concessions are, to an extent, allowed to have branches out through other concessions (Provincie Gelderland, 2024a). As the proposed line has not been publicly announced, it is not included in the concession plan. However, these branches allow for some freedom within the concessions.

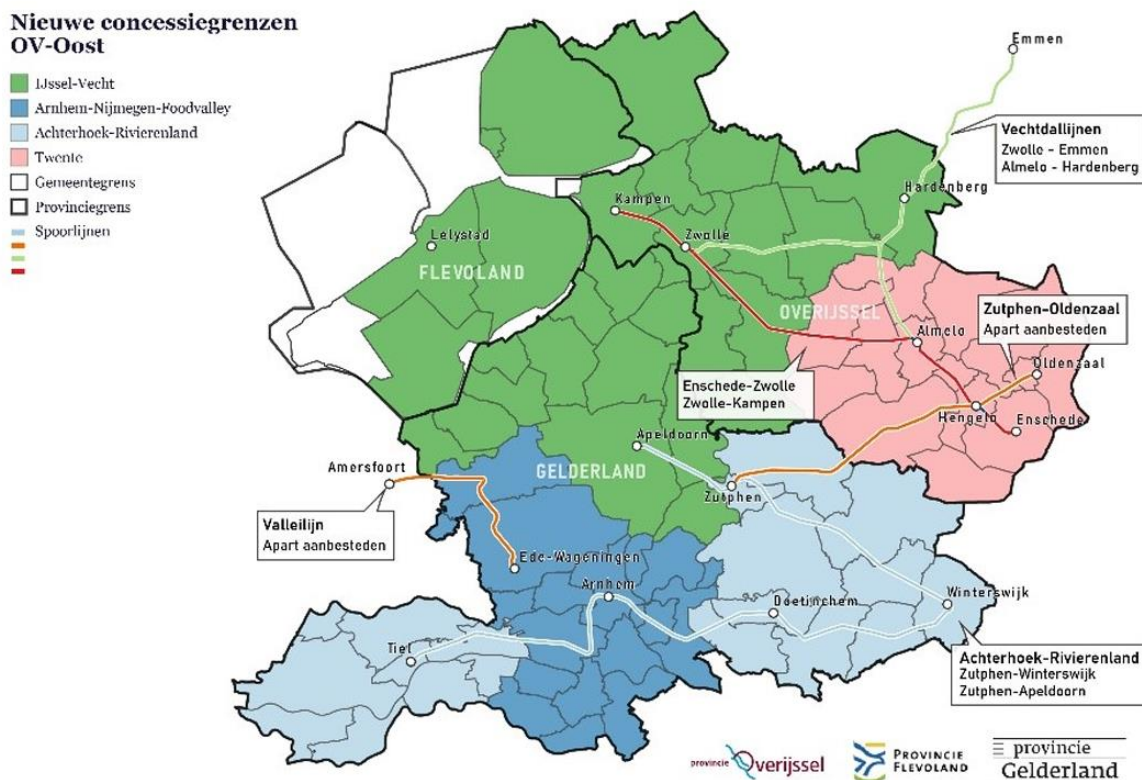


Figure 2: Concession Borders 2026-2036 (Provincie Gelderland, 2024b).

To further broaden knowledge around the scope of this research, knowledge of the “woondeals 2022-2030” is important. These housing deals made between the government and provincial governments contain plans to build high volumes of new housing between 2022 and 2030 (Ministerie van Volkshuisvesting en Ruimtelijke Ordening, 2022). The total amount of new housing is added to Table 2. This creates an overview the proposed LDB-line.

Table 2: Proposed main stops of the LDB-line.

Stop Location	Concession	Amount of new housing	Remarks
Lelystad Central Station	Ijssel-Vecht	+10200	Lelystad lies on the intercity railroad between Zwolle and Amsterdam.
Harderwijk Station	Ijssel-Vecht	+5557	Harderwijk lies on the railroad between Zwolle and Amersfoort. South of Harderwijk the nature reserve of the Veluwe starts.
Apeldoorn Station	Ijssel-Vecht	+8838	Apeldoorn lies on the eastern outskirts of the Veluwe and along the railroad from Enschede to Utrecht.
Arnhem Central Station	Arnhem-Nijmegen Foodvalley	+9500	Arnhem provides a large railroad station with fast connections to Germany (Düsseldorf) and the Randstad.

The new housing, to be finished by 2030, will generate more trips and travel. This could mean increased traffic pressure on the Veluwe, adding to the issue that tourism currently posed. 61% of inhabitants of the northern part of the Veluwe (65% over the entire area) perceive issues with mobility, such as (a lack of) parking spaces and traffic jams. To combat this and earlier discussed problems with car dependency and lack of accessibility, ROCOV Gelderland proposed this line as a solution to the main high-quality public transport in the area that runs east to west.

To further delineate this case, the study area will be clearly defined and the scope of the research will be further narrowed down. To determine justification conditions for developing these hubs within the proposed planning of the project, the trajectories Lelystad-Harderwijk and Apeldoorn-Arnhem will be considered as an intercity bus connection without the inclusion of these hubs to narrow down the case into a manageable project. The focal point of this research therefore lies on the case of a LDB-line between Harderwijk and Apeldoorn, in the corridor of the North-Veluwe. This corridor revolves around provincial road N302 which runs from Lelystad to Kootwijk, and the A1 national highway running from Kootwijk to Apeldoorn. This route is the proposed route for the LDB-connection as to not branch off and stay with a route which is as fast as possible, as speed is key for a high-quality bus connection. Travel speed is part of a broader concept for high quality of bus connections, named Level of Service (van der Bijl & Van Oort, 2024).

To provide a reflective view on the constructs behind these bus connections a comparison case was selected. In the concession of Groningen-Drenthe, the concession structure functions differently. Whilst the standard procedure includes public tendering to contract a travel provider, the concession of Groningen-Drenthe has given the direction to a separate entity; the OV-Bureau Groningen-Drenthe, a governmental organisation led by both provinces and municipalities involved. This organisation still provides public tendering, but the role of developing the route network lies in the hands of the regional and local government (gemeente Groningen, 2023). This leads to less delays in communication. Furthermore, the concession GD is not locked in the same eight to thirteen year spiral other concessions are limited to, but the OV-bureau has the freedom to develop throughout the years, leaving the travel company with revenue for each driven hour.

This system is unique in the Netherlands, and provides a good comparison case to the proposed case by ROCOV Gelderland.

1.2 Research Question Structure

Main- and Sub-research questions

To provide suggestions for implementing small hubs on a new LDB-line from Arnhem to Lelystad, success factors can be determined for implementation, leading to a greater possibility for successful development of these small hubs. To guide this research, the questioning structure consists of an exploratory research question (E-RQ) and an underlying design-oriented question (D-RQ) to help guide the conclusion. In this chapter, the E-RQ, D-RQ and underlying sub-questions (SQ-n) can be found.

E-RQ: *What conditions justify the development of a LDB-line from Arnhem to Lelystad with integrated small hubs in the rural areas of the line within an argumentative action structure?*

D-RQ: *How can suggestions for small hubs on a new LDB-line from Arnhem to Lelystad be provided using the domains from the 5E model?*

This research question requires several sub-questions to further deepen knowledge into the topics of the main question and provide answers to formulate clear conclusions. Furthermore, some concepts used in the main research question need additional clarification or specification to use in this research. As per the aim of this research, these sub-questions aim to find justification in development of small hubs and the proposed LDB-line from Arnhem to Lelystad. To explain these concepts and help answer the main question, the following sub-questions have been formulated:

SQ-I: *What characterises the current action arena regarding regional mobility (hub) development?*

SQ-II: *How do the domains of the 5E-model relate to current mobility and hub planning practises in the study area?*

SQ-III: *In what way is the decision making process currently anchored in the mobility and planning process in the study area?*

SQ-IV: *What prevailing criteria are in use to justify the investment into LDB projects and hub projects in the study area?*

SQ-V: *What justification conditions can be identified from current projects within field of public transportation and hubs within the study area?*

The goal of these five questions is to build up to an answer to the main research question, along with providing structuring for the results and conclusion chapters. The opening question defines the structure in which all decisions are made, after which the conceptual model is dissected with questions II to IV. These questions serve the purpose of adding definition to the conceptual model by forming a theoretical background and guidance as to what questions should be asking during the interviews. The last question serves the purpose of looking for current practises surrounding the necessary data to answer the main question.

1.3 Societal and Scientific Relevance

Research gap and societal problems behind the research

1.3.1 Societal Relevance

Integrating small hubs on a LDB- or HOV-line is a discussion that is often held between policymakers on a municipal level. In the Netherlands, local public transportation by bus is a municipal responsibility. With the publication of the Omgevingswet in 2024 (Omgevingswet, 2024), participation has become a mandatory part of the development process of municipal projects. This also includes the development of small hubs. Hubs have been part of the societal discussion for a few years, generating certain expectations with both the public and policymakers (Kwantes & Scheltes, 2022). These expectations can be strengthened by successful projects due to their visibility, such as the successful implementation of a hub structure in the North of the Netherlands (Puylaert, 2018). Projects that are not realised often do not reach publicity. Kwantes & Scheltes define pitfalls too (2022), further emphasizing need for a clear structure on how to provide solid argumentation for the implementation of small hubs in a rural area.

Due to the hype phase that the concept of mobility hubs is currently residing in (Kwantes et al., 2019), municipalities wish to hop on to the trend and provide their inhabitants with these “fancy, new systems” that promise to provide new, sustainable transportation in a broad scale of travel goals. This can be seen in the fact that mobility hubs are included in many municipal mobility strategy documents (Gemeente Groningen, 2023; Gemeente Nijmegen, 2019). However, in rural municipalities, the inclusion of mobility hubs in the planning differs (Gemeente Barneveld, 2025; Gemeente Noardeast Fryslân, 2024), with the former not including the concept, and the latter having included this concept extensively. Whether this occurs because of personal involvement of policy makers and politicians is outside of the scope of this thesis. This research attempts to add to the tools that policymakers can use to include hubs in their vision documents, cementing their place in the local planning culture and providing much-needed future-proofing.

Other general societal relevance includes accessibility of rural areas. With adding to the research into small hubs, rural society could see improved access to general practitioners and hospital facilities for people without private-owned cars who depend on public transport. The current accessibility to public health services on the Veluwe is bad. Higher education, shopping facilities and job accessibility by public transport also suffer (Bastiaanssen & Breedijk, 2022). This research could add to the possibilities of reducing car-dependency by making the surrounding larger cities more accessible for all inhabitants, therefore creating a better quality of life and improving broad welfare in the research area.

1.3.2 Scientific Relevance

In ongoing research, integrating small hubs on a LDB-line is new in the sense that these concepts have not been applied from the start of a LDB-project. Furthermore, the 5E-framework that is used in this research has been applied on light rail and BRT projects (van der Bijl et al., 2015; van der Bijl & Van Oort, 2024) but not on the concept of small hubs. A successful implementation of small hubs can be seen in the structure of Groningen and Drenthe (gemeente Groningen, 2023; Puylaert, 2018), but this concept has not been broadly implemented in the entire country. Due to the context-dependent nature of spatial planning this research will mostly contribute to projects and further research in the Netherlands.

The 5E framework that is used in this research contributes in several ways to the ongoing research surrounding mobility hubs. As sustainable mobility and mobility hubs are trending topics (Kwantes et al., 2019; Puylaert, 2018; Rongen et al., 2022), the fourth E (Environment) will address the sustainability element in this research. Furthermore, the concept broad prosperity has been widely reported in governmental analysis documents and papers (Manshanden et al., 2024; Snellen et al., 2021). This concept, regarding inclusion of more welfare concepts into the appraisal of several projects, in this case mobility projects, synchronises with the fifth E; Equity. By including this, ongoing research on broad welfare concepts and clarification of broad welfare research can be included in this research to add to the tangent of the two research fields of small hubs and broad welfare.

Another topic that touches upon the scope of this research is first and last mile accessibility. By conducting interviews with relevant actors, this research aims to find out preferences and needs from specific actors in the studied case, contributing to the database with needs for first and last mile connections. Access and egress has been studied by scholars in generalised topics such as bicycle use (Shelat et al., 2018) and FLM-quality (Venter, 2020), but also in more context-dependent topics such as practices in US Transit agencies (Mohiuddin, 2021), or the role of micro-mobilities (Oeschger et al., 2023). The difference with this research lies within its' context of a selected rural area in the Netherlands.

In the coming years, creating a sustainable urban mobility plan (SUMP) will be necessary for urban nodes that are connected to the inter-European TEN-T network. Compared to "standard" Dutch mobility vision documents, these SUMP's are interesting as their focus is more on evaluation, logistics and participation with a broad target audience (Frederix, 2024). The European commission has made these SUMP's mandatory (Provisional TEN-T Agreement, 2023) for these urban nodes, including Apeldoorn within the research scope. This research adds to these SUMP plans by providing rural input into these vision documents, which they are not cater-made for. Lastly, this research adds to the field of first and last mile research within mobility and mobility hubs, by generating primary data towards user preferences and needs for these first and last mile connections in a specific rural case.

1.4 Outline

This research starts out with an overview and insight into concepts used in this research such as LDB, (rural) mobility hubs, and general high-quality public transportation characteristics. Furthermore, the choice of framework will be analysed thoroughly where pros and cons are set out. A theoretical framework and desk research will provide the necessary literary background, after which the methodology will describe the research paradigm, quality criteria and data collection and analysis methods. Finally, the results will be compiled in a results and interpretation chapter, after which a discussion of results and conclusion will finalise this research.

