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Understanding collaborative dynamics and public resistance

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Understanding collaborative dynamics and public resistance

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FACULTY OF ENGINEERING | LUND UNIVERSITY | 2026

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Jakob Allansson

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DOCTORAL DISSERTATION

Doctoral dissertation for the degree of Doctor of Philosophy (PhD) at the Faculty of Engineering at Lund University to be publicly defended on 24 April 2026 at 9.00 in V:A, Department of Technology and Society,
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Abstract:

This thesis addresses the challenges associated with the planning and implementation of high-quality bus services, with a particular focus on collaborative dynamics between responsible organisations and public resistance to such projects. Using empirical material from Swedish cases, the thesis aims to develop a deeper understanding of the planning and implementation processes of high-quality bus services in Sweden. It focuses on coordination between organisations responsible for public transport planning and provision, and protests against a high-quality bus service.

The thesis comprises four research papers. Papers 1 and 4 examine the collaborative dynamics among organisations involved in planning and implementing high-quality bus services, with particular attention to how challenges emerge and are handled during different planning stages. Paper 2 focuses on developing an understanding of how Bus Rapid Transit (BRT) can be understood and planned for in small and medium-sized cities. Paper 3 investigates public protests against BRT implementation through an analysis of debates in local media, providing insight into the drivers of public resistance.

The findings show that collaborative challenges occur throughout the planning and implementation process and primarily stem from conflicting organisational roles, motivations, and objectives. Early planning stages are characterised by difficulties in developing joint problem formulations and shared goals, while later stages reveal a lack of common understanding of what constitutes a high-quality bus service in the local context. These challenges often lead to conflicts over infrastructure design, operational decisions, and service characteristics. To support coordination and collaboration among involved actors, a planning tool for Swedish BRT has been developed to facilitate dialogue and the development of shared objectives in early planning stages.

The analysis of public protests shows that resistance against a high-quality bus service project is largely driven by perceptions of unfairness and inefficiency, rooted in mistrust of technocratic justifications and calculations. The analysis of the debate in local media also shows that the opposition is driven by a smaller number of vocal protesters. These findings suggest that it is important not to focus solely on technocratic argumentation and to expect protests and resistance.

Overall, the thesis highlights the importance of early actor engagement, joint problem formulation, and the integration of fairness-oriented arguments alongside efficiency-based reasoning. By addressing both organisational coordination and public acceptance, the thesis contributes knowledge to the planning of high-quality bus services and provides practical guidance for handling challenges during planning and implementation.

Key words:
High-quality bus services, public transport planning, collaboration, protests, resistance

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MADE IN SWEDEN

To Lin, Joar and Siri

Abstract

This thesis addresses the challenges associated with the planning and implementation of high-quality bus services, with a particular focus on collaborative dynamics between responsible organisations and public resistance to such projects. Using empirical material from Swedish cases, the thesis aims to develop a deeper understanding of the planning and implementation processes of high-quality bus services in Sweden. It focuses on coordination between organisations responsible for public transport planning and provision, and protests against a high-quality bus service.

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Overall, the thesis highlights the importance of early actor engagement, joint problem formulation, and the integration of fairness-oriented arguments alongside efficiency-based reasoning. By addressing both organisational coordination and public acceptance, the thesis contributes knowledge to the planning of high-quality bus services and provides practical guidance for handling challenges during planning and implementation.

Populärvetenskaplig sammanfattning

Våra transportsystem har många positiva effekter, och möjliggör människors tillgång till sociala aktiviteter, arbete, utbildning och samhällsservice. Men transportsystemen har också negativ påverkan på vår värld och oss människor, från buller och andra utsläpp med negativ påverkan på människors hälsa. Människor som saknar tillgång till transportsystemet riskerar dessutom exkludering från samhället. För att motverka de negativa effekterna behöver vi skapa mer hållbara transportsystem.

Exempelvis genom att investera i åtgärder för att skapa högkvalitativa bussystem, exempelvis via buss körfält eller andra prioriteringsåtgärder, kan man göra kollektivtrafiken mer attraktiv. Detta är en central del i ambitionen om hållbara transportsystem, men sådana förbättringar är ibland svåra att genomföra. Detta eftersom kollektivtrafikplanering är en komplex process, där olika aktörer, med olika intressen och ansvar, behöver koordinera och komma överens om vilka åtgärder som kan genomföras. Dessutom har protester från allmänheten mot kollektivtrafiksatsningar identifierats som ytterligare en utmaning mot implementeringen av högkvalitativa bussprojekt.

I denna avhandling undersöks utmaningarna som uppstår i planeringsprocessen för högkvalitativa bussprojekt, med fokus på samverkansutmaningar mellan involverade aktörer (kommuner, kollektivtrafikmyndigheter, Trafikverket och operatörer) och protester från allmänheten, samt hur dessa utmaningar kan hanteras.

Resultatet visar att samverkansutmaningar finns i alla studerade projekt och under planeringens alla faser. Dessa utmaningar grundar sig i de olika ansvar och intressen som de involverade aktörerna har. Ofta saknas en gemensam problemformulering och målbild, vilket leder till konflikter och utmaningar gällande vilka åtgärder som ska genomföras för att förbättra busslinjerna. Främst handlar det som infrastrukturåtgärder, så som längd och placering av busskörfält, signalprioritering för kollektivtrafik, avstånden mellan hållplatser eller hur övergångsställen och farthinder ska hanteras. Men även frågor om busslinjens varumärke, inklusive färgval på bussar kan leda till utmaningar.

Att skapa förståelse för involverade aktörers problemförståelse och gemensamma målbilder är viktigt för att hantera de identifierade utmaningarna. Detta kan göras genom att använda det Planeringsverktyg för svensk BRT som tagits fram inom

ramen avhandlingen. Detta verktyg kan användas i tidiga planeringsskeden för att skapa gemensamma målbilder och identifiera vilka frågor som kan orsaka utmaningar i det kommande arbetet.

Gällande resultatet av protester från allmänheten visar analysen av den offentliga debatten att protesterna mot ett BRT projekt i Örebro ofta motsätter sig teknokratiska beräkningar och visar misstro till de utredningar om kostnader och nyttor som kommunen utfört eller beställt. Istället argumenterar motståndare att satsningar på kollektivtrafiken kommer leda till trafikkaos, att satsningarna koncentreras till personer med redan goda möjligheter att använda kollektivtrafik på bekostnad av boende på landsbygd.

För att planerare ska kunna bättra hantera protester och är det viktigt att först förstå vad det är protesterna grundar sig i. Att röra sig från en teknokratisk planering och skapa en förståelse för eventuella protesters omfattning och innehåll är ett steg på vägen som kan bidra till ökad acceptans för högkvalitativa bussprojekt.

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Writing the acknowledgements is a strange and mixed feeling. On the one hand, it is nice to be able to thank everyone who has contributed in one way or another to my work as a PhD student over the last couple of years. On the other hand, writing the acknowledgements means that my time as a PhD student is soon over, and as I have thoroughly enjoyed it, it is a mixed feeling that this time has come to an end.

I began my PhD studies in the midst of the COVID-19 pandemic, which now feels both distant and slightly surreal, almost as if it took place in a parallel universe. For much of my first year, I visited the LTH office only twice: once on my very first day and once to pick up my computer. Looking back, it is difficult to imagine doing a PhD without the possibility of meeting colleagues face to face. What is certain, however, is that this thesis would not have been possible without the valuable insights, guidance, and support of many people, both within and outside academia. I am deeply grateful to all who have helped me navigate the path toward completing my PhD, and I wish to direct a warm thank you to you all.

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Pursuing a PhD was not something I had in mind when I began my bachelor's programme in urban planning at Malmö University, especially given that I had not completed my earlier studies in English linguistics, which, in hindsight, was simply not the right path for me in the way that planning studies turned out to be. The idea

to pursue a PhD did, however, grow on me while doing my master's in urban studies, and I would like to thank Christina Lindkvist for your support along my bachelor's and master's studies, and for giving me the chance to be a research assistant at Malmö University, which opened the door for this PhD adventure.

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Lastly, to my closest family. My dearest Lin, the love of my life, thank you for all the love, support, and joy you have given me since 2013. Thank you for always being there, for appreciating my company, and for making sure I stay focused on the important things in life. To Joar, for being a complete ray of sunshine, for your curiosity, and for all the joy you bring us. And to Siri, for making our trio a quartet, for being the most joyful baby, and for warming our hearts even more.

I love you all, thank you so very much!

Jakob

Malmö 2026

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Abbreviations

BRT − Bus Rapid Transit

BHLS – Buses with High Levels of Service

BRRT – Bus Rapid Reliable Transit

BRS − Bus Rapid Service

eBRT – electric/European Bus Rapid Transit

RPTA – Regional Public Transport Authority

PTO – Public Transport Operator

SCM – Strategic Choice of Measures

STA – Swedish Transport Administration

1 Introduction

Mobility is essential for accessing education, work, and social activities (Kenyon, 2011; Lucas, 2012; O'Riordan et al., 2022). At the same time, transport systems generate a wide range of negative effects. Among them are emissions of greenhouse gases, noise pollution, congestion, and negative health effects, as well as risks for social exclusion (Lucas, 2012; Sheller & Urry, 2006; Greene & Wegener, 1997; O'Riordan et al., 2022). Despite several efforts to mitigate these negative effects, there is still a long way to go to make transport systems sustainable.

Research on how transport systems can be more sustainable paved the way for the sustainable mobility paradigm, where the need for a shift to more sustainable mobility patterns was established (Banister, 2008; Greene and Wegener, 1997). One central aspect of this sustainable mobility paradigm is to increase the quality and use of sustainable transport modes, particularly public transport (Banister, 2008).

Improving public transport services, by making trips faster and more reliable, can make public transport more attractive, thus mitigating the negative effects associated with private car usage (Banister, 2008; Redman et al., 2013). Other measures, such as improving accessibility to public transport or improving passenger comfort, are also important to making public transport more attractive and worthy of consideration as a viable alternative to private car usage (Litman, 2008). Additionally, taking policy measures to reduce the attractiveness of private vehicles, such as increasing parking costs or introducing congestion charging, is also seen as important to making public transport a more attractive alternative (Fiorio and Percoco, 2007; Redman et al., 2013).

Internationally, bus services are the single most used public transport mode (European Environment Agency, 2024; UITP, 2025), and investments in bus services to improve their quality have resulted in several positive benefits, from increasing public transport ridership to positive environmental effects (Combs, 2017; Fadaei and Cats, 2016; Karekla et al., 2018; Sørensen et al., 2021). Measures such as dedicated bus infrastructure, signal priority systems, and advances in passenger information technologies have been shown to support more attractive and efficient bus services (Fadaei and Cats, 2016; Russo et al., 2022). In recent decades, different terms have been used to describe a service that incorporates these features, and while they differ in terminology and focus, they describe bus services that aim to improve bus service performance (Delgado et al., 2016; Heddebaut et al., 2010;

Levinson et al., 2003). These will be further explained in Chapter 2. Despite the increased popularity of high-quality bus services, the documented benefits and the successful implementation of such services in several cities across the globe, the planning and implementation of high-quality bus services face challenges (Lindau et al., 2014; Mallqui and Pojani, 2017; Rizvi and Sclar, 2014).

1.1 Challenges during the planning and implementation process

Planning and implementing public transport services is an intricate task, with a need to balance several trade-offs (Hansson, 2022). These trade-offs include geographic coverage, service frequency, operational priorities, and network design. In addition, planners need to consider how to use a limited budget and the limited available road space (Finn, 2013; Lindau et al., 2014).

These challenges are amplified by a fragmented governance structure that characterises the transport systems in several countries (Paulsson et al., 2017; Van De Velde, 2014), as the responsibility for public transport planning and provision is, in many countries, shared across multiple public and private actors. The fragmentation of the different organisational responsibilities can lead to demanding negotiations and difficulties in alignment across organisational boundaries (Cannon et al., 2024; Pettersson and Hrelja, 2020). Well-functioning coordination between actors is thus important for successful planning and implementation processes. However, with different interests, motivations, and goals, this can be challenging (Cannon et al., 2024; Paulsson, et al., 2017; Pettersson, 2018).

Moreover, as with many other larger infrastructure projects, public resistance has caused another significant barrier to high-quality bus service projects (Sagaris, 2014; Schalekamp, 2017; Wijaya et al., 2019). Public acceptance is therefore an important factor for the successful implementation of high-quality bus services (Diallo, 2022; Ponnaluri, 2011; Wijaya et al., 2019), and in efforts to mitigate the negative externalities caused by the transport sector (Gössling et al., 2024). Several actors (e.g. politicians, interest groups, or citizens) may mobilise against high-quality bus service projects, and protests can take place in different forums (e.g. street protests or via news media).

Previous research highlights that news media play an important role in shaping public debate around such projects. As “discursive selection machines” (Isaksson, 2001), news media do not merely function as a neutral channel for information but actively structure and influence public debate. As a result, news media can be used by protesters to influence planning outcomes. Analysing and understanding the key argumentation of protests in news media can therefore provide insights into the

dynamics of protests (Nagel and Satoh, 2019). Such insights can provide a deeper understanding of which actors are influencing the public debate, and how argumentation evolves throughout the planning process.

1.2 Aim and scope

This thesis analyses the planning and implementation of high-quality bus services in Sweden. In recent decades, Swedish cities have shown increasing interest in high-quality bus services as part of broader sustainable mobility initiatives, and several initiatives are either underway, completed, or in development. Despite this momentum, there is a noticeable lack of research focused on the planning and implementation processes of high-quality bus services within small and medium-sized cities (Sidloski and Diab, 2020).

Against this background, this thesis aims to develop a deeper understanding of the planning and implementation processes of high-quality bus services in Sweden. Specifically, it focuses on two key factors that influence these processes: coordination between organisations responsible for public transport planning and provision, and protests against a high-quality bus service.

Two research questions have been formulated to guide the research:

- How and why do inter-organisational challenges arise in the joint planning and implementation of high-quality bus services, and how do these challenges shape planning outcomes?
- What were the key arguments in local protests against a high-quality bus service?

By addressing these questions, this thesis provides an in-depth understanding of the various dynamics of the planning processes. It contributes to existing research by highlighting how coordination challenges occur during the planning and implementation processes of high-quality bus services. Such knowledge can inform how the identified challenges can be handled. In addition, the thesis advances understanding of protests against a high-quality bus service by analysing how protesters argue to delegitimise these projects. Such understanding is important as it can better inform how high-quality bus service projects can be framed to gain public support. Empirically, this thesis draws on material from Sweden, which consists predominantly of small and medium-sized cities.[1] It thus contributes with

[1] OECD (2014) defines small and medium-sized cities as urban areas with between 50,000 and 500,000 inhabitants. In this thesis, understood as urban and regional areas with up to 500,000 inhabitants.

findings from a previously under-explored empirical context (Sidloski & Diab, 2020), complementing existing research on high-quality bus services.

1.3 Outline

Chapter 2 presents previous research on high-quality bus services and provides a deeper background on what these are, the reasons to invest in such services, and the different terms used to describe them. It also presents previous research on difficulties and challenges of public transport planning in general, and two main challenges related to high-quality bus services in particular. In Chapter 3, the Swedish public transport context and the development of high-quality bus services in this context are presented in more detail. Chapter 4 focuses on the understanding of the planning process, and lays out theoretical perspectives on how to analyse the identified challenges. The orientation of the included papers, the methods used in the thesis, and methodological reflections are presented in Chapter 5, followed by a summary of the findings of the included papers in Chapter 6. The general findings are discussed in Chapter 7. Finally, in Chapter 8, conclusions are drawn.