2 Theoretical framework & literature review

Concepts, framework choice and general literature review

To provide the necessary domains and indicators for retrieving structured primary data and answer the main research question, this chapter goes into depth how the theoretical framework was selected by going into several frameworks from scientific literature and giving arguments for usage of the 5E-model. The chapter starts off by going into the general scientific field surrounding mobility, the use and popularity of hubs and public transport. Building upon the scientific relevance, the field around (multimodal) mobility hubs, long-distance bus transportation and the governance and institutional structures surrounding the topics are explored. The research is built around three pillars; One analytical (5E model), one regarding governance and institutions in place (Action Arena), and one evaluating pillar (success conditions). These pillars provide the necessary structure in this research, guiding findings towards concepts. The goal of this chapter is to provide a clear overview of these concepts and define indicators to help structure the data analysis performed later in the research. This chapter starts with a broad argumentation of the selected analytical framework, and the scientific clarification of the other two pillars follows in paragraphs 2.4 and 2.5.

2.1 Current trends in the mobility field

This research finds its' footing within the field of mobility hub and public transport research. In 2005, Nielsen et. al. released several volumes of public transport guidelines which can still be seen as relevant. Current works cite them relating route networks and effective use of space especially (van der Bijl et al., 2015; van der Bijl & Van Oort, 2024). In this research, a framework was picked based on a selection of frameworks. These frameworks each focus on aspects of the research field or provide a broad scope in which research is possible. The four selected frameworks to work out further were considered from a wider selection because they touch upon the concept of mobility hubs better than frameworks listed in HiTrans vol. 2 (Nielsen et al., 2005), which focus mostly on the bus transport side. This can be explained by the fact that mobility hubs are a concept that has only emerged in the past ten years and is currently developing (Kwantes et al., 2019). Furthermore, research based on BRT was considered, but frameworks on BRT focus mostly on aspects of bus transit and leave the concept of hubs out (Wirasinghe et al., 2013). This weakens the link that this research aims to create between high-quality bus transport and (multimodal) mobility hubs. Within this reasoning, and the added importance of developing sustainable urban mobility as discussed in 1.3.2, the decision was made to include "mobility hubs", "sustainable mobility" and "success factors" into the search query for frameworks. With the success factors, the broadness of scope was established in the search query and the other two keywords ensured that mobility hubs were integrated or touched upon in the framework, creating an overlap between these aspects of the research field.

2.2 Selected frameworks and their use

To determine a proper framework, research was done among used frameworks in the field of (mobility) hubs. For this, frameworks were selected based on a Web of Science search using “mobility hubs”, “success factors” and “sustainable mobility” as central keywords. The 5E-model was selected based on recommended literature. Based on this selection, it becomes possible to select a framework based on argumentation.

Table 3: List of preselected frameworks

Framework	Author	Remarks
The “Five Transformations” of sustainable transport	(Loo & Tsoi, 2018)	Very extensive framework which focuses on sustainability through decoupling negative externalities.
5E-model	(van der Bijl et al., 2015)	Argumentative framework based on the People-Planet-Profit framework (Elkington & Rowlands, 1999).
User requirements at public transport stops	(Bell, 2019)	Detailed framework on specific needs and demands of public transport users.
4P-factors	(Arnold et al., 2023)	An exploratory study among selected experts to determine global recurring decision-making factors to examine implementation of mobility hubs.

2.2.1 Pro and con arguments for picking frameworks

The four selected possible frameworks all have certain arguments in favour and against their usage. In this paragraph these arguments will be given and a “best choice” framework is picked. First of all, the framework by Loo and Tsoi (2018) is looked at. This framework consists of five pathways leading to a decoupling of negative externalities, as can be seen in Figure 3.

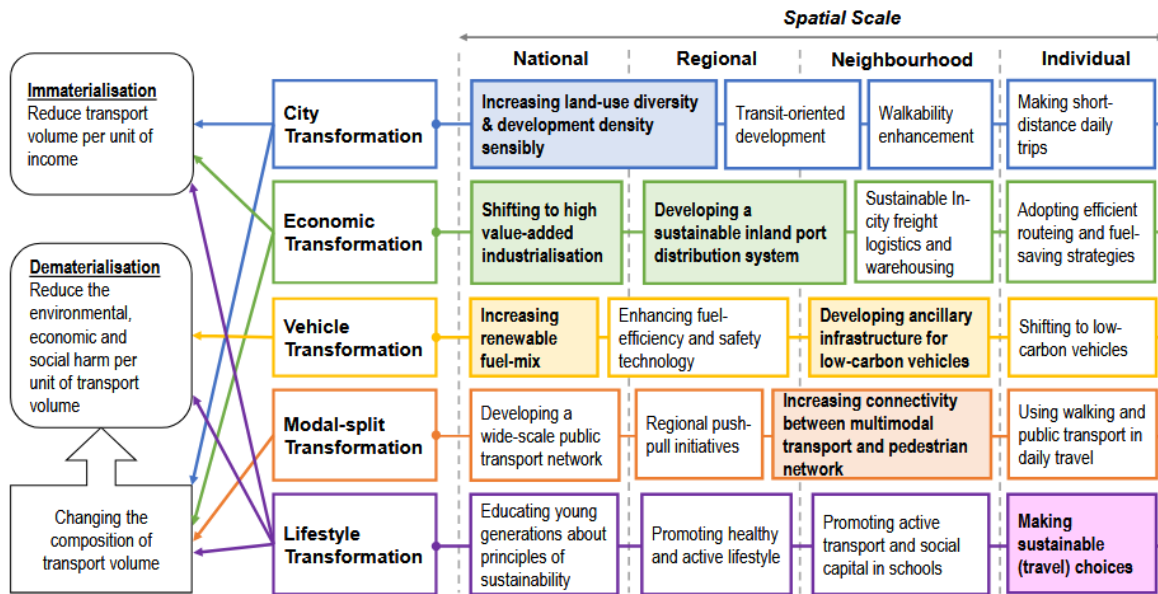


Figure 3: The "Five transformations" of sustainable transport (Loo & Tsoi, 2018).

This framework covers a broad range of topics to be used on, and was used on a hub-related topic in a master thesis before (Huigen, 2024). The focal point of the framework lies with the decoupling of negative externalities such as environmental impact and social harm from transport. This does not fit with this research because this framework, though addressing a wide range of topics and scales, is focused on decoupling. Due to the extensive inclusion of spatial scale and measures to work towards transformation, this framework could assist in providing indicators or handles for retrieving primary data.

The 5E-model (van der Bijl et al., 2015) consists of five domains of argumentation, namely Effective mobility, Efficient city, Economy, Environment and Equity. As described, the latter three E's are closely linked to the People, Planet, Profit model by Elkington (1999). In their research, van der Bijl and van Oort highlight the importance of solid justification for public transport projects and links with sustainable urban mobility plans (SUMP) (2024), and possibilities for quantification of the domains (2017). These links provide a strong connection with this research for structuring data gathering and argumentation. A risk in using this framework lies in its' broad nature. Domains have to be clearly operationalised and indicators need to be defined to generate the needed structure.



Figure 4: Visualised 5E-model (van der Bijl et al., 2015).

The third selected model consists of a user-centred design of a framework visualising the needs of users of intermodal mobility hubs. This resulted in observations and focus group discussions leading to the framework visible in Figure 5. The positive parts of this framework is the level of detail it goes into. However, the framework is focused on only demand and need of users of these hubs, while the research applies on the concept of integrating these small hubs in their entirety. This could prove difficult to link together when looking at broader societal concepts in this research.

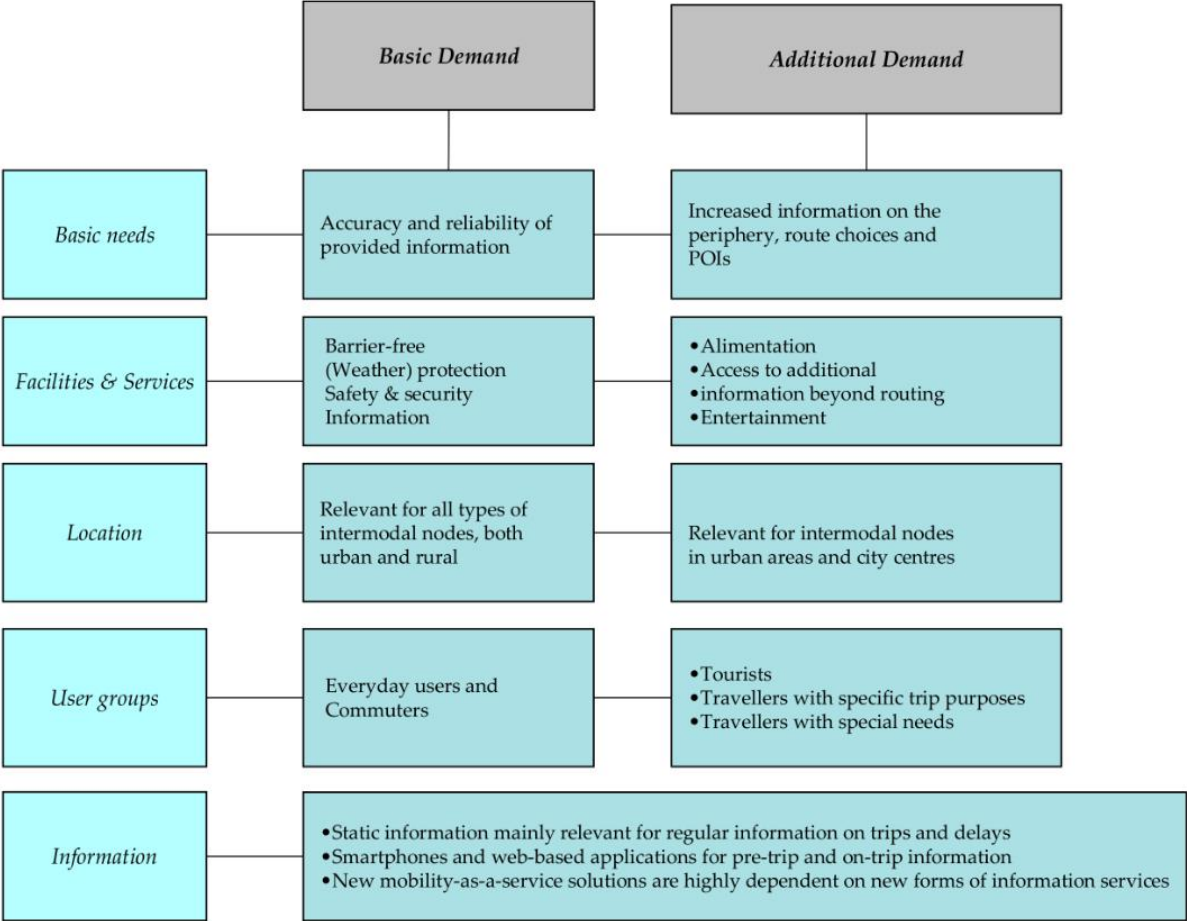


Figure 5: Framework on intermodal mobility hub user needs (Bell, 2019).

Lastly, the 4-P framework defined by Arnold et. al. (2023) is considered. This framework was created by interviewing field experts after careful definition of the concepts surrounding mobility hubs. This provides a great premise for the research in this thesis as the context is made clear. The four P's, namely Purpose, Process, Place and Performance, are defined as “influential elements of the decision-making process and implementation” (Arnold et al., 2023), where the researchers then further go into the details of these elements, giving definitions, discourses and indicators which could assist in operationalising this model. A con of this model is that it was developed with a global scope in mind. This thesis is more locally focused and could therefore not be a good fit.

2.2.2 “Best fit” model

Considering the arguments above, the 5E-model is used in this research as “best-fit” framework. The broad nature of the framework signifies the need for delineation of the research and clear use of definitions of key concepts in this research. The other three models have a worse fit because of detailed focus on a certain aspect of mobility hub, whereas this research aims to give suggestions in a broader sense. This does not mean those three are discarded, and they will nonetheless be analysed in the theoretical framework.

2.3 The 5E Model

This paragraph delves deeper into the domains of the 5E-models and parallels from literature related to those domains. In general, the five domains of the 5E-model contribute to arguments for investments in LDB, BRT and other forms of high-quality bus (van der Bijl & Van Oort, 2024). These domains are reflected in literature mostly in developing countries (Wirasinghe et al., 2013) and furthermore, Wirasinghe et al. (2013) indicate that results from these domains differ greatly from city to city. This underpins the spatial planning phenomenon of context-dependency (Nadin & Stead, 2013).

The reflections in literature may not be extrapolatable to western countries and their cases on better bus systems and their specific elements, but the 5E model does provide room to give the necessary context to cases, embedding the research into its' context. To determine possibilities for specific applications of each domain in relation to the thesis topic, each of the domains will be analysed and secondary literature to these domains will be addressed.

2.3.1 E1: Effective mobility / Effectiveness

Effective mobility is a container term, effectiveness even more so. To use “effectiveness” as a domain, some specificity into the effectiveness of the proposed LDB case, and effectiveness in public transport projects in general, is necessary. The question if a LDB-line is viable for fulfilling the function of an effective mobility solution, is often part of a discussion between ideological followers of certain solutions (van der Bijl & Van Oort, 2024). Therefore, effectiveness has to be determined by creating objective argumentation instead of ideological and subjective arguments. In literature, this can be found in the standard-work by Nielsen in light of the HiTrans project, especially in volume 2 (Planning the Networks. In this set of documents, Nielsen et. al. sketch fundamentals needed for effective public transport solutions. First of all, a network of routes is more effective than a single route (Nielsen et al., 2005). This is set out extensively in earlier literature, where examples are given of “square city (Vierkantstad)” which shows a network of nodes can service all possible routes within a square city with one switch (Mees, 2000).

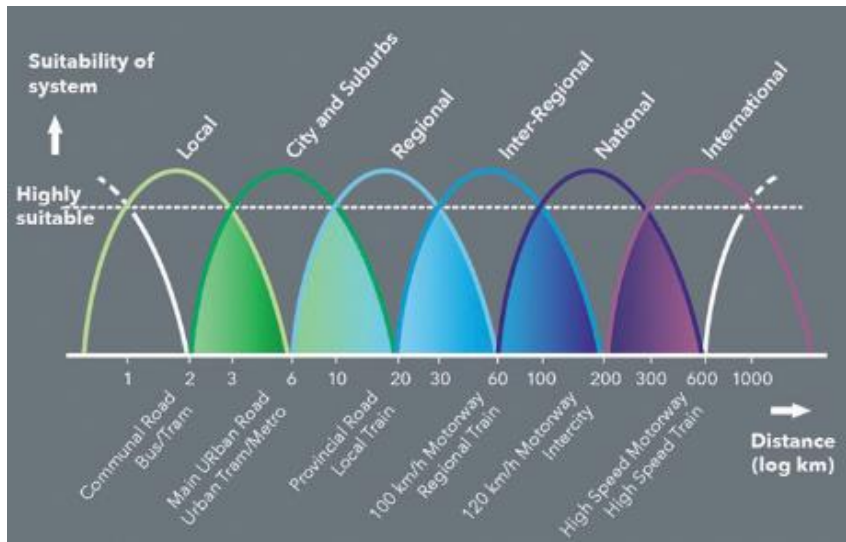


Figure 6: Suitability of a transport system per distance (Goudappel Coffeng, n.d.).

There are other measurement tools for effectiveness of a mobility system. However, as all (spatial) planning, bus projects are highly dependent on their context (van der Bijl & Van Oort, 2024), both underpinning need for context- and case-specific research and for careful consideration of use of measurement techniques. As a general rule of thumb for mobility solutions, the graph in Figure 6 shows fitting modalities per distance travelled. Van der Bijl & Van Oort (2014) add to this that bus may cover more distance than shown in the graph, but scale is nevertheless important to consider as effectiveness and suitability are inexplicably linked to scale and travel demand (Hass-Klau et al., 2004). Furthermore, the graph in Figure 6 shows overlap, adding to the notion that several solutions could fit the same problem.

2.3.2 E2: Efficient city / Efficiency

The domain of the efficient city is inherently connected to the urban environment through its name. However, “efficiency” as a domain can be considered for application in a more rural scope. This domain goes into the efficiency of land use for public transport solutions. Van der Bijl and Van Oort define this domain as arguments that provide backing to the fact that public transport projects are efficient land use (2024). In literature, efficient land use knows more definitions. In this research, efficiency not only goes into the efficient use of land, but also exploring the broader societal definition around efficient land use by conducting interviews. Four domains of land use falling under the societal elements of land use entail economic structure, actors’ attributes, institutions and demographic conditions (Turner et al., 2020). These societal elements are incremental to this research as to find the justifying conditions for success.

Only accounting for the purely technical domains will result in projects that cater towards a more utilitarian approach with quantifiable variables. An early criticism on these utilitarian views is that quantifying these variables usually goes with monetising them, resulting in loss of subjective personal interest (Alexander, 2002). This research will cater to individual interests by selecting a specific case and only focusing on this specific case to overcome this issue with a utilitarian approach. The Dutch waterworks have undergone a transformation where arguments are made from a unitary perspective (Wiering & Winnubst, 2017), but infrastructural projects are often still made with multi-criteria analyses and mostly based on economic arguments within the MIRT-structure (Van Dijk, 2023). Furthermore, the addition of the upcoming concept of broad welfare adds to the societal side of the domain of efficiency. In a practical sense, effective land use also contains the spatial footprint (physical land-use) of the

transport modality. A famous picture with cars, buses and pedestrians clearly shows the low spatial footprint of bus transport (Wright & Fjellstrom, 2003).

2.3.3 E3: Economy

Economy as a domain contains mostly economic *benefits* gained from investment into public transport solutions (van der Bijl & Van Oort, 2024). However, from literature it becomes clear that specifically determining economic benefits of public transport is tough. They see that land-prices increase and investments into real estate come in, but specifically linking these to the public transport project is not straightforward (D. Knowles & Ferbrache, 2016). In Lahore, Pakistan, a similar research was carried out which concluded that BRT has economic benefits to real-estate value, outside investments and expansion of the labour market, but only in the direct area around the BRT line (Basheer, 2021).

Politically, funding is essential for successful public transport projects (van der Bijl et al., 2015). Therefore, this research includes economical aspects even though other arguments may be needed to give investors a nudge to actually invest in public transport projects. Input for the economical domain may come from articles in popular-scientific magazines or follow from interviews with field experts.

2.3.4 E4: Environment

The environmental aspect of this framework not only includes environmental aspects in terms of nature, but also goes into the general sustainability argument of public transport. With the widespread introduction of more sustainable buses, especially zero-emission buses making up 39 percent of the bus-fleet in the Netherlands (CROW, 2025), the modality of the bus is an increasingly sustainable solution. In general in the mobility field, the Dutch “STOMP” principle is increasingly popular. STOMP stands for walking solutions (“stappen”), cycling-based solutions (“trappen”), public transport solutions (“OV”), Mobility as a Service solutions (MaaS), and private car solutions (“personenauto”). These solutions are leading by priority in area development visions, where policymakers start by looking at needs for walkability.

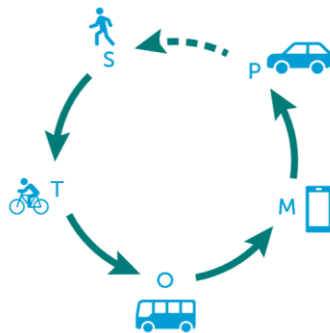


Figure 7: STOMP visualised (CROW-KpVV, 2023).

Further environmental choices connected to the bus are related to the fact that no new infrastructure may be necessary when implementing a bus line. This is not only environmentally friendly, but also efficient when for example reusing old bus infrastructure (van der Bijl & Van Oort, 2024). Furthermore, when travelling over longer distances, collective transport in the form of bus or train is far more sustainable than travelling by car as the spatial footprint of PT is smaller (see 2.3.2). However, as literature suggests, car travel and public transport are not communicating vessels and cater to different mobility “markets”, meaning that public transport can only slightly reduce car traffic (P. Bakker et al., 2015), and showing that cross-elasticity between car use and improving public transport is near-zero (Terwindt et al., 2024).

2.3.5 E5: Equity

When looking at equity in the field of mobility and public transport, several concepts come to light. First of all, broad welfare is getting attention in the general planning field and more so in the mobility field. The concept is extensive, touching upon many different aspects of society, and the Dutch Statistics Bureau (CBS) monitors this concept in light of all seventeen Sustainable Development Goals (SDG's). In the last monitor from 2022, each of these SDG's is connected to indicators for broad welfare (Centraal Bureau voor de Statistiek, 2022). Research towards broad welfare in the mobility field has also been done specifically by the Netherlands Environmental Assessment Agency (PBL). In this research, we see how broad welfare still entails eleven dimensions within the mobility field (Snellen et al., 2021) and therefore needs to be used with caution. Not delineating the concept properly could result in equivocal results. Following argumentation in works from van der Bijl and Van Oort (2017, 2024), the domain of equity fits best with “accessibility” (job -, social contact -, and facility accessibility) (Snellen et al., 2021).

Next, transport poverty is also closely linked to equity in the 5E model. Transport poverty ranges from “involuntary transport disadvantages (ITD)” (H. Jeekel, 2018) to full-blown inability to use the transport system, even though ITD and transport poverty are sometimes used as synonyms (J. F. Jeekel & Martens, 2017). It is clear that some social groups are disadvantaged when looking at possible mobility and accessibility. It is vital to define transport poverty as a lack of access to means of transport (J. F. Jeekel & Martens, 2017), as to separate it from economical poverty (lack of financial funds). Someone experiencing transport poverty may not have problems with accessibility due to the area being accessible, either mixed-use, (peri-)urban or high density urban, because the speed penalty is outweighed by the close proximity of facilities (Levine et al., 2012). With this, transport poverty can be clearly described as a lack of possibilities to move oneself, but it is not inherently linked to a low potential accessibility, depending on the area the individual resides.

From literature, inclusive mobility is another concept closely linked to equity in transport planning. Inclusive mobility may range from inhibiting car use (Martens, 2021), improving inclusivity by lowering the need for a car, to researching options per disadvantaged group to come to more inclusive solutions (Martinez et al., 2024). In 2023, a visualisation was made in TU-Delft-led Smart Public Transport Lab, creating an overview of dimensions linked to inclusive mobility (Dijkstra, 2023). Based on the ten dimensions of exclusion (time-based, discrimination-based, geographical, fear-based, space, information, facilities, economic, physical & cognitive and digital divide) (Bruno & van Oort, 2023), it can be argued that this “accessibility for all” is important to take into account as a main argument to implement bus public transport in any (upgraded) form (van der Bijl & Van Oort, 2024).

2.4 Governance and Institutions in the public transport sector

To provide a clear overview of relevant stakeholders and define the Action Arena (Clement, 2010), this paragraph focuses on the structure of actors within the scope of this research. Therefore, the Dutch system will be analysed and other systems will be taken out of consideration. Within the argumentative structure that this research revolves around, the governance can also benefit from this. This can be achieved by deliberate policy analysis which involves argumentation, context, practises and norms (Hajer & Wagenaar, 2003). Hajer and Wagenaar also plead for less traditional, utilitarian numbers-based approaches in networks but rather focus on discussion and interpretation, which is a more dialogical approach.

2.4.1 Actors in-system

In the Dutch system, the main actors within the public transport sector are municipalities, provinces, the regional users' advocacy organisation (ROCOV) and transport providers. Within this structure, several institutions are in play to determine the transport network and its' exploitation. The main institution in play is the PT-concession system that determines what public transport providers get to exploit certain regions. Currently, thirty of these concessions exist in the Netherlands, divided over nine transport providers (CROW-KpVV, 2025). Regional government determines a programme of requirements for these concessions, after which public transport companies create a tender offer. The best offer then gets to exploit the concession for up to fifteen years.

Currently, there is one concession using a different system. This concession, Groningen-Drenthe, has no public tender but instead the regional government has the lead in providing public transport. The government decides on the line network, but in return also carries the performance obligation and the risk if usage of certain lines drops. The exploiting party is then only responsible for providing the transport and the timetables (Puylaert, 2018). Based on this information, this research also uses this case as a reference case to compare (best) practises.

Furthermore, the municipalities and ROCOV play an advisory role which is not official in nature. ROCOV advice has to be taken into account and can only be set aside with proper argumentation, and municipal advice does not have to be taken into account. However, this poses issues when regarding the local knowledge of ROCOV and municipality. When their advice is not taken into account, specific local issues may not be addressed and reflected within the public transport system.

2.4.2 Dutch public transport tendering

Since 2000, almost all Dutch bus transport has been contracted out through tender, based on law (Wet Personenvervoer 2000, 2024). The expectation was that tendering would lead to more efficient systems and transport due to the competitive nature, but research has shown that this was not specifically the case (Veeneman et al., 2014). This structure has been in place for the last twenty-five years however, and we see this in the proposed case as well. The case spans several concessions, as shown in Figure 2. This could provide issues with a long-distance bus line and should be paid attention to in the interviews. The specific tendering system is left out of the scope of this research, but it deserves attention in the interviews to check whether interviewees share the views of scientists.

2.4.3 Governance in literature

When literature in general is put in parallel with this research, we see that public-private partnerships such as the connection between a province (concession manager) and public transport provider (concession operator) are important to align actors with their respective goals, wishes, responsibilities and the occurring risks (Arts & Faith-Ell, 2012). Institutional consistency is needed, and in the Dutch system, provided, by having spread the concession system across the country. This aligns financial, legal and implementation aspects so that transport providers can move between concessions. This integration is important, as incongruence in institutions could lead to delays in operating a new concession. If we project this onto the Dutch system, we see that while the system is the same over the country, the spread responsibilities are also there. The province has the legal responsibility over the concession, the provider has financial responsibility and implementation under contract, while the municipalities have no responsibilities or power. This lack of institutional consistency may lead to policy documents that advocate for integration with implementation lacking behind (Geerlings & Stead, 2003).

2.5 Success conditions

To determine success conditions, it is vital to look at success conditions in similar circumstances, and provide guidelines in data analysis to come to clear conclusions. To achieve this, theories behind governance success and success in public transport projects are analysed. As this research analyses success conditions based on views on the system and its domains as defined in this chapter, a specific framework in which success conditions are defined is not needed beforehand.

2.5.1 Governance success

Governance success relies on a strong institutional structure. Following from the IAD framework, this is backed in literature (Ostrom & Hess, 2006), who vouch for collectivity in action and a robust institutional framework. Against this stand risks for failure in governance. These are described broadly over literature, with (Arts & Faith-Ell, 2012) noting that fragmentation of governance, by limiting responsibilities and fragmenting these over several levels of governance, is detrimental to the efficiency and functioning of the organisations involved. Furthermore, the need for collaborative arguments is mentioned, synchronising with the collectivity argument by Ostrom & Hess (2006).

Lastly, as opposed to a utilitarian approach, discourse and negotiation within the action arena are relevant topics for governance success (Hajer & Wagenaar, 2003). These conditions align with the mentioning of stakeholder support, or stakeholder buy-in and Arts & Faith-Ell (2012) add to this that the institutional alignment should work with this stakeholder buy-in, however, technical robustness of the project is necessary too. Without this, either one of the other preconditions could fail.

In general, to achieve governance success, necessary conditions include clarity of roles and proper collaboration, as well as accountability and a coherent technical background.