2 Previous research on high-quality bus services

2.1 Presenting high-quality bus services

Ideas of high-quality bus services are not a novelty. Notions of improving bus services by allowing for bus priority have been around since the 1930s (Hidalgo and Gutiérrez, 2013; Levinson et al., 2003). In the last couple of decades, there has been an increasing interest in improving bus services to address several of the negative externalities of the transport system and to facilitate a modal shift from private car use to public transport. However, what constitutes a high-quality bus service is not well defined. Instead, its attributes are multifaceted in their characteristics, and are dependent on the context (Borsje et al., 2025; Hensher et al., 2010).

Previous research on the qualities of high-quality public transport has primarily focused on characteristics argued to facilitate a modal shift, focusing on physical attributes (Redman et al., 2013). One of the most frequently studied factors to improve bus services is reliability. Improved reliability is commonly addressed by investing in bus-priority infrastructure, particularly in bus lanes or priority signals (Hensher et al., 2010; Kaewunruen et al., 2021). Bus priority measures have been used as umbrella terms to describe aims to improve reliability and travel speed (Sørensen et al., 2021). There are different types of bus priority measures. They can focus either on priority in terms of space, or in terms of time (Sørensen et al., 2021). These different measures are illustrated in Figure 1.

Other factors that make up quality bus services are frequency and speed (Redman et al., 2013). Urbanek (2021) identified insufficient travel speed as a major obstacle that discouraged the use of public transport. Speed can be understood from two perspectives. Firstly, it can be considered from the perspective of increasing the speed of operations to reduce travel time (Redman et al., 2013). A second perspective on speed is to consider the whole journey, where it also becomes important to reduce transfer time between routes within a network as much as possible.

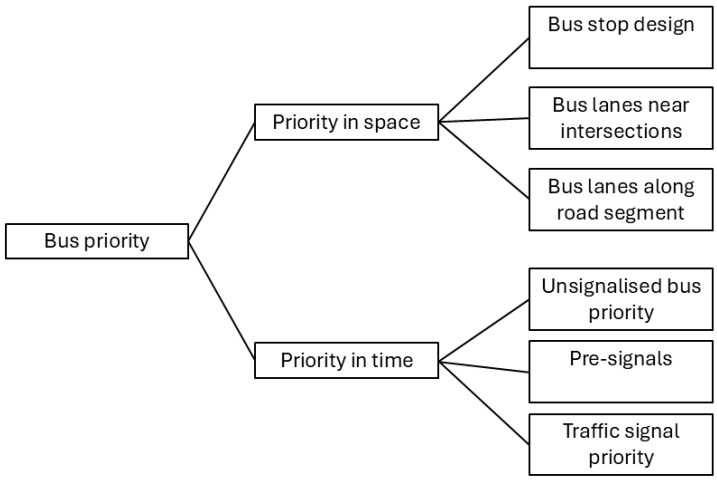

Figure 1. Categories of bus priority measures adapted from Sørensen et al. (2021)

Despite transfers being generally disliked by public transport users (Hansson, 2022), studies have shown that public transport networks that apply transfers as a key component generally outperform networks designed on a direct-service principle when comparing both patronage and service coverage (Hansson, 2022; Mulley and Nelson, 2021). Speed, just like reliability, is often addressed by developing infrastructure for public transport, commonly through the implementation of bus priority measures such as bus lanes or signal priority at crossings (Pucher et al., 2005).

In addition to investing in physical attributes and infrastructure measures to improve public transport services, other factors also influence the quality of public transport services (Redman et al., 2013). These can be perceived as safety, comfort, convenience, operating hours, and vehicle design and aesthetic (Borsje et al., 2025). Comfort is often addressed by increasing comfort in the actual vehicles or by building better and more attractive bus stations (Borsje et al., 2023; Hess and Bitterman, 2008; Redman et al., 2013). While a large amount of research has focused on infrastructure and priority measures, it is clear that comfort in vehicles, operating hours, and vehicle design are also important features of high-quality bus services. Zimmerman & Levinson (2004) argue that the importance of a good vehicle design cannot be underestimated, and that a high passenger appeal, with easy access and egress, are important. Moreover, a good passenger information system has been identified as an important factor for passenger perception of the quality of the service (Monzon et al., 2013). This shows that different features, from bus infrastructure to vehicle design and information technologies, are all important to consider in producing a high-quality bus service.

Reasons to invest in high-quality bus services

High-quality bus services consist of various features (e.g. bus lanes, signal priority, comfort, passenger information systems, and vehicle design), and the benefits of the implementation of these features have been studied extensively. Benefits can be understood in different ways, e.g. operational effects, social, or environmental effects. Several studies have focused on the social or environmental effects of high-quality bus service implementation (e.g. Combs, 2017; Karekla et al., 2018; Oviedo et al., 2019). However, this section will not focus on wider effects such as social justice or environmental impact; rather, the focus here is on the operational reasons and motivations for investing in high-quality bus services.

The operational effects are, in this thesis, categorised as primary and secondary benefits inspired by Currie (2016). The variety of primary benefits include time savings, capacity, and reliability improvements (Sørensen et al., 2021). Secondary benefits are those that come as a result of the primary benefits. For example, improved reliability can improve fleet management, reduce operational costs, and shorten travel times, make public transport more attractive, and increase ridership.

Several studies have examined the primary impacts of implementing high-quality bus services, highlighting improvements in travel times, reliability, and service frequency. Ingvardson and Nielsen (2018) found that the introduction of systems such as BRT can lead to significant reductions in travel times, with BRT showing the largest effects compared to other modes such as light rail or metro. Similarly, Russo et al. (2022) reported that dedicated bus lanes can decrease travel times by approximately 20% and waiting times by around 12%, which in turn enables higher service frequency. These findings highlight the potential benefits of priority measures, such as bus lanes and signal priority, which have been demonstrated to significantly improve public transport reliability by reducing delays and minimising unnecessary stops (Dousková et al., 2023). However, these outcomes must be understood in relation to the specific contexts of the implemented projects, as the introduction of a high-quality bus service does not automatically guarantee reduced travel times (Ingvardson and Nielsen, 2018). What is clear, however, is that targeted investments in priority aspects can substantially improve the performance and attractiveness of bus services.

Improved travel times and reliability offer important secondary benefits. For instance, they support more efficient fleet management and help lower operational costs (Venter, 2013). Currie and Sarvi (2012) note that even small time savings can reduce costs, particularly on shorter routes with tighter headways. Additionally, faster services may encourage private car users to switch to public transport.

In relation to changes in ridership, previous studies have found that the implementation of high-quality bus services, often together with the implementation of other policies, has had a positive effect on ridership (Borsje et al., 2025; Lee and Miller, 2022; Marshall Baker and Linovski, 2022; Stewart et al., 2017). Research

has shown that several features of high-quality bus services, such as vehicle design and information technologies, have a positive effect on the perception of the service, highlighting that such features have a positive effect on the attractiveness of bus services (Hess and Bitterman, 2008; Monzon et al., 2013). Tang & Thakuriah (2012) concluded that when compared to other factors, the usage of real-time bus information technologies helped increase ridership.

To conclude, the effects of the implementation of high-quality bus services can be categorised into different types of benefits. Research shows that the implementation of high-quality bus services has positive primary and secondary benefits (e.g. decreased travel times, improved reliability, or fleet management) (Currie and Sarvi, 2012). However, challenges during the planning process, i.e. handling different trade-offs, implementing priority measures, or difficulties in developing substantial amounts of bus lanes, can affect the expected benefits. Handling challenges during the planning process is therefore important to ensure that as many benefits as possible can be achieved.

To support the planning, implementation, and evaluation of high-quality bus services, efforts have been made to develop terms aimed to encompass several different important features. Such terms are used when referring to an array of measures that jointly constitute high-quality bus services. Different terms are used to describe different types of high-quality bus services, consisting of a different mix of these attributes. The following section will present some of these high-quality bus service terms in greater detail.

2.2 Different terms for high-quality bus services

Several terms have been used to package different features of high-quality bus services (e.g. BRT, BRS, BHLS). As they stem from the same ideas of improved bus services, there are several similarities between the different terms. However, some differences can be identified, often as a result of the local context in which the term has emerged. Table 1 provides an overview of some of the different terms used to describe high-quality bus services. Efforts to improve bus services can be found in several different countries, from Brazil, India, the USA, and South Africa to France and Sweden. For example, Jönköping in Sweden introduced a systematic approach to improving local bus services in the 1990s (Hansson, 2024); however, it made no efforts to develop general principles or bus terms for contexts other than the local.

Table 1. Differences between different terms of high-quality bus services

Term	Identifier/Focus
Bus Rapid Transit (BRT)	Large-scale mass transit through separate infrastructure, bus stations, and bus priority (Levinson et al., 2003)
Bus Rapid Reliable Transit (BRRT)	A focus on reliability provided by GPS-system (Delgado et al., 2016)
Bus Rapid Service (BRS)/BRT Lite	A lighter version of BRT, for routes that need improved bus services but without the same capacity needs as BRT systems (De Aragão et al., 2016)
Buses with High Levels of Service (BHLS)	A European version of the BRT term with less focus on capacity and speed; rather focuses on priority measures to ensure comfort and reliability (Heddebaut et al., 2010)
Bus Branded Service (BBS)	Upgraded bus services with a distinct visual design (Borsje et al., 2025)
Transitway	Seperated infrastructure to ensure high speed and frequency (Borsje et al., 2025)

The most well-known and widespread term of a high-quality bus service is, as already mentioned, Bus Rapid Transit, or BRT for short. BRT is a term used for bus services, focusing on high capacity and speed of public transport. BRT is often defined as "a flexible, rubber-tyred rapid transport mode that combines stations, vehicles, services, running ways and information technologies into an integrated system with a strong identity" (Hidalgo and Gutiérrez, 2013; Levison, et al., 2003). This means that the term BRT is a form of a public transport solution that consists of several features, such as separated bus infrastructure with its own busways, station-like bus stops, vehicles with a strong design/identity, together with information technology systems (ITS) (Levinson et al., 2003). The first fully implemented BRT system was introduced in Curitiba, Brazil, in the 1970s (Deng and Nelson, 2011). Since its successful implementation, BRT projects have been implemented across major cities in the Global South, from Bogota to Jakarta (Deng and Nelson, 2011; Hidalgo and Gutiérrez, 2013).

The 'Rapid' in Bus Rapid Transit often refers to both the speed of the buses and their frequency (Delgado et al., 2016). This idea of higher speed and more frequent departures means that BRT systems may operate on a time schedule that could be challenging. Delgado et al. (2016) argue for the need to also focus on reliability to make sure that buses depart according to the set schedule, and to do this, they argue for the usage of GPS-driven control systems and to consider the addition of another 'R' to the acronym. This R should stand for Reliability, making it a new acronym − Bus Rapid Reliable Transit (BRRT).

Despite the successful implementation of BRT in Curitiba, Brazil, in the 1970s, and several more systems since, the Brazilian transport system has seen a need for "lighter corridor technologies" (De Aragão et al., 2016). As a result, the idea of Bus Rapid Service (BRS) has been suggested in a Brazilian context. BRS utilises simpler and smaller solutions to improve existing bus services compared to BRT (De Aragão

et al., 2016). The BRS term is also often associated with an urgent need to improve bus services, where smaller improvements can be implemented faster than larger BRT projects. It is also commonly used in areas where there is less space available, such as the centre of Rio de Janeiro, since there is a need for less space compared to BRT solutions (De Aragão et al., 2016). As such, BRS shares several similarities with BRT-lite, which is described as "the lower-end on the investment spectrum" (Cain and Flynn, 2013). BRT-lite systems often run in mixed traffic but utilise priority in crossings and far-side stops to improve commercial speed and reliability.

Efforts to develop high-quality bus services have also been made in Europe, where the term Buses with High Levels of Service (BHLS) has been suggested to better describe high-quality bus services catering to the European context (Heddebaut et al., 2010; Hidalgo and Gutiérrez, 2013). The focus of BHLS projects was to improve passenger experience rather than focusing on increasing capacity and travel speed, differentiating it from BRT. The BHLS term is often argued to be a viable option for cities with a need to improve public transport, but with a lower investment cost than light rail alternatives (Hidalgo and Gutiérrez, 2013). Moreover, Borsje et al., (2025) suggest additional terms from a Dutch context, such as Branded Bus Services (BBS) or Transitway. In addition, the term BRT creep has been suggested to describe a phenomenon that refers to the reduction of the quality of a bus service due to a lack of funding or political will.

As shown, there are many similarities between the different conceptualisations of high-quality bus services. In practice, little distinction is made between the different terms, and at many times, BRT has become the commonly used term that represents the principles of high-quality bus services and projects with varying levels of ambition. Despite efforts to standardise the BRT term through the BRT Standard (ITDP, 2024) and development of planning guidelines in different contexts (see Chapter 3 for information on Swedish supportive tools), BRT systems or routes have different applications across the globe.

The efforts to conceptualise high-quality bus services often focus on incorporating technical or infrastructure measures. While many high-quality bus services have proven to have positive effects on ridership (Alhassan and Anciaes, 2025; Ingvardson and Nielsen, 2018), the planning and implementation of these services are often contested, as the ideas to improve public transport services often include bus lanes or signal priority, which require space or prioritisation over other modes of transport. In addition, multiple public and private organisations with different interests may be involved in the planning and implementation of high-quality bus services. Because of this, there are many challenges which occur in the planning and implementation of high-quality bus services. These will be further explored in the following section.

2.3 The intricate task of public transport planning

The previous section showed that there is no single and clear definition of what constitutes high-quality bus services. In addition to facing the difficulties common to public transport more generally, the ambiguity of the meaning of high-quality bus services may further complicate the planning and implementation of such services. The following section will therefore present previous research on public transport planning on a general level and research on high-quality bus services in greater detail.

The planning of public transport is a complex process that requires balancing economic objectives, environmental impact, and social considerations (Lyons et al., 2021; Mulley and Nelson, 2021). In addition to handling these interconnected aspects, public transport system planners need to consider future trends and technological developments (Lyons et al., 2021). In addition, planners need to handle infinite travel demands within a fixed budget. This requires balancing several different trade-offs (Hansson, 2022). At a network level, such trade-offs include decisions about geographical coverage, i.e. in serving a small area with high frequency or a larger geographical area with a lower frequency, as well as decisions related to transfers, i.e. prioritising direct routes and designing the network built on transfer stations and parallel services (Hansson, 2022). Handling trade-offs between frequency and coverage is therefore a central component of public transport planning on a network level (Mulley and Nelson, 2021).

On a route level, trade-offs include choices of temporal distribution, i.e. when services operate and at what frequency, choices of modes, distance between bus stops, and directness (Hansson, 2022). Depending on the mode, there are different opportunities and choices for planners. For urban areas, in short-term planning, rail-based modes cannot be moved, so planners can only change the frequency, whereas it is often argued that a network based on buses has higher flexibility, meaning that routes can be changed or introduced to meet changing needs (Mulley and Nelson, 2021).

In recent decades, there has been an increased recognition that public transport operations are most successful when designed as a network that supports seamless and multi-destination travel, rather than based on an idea to produce single lines catered to single trips (Dodson, et al., 2011; Hansson, 2022). Previous research shows that public transport becomes attractive when there is high frequency, and the journey could be made within similar time frames as a trip using a private car (Mulley and Nelson, 2021). Planning public transport as a network includes several decisions for the planners. Inherent to the planning is that they aim to address an infinite number of individual travel demands, with a very finite number of spatially fixed routes (Dodson, et al., 2011).