2.5.2 Successful public transportation projects

Other than success conditions following from good governance, defining success conditions based on public transport projects is relevant to this research as well. Using the 5E framework to guide these success conditions, Van der Bijl & Van Oort (2024) argue for use of these five domains to create a successful environment for these projects. Specifically in the context of Dutch public transport, they nudge towards a more modest form of design, where improving infrastructure in small increments may contribute to these projects more than going over-the-top. This aligns with Knowles & Ferbrache too, who plead for caution with overreliance on economic arguments. While economic arguments are an important factor in project success (see stakeholder buy-in), overreliance can lead to a lack of consideration of societal aspects. Designing more modestly could lead to less need for economic support and therefore less reliance on economic arguments. Lastly, integration into the system and functionality for users is an important topic in public transport project success (Nielsen et al., 2005). By designing for the users and with the entire system in mind, the fit of the project as a whole could improve drastically, increasing user-friendliness and level of service.

2.6 Conceptual Framework

In this paragraph, the information from the literature study and analysis of frameworks will be combined into a conceptual framework that will structure the data gathering and outcomes. This conceptual framework will highlight the research flow and follows the question structure proposed in chapter 1.2. The conceptual framework contains elements of other frameworks but is mostly based around the 5E-framework proposed in chapter 2.1 and justified with literature in chapter 2.3.

The conceptual framework in this research is provided to provide structure. This case study has a descriptive nature, attempting to find certain justification conditions. Therefore, this research is exploratory of nature, fitting with the case study. The research philosophy is explained further in chapter four.

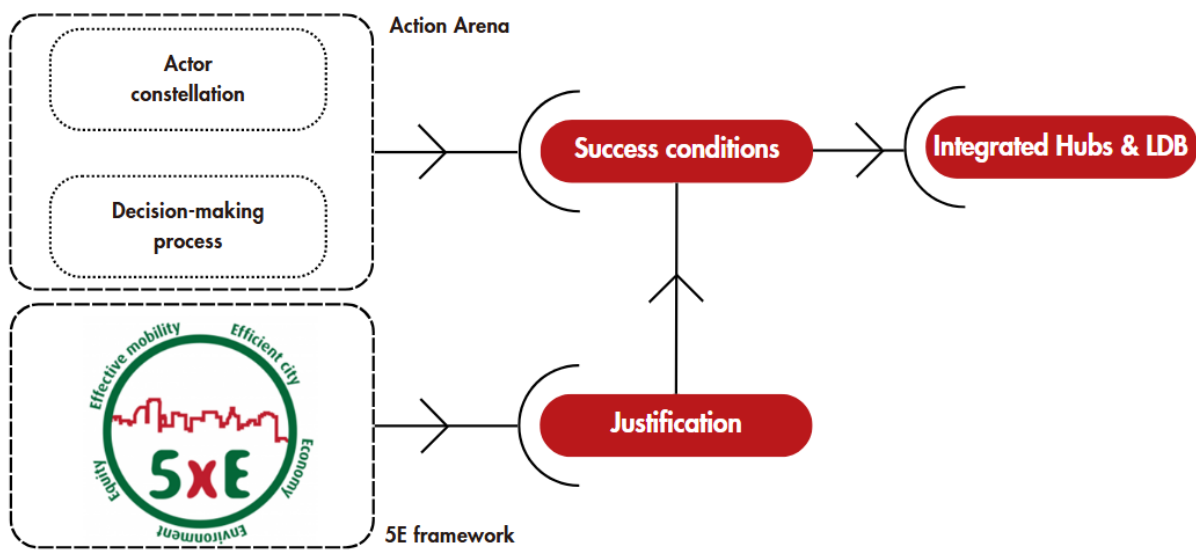


Figure 8: Conceptual Framework describing research structure (own work, 2025).

The framework shown in Figure 8 provides a concise overview of the research structure. To further solidify the structure, some in-depth information is needed on the used concepts. This is done by operationalising these domains into indicators based on the literature research. The indicators can be found in Table 4. Indicators are taken from the literature review and theoretical framework.

The domains included in the conceptual model include the five domains from the 5E-model, the “actor constellation”, the “decision-making process”, both part of the “action arena”, the “justification (criteria)” and “success conditions”. These domains follow from the research question structure and can be linked to literature.

Table 4: Operationalisation of research Domains

Domain	Indicator	Remarks
E1 - Effectivity	Route Network Context Design Modality Square City Scale // Scalability Travel Demand Modality Overlap	
E2 - Efficiency	Land use for public transport Economic structures Actors' attributes Institutions Demographic conditions Utilitarian perspective Unitary perspective Multi-criteria analysis (S)CBA Broad Welfare Spatial Footprint	Thickened indicators come from (Turner et al., 2020).
E3 - Economy	Benefits Investments Real-estate value increase Funding // Subsidies Labour market expansion	
E4 – Environment	STOMP Zero-emission buses SUMP(s) Reuse of old infrastructures Sustainable travel Spatial footprint	
E5 - Equity	Broad Welfare SDG's Accessibility Transport poverty ITD Potential accessibility Inclusive mobility Ten exclusion dimensions	
Actor Constellation	External Organisation Local Initiatives Municipalities Province Travel Companies/Provider Umbrella Organisation	ROCOV, Consultancy companies

Decision-making Process	Actor interrelation
	Best practise
	Concession Holder
	Learning opportunities
	Less-than best practise
	Performance obligation
	Tendering

Table 4 entails the operationalisation of the used framework to help with initial coding schemes from interviews. Notably, success conditions are not mentioned in the domains. This was done to make sure success conditions follow from interpretations of results and not from biases formed by asking direct questions on success conditions.

3 Methodology

This chapter includes the elements surround the used methodology in this study. First of all, research design is discussed where the ontological considerations of this thesis are laid out. The type of research, research philosophy and ethical considerations are included in this chapter. Lastly, the quality criteria are included in this chapter to ensure quality of the study.

3.1 Research Design

In this study, a qualitative approach is taken using a case study as scope and a second case for comparison. Examining justifying conditions for a long-distance bus line from Arnhem to Lelystad is done by interviewing experts from relevant areas in both the case surrounding the Veluwe and comparing this to experiences and practices from the field in the case of Groningen-Drenthe. The argumentative framework (5E) which is used focuses on creating a broad argumentative basis for public transport projects, providing the necessary handles in analysing conditions. This framework aids in analysing the interplay between diverse actors and institutions in this governance setting, helping to contextualise how these justifications are constructed.

3.1.1 Research Philosophy

To determine the paradigm of research this study fits with, three criteria are identified and assigned to this study. Ontology, epistemology and methodology form these three criteria (Guba & Lincoln, 1994), and respectively determine what the form of reality is assumed to be, what the relation between researcher and reality is, and how reality is analysed. This study is of a constructivist ontology and interpretivist epistemology, where it is assumed that realities are socially constructed, heavily dependent on context and exist in multiples. The political process, which is formed by values of actors, spatial context and the institutions in place, is of great importance to the planning of infrastructure projects such as long-distance bus lines and (multimodal) mobility hubs. Within this paradigm, knowledge is not created by individuals. It is instead coproduced through interactions, either between stakeholders, between the researcher and interviewees or through other means of communication. The goal of this research is not to uncover one truth, but to understand the systems of logic and subjective elements that stakeholders use when working on developing projects such as the used case. This ontology inherently leads to the methodological use of interviews, providing some structure in these dialectical elements of study and providing a subject of study of *verstehen* (van Thiel, 2014), meaning the goal is to create a holistic understanding of the data.

3.1.2 Considerations within Spatial Planning

Reasoning for the open structure of this research and its' holistic approach lie not only within the philosophy behind the research design, but in the background of spatial planning too. Spatial planning processes, including the development of public transport projects, are heavily influenced by physical, institutional and cultural characteristics of the place, or context it is placed in (Blotevogel et al., 2014). This so-called embeddedness leads to planning processes that are dependent on context and culture, giving room for a comparative research nature. To address this, a second case in the Netherlands was defined in Groningen and Drenthe, where similar projects have been successfully implemented. Practises from this area could lead to new insights and transfer information as to what conditions have led to this success.

3.1.3 Research Criteria

From positivist views, research is kept to criteria such as validity, reliability, objectivity and generalisability (M. Bakker & de Boer, 2021). Conducting qualitative research however, different paradigms can be used as basis for conducting research. To provide trustworthiness, a layer of quality control is therefore necessary. This view is supported by earlier work (Lincoln & Guba, 1985), where the argument is made for four specific criteria: credibility, transferability, dependability and confirmability. Later work further analyses and translated these criteria for use in Dutch research (de Boer & Smaling, 2011) and analysis is done on how these four principles compare to the positivist criteria of internal validity, external validity, reliability and objectivity. It is found that four quality principles link these criteria together, that being truth value of evidence, applicability of evidence, consistency of evidence and neutrality of evidence (Frambach et al., 2013).

Credibility

Credible research entails research that is trustworthy and believable to others (Frambach et al., 2013). To ensure credibility within research, Lincoln and Guba (1985) propose to use multiple data sources, known as data triangulation. Furthermore, feedback on the data and collecting data for a prolonged time is encouraged. Within this research, semi-structured interviews are conducted and these will be supported by contact through phone and email with experts, as well as several magazine articles to further enhance the data triangulation. Furthermore, the framework was selected from triangulating several theories, which supports credibility (Frambach et al., 2013).

Transferability

To apply the results of this research in different settings regards transferability. While the field of spatial planning suffers from difficulties with generalisability due to projects being embedded in a certain planning culture and planning system (Booth, 2011), this can be mitigated by creating a case study with detailed descriptions of the outline and context. Furthermore, sampling of, in this case, respondents, should be clearly noted and the results should be compared to both literature from its setting and different settings (Frambach et al., 2013). To do this, the scope and context of the research is thoroughly described. Participant sampling will be mentioned in a separate chapter, and in picking literature, taking the setting of the paper into mind is important.

Dependability

To get consistent evidence, the findings should be consistent in relation to the context in which they were generated (Frambach et al., 2013). Data saturation, relating to collecting data until no new themes emerge could prove difficult within the time constraints of this research. Therefore, it is important to discuss the emerging themes with experts from the field. This can be done by having e-mail and phone contact with relevant organisations during the data collection process. Data should also be re-examined for new insights, adding an iterative aspect to the data analysis. This can be covered by creating a coding process with several steps.

Confirmability

This criterion adds onto the dependability aspect, linking the findings to the participants instead of researcher bias. This can be negated by searching for links in literature that prove counterfactual to the findings (Frambach et al., 2013). Furthermore, reflexivity is an essential element of dependability, to show the role and influence of the researcher (Lincoln & Guba, 1985). Lastly, the steps taken in this research should be noted clearly, providing a trail that can be followed to check the results.

3.2 Data Collection

As a method, interviews are often conducted in case-study research (van Thiel, 2014). The choice of interviews is made to be semi-structured. The data which this research aims to collect is bound within a certain scope, and open interviews compromise the reliability due to differences within the interviews. The choice of framework leads to a semi-structured interview surround the five main domains from the argumentative framework, leaving some room for interpretation and open questions to expand into the topic of success conditions. Van Thiel (2014) also mentions the use of semi-structured interviews under time constraints, as open interviews can take up to several hours and are time-consuming to conduct and analyse.

On top of these interviews, informal contact with experts is included in the analysis. This is due to several factors. First of all, some respondents were not able to plan an interview within half a year, but were able to commence in e-mail conversations, opening possibilities for open questions. This does leave out the option for open questions, and compromises the ability to express certain opinions.

A focus group was considered to be a useful addition to this research. The choice was made to not conduct this, for several reasons. The focus group would have taken up the time in which at least four interviews could be planned and conducted. Due to the small population of experts in this field in the Netherlands, most experts know each other, and this will influence the dynamics of the group. Lastly, due to the small population, partial data saturation can be achieved via interviews, e-mail communication and thorough analysis and a focus group will not add yet to the data. When the case is specified further, and more experts join the population, a focus group could provide significant insight into actor relations within the case.

3.3 Participants and sampling

The participants in this research were sampled by contacting travel companies and governmental organisations through contacts of ROCOV and personal contacts or LinkedIn. A choice was made to spread these participants over the country, to make sure that respondents' views were not only relevant for the case proposed by the instigator of this research, but also provide views to potential conclusions that offer views on the broader mobility field. Preceding this research, the researcher was not familiar with any of the respondents. A specific note can be made for ID09, who was contacted via a peer discussion during research work. ID05+ joined the interview with ID05 on short notice and was therefore not contacted beforehand. In total, 17 mails were sent out to potential respondents. All seventeen respondents reached out, but seven of them could not schedule an interview within a few months. Two of these respondents reacted on specific questions sent via e-mail. The overview of participants can be seen in Table 5.

Table 5: Overview of sampled participants

ID-number of participant	Alt. abbreviation	Remarks
ID01	JM	Transport Engineer Region surround Utrecht
ID02	TS	Transport timetable engineer Region Amsterdam
ID03	MC	Provincial & Municipal manager hubs Region Groningen & Drenthe
ID04	MF	Transport Engineer Region IJssel-Vecht
ID05	TM	Municipal manager mobility and built environment Municipality of Apeldoorn
ID05+	C	Municipal manager hubs Municipality of Apeldoorn
ID06	HS	Advisory, ROCOV Gelderland
ID07	MM	Advisory, ROCOV Gelderland
ID09*	CB	Local consultancy bureau -personal contacts, Enschede
ID10*,**	EM	Province of Gelderland Limited questions via e-mail contact
ID11*,**	JJ	ROCOV No data gathering done because ID11 also provided the guidance of the thesis. Limited to informal discussion and information forwarding.

*These ID-codes are shifted due to last-minute cancelling of ID08.

**These ID-codes did not participate in a full semi-structured interview but rather participated in more informal communication.

3.4 Analysis and tools

To analyse the interviews, a standardized interview guide is set up. This interview guide consists of a structure of five domains of 5E, which entail some basic questions to guide the interview. The rest of the interview is done based on follow-up questions which can differ per respondent, since their expertise differs slightly, as does their position in the market. Transcribing the interviews was done by the online tool of GoodTape, excluding the AI functions ([Good Tape](#)). These transcripts were checked manually for names, grotesque grammatical or punctuation errors and ultimately uploaded to Atlas.ti 25.

Following coding guides from van Thiel (2014), this research makes use of interpretative coding with memos and axial coding based on a predetermined codebook, which was operationalised from literature research. The first iteration of coding, consisting of interpreting memos and a select few in-vivo codes, was done to understand the transcripts. Then, a second round of axial coding, making use of the codebook, was done to determine topics and emerging views, after which these two cycles were connected by interpreting quotes and codes together. The choice was made not to focus on looking for success conditions within the codes, but to interpret these based on what was said. This improved clarity and made for less cluttered transcripts.

3.5 Ethical considerations

This research does not include personal remarks from respondents and other participants. However, since a political aspect is clearly present in this research, the respondents have been anonymised, only displaying their role and actor relation, as well as an ID number and a one- or two letter code. There are no researcher-respondent roles to note, as the researcher did not have any relation to the respondents beforehand, and no imbalances were observed during the interviews. Personal details such as specific names and companies are left out of the transcripts if irrelevant.

Lastly, an AI statement is in place. For the data of this research, no AI was used. Furthermore, Atlas.ti and Good Tape do not include AI functions in their available subscriptions so these were also irrelevant. The main AI in place at this time is ChatGPT. This large language model was only used for prompts to create example structure for the thesis (headings, formatting with titles) and to help with managing personal notes, such as where to place a table or what order for chapters to be used. The researcher has no account, so a very limited use of ChatGPT was available. For self-made images, canva (<https://www.canva.com/>) was used without any AI tools available to the researcher.

4 Results & Interpretation

From conducting interviews, experts within the broad field of public transport, mobility hubs and local initiatives have spoken out about their views on the topic. This has resulted in new views on the topic and some interesting comparisons. In this chapter, each domain from the conceptual framework is clarified, findings from each domain are highlighted with quotes and interpretations, and the domain and findings are linked back to the theory. Finally, important differences per stakeholder will be addressed for each domain.

Findings from memos and the axial coding are combined in this chapter to come to a comprehensive interpretation.

4.1 Domains

This paragraph contains the initial results from open coding and memo interpretation. This data can be found in appendix 8.1 and 8.2. The interpretation was done based on passages from interviews and comparing interviews. The quotes used have been translated from the Dutch interviews.

4.2 Main interview structure

4.2.1 Effectivity

To provide objective argumentation and a suitable context for infrastructure projects, and provide arguments for integrating modalities and different project solutions, effectivity is the provided domain. Within this domain, subjective measures and norms are more or less rejected and ideology is put on a back-burner. This domain supports a more utilitarian approach, or a more “numbers-based” approach with functional logic, a similar approach as was done in HiTrans (Nielsen et al., 2005).

In summary, this domain was reflected in the interviews in several ways. First of all, from interviews it was taken that the integration of the line is key when looking at effectivity. This aligns with the topics to which **ID03** highlighted, where serving a specific function was an important topic in their mobility policy. Adding to this, they also looked at effectivity in combination with other factors, mostly societal factors regarding the wishes and needs of users.

“It needs to make sense for people to use it; otherwise it will just be another project with good intentions.” - (anoniem, personal communication, 2 June 2025b)

This quote entails the notion that effectivity cannot just be looked at from a numbers’ perspective, but effective evaluation is necessary and public transport utility is of great importance. This is supported by theory where the “view of the people” is relevant, reinforcing a user-centric definition of usage, or utility of public transport, linking effectivity and equity together (J. F. Jeekel & Martens, 2017).

“Effectiveness here means making a difference for people who have no alternatives.” - (anoniem, personal communication, 26 June 2025)

The second quote here further strengthens this finding that the use of the system is very important. Several of the transport engineers also questioned the fact that developing a long-distance bus connection without exactly knowing the background details of usage brings along risks. These dimensions of effectiveness can help in guiding the decision-making process for these types of projects. In these interviews, the suggestion is made that effectiveness is framed within its’ function, where the utility and the functionality of the system are the main factors in play. However, the operationalisation of the system varies from area to area, even in a small scope such as the Netherlands, where processes

are similar across the country. The differences in place are significant enough to create a lack of consensus on how to measure or justify this domain of effectiveness, beyond how the utility of the system is perceived. A shared system or structure aiding in the decision making process could help stabilise this. In literature, this finding is supported by several authors. Embedding effectiveness into an evaluative system is both suggested in the works of HiTrans and Betere Bus (Nielsen et al., 2005; van der Bijl & Van Oort, 2024).

4.2.2 Efficiency / Efficient city

In the context of this study, efficiency does not solely consist of technical and spatial aspects. It also includes making (rational) use of existing infrastructures, alignment of institutions in-place and the functionality of the land-use. Within the 5E-model, efficiency is further strengthened as a domain not only entailing utilitarian elements such as technical and spatial aspects, losing the personal and societal aspects (Alexander, 2002), but also including upcoming concepts such as broad welfare, a more broad argumentative domain is created. The domain of efficiency therefore balances between a broad, argumentative domain and a utilitarian, measurable domain where all variables can be quantified. Van der Bijl & Van Oort (2024) describe that a transport system should minimise spatial and institutional footprint, and offer functional coverage. This together will contribute to an efficient city.

In the interviews, reusing infrastructure and minimising non-useful investment was linked to efficiency fairly consistently. Mainly so, it was argued that a bus project, and LDB-projects and hubs in particular, are easier to gain financial backing or political backing when they make use of existing infrastructures, require less or no land acquisition, and when the development process progresses smoothly. Arguments made for these points include consolidation of current existing services such as bus lines, hub taxi systems or train connections, making use of less-used nodes within the area, and avoiding competition with other lines within the same concession. This was deemed important because the current system focuses on profitability.

“You don’t want to build a whole new system... reusing existing infrastructure is the only sensible way.” - (anoniem, personal communication, 26 May 2025)

When regarding institutional framing, efficiency and minimising unnecessary investment is mentioned again by respondents. Furthermore, the functioning of the decision-making process is mentioned here, where interviewees mention that the development of hubs, which is necessary for an efficient flow of transport regarding first and last mile transport, is limited by decisions made by provincial governments, leaving municipalities to wait without any power to intervene. These inefficiencies within the decision-making process lead to an overall less efficient system.

“There are too many stakeholders doing the same studies, we need clearer agreements, otherwise it’s not efficient at all.” - (anoniem, personal communication, 26 June 2025)

Lastly, the opinions and interpretations done by the participants of the interviews differed when looking at the more societal aspects of efficiency. The idea that public transport is only efficient when it serves part of the population that would otherwise make use of the private car came up. This can be countered when looking at cross-elasticity between private car and public transport usage, and noting that there is next to no cross-elasticity present (Terwindt et al., 2024) meaning it becomes near-impossible to influence markets without rigorous measures. Furthermore, in this more user-centric approach of efficiency which differs from the definition given by van der Bijl and van Oort (2024), offering predictable services is a topic that was mentioned by several respondents.

“A hub looks good on paper, but if there’s no real usage, it’s not good planning.” - ID05+

The analysis of initial coding and analysis leads to a double-sided interpretation; One technical side, and one governance side. Efficiency is both perceived as something that is achieved by minimising investments, reusing infrastructure and generally designing in a more reasonable, conservative way. A Dutch saying is “doe maar gewoon, dan doe je al gek genoeg” (“act normal, because that is crazy enough”) and interestingly, this is also reflected back in Dutch planning culture, where modest, rational solutions which can be measured and backed by quantifiable parameters prevail. This is emphasised in “Betere Bus”, where the authors argue that modest design qualifies as a virtue in the field of mobility planning (van der Bijl & Van Oort, 2024). This modesty can be seen as technological efficiency. On the other side, in governance efficiency, we see partial institutional inefficiency in fragmentation of responsibilities and decision-making. This aligns with Arts & Faith-Ell (2012)., who define governance critiques with the emphasis on how fragmentation of institutional structure leads to inefficient governance (Arts & Faith-Ell, 2012). Where Arts & Faith-Ell (2012) define a framework that helps diagnose these issues by recognising fragmentation of responsibilities and the need for collaborative planning, the respondents in the interviews mostly identify existing issues which align with the views of Arts & Faith-Ell (2012). Lastly, respondents go into the justification of efficiency, where it can be seen that efficiency can both be used as a frame for argumentation by looking at technological efficiency, or as a political narrative by looking at efficiency as good governance. This ambiguity is achieved by not having a uniform way to measure or evaluate efficiency within the scope of mobility and infrastructure projects.

4.2.3 Economy

Within the conceptual framework, *economy* relates to all financial aspects of public transport project and hubs, which provide necessary argumentation to create a successful project. From literature, it becomes clear that pinning specific economic benefits to a certain public transport project is a tough job. Some general remarks can be made on land price increase and possible investment possibilities, but to use economic arguments seems to be mostly a political decision making process. Due to the importance of political support, economic arguments are an increasingly important part of structural argumentation for public transport projects (van der Bijl & Van Oort, 2024).

Following on the general literature consensus, respondents based their observations around the political needs to back projects with proper financing. Financing comes from different budgets, and often, shifting provincial or municipal money around is hard to do, as affirmed by one of the respondents (anoniem, personal communication, 2 June 2025b). Furthermore, respondents also noted that the political side is only interested in the results, and less how to get there. These budgets however, have to be approved by the same politicians.

“Politicians are mostly interested in the economic side, how many jobs, how much growth.” -
(anoniem, personal communication, 26 June 2025)

Similar to Knowles & Ferbrache (2016) and Basheer (2021), respondents identify that pinpointing specific economic gains onto a project is a vague process and guesswork. The feeling of economic growth is there, but quantifying it, especially important for Dutch politics and their utilitarian system, is tricky. This was underpinned by ID02.

“The benefits are always vague. We know good transport helps, but quantifying that is tricky.” –
(anoniem, personal communication, 2 June 2025a)

These financial hordes are further broadened by the dependency on funding by higher-level governments. National governments fund provincial governments who then fund municipalities, leading to a multilevel dependency. To gain this support, a municipal worker has to go to the province, who then has to persuade national government to support a certain project financially.

“You have to talk in euros if you want them on board, even if money isn’t the whole picture.” - (anoniem, personal communication, 13 June 2025)

This lack of fiscal power in localised governmental organisations leads to a lack of autonomy, which is confirmed by respondents. Projects can be initialised, but implementation depends on aligning views with regional and sometimes national governments, depending on the project. Getting “all the noses in the same direction” is something that requires knowledge of the person, the context, and in doing so, becomes a case of strategic tool which is needed to create strong economic arguments within the 5E framework (anoniem, personal communication, 30 June 2025).

Examples of hub projects successfully boosting local economy were also mentioned by two respondents, but these cases are context-specific, and heavily rely on local policy supporting innovative policy. The economic sector in general was framed as essential for development, but also oversimplified in the way that economic benefits are currently used as a gateway to bring financial arguments without content to generate political support.

The general issue portrayed here is a necessity for economic arguments, but a lack of support for these arguments. Whilst politicians rely on strong economic arguments, for ease of communication and the requirement of sound financial backing for successful projects, literature suggests that this overreliance on these financial arguments is something to be cautious of (D. Knowles & Ferbrache, 2016). When looking back further, Alexander (2002) too warned for overreliance on quantifiable output could lead to neglect of societal and qualitative aspects of the justification process. The MIRT system takes up part of these problems by integrating arguments into an SCBA, but this system still focuses on quantifiable results. One respondent noted that the MIRT system takes a long time from initiation to finalisation, therefore it not being the most suitable system for smaller projects.

4.2.4 Environment

Sustainability is becoming an increasingly relevant topic within the field of spatial planning. This is recognised within the 5E framework by making use of the fourth E, Environment. In the interviews, respondents were asked how ecological impact was made and how the concession have evolved to accommodate for a more sustainable and future-proof system. Respondents added to the matter by going in-depth into topics of infrastructural- and operational sustainability.

From literature, the decline of diesel-buses is clearly visible with 39% of the entire Dutch bus fleet consisting of electric-powered buses (CROW, 2025). Furthermore, more of the STOMP-principle is becoming visible in mobility policies, with walkable cities being a term that is uttered more. Respondents linked the domain of environment to reusing old infrastructure, as they did with efficiency, showing a clear link between the two. The issue with new infrastructure lies in its need for financial support, showing a link between efficiency, economy and environment and minimising the spatial footprint is also backed by literature (van der Bijl & Van Oort, 2024).

“Minimising environmental impact often means reusing what is already there, which also makes the project easier to sell politically” – (anoniem, personal communication, 30 June 2025)

“Environmental arguments look good on paper, but rarely decide the project. They help make the broader case” – (anoniem, personal communication, 26 June 2025)

These quotes understate that environment is an important topic when talking about successfully implementing an infrastructure project. The more complex the project, for example when integrating hubs into bus services, the more support is needed, both from society and politics. When attempting a broad argumentation to justify the project, respondents leaned towards the fact that environmental concerns often overlap with efficiency arguments, because an efficient process could reduce environmental load by reducing resources used (anonym, personal communication, 26 June 2025, personal communication, 30 June 2025).

“If you can replace a long car trip with a bus trip, that is a clear environmental win. Proving the shift actually happens is the problem” – (anoniem, personal communication, 26 June 2025)

While environmental sustainability is present within municipal and provincial policy documents, respondents confirmed that operationalisation of these concepts vary. As mentioned earlier, fragmented responsibilities between different levels of government lead to inefficiencies, and these fragmentations can pose issues in achieving the environmental goals. This phenomenon aligns with Arts & Faith-Ell (2012) who critique this fragmentation of government responsibilities. In conclusion, the interviewees indicate that environmental arguments are a strong public discourse, but lack the same power in the political world. There, arguments of efficiency and economy overwhelm the environmental cause. This suggests that evaluation strategies should be updated with specific metrics for environmental aspects to attempt to force justification.