The factors mentioned underline the complex nature of public transport planning; in addition, the local governance structure adds further factors that influence how

public transport planning can be conducted. A divided responsibility between public organisations for land-use planning and public transport planning may cause conflicts, as different perspectives, goals, and interests have been identified as a challenge (Hrelja et al., 2017; Paulsson et al., 2016). This fragmented responsibility often means that one public organisation is responsible for land-use planning, including infrastructure, and another is responsible for public transport planning, i.e. planning routes, schedules, etc. (Van De Velde, 2014). Public transport planning becomes difficult, as policies for land use influence the possibilities and outcomes of public transport planning (Wang et al., 2021), e.g. the planning and development of residential areas has an influence on the future need for public transport capacity. As such, several factors, from land-use planning to network design, influence the planning and implementation of public transport services.

Planning high-quality bus services

The positive narrative around BRT and high-quality bus services has supported a rapid spread of such ideas around the globe (Deng and Nelson, 2011; Hidalgo,, Graftieaux, 2008; Hidalgo and Gutiérrez, 2013). This spread is often driven by arguments emphasising BRT's competitive advantages, such as its high capacity, comparatively quick implementation, and lower investment costs relative to rail-based alternatives. However, the implementation of high-quality bus services has not been without challenges. Previous research has identified a lack of technical capacity among public agencies, including issues of GPS-driven control and ticketing systems (Angelina et al., 2017; Lindau et al., 2014). Other obstacles such as a lack of supportive policy and legislation, insufficient funding, and rushed implementations, have been identified in previous research (Lindau, et al., 2014). Furthermore, bus priority measures in general are a cause for conflict, with road space allocation, institutional complexities related to funding, or different focuses of diverse organisations, such as prioritisation of vehicle flow over the movement of people, as examples (Sørensen et al., 2021).

In addition to the technical and financial challenges identified, there is a growing body of literature identifying other types of challenges. My reading of this literature identifies two main categories. One type of challenge relates to the shared responsibility for public transport planning among different public agencies (Paulsson et al., 2017; Paulsson et al., 2016; Pettersson, 2018). This literature identifies coordination between involved actors due to issues with conflicting goals. Another type of obstacle relates to public acceptance or protest and resistance against high-quality bus service projects from citizens or other actors, such as operators of informal transit or citizens (Asimeng and Heinrichs, 2021; Ponnaluri, 2011; Sagaris, 2014). These different types of obstacles influence the planning of high-quality bus services in different ways, and as such, they can have an effect on the outcome of the planning process.

High-quality bus services and coordination among actors

Decisions regarding public transport planning are made in organisational settings in which responsibility for planning is distributed across multiple public agencies, as each actor may hold different responsibilities and, consequently, different interests, goals, and interpretations of the measures involved. As with public transport in general, fragmented responsibility structures, with overlapping administrative functions and responsibilities for public transport, have been identified as an obstacle to the planning and implementation of high-quality bus services (Lindau, et al., 2014; Mallqui & Pojani, 2017). The fragmented responsibility for public transport planning results in challenges of alignment of goals and objectives between different involved actors. A lack of alignment of goals and objectives can cause conflict between actors over what measures to implement, and result in more time being spent on negotiating between involved actors, rather than designing the high-quality bus service project itself (Lindau, et al., 2014). An organisational set-up with shared responsibility for public transport planning can make it difficult to coordinate decisions and implement high-quality bus service projects (Angelina et al., 2017; Cervero and Dai, 2014; Wu and Pojani, 2016).

In addition, involved actors may hold divergent preferences for different modes of transport (Lindau et al., 2014). National governments tend to favour investments in infrastructure for private cars over public transport. Users of public transport, however, tend to have a preference for rail-based solutions, even if conditions of waiting times, travel times, and costs are similar (Hensher and Mulley, 2015). As a result, high-quality bus services may be at a disadvantage in evaluations of suitable modes for a public transport project, as the bus is often considered a lower quality mode (Mallqui and Pojani, 2017). Weak political support has also been identified as a barrier, as plans for high-quality bus services may be discontinued following changes in political leadership (Rizvi and Sclar, 2014).

The establishment of a well-functioning public transport network needs alignment of objectives between involved actors; such alignment has been identified as particularly crucial for the implementation of high-quality bus services (Lindau et al., 2014). Without such alignment among actors or strong political leadership, the slightest change to plans (Muñoz and Gschwender, 2008) or the inclusion of additional actors (Pettersson, 2018) can risk causing difficulties. The importance of alignment between actors during the planning and implementation of high-quality bus services should not be underestimated, as challenges during the planning process are more often a result of institutional and financial constraints than technical difficulties (Hidalgo et al., 2024). One identified challenge is the underestimation of the complexity of implementation. This is often caused by involved actors having different understandings of a project, increasing the risk of conflict.

However, it is not just different involved organisations that may have conflicting ideas of problems and goals; departments within each involved organisation may also not be aligned. This means that departments within the same organisation do not always share goals or problem understanding. To avoid these challenges, some cities have created a special unit responsible for coordinating different departments and overseeing the implementation process to avoid being caught up in the daily issues that a city's transport department faces (Lindau et al., 2014).

To conclude, the planning of high-quality bus services is an intricate process that becomes significantly more challenging in fragmented organisational settings. When responsibilities are split across multiple public agencies, differing goals, interests, and interpretations of the project often lead to misalignment, prolonged negotiations, and implementation difficulties. Misalignment can also occur within organisations themselves, adding another layer of complexity. Overall, implementation of high-quality bus services requires coordination, shared objectives, and alignment among involved actors.

Protests and public acceptance challenges

In addition to the coordination difficulties, research has also identified challenges related to protests and public acceptance of high-quality bus services (Lindau et al., 2014; Ponnaluri, 2011; Reynolds and Currie, 2021). While the technocratic rationale for implementing bus priority measures is straightforward − buses use space and energy more efficiently than private cars − implementing measures to improve bus services is far more challenging (Reynolds and Currie, 2021). Public acceptance cannot be assumed, even when projects are politically approved or supported by strong technical arguments. Previous research has shown that a lack of public acceptance can pose a significant obstacle to the planning and implementation of high-quality bus services (Lindau et al., 2014; Sagaris, 2016; Ponnaluri, 2011; Rizvi & Sclar, 2014).

Opposition towards high-quality bus service can come from a wide range of actors and for a wide range of reasons. For instance, Flores Dewey (2013) found that bus operators resisted BRT implementation because it threatened existing operations. Similar situations have been identified in other parts of the Global South (Schalekamp, 2017; Wijaya et al., 2019), as operators of informal transport solutions protest and resist the introduction of BRT systems because the introduction of these projects is seen as a way of formalising existing informal transit. Involvement of public transport operators is therefore important in the early planning stages of such services (Lindau et al., 2014).

Bus priority measures, often central to high-quality bus services, are often studied within large scale projects such as BRT (Sørensen et al., 2021). The implementation of such measures often faces conflict and contestation, caused by a redistribution of

road space from private car use to public transport (Nikitas and Karlsson, 2015) or the removal of on-street parking in favour of bus priority measures (Ray, 2019). Financially, bus priority measures are often found to be a cost-effective solution (Ray, 2019), however, in car-centric cities, public protests can result in major obstacles to the implementation of bus priority measures (Reynolds and Currie, 2021).

Furthermore, previous research has identified lack of community engagement and involvement as an obstacle in the planning process (Lindau et al., 2014; Muñoz and Gschwender, 2008). Insufficient community engagement increases the risk of protests, as conflicting perspectives and priorities remain unaddressed. This is often because planners and citizens have a focus on different scales, where planners tend to focus on broad impacts, such as climate mitigation, and citizens may have a more detailed focus, such as on-street parking spaces (Sukaryavichute and Prytherch, 2018). Limited or lack of community involvement can risk not identifying the focus of citizens.

Often, protests are not caused by financial issues; rather, it is a political fight over the allocation of road space and a lack of acceptance to redistribute road space in favour of modes of transport other than the private car. It is therefore important to understand the social context when studying perceptions of new infrastructure measures and working with public participation to ensure public acceptance of public transport projects (Rodrigue et al., 2024). Previous research has shown that the local context needs to be ready, or a “fertile ground” needs to be developed for implementation of high-quality bus services (Wood, 2015)

To conclude, there is a need to understand how the ideas of both smaller bus priority measures and larger systems are received by the public. How high-quality bus services are understood by the public is therefore an important part of the planning process, highlighting the relevance of studying public acceptance and protests, as this becomes important to ensuring that plans retain support, despite possible changes to political leadership. Although identified in previous research as an obstacle to the planning and implementation of high-quality bus services, there has been a limited number of studies on protests against such services. There is therefore a need for more empirical studies on protests and resistance against high-quality bus services planning and implementation.

3 The Swedish public transport context

3.1 Public transport reform and actors in Sweden

The planning process of public transport in Sweden is regulated by Swedish law, both in terms of the responsibility of different actors and in terms of the process of developing urban plans. By law, public transport should be included in regional planning (Swedish National Board of Housing, Building and Planning, 2024a). In addition, it is a municipal responsibility to develop plans and strategies to regulate land use (Swedish National Board of Housing, Building and Planning, 2024b). The process of land-use planning and how to manage public consultation is also regulated by law (Swedish Riksdag, 2010). These responsibilities are listed in Table 2.

The Swedish public transport sector has, similar to other Western European countries, undergone major reforms during recent decades (Rye, et al., 2018; Van De Velde, 2014). In Sweden, the reform introduced in 2012 meant local and regional public transport services were opened up for private actors (SFS:2010:1065, 2012). In addition, the responsibility of Regional Public Transport Authorities (RPTAs) was clarified, giving them more responsibility to plan and provide public transport services. Moreover, a Regional Transport Supply Program should be developed to state the public transport obligations in the area and how these obligations should be fulfilled. To ensure that these obligations are met, the most common solution is that the RPTAs set out contracts for private companies to operate public transport services. These contracts are awarded via public procurement.

The reform means that the Swedish public transport system exists in a fragmented governance system where different organisations must work together when planning and providing public transport (Paulsson et al., 2017; Paulsson et al., 2016; Rye & Wretstrand, 2014). Depending on the project and what type of infrastructure is included in the project, different organisations are involved, and these different public and private organisations have different mandates, roles, and responsibilities.

RPTAs are responsible for the planning and procurement of public transport. This includes responsibility for developing public transport plans, planning the levels of service in an assigned area, planning routes, financing, and organising public transport (SFS: 2010:1065). Swedish municipalities have a monopoly on land-use

planning (SFS:2010:900, 2010). This includes responsibility for municipal infrastructure, meaning that if plans for high-quality bus services entail changes to the physical infrastructure, e.g. bus lanes or priority signals in crossings, it is the municipality's task and responsibility to make these changes. Moreover, the responsibility for bus stops and stations is often negotiated between the municipality and the RPTA. One principle that is commonly found is that the municipalities are responsible for the development and maintenance of the infrastructure, e.g. platforms, and that the responsibility for bus service information and weather protection lies with the RPTA (Region Västmanland, 2018; Skånetrafiken, 2022).

The Swedish Transport Administration is responsible for strategic planning and management of national infrastructure (e.g. rail, national roads, bridges). They has also been instrumental in providing external funding for public transport projects on a local and regional level through the Urban Environmental Agreements[2] (Larsson & Svensson, 2021). These are explained further in section 3.2. Finally, private companies are procured to operate the public transport system. These private companies, or Public Transport Operators (PTOs), could be involved in the planning as well, which has been the case in at least one of the BRT projects studied in this thesis.

Table 2. Responsibilities of different organisations related to public transport

Organisation	Responsibility
Municipality	Planning monopoly on land-use planning, responsible for infrastructure and the built environment
Regional Public Transport Authority	Plan and procure public transport (at times also some infrastructure), branding, ticketing systems, and bus stops
Swedish Transport Administration	Funding agency, infrastructure development and maintenance of national infrastructure
Public Transport Operators	Conduct public transport operations

3.2 Recent high-quality bus service developments in Sweden

National goals

In the early 21st century, Sweden saw an increasing interest in public transport services, and ambitious goals were set out by the industry (K2, 2024; Svensk kollektivtrafik, 2024a). Preceding the 2012 public transport reform, private enterprises, the Swedish Public Transport Association,[3] and public agencies developed joint goals to double the market share for public transport from the 2006

[2] Swedish: Stadsmiljöavtal.

[3] Svensk kollektivtrafik.

levels of 18% to a 36% market share by 2020 (Hultén and Svensson , 2024; Svensk kollektivtrafik, 2024a). Later, this goal was revised, and currently, the goal is that by 2030, four out of ten motorised trips will be conducted through public transport (Svensk kollektivtrafik, 2024b). The national average in 2025 of the motorised tips are conducted by public transport was 26 % , with large differences between the regions (Svensk kollektivtrafik, 2026). As such, there is an overall interest in improving and investing in public transport services from both public and private actors, but there is still a long way to go.

In line with the goals of increasing the market share of public transport, Urban Environmental Agreements were introduced in 2015 (Larsson, & Svensson, 2021). These agreements meant that municipalities could apply for external funding from the Swedish government to help finance "measures implemented in urban areas that encourage more trips by public transport or active modes … that will lead to energy efficient, low-emissions solutions while also contributing to a high-quality built environment" (Larsson & Svensson, 2021 (author's translation)). In total, 2 billion SEK[4] was earmarked for the Urban Environmental Agreements between 2015 and 2018. A second period, between 2018 and 2023 was later introduced, which amounted to a total of 7.6 billion SEK, including approximately 300 million SEK for bicycle measures (Forseng, 2025).

Developments of high-quality bus services

The idea of developing high-quality bus services is not a novelty in Sweden. Such solutions emerged from earlier successful investments in trunk-route systems during the 1990s (e.g. Jönköping municipality developed its public transport system by introducing *Citybuss,* following the principles of trunk route services, under the parole "think tram – drive bus"), mixed with the international influences of successful BRT implementation (Hansson, 2024). A few years after the *Citybuss* project in Jönköping, the municipalities of Gothenburg and Stockholm followed with similar developments.

When the BRT concept was introduced in Sweden around 2010, it carried over many of the core principles associated with international BRT systems, such as separated busways, increased capacity, and signal priority. However, it soon became evident that the concept required adaptation to Swedish planning conditions, along with clearer guidance for implementation. As a result, two national BRT guidelines have been developed since 2010. These are briefly presented below.

[4] 1 SEK = 0.09 EUR.

Swedish Guidelines for an Attractive Public Transport with Focus on BRT (BRT Guidelines)

In a collaboration between several public agencies and academia, the first guide to BRT in Sweden was published in 2015 (X2AB, 2015). This document, Guidelines for an Attractive Public Transport with Focus on BRT (hereafter referred to as the BRT Guidelines), was developed to adapt the BRT concept to Swedish planning conditions. The document is intended to support planners in designing attractive public transport services, outlining key factors that contribute to high-quality bus services.

These factors are presented in four different categories: urban design, public transport infrastructure, vehicle and support systems, and operations. Each factor is divided into two levels − green and yellow. If a project meets the green level of the factor, it is considered to be a "Full BRT", which is considered to result in an attractive and efficient BRT service (X2AB, 2015). A service that meets the lower, yellow level is considered to "partly meet the BRT requirements" and can be a viable option for conventional bus services as well. Two examples of these factors are provided in Table 3.

Table 3. Example of factors from BRT Guidelines

Urban design (category)		
Urban planning (factor)	Coordination between BRT and development with an anchored strategy, complementary activities, services and development around stops and hubs.	Only some new development and densification at BRT stops.
Public transport infrastructure (category)		
Design of road/separated bus lanes (factor)	Own or separate traffic lanes/roads, a "systematic thinking".	Own bus lanes or guaranteed accessibility. Some separated bus lanes, calm bus stops without car traffic disturbance.