4.2.5 Equity

Broad welfare is a broad concept which has gained popularity in the past few years. From a concept that was hard to grasp, to a current state of several indicators which show the state of broad welfare. The fact that elaborate papers and analysis documents are being written on the concept (Centraal Bureau voor de Statistiek, 2022; Manshanden et al., 2024; Snellen et al., 2021) shows that our understanding of broad welfare is growing. Broad welfare is one of the main elements within the Equity domain, which also touches upon social exclusion (Bruno & van Oort, 2023) and transport poverty (H. Jeekel, 2018). These societal elements, such as employment, (access to) facilities and social contacts all fall under the field of equity.

Equity is a practical term in the eyes of the respondents. Practical implication of equity found from the interviews include serving a population with viable transport alternatives for the entire population, and ensuring proper accessibility of hubs. Herein, accessibility was not limited to physical accessibility, but also financial accessibility was mentioned; expensive facilities also exclude partial populations.

“Making a difference for people who have no alternatives” - (anoniem, personal communication, 26 June 2025)

The main population affected by Equity are the ones without alternatives. Respondents mentioned this is often a small group of the total population, and are therefore often overlooked. To this they added that, if the population is small enough, custom solutions for a specific case become possible. This however, requires specific attention to these groups. In general, the same arguments apply to both Environment and Equity. Custom solutions prove sufficient in some cases, for example the hub-taxi system in place in the Groningen-Drenthe concession. However, small-scale custom solutions are not possible in very large concessions such as IJssel-Vecht.

“Hubs could work for rural residents, but only if they are affordable, accessible and reliable” - (anoniem, personal communication, 2 June 2025b)

The use of hubs in rural areas is sometimes disputed in literature (Kwantes & Scheltes, 2022), and some respondents noted that hubs function much better in an urban area than rural areas (anoniem, personal communication, 30 June 2025, personal communication, 3 July 2025). However, as stated in the above quote, rural hubs can work if they are integrated into the system smoothly. They would have to have a high level of service. When integrating hubs into the public transport system, the same constraints start to apply. Hubs will not function as a “drag and drop” solution for first and last mile transport.

“In rural areas, if you don’t have a car, you’re just stuck. The network isn’t built for you.” - (anoniem, personal communication, 3 July 2025)

Lastly, the respondents noted that the entire public transport network is based around urban areas. This is seemingly logical, as the main portion of the population lives in cities, but this puts rural areas at a risk of being “left behind”. By not investing in them, the urban-rural divide can open up, creating tension. ID09 mentioned this by stating that most rural areas are car-dependent, and that changing this is a tough ask. Changing how the network is perceived is mostly a political task. ID03 showed that this task takes a long time to work through to the user of the system, in their case being around twenty years. The tension that occurs here is that politics often do not plan far into the future, because their future depends on votes, which are decided over four years.

Within this domain, a similar institutional limitation is shown to the environment domain. The equity argument is powerful in a dialogical way, because it empowers some groups in society. However, the political relevance is lower, because equity is not easily quantified and therefore defended in budgets. Clear policy goals surrounding equity lack from the concession plans, leading to the bigger picture in a concession being left behind. Because equity is hard to measure, in a cost-benefit analysis it may be undervalued or left out. Respondents noted that a solution, similar to environmental goals, could work. By implementing a standardised equity goal into concessions it could become easier to manage these goals and keeping equity a main justification for developing public transport, instead of it being a secondary discourse that is important to advocacy parties but not to the implementing actors.

4.3 Secondary interview structure

Other than the main 5E framework around which this research is based and the interviews are structured, other domains are present within the conceptual framework. From the interviews, indicators into these domains were also present. To determine the influence of these domains, they are analysed through interpretation of memos and open codes where necessary. In addition to the argumentation from the 5E model, this analysis provides ample insight into the context of the case analysed and the specific decision-making structure and actors involved in these processes.

4.3.1 Action Arena

The action arena is analysed based on a description by Ostrom (2005) and the adaptations made by Clement (2010) resulting in the IAD-framework. The configuration of actors, their roles and interactions that define decision-making within the context of mobility planning is included in the action arena. In the interviews, we have seen some interesting elements of the action arena reflected in the 5E domains.

The first element of the action arena that can be taken from the interviews is the structure of the action arena. There are similarities between the arena related to hubs and bus transit, but they do not fall under the same action arena. The main difference is that hub planning is mostly done by municipalities, where the higher levels of government hold financial positions but do not have specific planning power. For bus transport, it is the other way around. The multi-level structure is present clearly: National government provides guidance with strategic frameworks and financial guidelines, the provincial government acts as implementing authority and holds power over the requirements per concession. Municipalities are consulted by transport organisations, but they have no official power within the concession. It was mentioned several times that informal connections could lead to a positive outcome, informal processes even outweighing official procedures.

“It’s a small world. If you know the right person at the province, things move faster.” - (anoniem, personal communication, 2 June 2025b)

“We have the plans, but we need to get them in the right agenda to make anything happen.” - (anoniem, personal communication, 30 June 2025)

The dynamics of the action arena became apparent from the interviews too. Changes in the political landscape could make or break projects, by changing views and opinions on how public transport should function. Actions by actors within the arena changed requirements of concessions and due to national funding being subject to change every four years, the governance surrounding public transport and hub projects is deemed to be more of a negotiation arena than an arena where the institutions are firmly in place and fixed. This aligns with literature (Hajer & Wagenaar, 2003) in the sense that governance often provides an arena where negotiations are more powerful than fixed hierarchy.

In conclusion, the action arena for long-distance bus and hub projects can be defined as an arena where personal networks, windows of opportunity and discursive tactics have their influence, as opposed to an arena where rules and institutions in-place provide guidance to the decision-making process. This has positive and negative sides. Positively, discussion leads to more flexibility and possibilities to cater to specific context, but negatively, these discussions may undermine evaluations and other criteria-based decision-making processes.

4.3.2 Decision-making Process

Following on the Action Arena, the decision-making process describes the process in which requirements and input from actors are translated into a clear decision and outcome, which should lead to continuation of the process. Similar to the action arena, respondents noted that the decision-making process contained an informal system. Agenda-setting and timing strategies prevailed in these informal descriptions. Formally, the elements within the decision-making process were clear. Concession planning, mobility vision documents and conducting societal cost-benefit analyses were mentioned and these are all mainstream topics in the Dutch mobility system, showing the embeddedness of these systems.

When zooming in onto the formal processes, the concession requirements set by the provincial government shape the system in which long-distance bus lines are ultimately developed. Hub development is led by municipalities on their own accord, only limited by funding from higher up. This rigidity provides a predictable system in which transport providers know what to expect and how to act. However, projects that are set up by creative and innovative organisations may be delayed by the lack of flexibility in the system. Informally, respondents mostly noted that it is paramount to find the right frame and discourse for the project to represent it in the current political movement, to ensure success.

“The content matters, but the story matters more. You have to tell it in their language.” - (anoniem, personal communication, 13 June 2025)

“We missed the window last time, so now we have to wait until the next concession.” - (anoniem, personal communication, 2 June 2025a)

These quotes show both rigidity and possible flexibility. Rigidity where the concessions function on strict timeframes, and flexibility where the story is important to actors higher up in the decision-making process. Formal decision-making is top-down controlled by national government deciding on the shape of the system, eventually forming the concession structure. Herein, the provincial governments were allotted the role of implementing and managing these concessions. The respondents noted that the issue with concessions is often that their size is too big to manage them properly (ID05) because the spatial context of the planning culture differs even within the larger concessions (IJssel-Vecht).

Similar to the action arena, the decision-making process is formed by both formal and informal systems in-place. It seems that the formal systems provide more guidance than in the action arena, because the rules and norms are monitored and evaluated by the responsible authority. The risk this poses is that alternative systems can be difficult to implement if they do not fit the current processes.

4.3.3 Success Conditions

One of the main goals of this research is to determine success conditions which justify the development of a complex public transport project with integrated first and last mile transportation in the form of a multimodal hub. Within the interviews, respondents were not asked directly what success conditions they found important, but as a secondary analysis these conditions can be interpreted from their answers and views.

Respondents defined two main categories of preconditions. First of all, project design conditions, such as physical design, analysis and fit with travel patterns and level of service were mentioned. Specifically, sustainable design in the form of reusing infrastructure was mentioned. These design conditions were linked to non-physical design conditions too, where the user stands at the centre. One respondent mentioned that the possibility for market parties to participate ensured enthusiasm for certain projects (anoniem, personal communication, 2 June 2025b). Making sure the usability of the design fits and integration into the system of currently useable options is correct was mentioned as one of the critical factors for project success. These findings fit with the conditions mentioned in literature; technical robustness, institutional alignment and stakeholder buy-in (Arts & Faith-Ell, 2012).

“If people don’t see results within a year or two, you lose momentum.” - (anoniem, personal communication, 26 June 2025)

“We have to make sure it connects to what people actually do, not just what we think they should do.” - (anoniem, personal communication, 26 May 2025)

The success conditions mentioned for the case were mostly linked to the lack of travel analysis done on the case. Respondents noted that analysis travel patterns and behaviour, expectation and integration into currently possible journeys by public transport is important to ensure successful implementation of a project without letting the project burn out within a year or two. They empowered these statements further by noting that quick results lead to public support, as the public is not prepared to wait for a prolonged amount of time to see the project become successful.

Institutional success, according to the respondents, was achieved by parallel decision making. Currently, a critique of the system that was mentioned several times was the waiting time during communication between several levels of government or parties, leading to delays within the project and lesser overall functioning of a concession. This was further strengthened by views from ID03, noting that the system in place in the northern concession made for shorter lines of communication.

Lastly, in sparse contact with the concession holder, the Province of Gelderland, some conditions also emerged. Especially the level of service was deemed important, because long bus lines are sensitive to delays. In combination with the strength of hubs these lines function best with high frequencies and a plethora of (local) connections (anoniem, personal communication, 2025). This is offset by the need for the Arnhem-Lelystad case needing highway right-of way by assigning certain permits to use the hard shoulder, or implementing new bus infrastructure. This goes against the environmental aspects of re-use of infrastructure and is therefore not perfect.

In general, success depends on a twofold case where both the technical aspects of the project align with the goals set by governing bodies, and the use-case of the project fits with the current users. Showing signs of “integrated planning”, a container term often used in planning documents, in practice these two domains of success are interdependent and need to be managed closely in time, finances and (user) expectations.

5 Discussion

Critical Result reflection and topic overlapping

In this discussion, several topics will come to light. First of all, the sub-questions to this research will be answered in order to provide suitable ground for answering the main questions. Furthermore, the results and interpretation will be put under a magnifying glass. Analysis of code groups and interviews is done with the help of visualising tools in Atlas.ti 25. Lastly, some relevant topics outside of the scope of this research are mentioned, followed by recommendations for further research.

5.1 Sub-Questions

5.1.1 SQ-I: What characterises the current action arena regarding regional mobility (hub) development?

In relation to mobility development in the Netherlands, the action arena can be described as an arena where negotiation is a central part of the arena. This negotiation takes place on several levels of government. This multi-level aspect determines the roles of the governmental parties involved, where the national government provides partial funding and through institutions, the general guidelines for the concessions. The provincial government takes the leading role, determining prerequisites for concessions and managing the travel provider active within the concession, as well as guiding the tendering process. Lastly, the municipalities determine plans for the hubs, but within the concession, their power is limited to negotiating if they have connections to higher levels of government. These characteristics define an action arena which relies on negotiation and contains a certain level of institutional fragmentation, implying that the arena is flexible, but outcomes can be dependent on timing, (political) framing or personal networks.

5.1.2 SQ-II: How do the domains of the 5E-model relate to current mobility and hub planning practises in the study area?

Taking the 5E model as a structure, each of the 5E domains have their own relation to the current planning practises. Effectivity is mostly seen by respondents as a purely technical domain. Projects have to be usable, and functionality is an important aspect of planning practises. For buses, this means a high level of service, and for hubs, a good connection with the buses to achieve proper connectivity is key. Efficiency overlaps with economy and environment in reusing infrastructure, minimising investments and comes back when looking at the fragmentation in the action arena, because this fragmentation could lead to inefficiencies, such as delays. Moving onto economy, which is found to be the key argument in gaining political support for public transport projects. Broad benefits from public transport projects are difficult to define, leading politicians to possibly over-rely on economical arguments. This leads to a potential overlook of societal benefits, and is an aspect to be cautious of. Both environmental- and equity-aspects are present within the discourse of providing argumentation for these projects, but due to issues with operationalisation these arguments are still not broadly presented as useable arguments.

5.1.3 SQ-III: In what way is the decision making process currently anchored in the mobility and planning process in the study area?

The current decision making process is anchored in the system through national institution (Wet Personenvervoer 2000) and the concession structure with prerequisites specific to each individual concession. These institutions are timebound, with public tendering every eight to thirteen years on average. This formal anchor provides the basis for the decision making structure. The informal side is harder to define specific anchoring to, as it relies on timing and specific framing of projects to gain attention of organisations who have decision-making power. This could be defined as top-down anchoring, but the success of the process relies on bottom-up informal strategies and agendas.

5.1.4 SQ-IV: What prevailing criteria are in use to justify the investment into LDB projects and hub projects in the study area?