Assessment tool for Swedish BRT

While the BRT Guidelines presented the first effort to adapt the BRT term to the Swedish context, it soon became apparent that the formulations in it were too vague and difficult to assess. A solution to this was the development of a new tool to further concretise what BRT means in Sweden. In 2018, the Assessment Tool for Swedish BRT[5] (Odbacke, 2018) was developed. Inspired by international counterparts (e.g. the BRT Standard (ITDP, 2014/2024)), the Assessment Tool presented a set of

[5] Swedish: Bedömningsverktyg för svensk BRT.

criteria with assigned points, intended to support planners and assess the performance of the bus service.

The tool is divided into four different categories: urban design, public transport infrastructure, vehicles and support systems, and operations (Odbacke, 2018) reflecting the categories in the BRT Guideline. In total, there are 24 different criteria, and similar to the BRT standards, these criteria can generate a total of 100 points. The points accumulated from the 24 criteria are related to the three levels of BRT, namely 1 star (45 points), 2 stars (65 points), and 3 stars (85 points), which give an indication of the levels of service. Table 4 shows how the equivalent criteria from the BRT Guidelines are formulated in the Assessment Tool for Swedish BRT.

Table 4. Example of criteria in the Assessment Tool for Swedish BRT (Odbacke, 2018)

Urban design (category)	
Urban planning (criteria)	Points
BRT and land-use planning are integrated, and clear strategies for how these plans benefit each other exist	2
Public transport infrastructure (category)	
Share of bus lanes (criteria)	Points
More than 90% separated bus lanes	8
More than 80% separated bus lanes	6
More than 70% separated bus lanes	4
More than 60% separated bus lanes	2
60% or less separated bus lanes	0

Increasing interest in high-quality bus services

The increasing interest in public transport during the early 21st century has led to the implementation of a handful of BRT projects in Sweden over the last decade. In 2014, Malmöexpressen route 5 was inaugurated, and was followed by projects in Karlstad, Helsingborg, and Järfälla. Malmö has also developed a second BRT-inspired route with Malmöexpressen 8, although with less infrastructure in terms of bus lanes than its predecessor (Ramberg, 2024). There are also several BRT projects ongoing, either in the early stages of planning or are being implemented, e.g. the BRT project in Örebro studied within the frame of the thesis, which has been under implementation during the course of this thesis and finished its first stage in November 2025. Similarly, ideas of developing high-quality bus services are found in several other Swedish cities, and there is continued interest in the principles of high-quality bus services, as shown by the establishment of a national BRT network consisting of various municipalities and regions.

Studied projects

Figure 2 and Table 5 present an overview of the geographical locations and population sizes of the cities in which the projects examined in this thesis are situated. With the exception of Mörbylånga, all cities have implemented a high-quality bus service projects since 2014, whereas the Mörbylånga case constitutes an ongoing planning process to improve public transport services by developing a public transport transfer station.

Figure 2. The location of the studied cases

Table 5. The studied high-quality bus service projects in this thesis

Project	Opened	City	Inhabitants[6]
Malmöexpressen	2014	Malmö	366,000
Helsingborgsexpressen	2019	Helsingborg	152,000
Karlstadstråket	2018	Karlstad	98,000
Barkarbystadens BRT	2020	Järfälla	89,000
Citylinjen	2025	Örebro	160,000
ÅVS Brofästet	-	Mörbylånga	16,000

[6] Municipal population in 2024, rounded to the nearest 1000. Source: (Statistics Sweden, 2025).

4 Analysing planning processes

This chapter will present analytical concepts used to understand the different challenges occurring during the planning processes of high-quality bus services. Before presenting the analytical concepts, I will briefly outline my understanding of public transport planning, and how the planning process can be understood and conceptualised. It is important to first note that any conceptualisation of the planning process will always be a simplification. In practice, planning is not a linear progression from A to B; rather, it consists of multiple parallel and interdependent processes involving several actors. These actors must coordinate and align a wide range of decisions, from mode choice and network design, to route alignment and vehicle deployment (Desaulniers and Hickman, 2007; McLeod et al., 2017; Michaelis and Schöbel, 2009).

The articles included in this thesis analyse different challenges that have occurred during the planning and implementation processes of high-quality bus services in Sweden. However, several of the conditions and challenges are relatable to other countries, as complex organisational structures and responsibilities have been identified outside of Sweden (see Deng & Nelson, 2011; Heddebaut et al., 2010; Lindau et al., 2014; Paulsson et al., 2017).

4.1 Understanding planning

Planning is conducted in several different sectors and by a variety of actors, from economic planning, policy planning, or land-use planning. The specific interest for this thesis is public transport planning, and because of the close relationship between public transport planning, land-use, and transport planning, I turn to literature from these fields to better understand planning.

Simply put, planning can be understood as the relation between what there is today and what we envision the future should be (Mukhtar-Landgren, 2012), or that planning is an intervention with an intention to alter the current state (Fainstein and Campbell, 2012). As such, planning requires a vision of a future state and a plan of action to get to that state. Throughout the 20th century, there have been different ideals regarding how to conduct planning (Allmendinger, 2017; Fainstein and Campbell, 2012; Mukhtar-Landgren, 2012). Central to planning practises is the

understanding of knowledge and the role of the planner, as planning is a conscious process and not something that just happens (Mukhtar-Landgren, 2012). Different ideals put different emphases on the role of the planner, and as such, influence involved planners in their views on how planning should be conducted and what factors are important to consider.

For a long time, planning was considered a 'rational' enterprise, where the planner interprets politically set goals, makes systematic analyses, and sets out appropriate measures to achieve the set goals (Allmendinger, 2017; Faludi, 1973). From this ideal, planning is perceived as a scientific endeavour, where the planner has the role of the expert who scientifically sets out the best and most rational way of achieving the politically set goals (Faludi, 1973). In doing so, rational planning does not delve into goals and values themselves and views the planner as non-ideological, as goals and values are considered to be political; rather the role of the rational planner is to seek out the most efficient way to achieve these goals through systematic data collection and analysis (Allmendinger, 2017). This type of planning often faces challenges in incorporating citizens in the planning process, as it is often considered to be a top-down approach, which often makes meaningful public participation difficult (Boda, 2015).

The rational planning ideal has been criticised on various grounds during the latter half of the 20th century. One of the main critiques is that the rational and technocratic planning ideal has failed to solve several of the problems it set out to address, or it has created new problems (Allmendinger, 2017). In the wake of different social movements during the latter half of the 20th century, the rational planning ideal faced criticism for being undemocratic and seemingly apolitical (Healey, 1997; Strömgren, 2007). Following the critiques, new planning ideals have been developed, one of which is called communicative or collaborative planning (Forester, 1989; Healey, 1997; Strömgren, 2007). Although communicative and collaborative planning are at times used interchangeably (Allmendinger, 2017), this thesis will use the term collaborative planning in order to avoid confusion.

Collaborative planning questions the ability of objectivity and argues for a more democratic, just, and legitimate planning approach that is more responsive to the needs of people by improving the communication between different groups of actors within planning (Mattila, 2016). As such, the collaborative planning ideal sees planning as something that not only seeks to pursue established goals, but that also seeks to establish a consensus in a complex world through communication (Forester, 1993). In such, collaborative planning seeks to manage conflicts and complex issues rather than pursuing normative planning goals (Lin, 2023).

The collaborative planning ideal also differs from the rational ideal in its view of knowledge and the role of the planner. It does not consider reality as something objective; rather, it is socially constructed, and because of this, planning is embedded in social relations in its everyday practice (Healey, 2012). The role of the

planner, rather than being the scientific expert, is to facilitate dialogue and build an understanding among involved actors in specific institutional settings and political systems (Allmendinger, 2017; Healey, 1997; Lin, 2023).

The collaborative planning ideal places importance on the involvement of citizens and other interest groups in the planning process (Bjärstig et al., 2018; Healey, 1998). Citizens and interest groups are seen as actors who have shown themselves to be ready to appeal and protest decisions when there is a legal opportunity to do so. There is therefore a need for planners to involve and consult citizens in the planning process (Forester, 2006). The collaborative ideal thus suggests a move from a "decide-announce-defend" model toward an "engage-deliberate-decide" approach (Vigar, 2017), and emphasises early dialogue and participatory planning to build legitimacy. In the collaborative planning ideal, the planner is, however, not a neutral facilitator; research has found the planner to be an agent that actively shapes planning outcomes (Li et al., 2025). It is therefore important that the planner is transparent and acknowledges different interests in the planning process (Allmendinger, 2017).

Just like the rational planning ideal, collaborative planning has faced criticism. Critics believe that the consensus-driven ideal fails to understand the real-life planning practice and the complex power relations that exist in practice (Flyvbjerg, 1998; Mattila, 2016), or that public agencies simply lack the real commitment to collaborate (Ansell and Gash, 2008). In addition, collaborative planning has been criticised because it offers an attractive way for neoliberalism to gain democratic legitimacy (Purcell, 2009). Following this critique, it is important for planners to reflect on how to engage with citizens, interest groups and political representatives to build legitimacy and acceptance for high-quality bus services, while being mindful of the risk of reproducing the status quo. Planners should not seek to minimise conflict but rather seek to facilitate discussion and mutual understandings.

Public transport planning

Public transport planning has traditionally been understood from a techno-rational ideal that sets out a plan on how to go from a current situation to a desired future situation (Odhage, 2017). The goals of public transport are multiple and can encompass several different objectives: economic efficiency or growth, social or spatial justice in terms of accessibility to services or jobs, and environmental in terms of reducing emissions (Mulley and Nelson, 2021).

Historically, the task of public transport planning has been to design a transport system that can accomplish its role in society in a useful, efficient, and effective way (Schiefelbusch, 2010). As such, public transport has been understood as a rational enterprise and has shared many of the characteristics of rational planning. Typical tasks for public transport planners are to establish the demand for public transport and assess alternative measures to meet that demand (Schiefelbusch, 2010).

Public transport planning is often described as a (linear) process that includes several different phases (Desaulniers & Hickman, 2007; Michaelis & Schöbel, 2009; Schiefelbusch, 2010). Desaulniers and Hickman (2007) divide these phases into Strategic, Tactical, and Operational (STO) planning. Strategic planning deals with long-term decisions, such as the design of the network and how routes link together to form a wider network. As such, decisions in the strategic planning phase aim at maximising services within budgetary restrictions. Such decisions could include the choice of routes and modes to operate those routes, but also where routes allow for transfers to other services. Tactical planning relates to questions regarding specific routes, the design of the route in terms of infrastructure, or the service in terms of frequency. In such a phase, planners handle several issues, such as the amount and placement of bus-ways, stop-spacing, or signal priorities. Operational planning involves determining how operations can be conducted to achieve set goals and targets within the available budget. This involves, among other things, scheduling drivers or dealing with vehicle maintenance. These phases are described as sequential, meaning that decisions in the strategic phase need to be taken first, followed by the tactical phase, and then the operational phase (Desaulniers and Hickman, 2007; Michaelis and Schöbel, 2009).

This idea of how public transport planning is conducted, as a sequential process to reach set goals, shows a close resemblance to a rational planning tradition, and the planning of the transport system is still dominated by quantitative criteria (Lindelöw et al., 2016; Schiefelbusch, 2010), with predicting demand and providing solutions to address the demand, as the central idea (Vigar, 2017). Just as in land-use planning, this rational ideal of how to conduct public transport planning has received criticism, and there have been calls for the transport planning discipline to acknowledge how different perspectives are brought together during the planning process (Vigar, 2017). To do that, there is a need to move away from the idea of a certain way of addressing planning associated with the rational planning ideal, and to highlight understanding of how actors' different interests are negotiated and coordinated.

4.2 Conceptualising the public transport planning processes

Inspired by Desaulniers and Hickman (2007), this thesis considers the planning process of public transport as sequential, which involves addressing and balancing different trade-offs, handling different goals and interests. In addition, the planning process includes several separate processes (visualised in Figure 3); as such, there can be several separate processes occurring simultaneously, or overlapping in parts.

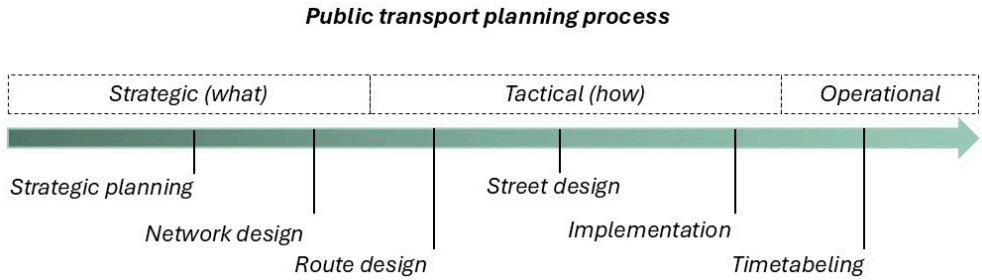

Figure 3. Conceptualisation of the planning process

The understanding of the public transport planning process as sequential may give the impression that the thesis understands this planning as a technocratic rational endeavour. This is not the case; instead, it sees the planning process as sequential, with different phases, while still acknowledging that the process is filled with conflicting perspectives, goals and interests with no objective correct way to produce public transport services.

This planning process is conducted within a planning landscape, parts of which were described in Chapter 3, which involves a variety of different actors: public actors in the form of municipal, regional, and national agencies; and private actors such as public transport operators. Moreover, politicians play an important role and have significant influence over the planning process and outcome, but citizens, NGOs, and businesses may also at some point influence the planning process.

In the early phases of the planning process, the actor(s) involved (i.e. RPTA and, depending on the process, municipalities, PTOs and/or the STA) need to consider strategic choices for the transport system. This includes strategic decisions concerning the design of the network and routes (Desaulniers and Hickman, 2007). In the strategic phase, involved actors need to handle trade-offs at a network level. Such trade-offs can include geographical distribution, transfers, and parallel services (Hansson, 2022). In the strategic phase, involved actors need to consider questions about *What?* The *what* question focuses on what should be done to achieve set goals for the public transport system, e.g. development of a public transport network on a bus route level. As no public organisation can individually develop high-quality bus services, there is a need for coordination and interaction between involved actors to agree on *what* should be done.

As already mentioned, this process of interaction and coordination to get the involved actors to agree on goals has been identified as a key challenge in the planning process, as different actors have different legal responsibilities, interests, and goals. This makes the alignment of goals and, subsequently, decisions potentially difficult and may cause conflicts that need to be addressed and solved during the planning process.

If, and when, all involved actors agree that something should be done, then the sequential question is *How* should it be done? The *how* question is dealt with in the intermediate phase of the planning process − the tactical phase. *How* it should be done requires involved actors to address several additional measures, and handle another set of trade-offs. Such trade-offs could be the temporal distribution of services, modes, stop spacing, or the directness of a route (Hansson, 2022). For high-quality bus services, this could also include how to handle bus priority measures.

Drawing from planning research, any planning process that involves several organisations cannot ensure the desired outcome independently, and needs coordination and efforts between stakeholders to reach common goals (Booher and Innes, 2002; Healey, 2003; Mattila, 2016). From this theoretical perspective, the planning process of public transport can therefore be considered as a sequential decision-making process, where involved actors, with different responsibilities and goals, work together to reach goals for public transport. In reality, there is no certainty that involved actors will agree; however, they will need to handle different perspectives and possible conflicts. In addition, the planning process may experience 'outside' pressure from other actors. A growing body of literature highlights protests from citizens as a factor that influences the planning process (Coppens et al., 2018; Gössling et al., 2024; Nagel and Satoh, 2019), and has also been identified in relation to the planning of high-quality bus services (Lindau et al., 2014; Ponnaluri, 2011).

Public transport planning requires effort and involvement from various actors, each with their own interests and objectives. Such understanding of the planning process moves away from the technocratic rational planning ideal. Instead, it acknowledges different perspectives, interests and goals of involved actors, and focuses on dialogue between actors, consensus-making, and shared decision-making to achieve desired outcomes (Healey, 1997). As a result, planners need to be able to handle conflicting interests and act as mediators to balance different interests from a wide range of actors (Li et al., 2025).

4.3 Two strands of research

This thesis analyses public transport planning challenges by integrating two strands of research − collaboration and protests. By bringing together these perspectives, the thesis addresses two types of challenges identified in previous research: intra-organisational coordination and public protests.

The collaborative perspective contributes to the analysis of inter-organisational coordination and dynamics, while a discursive approach to public protests conceptualises protests as expressions of socio-political contestation. Their integration broadens the analytical scope of planning research by connecting organisational processes with societal responses. In doing so, the thesis develops a

more comprehensive understanding of the challenges that may occur during the planning processes of high-quality bus services.

4.4 Theoretical perspectives to understand inter-organisational challenges

The interactions and coordination efforts between organisations can be studied from different analytical perspectives. One perspective that fits well with this thesis understanding of the planning process presented in section 4.1 is collaboration. Inspired by previous research on public transport and other empirical areas (Ansell & Gash, 2008; Conteh, 2013; Hrelja, 2025; Hrelja et al., 2016; Paulsson et al., 2018; Thomson & Perry, 2006), collaboration can be understood as efforts to overcome problems caused by organisational or legal structures, to achieve shared objectives through joint action. Such efforts are particularly relevant in contexts where involved organisations would otherwise act independently. Within public transport research, collaboration has been conceptualised as a process in which actors jointly address problems that no single actor can resolve on its own (Den Bakker et al., 2026; Hrelja et al., 2016).

Successful collaboration requires involved actors to discuss and agree on measures and actions to achieve a shared objective (Cannon et al., 2024), and has been described as co-action (Hrelja et al., 2016). Previous research has identified certain qualities that are needed for successful co-action (Hrelja et al., 2016). These qualities can be used as a lens for looking at the coordination efforts between organisations to understand challenges that occur and the basis of those challenges. Below, the qualities important in this thesis for understanding actor interactions and conditions for a well-functioning planning process, are presented.

Honest, open, and respectful dialogue

A central condition for collaboration is that the involved organisations engage in dialogue (Hrelja, et al 2016; Ostrom 1998). Such dialogue needs to be honest, open, and respectful; what Innes and Booher (2003) describe as *authentic dialogue*. This form of dialogue is particularly important in collaborative processes where organisations have a history of conflict or hold potentially conflicting interests. However, previous research shows that public organisations are often used to advancing their own organisational perspectives and maximising their interests. As a result, many collaborative processes risk becoming negotiations characterised by strategic behaviour and undisclosed intentions aimed at securing advantages at the expense of other actors; such situations reflect the opposite of the type of dialogue needed for successful collaboration (Innes & Booher, 2003).

A prerequisite to developing this type of dialogue is time, an important resource for successful collaboration (Bjärstig et al., 2018), as collaborative planning practices may require substantial time commitments. It is therefore important that the involved actors allocate sufficient time and effort to foster 'authentic dialogue'. Such dialogue supports several other qualities important for successful collaboration. Previous research suggests that different strategies can be employed to facilitate authentic dialogue, including the use of facilitators or "third-party" staff who document discussions and help structure and mediate interactions among participants (Innes & Booher, 2003).

Interests, roles, and resources

Through dialogue, involved actors can achieve another quality important for successful collaboration, namely an understanding of the roles, commitments and interests of the other involved actors (Booher and Innes, 2002; Den Bakker et al., 2026; Hrelja et al., 2016). Understanding other actors' interests and roles can help develop an understanding of how the counterpart(s) understand the problem the collaborative process is intended to solve, and clarify any potential conflicts and challenges.

Additionally, for a successful collaboration, the involved actors must have the organisational resources and mandate to participate in a meaningful way (Den Bakker et al., 2026; Hrelja et al., 2016). Such resources could be anything from finances to knowledge and leadership. Having both resources and a mandate means that involved actors have the capacity to solve potential conflicts and to take the actions needed to achieve the objectives of the process (Ansell and Gash, 2008; Emerson et al., 2012).

Joint problem formulation, shared objectives, and agreement on how to act

An understanding of the involved actors' roles and interests is important to developing an additional criterion for successful collaboration, namely that of joint problem formulation (Booher and Innes, 2002; Den Bakker et al., 2026; Hrelja et al., 2016; Pettersson and Hrelja, 2020). The development of joint problem formulations helps planners to speak the same language with similar frames of reference, avoiding different interpretations and misunderstandings (Booher and Innes, 2002). Joint problem formulation is also important to developing shared objectives (Hrelja et al., 2016). Such shared objectives or goals of what the collaboration is supposed to achieve, is important for enabling actors to take co-action (Cannon et al., 2024; Huxham and Vangen, 2000; Pettersson and Hrelja, 2020).

Joint problem formulation and shared objectives become particularly important for planning high-quality bus services, as these encompass several different interests, and different actors can have different understandings of the importance of different features of such services (Ishaq and Cats, 2020). Related to the planning process of high-quality bus services, a common goal of the collaboration process could mean that there is a shared understanding of what such a service is supposed to look like, what characteristics such a system has in terms of priority measures, bus stop spacing, or how to handle potential difficult trade-offs.

The development of joint problem formulation or shared objectives does not mean that actors will not have different perspectives on issues, but a common understanding of the goal of the collaboration can help develop an understanding of how to act in relation to conflicts during the collaboration process (Den Bakker et al., 2026). An understanding on how to act can be achieved in different ways, from voluntary agreements to formalised agreements through contracts (Rye and Wretstrand, 2014; Stanley and Van De Velde, 2008). Agreement on how to act in relation to the joint issue is important when navigating complex planning processes (Healey, 2003).

In conclusion, collaboration is understood as a step-wise process that requires honest and authentic dialogue, a shared understanding regarding roles and interests, a development of joint problem formulations and shared objectives, and sufficient resources and willingness to act. The research on the qualities or conditions for successful collaboration has been fairly consistent over the last decade (comparing Den Bakker et al., 2026; Hrelja et al., 2016), yet several coordination challenges remain (see Chapter 2). As such, while research has a clear idea of how to foster successful collaboration, evidence shows that this is difficult in practice. In planning processes of high-quality bus services, in which several actors, competing interests, and difficult trade-offs are inherent, attention to the presented conditions is crucial for enabling effective collaboration and navigating conflicts in ways that support implementation and planning outcomes. Analysing planning processes from this perspective can identify the reason for inter-organisational challenges.

4.5 Theoretical perspectives to understand protests

Decision-making and planning processes are thus influenced by a range of actors and interest groups, each bringing their own beliefs, values, and interpretations to the table. Such conflicting beliefs, values or interpretations of a project can lead to conflicts and protests. While protests against high-quality bus services have been highlighted as a challenge to the implementation of such projects (Angelina et al., 2017; Lindau et al., 2014), a limited number of studies focus on local protests against high-quality bus services in particular. Therefore, it is necessary to draw on

research about protests from related fields, particularly sustainable mobility research, to analyse protests against high-quality bus services.

Protests and public acceptance

Previous studies on sustainable mobility have shown that infrastructure measures and policy interventions often trigger protests, often rooted in conflicting values and beliefs between different actors (Coppens et al., 2018; Gössling et al., 2024; Nagel and Satoh, 2019; Sagaris, 2014). Such protests are often a consequence of a lack of public acceptance, highlighting the importance of public acceptance to the successful implementation of transport projects (Attard and Ison, 2010; Büchs et al., 2024; Hysing, 2015; Rodrigue et al., 2024), as protests can result in prolonged or discontinued plans (Nagel and Satoh, 2019; Reynolds and Currie, 2021). How a project is interpreted and understood by various actors, therefore, plays a central role in shaping their stance towards it (Nagel and Satoh, 2019; Patterson, 2023; Reynolds and Currie, 2021). If actors develop a negative stance against a project, this can result in organised efforts to obstruct its implementation.

Furthermore, public acceptance of political decisions is closely linked to whether decisions are deemed legitimate or not (Hysing, 2015). A comprehensive body of literature has been produced to understand what legitimacy is and what contributes to the legitimacy of different policies or projects (Netelenbos, 2016; Sørensen and Pettersson-Löfstedt, 2025).

One important type of legitimacy is *output legitimacy*, which can be understood as legitimacy based on the efficiency or effectiveness of a project (Zimmermann, 2014). In the context of public transport, output legitimacy focuses on the expected outcomes of a project; if a project is expected to deliver the desired outcomes, then it would be seen as legitimate to implement it. Output legitimacy has also been called reasonableness (Netelenbos, 2016; Reynolds and Currie, 2021), and can be understood from a technocratic perspective in which expected outcomes are used to motivate a project. From this perspective, the implementation of high-quality bus services would be reasonable, as buses utilise the existing road space more efficiently than private cars.

Another way of viewing legitimacy is *normative legitimacy*, in which a project is considered to be legitimate to implement if it is in accordance with the norms and values of the population (Sørensen and Pettersson-Löfstedt, 2025). This means that from a normative perspective, a high-quality bus service project would gain legitimacy if the majority of the population considers the project to be a good idea. Such legitimacy has also been labelled as public consent (Reynolds and Currie, 2021). From this legitimacy perspective, high-quality bus service projects would be legitimate if a majority of citizens were in favour of them.

While normative legitimacy emphasises alignment with societal norms and values, its practical implications become evident when examining how public acceptance unfolds during the planning process. The public transport planning process often relies on technocratic rationalities (Isaksson and Eriksson, 2025; Marsden and Reardon, 2017), i.e. motivated by output legitimacy argumentation. In practice, this means that actors responsible for the public transport planning process negotiate and discuss the content and design of the public transport services, often with little influence from the general public. This minimal or lack of public insight in the public transport planning process may risk reactions in later stages of the planning process, when plans become known to the wider public (Hossain and Fuller, 2021; Nagel and Satoh, 2019; Sagaris, 2014). Reynolds and Currie (2021) argue that the planning process undergoes different legitimacy phases, and that once plans or projects are made known publicly, they undergo a phase of opposition and/or delegitimisation (Reynolds and Currie, 2021). This is visualised in Figure 4.

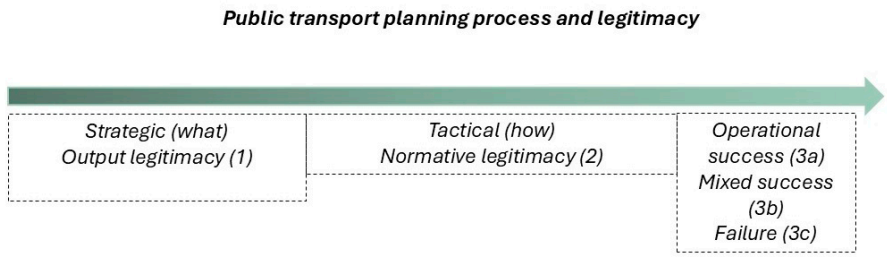

Figure 4. Legitimacy phases related to the planning process

With a lack of arenas for the general public to gain insights into the early phases of the public transport planning process, news media offer such an arena to influence the planning process. This is because news media play an important role in shaping public opinion and understanding of a project, and serve as a way to influence the planning process (Matoga, 2019). The argumentation and discursive struggles in news media become important to understand protests and resistance. Media functions as "discursive selection machines" (Isaksson, 2001), which determine which perspectives reach the public, making protests expressed in media discourse a key lens for examining transport project debates. Moreover, if different groups of actors want to be successful in influencing planning outcomes, they must dominate the public discourse, i.e. media (Hajer, 1993; Nagel & Satoh, 2019). Previous research has shown how protests and resistance efforts have tried to dominate the public discourse and tried to influence the planning outcomes by delegitimising different policy interventions (Portinson Hylander et al., 2024). Understanding the argumentation used in public debate is therefore important to understand protests against high-quality bus services.

Concepts to understand argumentation

To better understand efforts to legitimise or delegitimise high-quality bus services, this thesis uses four discursive categories formulated by Portinson Hylander et al. (2024). These concepts stem from previous research on resistance to transport transition policies, and can be used to understand and categorise arguments used to legitimise or delegitimise transition projects.

Unfairness

Perceiving a project as unfair is one of the main determinants of public opinion (Bergquist et al., 2022; Portinson Hylander et al., 2024), and one of the most commonly used arguments to oppose transition projects. Unfairness can be understood from various perspectives: from spatial aspects, i.e. a lack of access to transport services (Arning and Ziefle, 2020), to financial aspects, i.e. when a policy or project disproportionately affects low-income households (Povitkina et al., 2021).

Ineffectiveness and inefficiency

Just like unfairness, ineffectiveness or inefficiency are influential factors on public opinion (Bergquist et al., 2022). Perceptions of a project's effectiveness or efficiency are often linked to demographical factors, such as gender, age, and ideology (Isaacson et al., 2024). Protests against projects or policies based on ineffectiveness or inefficiency often argue that the project or policy would not achieve the estimated effects; i.e. they have a low input-output ratio (Portinson Hylander et al., 2024).

Lack of trust

Arguments expressing a lack of trust in government functions is another discursive category that frequently occurs in protests (Portinson Hylander et al., 2024). The lack of trust in government functions reflects a perception that government does not do what it says it will. This type of argument has been identified particularly when it comes to sustainable mobility policies and projects (Remme et al., 2022; Wågsæther et al., 2022), where they reveal a belief that such measures are taken to benefit economic and social 'elites'. A lack of trust can be closely linked to argumentation on effectiveness and efficiency, where there is a disbelief in calculations and estimations used by municipalities and RPTAs to motivate projects.

Norms and ideology

The final category addresses norms, identity, and ideological positions. Arguments in this category often highlight rights and emotions, and in some cases include ridicule or attempts to discredit others (Portinson Hylander et al., 2024). A recurring theme is the emphasis on protesters' rights; for example, participants in fuel protests argued that rising fuel prices would restrict their right to mobility. Previous research has also shown that norms and ideological beliefs are important factors driving opposition and protest against urban transport projects (Gössling et al., 2024; Isaacson et al., 2024).

In conclusion, public acceptance is important for the successful implementation of high-quality bus services. Protests often arise as a result of conflicting values, perceived unfairness, concerns about inefficiency, mistrust in institutions, or underlying ideological positions. Because planning processes are typically technocratic and offer limited early public involvement, projects risk encountering resistance once they become publicly known. Understanding how such arguments are articulated, particularly through news media, where discursive struggles shape public opinion, is therefore important for analysing and understanding protests against high-quality bus service projects. Such understanding can inform strategies for handling such protests.

5 Research design and methods

5.1 Orientation of included papers

Each paper included in this thesis has its own focus on different parts of the planning process of high-quality bus services. Jointly they cover both the planning and implementation processes, as shown in Figure 5. Each paper uses different methods to gather empirical material. The included papers are briefly described, with title and main content providing an overview of the topics covered.

Paper 1: *Collaborative challenges and barriers when planning and implementing Bus Rapid Transit (BRT). Lessons from Swedish BRT projects.* Identifies challenges that have occurred in the planning and implementation of Swedish BRT projects.

Paper 2: *Developing a BRT planning tool for small and medium-sized cities.* Develops a planning tool for BRT to facilitate collaboration between involved actors during the planning process.

Paper 3: *Understanding efforts to (de)legitimize Bus Rapid Transit implementation. A media analysis of the protests in Örebro, Sweden.* Studies how resistance and protests use local media to influence and delegitimise the planning of BRT.