As discussed in the second sub-question, economical arguments are leading for the party executing the transport. The northern concession of Groningen-Drenthe has averted this overrepresentation of economic arguments by changing the structure of the system, and granting the concession holder power over financing the concession and determining the bus lines within their own ranks. Other criteria that are in use to justify investment are criteria related to usage and functionality, modest designing of infrastructure and avoiding unnecessary investments. Implicitly, political buy-in and approval for funding from higher government levels are also prevailing criteria to justify investing into these projects.

5.1.5 SQ-V: What justification conditions can be identified from current projects within field of public transportation and hubs within the study area?

Specific conditions that can be identified from the data are design conditions, regarding physical design, and background research to usage conditions, which relate to travel demand and destinations. Furthermore, institutional conditions include avoiding delays in communication by implementing parallel decision making. Furthermore, respondents from municipalities pointed out that their decision making power is limited, indicating that including this party into the process could smoothen the entire process. Regarding temporal conditions, fast and visible results were determined to be important for public support and success. Lastly, to cater to user fit, accessibility and reliability of the system is deemed a success factor for groups without alternatives. In summary, these conditions fit with technical robustness, institutional alignment and user fit, aligning with literature as mentioned in 4.3.3.

5.2 Reflection on the results

First of all, the results are looked at. In this section, unexpected outcomes are analysed and the interpretation from the previous chapter is expanded with implications and offering insights. For this, the visualising tools from Atlas.ti 25 were used. In the previous chapter, the results from the interviews were interpreted and compared with previously analysed literature. In this section, the links between domains are explored and strengthened by visualisations from Atlas.ti25. The analysis done in this discussion consists of observations, as due to the time constraints of this thesis mean the population of interviewees is not large enough to make statistical claims.

5.2.1 Domains within the interviews

The five domains from the main framework used in this research show overlap in several domains. The interviews have been structured in such a way that all five domains are addressed, and the semi-structured nature of the interviews led to a natural discussion in which the respondents were free to expand on topics which they either knew more about or were specifically interested in. This led to an uneven distribution of code occurrences in atlas, where especially *Equity* as a domain was mentioned less often, and *Effectivity* and *Decision-making process* were mentioned more frequently. As an outlier, ID04 mentioned *Equity* and *Environment* more often than other respondents, possibly due to a background in environmental sciences and a focus on a human-centred approach in earlier work.

Table 6: Atlas.ti25 Code-Document analysis (normalised)

		1: transcript-... 19	2: transcript-... 30	3: transcript-... 59	4: transcript-... 29	5: transcript-... 26	6: transcript-... 40	7: transcript-... 30	Totals	
Actor Constellation	6 51	25,22 3,11%	28,22 3,47%	19 2,34%	14,87 1,83%	14,87 1,83%	8,59 1,06%	9,47 1,17%	120,24	14,81%
Decisionmaking Process	8 62	25,22 3,11%	28,22 3,47%	23 2,83%	8,92 1,10%	23,79 2,93%	12,89 1,59%	18,94 2,33%	140,98	17,36%
Economy	5 42	5,04 0,62%	15,68 1,93%	14 1,72%	14,87 1,83%	11,9 1,47%	6,44 0,79%	23,67 2,92%	91,61	11,28%
Effectivity	9 64	30,26 3,73%	12,54 1,54%	19 2,34%	11,9 1,47%	29,74 3,66%	23,63 2,91%	23,67 2,92%	150,75	18,56%
Efficiency	12 52	5,04 0,62%	21,95 2,70%	21 2,59%	8,92 1,10%	11,9 1,47%	19,33 2,38%	16,57 2,04%	104,71	12,90%
Environment	8 53	10,09 1,24%	9,41 1,16%	13 1,60%	29,74 3,66%	5,95 0,73%	32,22 3,97%	18,94 2,33%	119,35	14,70%
Equity	8 33	15,13 1,86%		7 0,86%	26,77 3,30%	17,85 2,20%	12,89 1,59%	4,73 0,58%	84,37	10,39%
Totals		116 14,29%	116 14,29%	116 14,29%	116 14,29%	116 14,29%	116 14,29%	116 14,29%	812	100,00%

Table 6 shows the normalised values for code-document analysis. The normalised values show the numerical and percentile occurrence of domains within each document. This value was normalised due to document D3 having a greater number of codes compared to the other documents. The total number of codes can be found in the online RIS database.

Other interesting observations from the code and domain occurrences include that the three respondents working for a travel provider talk less about the environment, efficiency and economy, even though economic stimulus is important for a travel provider to thrive. The main input for economy came from the external consultancy organisation and ROCOV. An explanation for this could be that a travel provider has to focus on making profits anyhow, making funding a project less important as they can send out invoices to their clients, whereas the consultancy works for the province usually, taking financing into account. ROCOV, as advocacy, needs to attend to costs as this is relevant to the users, who can benefit from cheaper ticket prices. These occurrences are visualised in Figure 9.

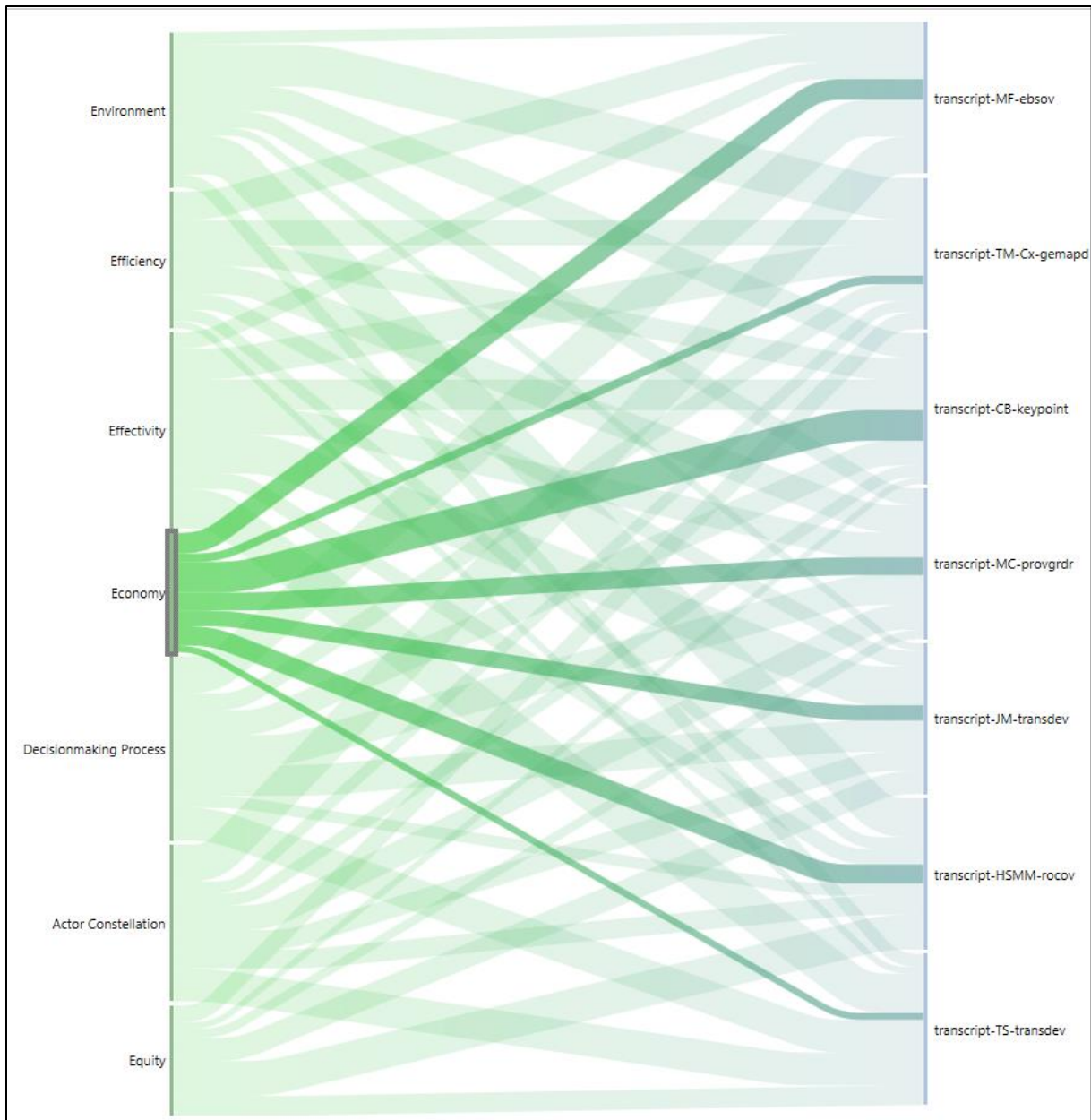


Figure 9: Occurrence of "Economy" domain over 9 interviews.

5.2.2 Overlapping domains

From the interviews, some overlaps between domains were noticed. First of all, the re-use of infrastructure was mentioned by most of the respondents as an *efficient* solution, whilst also providing *environmental* benefits and *economic* benefits. This seems obvious, but in providing proper arguments, new and “fancy” infrastructure might just provide the flashy goals that fit within a politicians agenda. The overlap between these three domains shows that re-use of infrastructure can be a powerful tool in developing bus lines and hubs. Going onto these quick goals, another clear overlap exists when looking at quick results versus long-term planning and vision. ID01, 03 and 07 defined that public support by politicians relies heavily on quick results, this could be either in number of travellers or a show of infrastructure. However, effective planning, according to these respondents, also benefited heavily from proper long-term vision and inclusion of all prerequisite conditions, including human prerequisites. This equal approach links *Equity*, *Success Conditions* and *Effectivity*.

Two more overlaps are apparent and worth mentioning in this section. First of all, *Efficiency*, *Decision-making Process* and *Action Arena* overlap, showing that the main framework overlaps with the secondary domains too. This overlap lies within the fragmentation of responsibilities, due to institutional inefficiency. These fragmentations lead to delays within a project, either due to one party not being able to execute their task properly or even a lack of willingness to provide necessary input into a project. This lack of clarity in roles further means that focusing on what task to execute is not always clear to the actor. This could possibly be improved by providing institutional backing on the tasks each actor has within a concession.

Lastly, *Economy*, *Efficiency* and *Decision-making Process* provide a clear overlap. The overlap lies within the use of arguments in the decision-making process. Politicians use economic arguments due to their ease of communication and quantifiability, creating an efficient process. However, experts within the mobility field prefer technical arguments and arguments providing societal and environmental background. These arguments are hard to quantify, and therefore hard to transfer within the political field. Respondents argue for content to be provided in a way that gives context and a story to tell, so the political field can make more sense of societal and environmental arguments.

5.3 Relevant findings outside the research scope

Hurdles, barriers and opportunities

Outside of the research scope and interviews, some concepts emerged that fit within the research field but not with the scope of the two used cases. These concepts are relevant to mention as they possibly influence policy decisions in the field in the future, and can contribute to success conditions or justifications in a later stadium.

First of all, several barriers in the system behind public transportation were defined. These directly influence the possibilities for integrating first and last mile solutions into the system. The concession borders used to determine where a travel provider is allowed to offer public transportation are set every eight to thirteen years, possibly changing at intervals. This leads to sometimes overly large concessions (ID04) and problems with changing borders leading to certain lines becoming cross-concession, where the ownership of the line could change (ID01). With changing borders, and therefore unclear prerequisites, it is harder to pursue consistent policies regarding public transport.

These changing prerequisites contribute to the second barrier too. Physical barriers, such as infrastructure, are a technical challenge which can be passed with economic incentives. This does not resonate with the environmental goals set by most regional governments however. Contrast to this are cultural barriers for the success of public transport. In rural areas, inhabitants rely on (personal) car use. This was confirmed by several respondents. Changing cultural barriers is much tougher than technical or otherwise physical barriers. Car use is linked to a discourse, the feeling of freedom (ID05), and therefore, limiting car use can feel like policy is limiting freedom, thus leading to a deterioration of support from society.

Due to these constraints mentioned above, ID09 mentioned an interesting out-of-the-box solution to the issues. Flixbus could work as an alternative for cross-concession long distance bus connections, due to their unique position on the market. Providing useful destinations is necessary for this and a prerequisite could be the opening of Lelystad airport, opening possibilities for a line from Arnhem, an international train station, to Lelystad airport and Lelystad. This however, is purely speculative and could be researched further.

Lastly, outside of the scope it was mentioned by ID09 that SUMP's can provide proper arguments and a structure to develop new housing and public transportation in the right order. ID05 and ID05+ identified this issue where housing was built without considering the need for public transportation, leading to new households being forced to find other means of transportation, often leading to an increase in car ownership. In a specific case (Enschede de Eschmarke) this was countered by properly focusing on transport, developing bus and train services for new housing projects. This could provide learning opportunities for areas within the research scope, where housing is planned but public transport is lacking behind. Furthermore, SUMP's are developed for urban areas, and in the Netherlands they are mandatory to develop for larger urbanised areas. However, in rural areas, similar vision documents could provide ample footholds for these developments, resulting in less failed hub projects (ID09) and a better integrated system.

5.4 Recommendations for future research

A forthcoming issue with the 5E model is the overlap between domains and the strength of the domains within the action arena. To provide a framework in which the 5E model is used to determine specific success conditions, further research into the overlap of the domains can provide insight into overlaps where tensions exist. One of these tensions became apparent within this research. The first three domains, effectivity, efficiency and economy provide clear, measurable arguments to work with. Environmental and Equity arguments lack the political strength due to fact that there are no frameworks in place to evaluate these arguments, thus limiting their discursive power in the largely political action arena. To give all domains equal strength, further research into quantifiability of these two domains could provide useful insights.