Paper 4: *Agreeing on Shared Objectives in Early Public Transport Planning: Collaborative Challenges and Implications for Implementation.* Studies the early stages of a public transport project, involving different levels of public agencies, aimed at improving public transport services by developing a transfer station.

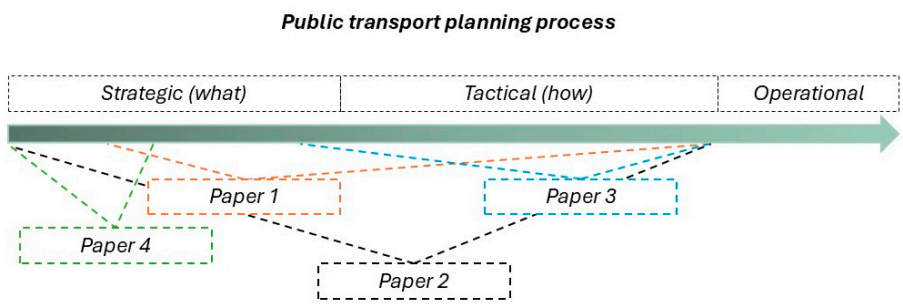

Figure 5. The included paper's coverage of the planning process

5.2 Applied methods and empirical data

This thesis includes papers on several different high-quality bus service projects in a Swedish context. The different projects studied in Papers 1 and 3 represent a large part of the high-quality bus service projects implemented in Sweden since 2014, where there has been an outspoken ambition to develop a BRT or BRT-inspired service. In addition, a project aiming to improve public transport services by finding a suitable place for a transfer station to improve bus services has been studied in Paper 4. The methods used in this thesis have predominantly been qualitative, as shown in Table 6, and will be presented in more detail below.

Table 6. Overview of the applied methods

Paper	Empirical material	Methods
Paper 1	Declarations of intent, policies, and interviews	Semi-structured interviews Document analysis
Paper 2	Survey answers, workshop	Delphi-method, including surveys and a workshop Descriptive statistics
Paper 3	Newspaper articles, meeting minutes	Document analysis Descriptive statistics
Paper 4	Participant observations, meeting minutes, and interviews	Observations Semi-structured interviews Document analysis

Interviews

Semi-structured interviews have been applied in Papers 1 and 4, and were approached in similar ways in both papers. The semi-structured design of the interviews means that there was a prepared structure for the interviews, while also allowing room for follow-up questions and for discussions regarding certain subjects (Creswell, 2014; Longhurst, 2009). This set-up was the same for each interview conducted. How strictly or loosely the interview guide was followed depended on the situation, which provided flexibility to pursue issues that were relevant for the specific interview (Kvale, 2014). Interview responses were interpreted during the session and, when necessary, verified with informants to ensure the accuracy of the interpretation (Alvesson and Sköldberg, 2018; Longhurst, 2009).

Before each interview, the informants were asked if they were comfortable with the interview being recorded, and were also informed that their answers would be anonymous and that they would be able to read how their responses are used to make sure that my interpretation was made in a correct manner. The major difference between the studies was in the identification of the informants. In Paper 1, the

identification of the informants followed a snowball structure, where one or more informants were identified and asked at the end of the interview for possible further informants. This method is good for identifying central individuals in the different projects (Denscombe, 2000). While the snowball method is a subjective choice of gathering informants, and thus subject to a sampling bias, a recommendation from previous informants can serve as a good reference when asking about the possibilities for an interview. The sampling bias was reduced by using informants from several different organisations. In Paper 4, the interviews followed observations of the SCM[7] process and had, therefore, no need for a snowball structure to identify informants. This because those interviewed for this study were the public officials involved in the SCM-process.

Interviews were transcribed and subject to analysis. As transcribed, the interviews are considered as text, subject to interpretation, and related to relevant theoretical perspectives (Alvesson and Sköldberg, 2018). Any uncertainties in interpretations encountered while analysing the empirical material were double-checked with the respective informant. When analysing data, the aim was to look for reoccurrences in the empirical material. These reoccurrences, or recurrent regularities (Ryan and Bernard, 2003), are understood as themes. The identification of themes supports the identification of different actors' perspectives and experiences of the planning processes. The identification of themes is used both in terms of the transcribed interviews as well as for declarations of intent and agreements. These can later be analysed with the help of the theoretical concepts; in this thesis, mainly concepts to understand collaboration (see Section 4.4).

In total, 12 planners were interviewed for Paper 1 and six planners for Paper 4. In Paper 1, informants represented either the municipality in focus or the RPTA. In one of the studied cases (Barkarbystadens BRT), a representative from the PTO was interviewed, as the planning of this project had included the PTO from the start. In Paper 4, representatives involved in the SCM, from local, regional, and national levels, were interviewed, as well as the two process leaders from the consultant firm AFRY.

Document analysis

The term document can be used to refer to a wide range of material, which could include books, newspaper articles, policies, or academic journals (Patton, 2015), all of which can be considered as pre-existing texts. There are different ways to conduct a document analysis, from both quantitative and qualitative perspectives. Qualitative

[7] Strategic Choice of Measures (Swedish: Åtgärdsvalsstudie) is a methodology premised on structured dialogue involving municipalities, regions, and other relevant stakeholders. It involves early assessment of potential measures within the planning process, with the aim of jointly developing a comprehensive understanding of the situation and identifying sustainable measures.

approaches to document analysis often focus on the interpretation of the studied document, whereas a quantitative approach focuses more on making statistics out of the document, sometimes to make illustrative examples (Morgan, 2022).

In the papers included in this thesis, various types of documents were used throughout. In Paper 1, declarations of intent and traffic strategies were the main documents in focus of the analysis. The purpose of studying these documents was to verify findings from interviews. In such an application, the document analysis was used as a triangulation of the results from other methods (Morgan, 2022).

Paper 3 focused on articles in local media to analyse the debate surrounding a BRT project in Örebro. A document analysis was conducted as the main method for this paper. The empirical material consisted of pre-existing texts (Morgan, 2022), focusing on articles published in local media outlets, but these were complemented by minutes from municipal board meetings.

These news articles were gathered via the Retriever Research database,[8] which collects news articles from a Nordic context, focusing on Swedish newspapers and journals. It includes articles in print, radio, television, podcasts, and sources from the web. After an initial sorting of the data based on negative, positive, or reflective views of the BRT project, together with a grouping based on the sender of the article, the first step in the analysis was to code the data according to themes.

Firstly, the empirical material was categorised into two main themes: financial argumentation and effect on the traffic system. Coding the data into themes made it possible to connect senders to types of arguments and to determine whether positive or negative articles could be related to a particular type of sender. The identification of themes was inductive (Maxwell and Reybold, 2015), and made it possible to isolate the type of article most frequently published by members of the public and what issues were important to a particular group of senders.

In a second step, the identified themes were analysed with the help of discursive categories previously identified by Portinson Hylander et al. (2024). Such a focus made it possible to analyse the discursive meaning of different arguments. It also made it possible to compare the themes in the empirical material to previous research in different fields within transition studies. An identification of discursive themes supports the understanding of how arguments are used to portray the BRT project, and who presents these arguments (Portinson Hylander et al., 2024).

In Paper 4, a similar approach to the document analysis as described for Paper 1 was applied. Every meeting in the SCM process was documented with meeting minutes, which were then used to complement the observational notes and to compare how the process leader understood the discussion. The meeting minutes were analysed thematically (Ryan and Bernard, 2003) through a collaborative lens (Hrelja et al,

[8] Swedish: Mediearkivet (2024).

2016). The result of this analysis was used to structure the interview guide for the interviews with the involved participants. In addition, meeting minutes from the joint SCM meetings were also studied and used to verify findings from interviews and observations.

Delphi method

Paper 2 developed a planning tool for Swedish BRT, utilising a Delphi method to combine repeated surveys, and a workshop to gather material. The Delphi survey method is a repetitive survey method with controlled feedback from the previous survey rounds (Hirschhorn, 2019; Hsu & Sandford, 2007; Le Pira et al., 2017; Okoli & Pawlowski, 2004). Feedback is an important aspect of the method as it provides information to the participants about what other participants think of the same questions. The aim of the Delphi method is to investigate consensus around a selected phenomenon among the included participants, and thus, a Delphi survey can, theoretically, continue until consensus is reached; however, in practice, three iterations are usually sufficient in order to collect adequate information (Hsu & Sandford, 2007).

The respondents of the survey remain anonymous to each other, allowing communication and answers that are unaffected by the other participants (Le Pira et al., 2017; Meijering et al., 2018; Okoli & Pawlowski, 2004). An important aspect of the method is that participants can conduct the survey at their own pace and when suitable for them. The Delphi method can be utilised in different ways with different focuses, from quantitative to qualitative (Miles et al., 2016).

In Paper 2, two rounds of surveys were conducted. The first part was a comprehensive survey, based on the existing Assessment Tool for Swedish BRT,[9] to identify shortcomings and uncertainties regarding the purpose, application, and parameters important for a Swedish BRT version. The survey asked several questions and used a five-point Likert scale (Primdahl et al., 2016), ranging from "do not agree" to "fully agree". In addition to the Likert scale questions, participants were given an opportunity to provide a free-text answer to all questions to explain their reasoning. In line with the Delphi method, the parameters that did not show any signs of consensus were further investigated in a second survey. This survey was much shorter as it only focused on the parameters and questions where no real consensus could be identified.

The first survey was answered by 20 representatives, from a variety of different organisations (e.g. PTOs, RPTAs, municipalities, vehicle manufacturers, and consultant firms). The second survey was sent to the respondents of the first survey and was answered by a total of 12 informants. Despite the consensus-driven idea

[9] Swedish: Bedömningsverktyg för svensk BRT (Odbacke, 2018).

of the Delphi method (Hsu & Sandford, 2007; Meijering et al., 2018), the applied approach in this study was rather qualitative. This meant that the focus was not to strictly measure consensus (if a question resulted in a qualified majority in favour of a question, it was not investigated further); rather, the focus was on the qualitative aspects of the results. To a significant degree, the analysis of the survey focused on the written answers from the participants, as these explained the reasoning behind the answers provided. In analysing these written answers, the focus was to group the answers thematically (Ryan and Bernard, 2003), to understand the core of the answers. Such a thematic analysis helps to group different answers into themes, and to visualise patterns in the complete material.

The result of the two rounds of survey informed the redesign and development of the Assessment Tool for Swedish BRT. The study concluded with a workshop, in which the results from the two previous survey rounds were presented, together with a draft of a new planning tool.[10] The discussions centred on the tool's parameters, including vague formulations and grading outcomes, as well as the format for its forthcoming published version. In addition, the developed planning tool was later presented at a national BRT-network meeting, including representatives from various municipalities, RPTA, and the Swedish Public Transport Association.

Descriptive statistics

Descriptive statistics are used to summarise and categorise numerical data to be able to present it in an informative way. Such summarisation and categorisation can be used to explain the key features of the data set (Green et al., 2023). Often, descriptive statistics are a precursor to future statistical analyses; however, depending on the project, as in this thesis, descriptive statistics can be sufficient for analysing the data.

Two papers included in this thesis have quantitative aspects to them; most notably, in Paper 2 the majority of the questions asked in the two surveys conducted included a five-point Likert scale (Primdahl et al., 2016). The result of these questions was analysed statistically, and the identified shortcomings, i.e. the parameters that did not show a qualified majority in favour (Agree-Strongly Agree), were included in the second survey for further analysis.

Descriptive statistics were also applied in Paper 3. In this paper, focusing on the debate in local media around a BRT project, a total of 235 articles were identified over a span of five years (2019-2023). Following one of the key functions of descriptive statistics, the empirical material was processed in the software Nvivo and was coded in different steps to better visualise the material. This way, it was possible to identify the major features of the material, i.e. how many articles depicted the BRT project in a positive or negative way. Such classification provided

[10] Swedish: Planeringsverktyg för svensk BRT (Allansson et al., 2024).

an oversight of the material and could then be used to identify recurring themes (Ryan and Bernard, 2003) from proponents and opponents of the project. These could then later be visualised to show the main issues of focus in the debate.

Observations

Paper 4 focused on understanding the dynamics between actors in a SCM process. To gather empirical material, this study utilised several different methods, including observations, analysis of meeting minutes, and finally interviews with the involved participants. Interviews have previously been discussed, so this section focuses on observations and meeting minutes.

Observation is a qualitative method where the researcher is part of the group that is being studied. The involvement in the studied group lets the researcher gain an in-depth understanding of the social dynamics and processes within said group (Schostak, 2010). In this study, this meant that the researcher was included in the different meetings for the SCM process. Being included in the planning process made it possible to gain a deep understanding of the dynamics during the meetings, the outcome of the process, and any issues that arose during the process. While observing, notes were taken of subjects that participants in the planning process did not agree on or had different perspectives on. These notes were later used to structure the interview guide used during the interviews, as well as standalone material.

5.3 Reflections on the methodological approach

A collaborative understanding of the planning process assumes that knowledge is co-created among actors and shaped by the context in which planning occurs (Allmendinger, 2017; Healey, 1997). From this perspective, knowledge is viewed as socially constructed rather than objective (Witzell, 2021), making communication and interaction central to how meaning is formed (Hajer, 2006). Such understanding places a particular focus on language and how it is used to construct our understanding of reality (Woodward et al., 2009).

Planning is thus seen as contextual, embedded in norms, assumptions, and power relations within economic and political structures (Fan et al., 2025). Although there is growing recognition of this within transport planning, positivistic approaches still dominate the field (Isaksson and Eriksson, 2025; Marsden and Reardon, 2017; Vigar, 2017).

Because meaning is constructed through interaction, qualitative methods are well-suited to this thesis (Alvesson and Sköldberg, 2018). The aim is not statistical generalisability but transferability, supported by rich contextual descriptions

(Witzell, 2021). Ensuring research quality therefore requires methodological transparency and triangulation across multiple data sources and methods (Mårtensson et al., 2019; Nightingale, 2020).

5.4 Reflections on the methods used

In Paper 1, semi-structured interviews were conducted to gather information and experiences from several public officials, from various governance levels in four different high-quality bus service projects. There is a trade-off between gathering experiences from several cases to learn what the projects have in common, and focusing on one project to learn from several departments within the public organisations involved. Focusing on one specific case could help develop a more in-depth understanding of the dynamics between different departments within an organisation. However, a focus on one specific case would not provide the opportunity to compare experiences from several cases, and thus risk not identifying similarities between projects.

Paper 2 utilised a Delphi-inspired approach to gather information and to develop the Planning Tool for Swedish BRT. The method served well to gather information from a wide range of professionals and provided a good understanding of different views on BRT, and what it is in a Swedish context. However, the survey was quite large, taking participants a lot of time to fill in. It was also time-consuming for the researcher to develop the surveys and analyse the results. There is always a desire for more respondents; however, the results showed the perspectives from several organisations involved in high-quality bus services, giving the empirical material a strong breadth with responses from several organisations, highlighting what a shared effort public transport planning is.

In studying the public protests against BRT implementation in Paper 3, the focus was on how the protesters' arguments were presented in the local newspaper. The manual analysis was quite time-consuming, and it is likely that a computer-assisted analysis could have been used. However, focusing on the local newspaper presents a good overall view of opinions and knowledge of options accessible to the general public. An alternative approach would have been to focus on social media, as this is where many opinions are being voiced. While local media do not capture the full range of opinions expressed in social media, it offers a curated and moderated representation of public debate, which is particularly relevant for studying how public protests influence the planning process.

Finally, Paper 4 utilises observations in the gathering of the empirical material. Such a method allowed me as a researcher to gain insight into the dynamics between the organisations involved in the collaborative process. Such insights into the real-life dynamics of the collaborative process are scarce, and while the project did not

particularly focus on developing a complete high-quality bus service project, it serves as a good complement to the approach used in Paper 1, in developing a more in-depth understanding of the collaborative process of public transport planning.

5.5 The research process

The research for this thesis has been an iterative process across four papers, each contributing to a deeper understanding of challenges in planning and implementing high-quality bus services in Sweden.

Paper 1 began with a broad mapping of Swedish BRT projects, which informed the selection of four diverse projects. Initially, the study lacked a defined analytical framework and was guided by previous research emphasising technological, financial, and political challenges. However, during the research, it became evident that technological or financial challenges had not been the primary concerns; instead, differences in actors' interpretations of the term BRT and the purpose of the projects dominated the discussions. This insight prompted the adoption of a collaborative framework to analyse the planning and implementation processes.

Paper 2 built on these findings by developing a planning tool tailored to small and medium-sized cities. The method generated rich empirical material that informed the development of the new Planning Tool for Swedish BRT,[11] designed to support early dialogue, clarify ambitions, and help actors align expectations.

Paper 3 expanded the scope by examining public protests surrounding the Örebro BRT project. Due to ethical and practical limitations, the study focused on newspaper articles and meeting minutes rather than interviews with protest groups. A discursive approach was applied to understand resistance and its influence on the planning process.

Paper 4 offered an in-depth look at early collaborative dynamics through observation of a multi-level planning process, complementing the broader approach taken in Paper 1. The study highlighted how challenging it can be to agree on shared objectives, and how differing interpretations of the problem shape the subsequent planning stages.

Overall, the research design was iterative and adaptive, continuously refined as new insights emerged. The multi-method approach − interviews, Delphi surveys, document analysis, observations, and descriptive statistics − allowed triangulation and strengthened the validity of findings. The combined results show how collaborative challenges and public resistance are central factors shaping the planning and implementation of high-quality bus services

[11] See Appendix B.

6 Findings from included papers

6.1 Paper 1. Collaborative challenges and barriers when planning and implementing Bus Rapid Transit

The paper aimed to deepen the understanding of collaborative challenges during the planning and implementation processes. It did this by studying the experiences from four different high-quality bus service projects in Sweden: Malmöexpressen, Helsingborgsexpressen, Karlstadstråket, and Barkarbystadens BRT, all of which had been implemented between 2014 and 2020.

In three of the four projects, the focus was on the coordination between the municipality and the relevant Regional Public Transport Authority. The fourth project, Barkarbystadens BRT, included the public transport operator Nobina throughout the process in a three-part collaboration.

The findings showed that collaborative challenges could be identified across the different studied projects and throughout the planning and implementation processes. Several conflicts between the involved actors could be identified, from writing declarations of intent to the implementation of bus priority measures such as signal priority or the removal of speed bumps. In addition, a conflict between ambitions to improve bus services, e.g. increased travel speeds and frequency and urban qualities, and other modes of transport, predominantly walking and cycling, could be identified.

The identified conflicts are understood as a result of conflicting actor goals and interests, where municipalities argue for urban qualities and the need to consider other modes of transport, and RPTA's goals to improve the public transport service. As such, the analysis, based on a collaborative framework (e.g. Hrelja et al., 2016), suggests that a lack of a shared understanding of the term BRT, and what a BRT service is in the local context, is missing between the actors involved. A lack of shared understanding and goals results in collaborative challenges and, instead of collaboration, risks leading to a negotiation-heavy planning process.

6.2 Paper 2. A BRT planning tool for small and medium-sized cities.

The aim of this paper was to address some of the findings from Paper 1, namely the lack of a common understanding of BRT in small and medium-sized cities, by developing a BRT planning tool. This was done by using Sweden as the empirical example, as it consists predominantly of cities categorised as small and medium-sized according to the OECD (2014) definition.

The findings showed that there is a need for a planning tool in the early stages of the planning process that can facilitate discussions and help set ambitions and goals. Further, the results showed that in comparison to the previous focus of supportive tools (e.g. BRT standard or the Assessment Tool for Swedish BRT), which relied heavily on infrastructure measures, there is a need to highlight other aspects of high-quality bus services, such as operations, vehicle and support systems, and particularly urban design aspects. In addition, the results from the study showed that there is a need for an adaptive tool that can be used to fit the contextual needs of the project.

As such, the study results informed a redesign of the supportive tool, from a focus on infrastructure measures such as bus lanes and signal priority, to a more balanced distribution of points between the four categories: urban design, public transport infrastructure, vehicle and support systems, and operations. Such redistribution means that a BRT standard can be achieved in various ways, not just by investing in infrastructure measures.

6.3 Paper 3. Understanding efforts to (de)legimtize bus rapid transit implementation.

The aim of this paper is to increase knowledge on protests against transition projects, particularly public transport.

Plans for a BRT route in Örebro began prior to 2015, and since then a number of reports and investigations have been carried out to estimate the feasibility to invest in a BRT solution. The empirical material analysed in this paper consists of 235 newspaper articles, displaying both positive and negative opinions of the BRT project. A majority (139 articles) are negative. The number of articles intensifies around the time of the decision to invest in the project, at the start of construction, and later during a call for a referendum.

A few members of the public frequently recur in the empirical material; out of the 139 negative articles, 60 are written by five individuals who are also linked to the

local protest group, “Traffic Rebellion Örebro”.[12] Besides these individuals, the local opposition parties, the Liberal Party (L) and Örebropartiet (ÖrP), are vocal in their disapproval.

In contrast to the negative articles, members of the public positive to the project are very few, and those who do voice their support for the project remain anonymous. Instead, it is representatives from local parties in government or supporting parties that present arguments in favour of the project.

The results show that the discourse surrounding the project is focused on two major themes: financial aspects and expected effects on the local traffic system. Proponents argue that the project will be a cost-efficient solution, that they have a chance to get external funding, and later, that a lot of money has been spent on the project so it would be wasteful to stop. In terms of effect on the traffic situation, proponents argue that the project will have a positive effect on the traffic situation, improve public transport services in general, and improve the geographical distribution of public transport services.

The arguments used by the project’s adversaries focus on similar themes; however, they argue that it is a waste of public money that could be spent on other municipal responsibilities, the investment cost is too high, and the actual cost will be more than estimated. In addition, they do not consider the chance of external funding a valid reason to invest in the project. In relation to effects on the traffic situation, adversaries argue that it will worsen the traffic situation (mostly as a result of introducing bus lanes, meaning fewer lanes for private cars), and that other public transport solutions would be more effective. In addition, they tie plans for discontinued parallel public transport services in rural areas to the project, arguing that investment in public transport only favours those who already have good access to public transport.

The analysis of the argumentation based on Portinson Hylander et al.’s (2024) discursive categories shows similarities to other protests against other types of transition projects. Inefficiency, unfairness, a lack of trust, and conflicting ideologies are all found in the empirical material. The findings highlight that the techno-rational argumentation used to legitimise the project does not convince adversaries of the project’s benefits. Other types of argumentation, based on moral argumentation and fairness, seem to be accepted by a larger audience. However, this does not mean that technocratic argumentation does not play an important role in the justification for a BRT solution. Planners and proponents of BRT projects need to consider how best to work with public acceptance and be prepared for opposition.

[12] Swedish: Trafikupproret Örebro.

6.4 Paper 4. Agreeing on Shared Objectives in Early Public Transport Planning: Collaborative Challenges and Implications for Implementation

Paper 4 aims to understand the dynamics of the collaborative process in the early planning stages of a public transport project and focuses on collaborative challenges in initial planning phases. The paper studies the formal SCM bridge abutment process in Mörbylånga municipality, which involved representatives from three levels of government. These were the Swedish Transport Administration at the national level, Region Kalmar Län at the regional level, and Mörbylånga and Borgholm's municipalities at the local municipal level.

The findings show that agreeing the goal of the SCM process posed greater challenges than expected. During the first joint meeting, five minutes was scheduled to establish the goal of the project; however, no agreement could be reached, and two additional joint meetings were needed to be able to progress with the SCM process.

The challenges to develop the goal for the project stemmed from conflicting understandings of the problem the process was intended to solve. Representatives at the regional level (and responsible for public transport) focused on the need to find a suitable location for a public transport transfer station, and wanted to promote solutions that benefited public transport. On the other hand, representatives at the national level and the Swedish Transport Administration focused on the congestion and accessibility problems during the peak hours, and wanted to find solutions that did not disfavour motorised modes, primarily the private car and increase congestion. At the municipal level, Mörbylånga representatives could see that both these problems were in need of attention, and from initially focusing on public transport issues, also thought it was important to investigate congestion issues.

After the three meetings to discuss the goal of the SCM process, the involved parties could agree on two goal formulations, one focusing on finding a suitable location for a public transport transfer station and a second that focused on the congestion issue during peak hours. Once the two goals were established, the process to identify suitable measures progressed smoothly, and involved participants agreed, to a great extent, on what measures could be taken to address the issues they were concerned with.

However, during the interviews, it became clear that the different representatives had different ideas on how to continue the process after finalising the SCM process. From a municipal perspective, the understanding was that the identified measures should be further developed and implemented at a later stage. However, representatives at the national level understood the process as a need for further investigations of the suggested measures, and that there was no certainty that the identified measures would be implemented.

7 Discussion of the findings

Each paper in this thesis identifies challenges during the planning and implementation of high-quality bus services. Two types of challenges have been in focus: inter-organisational challenges, and protests against a high-quality bus service implementation. In this chapter, the findings from the included papers are discussed in relation to the research questions.

7.1 Inter-organisational challenges in the planning process

The first research question was formulated as: *How and why do inter-organisational challenges arise in the joint planning and implementation of high-quality bus services, and how do these challenges shape planning outcomes?*

The findings reveal several inter-organisational challenges, understood in this thesis as collaborative challenges, manifest in different forms throughout the planning processes. Overall, the findings align with previous research on high-quality bus services, which has identified actor alignment as a key challenge during the planning and implementation processes of BRT (see Lindau, et al., 2014; Muñoz & Gschwender, 2008), especially when multiple stakeholders are involved (Pettersson, 2018). As such, the thesis adds to existing research with empirical material from a previous-underexplored context. Compared to international literature (see Lindau et al., 2014), the findings from the studied projects do not reflect any particular technical or financial challenges. This could plausibly be explained by the availability of external funding for each of the projects studied.

The findings indicate that collaborative challenges primarily occur because the involved actors hold conflicting understandings of what constitutes a high-quality bus service (e.g. the extent of bus lanes, signal priority, or the importance of a unique design) within the Swedish context. More specifically, the use of the BRT term seems to produce different understandings of what type of service it is, with some actors understanding the term as BRT systems in the global south with a focus on infrastructure development, while others understanding the term as similar to BHLS projects, with less focus on infrastructure and including other urban qualities.

Moreover, the empirical material shows that these conflicting understandings of high-quality bus services influence planning, causing collaborative challenges throughout the planning and implementation processes. In the Swedish context, where the responsibility to plan and provide public transport services is shared among public agencies, coordination between involved actors is needed during the planning and implementation of high-quality bus services. Developing a shared understanding of what a high-quality bus service means in the local context is central to handling collaborative challenges.

The development of a shared understanding of what a high-quality bus service is in the local context requires involved actors to first develop an understanding of the problem that the planning process is intended to address. Such joint problem understanding is central to developing shared objectives. However, reaching this joint problem understanding is not an easy task, as shown in Paper 4, and requires sufficient time for discussions, as well as honest and open dialogue between organisations. By deepening their understanding of the involved actors' roles and interests, actors are more likely to develop shared objectives and agree on how to act, and which measures to implement.

These findings point not only to the importance of developing a shared understanding among the involved actors, but also to the importance of internal processes and alignment of the involved actors' internal departments (e.g. marketing department and planning department). This was identified in Paper 1, where the planning departments from three involved actors, i.e. municipality, RPTA, and PTO, agreed on a specific colour for the buses so as to develop a distinct identity. However, the marketing department within the RPTA did not agree to this, as it would risk confusing users of public transport. This illustrates how internal misalignment within a single organisation can further complicate coordination of planning efforts.

The lack of a shared understanding of what a high-quality bus service should be, and different ideas of what the project should achieve, shows that it is difficult for involved organisations to move 'outside' of their organisational responsibilities and mandates, reflecting previous research on sustainable mobility measures (Cannon et al., 2024; Huxham and Vangen, 2000). As such, the empirical findings identify collaborative challenges throughout the planning processes of high-quality bus services. These collaborative challenges take different forms during different stages of the planning process, and will be discussed in more detail below.

Challenges in the initial planning stages

The formulation of goals of the planning process has repeatedly been proven to be a collaborative challenge in the studied processes. As already mentioned, these difficulties suggest a lack of shared understanding of the problems that the processes

were intended to address. Such shared understanding is highlighted in previous research as an important factor for successful collaboration (Ansell and Gash, 2008; Hrelja et al., 2016; Huxham and Vangen, 2000).

The development and formulation of goals have been handled in different ways across the studied projects. In Paper 4, for example, the difficulties in formulating a single goal for the project led to the formulation of two parallel and potentially conflicting goals. This outcome reflected a negotiated compromise in which the involved organisations could relate to at least one of the goals to move the process forward. This suggests that involved actors were not ready to, or could not, move outside the organisational interests and mandates, which has been suggested as necessary to improve collaboration (Cannon et al., 2024).

Similar challenges were identified in Paper 1, where formulating the declaration of intent in the Helsingborgsexpressen project proved highly challenging. The involved actors repeatedly added clauses to safeguard their own interests and to guarantee that the other parties fulfilled their commitments. This pattern indicates a lack of trust between the involved organisations, which has been identified as a condition for successful collaboration (Hrelja et al., 2016; Thomson and Perry, 2006). Rather it reflects the traits of a negotiation where the involved actors aim to maximise their own interests rather than exploring the shared benefits.

Findings from Papers 1 and 4 indicate that early planning stages require substantial time for dialogue. Such dialogue should focus on clarifying problem understandings and jointly formulating goals, which can help mitigate conflicts later in the planning process. In addition, the findings also suggest that not only do involved organisations need to develop shared objectives, but they also need to develop a shared understanding of the objectives' status in the planning process. A lack of a shared understanding of the status of objectives can result in misalignment between organisations, risking creating a barrier to implementation. This was found in Paper 4, where the involved actors failed to develop a shared understanding of the procedural status of the identified measures, leaving the involved actors with different expectations for the continued process. It also underscores the importance of involving all relevant actors as early as possible, and investing effort in understanding their roles and interests (Bjärstig et al., 2018; Healey, 2003; Rye and Wretstrand, 2014). Such measures can help identify and address potential conflicts or challenges (Booher & Innes, 2002).

Implementation difficulties as a result of conflicting perspectives

As already mentioned, the lack of a shared understanding of what a high-quality bus service project is in the Swedish context caused challenges across the studied projects. Findings from Papers 1 and 2 suggest that high-quality bus service projects are seen either as public transport projects (predominantly by RPTAs and PTOs) or

as urban development projects (predominantly by municipalities). This dual character often creates tensions when it comes to priority measures for public transport when these conflict with active modes (i.e. walking and cycling). Paper 1 identifies several concrete challenges as a result of this dual character, among them the design and extent of dedicated bus lanes, the removal of speed bumps and pedestrian crossings, and the configuration of signal priority at intersections. The identified challenges show that different involved actors assign different importance to bus priority measures, reflecting previous research on such measures. These findings are consistent with previous research (see Ishaq & Cats, 2020), and suggest the absence of shared objectives for the projects, resulting in conflicts primarily between municipalities and RPTAs.