Secondly, the use of a vision document in which rural plans are clearly set out could provide the guidelines and overview needed to help align agendas. This aligns with the current trend of SUMP's being written for urban areas. Research into the possibilities that these possible documents bring into the rural concessions could give insight into creating a more coherent guideline into vision of the rural areas, where concessions span many municipalities that each have their own mobility vision. Going on, a main concern of municipalities that came forward in this research regarded the complexity and rigidity of the concession system, leading to lack of input from local government or delays in communication. The tension created within this system could be researched and defined, leading to better input regarding specific bus lines and hub projects. Finally, this research is bound in its context and therefore lacks generalizability unto international planning cases similar to this case. To improve this, integrating this research and research into similar international systems would provide insight into those systems, providing learning opportunities and opportunities for potential policy transfer.

A clear view from the theoretical framework shows that mobility hubs are a current hype and overperform in policies, possibly leading to disappointments when implementing hubs (Kwantes & Scheltes, 2022). Within the interviews we see that hub enthusiasm comes from municipalities with plans being apparent in some municipalities (anoniem, personal communication, 30 June 2025). However, we can follow argumentation by Kwantes & Scheltes (2022) and see that consultancy is moving towards disappointment, showing several failed projects (anoniem, personal communication, 3 July 2025). This shows that research onto the volume of hub projects and their feasibility could be relevant to the success of implementation of hubs. This research provides ample handles to start from, especially regarding *possibilities* of successful hubs.

6 Conclusions

Answering the research questions and providing recommendations

Concluding this research, the main questions will be answered with help from the sub-questions answered in the discussion. The aim of this research is to define conditions to justify developing a LDB-line with integrated hubs in the rural area of the Veluwe, using an argumentative action structure, those being *success conditions*. This research defined both barriers (non-success) and enablers (success), which will be described in this chapter. The research does not provide a definitive answer to these questions, but rather a starting point from which a complex research system could be managed and improved.

6.1.1 D-RQ: How can suggestions for small hubs on a new LDB-line from Arnhem to Lelystad be provided using the domains from the 5E model?

The case of a LDB-line from Arnhem to Lelystad proved difficult to justify. Most importantly, background research into travel demand and possible destinations, especially Lelystad Airport and the possible opening of it, were relevant aspects to form justification. However, a step-by-step analysis shows that suggestions are possible along the lines of the 5E model. In basis, and aligning with Effectivity and Efficiency, it is necessary to start these projects off with the right background research to provide proper arguments towards the use of a route network that aligns with travel demand and has a high enough level of service. This is determined by user needs, and is necessary to align with the strengths of LDB connections. Furthermore, the domains from 5E can be used to gain the necessary political support to create strong financial support, thus creating a feedback loop in which willingness of actors is necessary to push through this loop. To satisfy environmental goals, clear standards need to emerge on which the project is evaluated. These arguments provide important discourse for the general population, but lack strength within the action arena.

In essence this above advice suggests creating a vision document specific to rural mobility plans, similar to the SUMP's created for larger cities. This collection of arguments, combined in a clear structure, could provide the missing link in creating a coherent structure to justify these types of projects. Furthermore, research to travel demand and possible destinations should be in clear order before moving towards designing new transportation lines. Jumping ahead does not provide the right argumentation to justify a project such as the proposed case. Therefore, municipalities and concession holders could work together on a vision document where future wishes and needs can be summarised and documented.

6.1.2 E-RQ: What conditions justify the development of a LDB-line from Arnhem to Lelystad with integrated small hubs in the rural areas of the line within an argumentative action structure?

Concluding this research, the main research question is left to answer. In short, the justification for these projects relies on combining several factors. First of all, functional design that combines effective route networks and level of service, institutional alignment where projects are supported from all levels of the multilevel action arena, and balancing the framing of economic, environmental and equity arguments to avoid overreliance on economic arguments. Justification criteria and success conditions do not rely solely on measurable criteria such as amount of funding, number of users and amount of infrastructure (re)used, but more so on discursive frames such as storytelling to align agendas of different actors. This is the Dutch saying of “De neuzen dezelfde kant op krijgen”. Especially fitting to the expected travel patterns of a proposed project is important to travel companies and exploitation of the line. Maintaining momentum can be done with quick results, but to ensure quick results alignment of institutions and political agendas is necessary to avoid communication delays.

As such, the domains from the 5E model influence one another, furthermore underscoring the fact that parallel decision making to speed up the decision-making process is important. Due to the overlaps and influences, further research may be needed to determine how to put this model to practical use in the field.

6.2 Limitations

This research is bound within its scope and context. Within the used methodologies and scope exist limitations, which will be defined in this chapter. The goals of this is to provide transparency into the choices made by the researcher. This chapter will include methodological limitations, limitations to scope and context of the research and a short personal reflection.

6.2.1 Methodological limitations

First of all, this research is based on a case aired by ROCOV. To determine specific success of a case or project, background research to the expected travellers and possible benefits is needed, often in the form of a (societal) cost-benefit analysis. Because this information was not available for this case, this research focuses on success *conditions* justifying this and similar projects. This leads to exploratory research in which interpretation is a central part of the analysis.

Case studies suffer from a difficulty in generalizability. Spatial problems are embedded in their context, and conducting interviews with a case in mind could influence the data gathered from these interviews. Whilst participant sampling was done carefully by not only selecting experts from the case area, the implications and insights gained from this data may not be applicable to cases that seem similar. To counter this, the case was described thoroughly to give future researchers a handle to compare cases when selecting their case.

The first aspect of the interview which is apparent is the lack of questions surrounding specific success and justification conditions. Mentioning these domains could lead to an interview fully focused on these conditions, without carefully considering the systems in-place which in their turn, define the success conditions. Therefore, the choice was made to leave these two domains out of the interviews. This ensured a clear focus around the argumentative framework and consideration of all the factors within the scope of the research that could influence the success conditions. However, this does mean that the conclusion is based on coding and interpretation data, subject to researcher bias.

Lastly, the interpretation was done based on nine interviewees. This is a low amount of interviewees for a broad exploration of a complex system. The data gathered was supported not only by academic literature, but also by data from public transport magazines containing opinions and expert views on the topic. Furthermore, the sampling of participants was done carefully by ensuring experts from all layers of directly involved government were interviewed. Furthermore, the background of these respondents was spread over the country, giving views of different systems, both rural and urban thus providing opportunities for comparison. For future research into this topic, including more in-depth conversation with the involved province managers could provide useful insight into local specifics on the concession.

6.2.2 Scope and contextual limitations

The current concession system which defines how bus lines are developed in the Netherlands is specific to the country. Therefore, this research does not fill an international gap in public transport research. This research defines a specific case it revolves around and uses one complimentary case to compare a different system. The use of this single case leads to a corridor-like approach where the focus lies on a specific area, creating problems with generalizability as discussed in **Fout! Verwijzingsbron niet gevonden..** To counter this, experts were selected from a wider scope, including the north of the Netherlands and some experts from the Amsterdam and Utrecht metropolitan areas. Furthermore, the scope was limited by the choice of framework. Using the argumentative 5E framework as a basis pointed the research to specific domains, leaving out potentially useful domains such as specific accessibility indicators.

This research includes perspectives from all levels of directly involved governments and organisations. However, one perspective is not included. Travellers' perspective was deliberately left out of this research because background research into relevant data regarding travel demand and possible destinations of the bus line was not available, the perspective of the traveller was deemed not relevant to the policy and governance aspects of this research. It is important to note that involving this perspective could provide ample insight into societal success conditions in later research.

6.2.3 Personal reflection

Interpretative research is analysed by the researcher, and therefore, their opinion could shine through in the analysis of the data. By using the quality criteria by Guba and Lincoln an attempt is made to ensure trustworthiness. Conducting semi-structured interviews and coding their transcripts is a skill that may develop over time, and this thesis is the first large-scale project to be executed. This inevitably led to inefficiencies and difficulties with these topics, such as failure to ask proper follow-up questions. Follow-up questions improved during the interviews, and therefore, the latter interview conducted in the research (ID05 to ID09) could be considered "better" than the earlier interviews. However, this is not measurable. Lastly, the time constraint on a thesis like this one provided some problems when communicating with respondents, leading to a few last-minute interviews.

6.3 Relevance within the mobility field

Research aim and closing statement

The aim of this research was to provide justification arguments for long-distance bus connections with possibilities for integration of rural hubs, specifically within the Veluwe area in the Netherlands. With the use of the 5E framework and a conceptual framework, this research provides an overview of expert views within the framework and shows overlap within the domains. This can be used in further development of the decision-making process. This research has identified some core issues within the current system of developing long-distance bus lines. Even though these bus lines theoretically provide a great alternative to other means of transportation, in practise they often do not emerge as a popular choice. By identifying the limitations of the concession systems, local and regional governments are encouraged to work with these limitations to create clear responsibilities and a more efficient workflow, leading to less delays. Furthermore, the risks of long distance bus lines become more clear to parties. Where travel providers have a clear overview of aspects of LDB that prove difficult to implement, this knowledge is less apparent in policy developers and advocacy organisations. This leads to an imbalance where the appeal of these systems is overestimated for rural areas, especially when attempting to fit it in a concession which already lacks funding and timetable hours, and provides an opening for innovative thought to implement these lines with outside companies such as Flixbus.

Practically, these shortcomings can be tested and researched further. First of all, the environmental and equity arguments provide solid dialogical power, but lack transferability due to the complexity of quantifying these criteria. Research could provide a more standardised approach to these criteria and test if these criteria could provide stronger arguments when quantified. Embedding these criteria into vision documents as suggested in the design research question could lead to a broader acceptance of environmental and equity criteria.

Furthermore, the rigidity of the current concession structure has proved difficult to work with for some municipalities, while other governing bodies have changed the structure to better include relevant actors from municipality and local initiatives. Working with this example, research into the inner workings of this concession with a governmental performance obligation and the success in that area could lead to suggestions for other concessions to improve their fragmentation of responsibilities, leading to more flexibility and possibly better performance.

All in all, success conditions for LDB lines, especially when attempting to integrate hubs on the line, are defined by a myriad of aspects, all of which fit into the argumentation of 5E with the addition of actor-related domains. These conditions can be used as a basis for future research, where, in combination with limiting factors of the current system, specific areas can be analysed for applicability of such public transport systems. The case used in this research requires more background analysis of travel demand and possible destinations, as well as local interviews to determine willingness of the rural population to make change.

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8.2 Appendix 2. Memo list

This list of memos can be found in the RIS project bundle. This list is not connected to the documents in this appendix.

9 Project: Thesis IC bus and Small Hubs

Report created by Sven Paternotte on 22-8-2025

Memo Report

All (40) memos

additions to the case

the line will not function on its' own.even with a hub. You need to combine and add facilities.

anecdote

TM on the plans of changing the bus station location

anecdote TS 1

best practise

Enschede de Eschmarke. Good practice on how PT is developed before housing

BRT definition

confirmation on how BRT did not have a proper definition yet. (at least, outside of academia)

bureaucracy/inefficiency

highlighting issues with the system

car vs bike

the culture still seems to be car good, bike bad. this creates many unnecessary car trips, and political tension.

Case specific note

15-minute or 30-minute timetable to connect to main train systems in NL

case-specific

problem with this case: veluwe as a physical barrier

disclaimer

information and thoughts based on current system to not compromise the tendering process.

efficiency passage

more of a note on technical efficiency

Evaluation

Evaluation criteria are interesting: they consist of only easily measurable systems. Logical for transport company but questionable if it is the only way we evaluate.

facility combining

note on how this vision is strongly based on how a connection between facilities gives strong base for development of hubs and PT. not only focusing on one system but making use of opportunities and creating a system that caters to all.

first developing houses then PT

another respondent going off on the fact that houses are developed before transit, basically pushing people to buy a car.

flixbus

possibilities for the flixbus!!!

Freedom of car use discourse

on population who has the car as a status symbol. They spend a lot on their "freedom mobile"

funding issues

how budgeting works top down and the issues it creates.

gieten PR

an example of political framing. NL says GIETEN PR is a nice hub. The developer disagrees. See this quote.

Inclusivity

participation!!

inefficiency

passage on how a certain project works due to willingness of local initiatives but another doesn't. hard to put to words why exactly.

inefficiency and lack of vision

argument for using sump. province not realising new development needs proper PT

introduction

keypoint activities

for the view: this are keypoints activities. mostly data analysis for different parties.

level of service of buurtbus

buurtbus is cheaper but drops demand too. Good to take into account if this is worth it.

link hub/ldb

highlighting that in the case area there is no real connection (yet) between hubs and ldb

loss of influence

here TM describes a loss of influence of the municipality on the whole development of PT, specifically describing a connection loss due to new concession borders.

maas bikes vs maas cars

arguing that maas cars do NOT work in rural areas, because you might as well keep driving to your destination.

Neuzen dezelfde kant op krijgen vanuit de gemeente

opinion on gr/dr structure

more of an opinion piece on how this respondent thinks that responsibility for travelers should be left to the travel companies as they have more in-house knowledge.

passage on effective LDB and issues

here we see that one of the main defined issues with ldb is connecting to the many existing systems. Keeping everyone happy is near impossible, and this passage shows that this makes developing longer distance bus connections in general problematic.

passage on use of Maas (OV fiets)

the use of OV-fiets is questioned by both interviewees. they argue that it is not a flexible system: it only gets used by people with the same destination every day.

pilot bus extension to Enkhuizen

a pilot project with bus from lelystad to enkhuizen.

Political pushing

politiek doorzettingsvermogen over dat je soms wel wat geduld nodig hebt om met de politiek om te gaan.

Political pushing 2

ook een noot over hoe het afhankelijk is van losse politici en beleidsmedewerkers die zelf input moeten geven over hoe zij hun werk verdelen en hoeveel aandacht ze ervoor hebben.

process of rocov advice

long process on how travel companies deal with advice from rocov and implement it

rural-urban tension

nice passage on how a system designed for urban areas might not work for rural areas.

societal research on safety and traffic

tension: local politics vs policy experts.

too many focus groups

Utrecht Merwede Development