Overall, the findings highlight that establishing a shared understanding of what a high-quality bus service entails, and which features are essential for achieving it, is fundamental for joint action. Such understandings have been highlighted as important for successful collaboration (Healey, 2003; Hrelja et al., 2016). Without such alignment, key features important to produce a high-quality bus service (e.g. the placement of bus lanes) may not be implemented at all or to the extent needed, or lead to sub-optimal solutions for public transport services. As shown in Paper 1, the inability to remove speed bumps or pedestrian crossings can negatively affect travel speeds and passenger comfort. Another example from Paper 1 illustrates the failure to develop new bus infrastructure to serve a large residential area, which forces the continuation of two parallel services instead of combining them into one single, more efficient, bus route.

7.2 Understanding protest against a high-quality bus service

The second research question was formulated as: *What were the key arguments in local protests against a high-quality bus service?*

Paper 3 showed that protests focused mainly on financial issues and the expected effects of the high-quality bus service project. Of the four discursive categories (*unfairness, inefficiency, lack of trust, and norms and ideology*) introduced in Chapter 4 to analyse the protests, all were identified in the efforts to delegitimise the BRT project in Örebro. Opponents of the project repeatedly describe the project as unfair or inefficient. They argue that the project benefits urban residents who already have good access to public transport services while neglecting rural areas. Such argumentation reflects moral claims of unfairness, showing similarities to research on other transition projects (see Portinson Hylander et al., 2024). Critics also claim the project serves too few people to justify its cost, arguing that the cost

per new passenger is too high. This type of argumentation also reflects findings from other studies on sustainable transport and transition (e.g. Attard & Enoch, 2011; Bergquist et al., 2022; Gössling et al., 2024) and highlights the challenge of evaluating fairness and efficiency before implementation.

While planners and proponents of the high-quality bus service tried to address critique with arguments based on calculations and evaluations, the results from Paper 3 show that technocratic justifications, e.g. estimated cost savings or increased ridership, have little impact on opponents. Protesters often dismiss municipal reports, particularly investment cost estimations, and express deep mistrust in the planning process and the analysis that underpins it. These findings indicate that proponents' reasoning has minimal effect on opponents, who instead focus on challenging and discrediting municipal reports to undermine and delegitimise the plans.

The call for a referendum, supported by a signature campaign organised by opponents, illustrates the extent of mistrust in the municipal process. The repeated reviews of the number of signatures, three in total, did little to restore protesters' trust in the municipal process, as each review brought the count closer to the threshold required to trigger the question of a referendum. Instead, the results of each signature recount were used by protesters to further fuel scepticism about the process. Concerns about signature validation and argued perceptions of elitist decision-making were used to reinforce doubts about the municipal process, consistent with previous research on legitimacy struggles in sustainable transport transitions (see Wågsæther et al., 2022).

In addition, some opponents argued that Örebro is too small for a BRT system, with critics using terms like "big city complex", and objected to reallocating road space from cars to public transport, reflecting broader ideological positions. This is consistent with studies showing that car-dependent cities exhibit stronger resistance to bus priority measures (see Reynolds & Currie, 2021). Such arguments reflect deeper conflicts tied to political identities and contribute to the legitimacy debate, reflecting research on resistance in other transition areas in general (see Portinson Hylander et al., 2024), and sustainable mobility studies in particular (see Gössling et al., 2024).

Despite claims from adversaries of widespread opposition to the BRT project, Paper 3 shows that the debate in local media is driven by a vocal minority, raising questions about the true extent of public opposition and how widespread the lack of trust in the municipal planning really was. This does not mean that public acceptance is not important for sustainable transport planning; rather the results show that a small group of engaged and vocal opponents can disrupt or delay the planning process.

7.3 Addressing the identified challenges

With a better understanding of the two types of challenges identified in this thesis, there is a need to reflect on possible ways to handle these challenges.

Handling collaborative challenges

The findings show that collaborative challenges can be found throughout the planning process, and that they predominantly stem from conflicting responsibilities and goals, and a lack of a shared understanding of what high-quality bus services, particularly BRT, mean in the studied projects.

A central condition for successful collaboration is the development of a joint problem understanding among the involved stakeholders, as this forms the foundation for establishing shared objectives (Conteh, 2013; Hrelja et al., 2016; Pettersson and Hrelja, 2020). Actors engaged in improving bus services and developing high-quality bus services must therefore invest time in understanding each organisation's roles and interests, and create opportunities for thorough discussion to build such shared understanding. Although time and dialogue do not guarantee the development of shared objectives, a lack of both reduces the likelihood of developing them.

To support dialogue and the development of shared objectives, this thesis introduces a planning tool designed to facilitate discussions and strengthen joint understandings of what constitutes a high-quality bus service. The tool, "Planning Tool for Swedish BRT" (Allansson, et al., 2024) was developed as part of the research underlying Paper 2 and provides a structured basis for clarifying ambitions and expectations among involved actors. A detailed description of its criteria is provided in Appendix B.

The planning tool is designed to fit the Swedish context, consisting predominantly of small and medium-sized cities. Drawing from insights from Papers 1 and 2, showing that high-quality bus services function as both public transport projects and urban development projects, the Planning Tool for Swedish BRT has less focus on the category *public transport infrastructure* compared to international counterparts (e.g. ITDP, 2024). Instead, it gives greater weight to criteria related to *urban integration*, *vehicles and support systems*, and *operations*, reflecting the broader set of priorities relevant to Swedish planning practices.

In line with the findings from the Delphi-study applied in Paper 2, the planning tool aims to substantiate ideas of different levels of BRT or BRT-inspired solutions by serving as a platform to facilitate discussions between involved stakeholders. The planning tool can be used to build a shared understanding of the project, support agreement on which measures are important in a specific case, and serve as a basis

for developing declarations of intent. As such, the planning tool can both support discussions between organisations and perform as a foundation for formal agreements. However, the tool does not guarantee that stakeholders will automatically reach shared problem definitions or goals, nor is it intended to create consensus on all issues. Instead, its purpose is to stimulate discussion and highlight measures that previous research has identified as important for delivering high-quality bus services, enabling involved organisations to recognise areas of disagreement early in the collaborative process. The underlying principle is that by putting more effort into developing shared understandings, both of problems and goals, these efforts could mitigate potential collaborative challenges in later stages of the planning process.

Planning processes progress, with or without joint problem understandings and developed shared objectives, as shown by the implementation of the different high-quality bus service projects studied in this thesis. However, by discussing and developing shared understandings of problems and objectives, hopefully some collaborative challenges can be avoided.

Handling protests against high-quality bus services

Public protests pose a significant challenge to the planning of high-quality bus services and share many similarities with resistance observed in other transition projects (see Arning & Ziefle, 2020; Nagel & Satoh, 2019; Portinson Hylander et al., 2024). The findings in Paper 3 show that opposition can mobilise and effectively use news media as a forum for protests. Protests against high-quality bus services can therefore be expected when planning and implementing such types of projects. Previous research has highlighted several strategies for strengthening public acceptance of sustainable mobility measures, including placing greater emphasis on fairness-based reasoning, focusing on service improvements or operational benefits, rather than relying solely on cost-benefit analyses (Flyvbjerg & Bester, 2021). Such suggestions resonate with findings from Paper 3, which show that techno-rational arguments, such as cost-benefit analyses, have little impact on opponents.

Another option is to move from a “decide-announce-defend” model to an “engage-deliberate-decide” approach (Vigar, 2017) by strengthening early dialogue and participatory planning (Attard and Ison, 2010). Including citizens can improve legitimacy, although it has been pointed out that public participation often remains symbolic rather than substantive (Mattila, 2018; Hysing, 2015). Introducing a consultation phase to the public transport planning process, similar to land-use planning, could improve understanding of possible resistance and provide insights into public concerns. However, the findings from Paper 3 do suggest that such efforts may have little impact on the most vocal adversaries, whose opposition to the high-quality bus service project appears to be firm, regardless of participatory

efforts. Therefore, it is perhaps not the most vocal of adversaries, who have shown to be limited in numbers, that planners should direct most of their focus towards.

Finally, although the findings from Paper 3 suggest that technocratic arguments have little impact on the most vocal of adversaries, they should not be abandoned completely, as they may resonate with silent supporters. Instead, planners should complement such arguments with fairness-oriented approaches. Ultimately, understanding the drivers of protest is central to designing strategies that improve public acceptance and reduce resistance.

Overall, the findings show that planning high-quality bus services is affected by two connected challenges: inter-organisational coordination and public protests. Misaligned problem understandings, lack of shared objectives, and fragmented responsibilities hinder collaboration between actors involved in the public planning process, while limited early public insight and reliance on technocratic reasoning create conditions in which protests are likely to occur once projects become publicly known.

7.4 Main contributions and future research

This thesis advances the understanding of high-quality bus services in a Swedish context, dominated by small and medium-sized cities. It does so by seeing public transport planning as a collaborative process, in contrast to the techno-rational approaches seen in most transport planning. Empirically, it provides in-depth insights into inter-organisational coordination challenges across multiple Swedish high-quality bus service projects, showing how actors' roles, problem understandings, and objectives cause challenges during the planning and implementation processes. The thesis also contributes to research on sustainable transport transitions by analysing public protests against a high-quality bus service. In doing so, it highlights how protesters use perceptions of fairness, ineffectiveness, and mistrust to influence public acceptance of high-quality bus services and generate protests.

Methodologically, the thesis demonstrates the value of qualitative, multi-method triangulation, combining interviews, document analysis, media analysis, observation, and Delphi surveys, for studying complex planning processes.

Finally, the thesis offers a practical contribution through the development of a Planning Tool for Swedish BRT, translating empirical insights into a concrete support for early-stage dialogue and shared understanding among planning actors, particularly in small and medium-sized cities.

Future research could build on these findings by examining how the Planning Tool for Swedish BRT is applied in practice to facilitate dialogue and foster shared

understandings of what a high-quality bus service entails in different local contexts. Additionally, further research could deepen the understanding of protests against sustainable mobility initiatives by comparing different types of projects and policies. Such comparative studies could shed light on whether similar patterns of resistance emerge across various sustainable mobility measures, or whether the dynamics of protest differ depending on the specific project or policy in question.

8 Conclusions

This thesis aimed to develop a deeper understanding of the planning and implementation processes of high-quality bus services in Sweden. The four included papers have provided an in-depth understanding of previously identified challenges: collaborative challenges as a result of the organisational complexity of the public transport planning landscape, and socio-political challenges in the form of resistance and public protests. To expand on this, it is relevant to return to the research questions posed in the beginning of this thesis.

- How and why do inter-organisational challenges arise in the joint planning and implementation of high-quality bus services, and how do these challenges shape planning outcomes?

The main inter-organisational challenges identified in this thesis are understood as collaborative challenges. The thesis demonstrates that collaborative challenges arise throughout the planning process due to conflicting organisational interests and objectives. Early stages are marked by difficulties in developing joint problem definitions and formulating shared goals, while later stages reveal a lack of common understanding of what constitutes a high-quality bus service. This misalignment manifests in conflicts and difficulties in writing and interpreting declarations of intent, handling infrastructure design, and operational details such as development of public transport infrastructure, bus stop spacing, priority signals, and conflicts over speed bumps, pedestrian crossings, and service identity.

To address the identified challenges, a Planning Tool for Swedish BRT has been developed to facilitate discussions around certain parameters that have been argued to be important for high-quality bus services. This tool has been inspired by both international predecessors and by input and findings from the studied context.

- What were the key arguments in local protests against a high-quality bus service?

This thesis demonstrates that protests against high-quality bus service projects are primarily driven by arguments of unfairness and inefficiency, often rooted in a lack of trust in technocratic justifications. Scepticism toward municipal and regional calculations, intensified by controversies such as the disqualification of signatures during referendum calls, further undermines legitimacy. Additionally, arguments

used by protesters reflect deeper normative and ideological conflicts, including opposition to reallocating road space and perceptions of urban bias over rural areas.

Overall, the findings underscore that collaborative challenges arise from misaligned organisational roles, interests, and interpretations of what constitutes a high-quality bus service in small and medium-sized cities. Addressing these challenges requires early development of joint problem formulations and shared objectives to establish a common understanding of project goals and design principles. Given these conclusions, a few policy recommendations on how to handle the identified challenges have been proposed. To improve coordination and dialogue between actors, planners could:

- Focus on early actor engagement

Require municipalities, regional authorities, and operators to initiate structured dialogue at the start of planning. This should include joint problem formulation and goal-setting workshops to align objectives and reduce later conflicts.

- Make use of planning tools

Adopt supportive tools, like the Planning Tool for Swedish BRT, to facilitate discussions on project ambitions and clarify expectations. This tool can also be integrated into formal planning guidelines.

Moreover, improving knowledge of the factors driving public protests is essential for designing strategies that foster acceptance of sustainable transport initiatives. Advocates for high-quality bus services should therefore:

- Do not rely on technocratic argumentation alone

Reliance on technocratic arguments alone has shown to be insufficient; planners must complement efficiency-based reasoning with approaches that engage fairness concerns and normative values to build broader legitimacy. While cost-benefit analyses remain important, complement them with how the project addresses equity, accessibility, and service improvements for underserved areas. Such argumentation can be based on how services will improve rather than focusing on how infrastructure will change.

- Expect protests

The implementation of high-quality bus services, like any major urban development, is likely to cause reactions. Planners need to expect potential opposition and prepare appropriate strategies for addressing protests. It is important to understand not only the underlying causes of the resistance but also its actual scale, as protests may appear more widespread than they truly are.

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10 Appendices

10.1 Appendix A. List of included papers

Paper 1

Allansson, J., Pettersson-Löfstedt, F., Hrelja, R. (2023). Collaborative challenges and barriers when planning and implementing Bus Rapid Transit (BRT). Lessons from Swedish BRT projects. *Urban Planning and Transport Research* 11(1)

https://doi.org/10.1080/21650020.2023.2246530

Author's contribution

This paper was co-written with two of my supervisors, Fredrik Pettersson-Löfstedt and Robert Hrelja. J.A. contributed to the study design, data collection, data analysis, interpretation of findings, and drafting of the manuscript. F.P-L. and R.H. contributed to the development of the study aim and scope, interpretation of results, and critical revision of the manuscript.

Paper 2

Allansson, J., Hansson, J., Pettersson-Löfstedt. (2025). Developing a BRT planning tool for small and medium-sized cities. *European Transport Studies.* Vol 2.

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Author's contribution

The paper was co-written with two of my supervisors, Joel Hansson and Fredrik Pettersson-Löfstedt. J.A. contributed to conceptualisation, study design, survey design, data collection, data analysis, interpretation of findings, and manuscript drafting. J.H. and F.P-L. contributed to the development of the study aim and scope, interpretation of results, and critical revision of the manuscript.

Paper 3

Allansson, J. (2025) Understanding efforts to (de)legimtize bus rapid transit implementation. A media analysis of the protests in Örebro, Sweden. *Urban Transitions* Vol. 1.

https://doi.org/10.1016/j.ubtr.2025.100003

Author's contribution

J.A. was solely responsible for conceptualisation, study design, data collection, data analysis, interpretation of results, and manuscript drafting. Supervisors provided feedback on manuscript drafts.

Paper 4

Allansson, J., Pettersson-Löfstedt, F., Hrelja, R. *Forthcoming*. Prel title: Agreeing on Shared Objectives in Early Public Transport Planning: Collaborative Challenges and Implications for Implementation

Submitted to:

Author's contribution

The paper was co-written with two of my supervisors, Robert Hrelja and Fredrik Pettersson-Löfstedt. J.A. contributed to conceptualisation, study design, data collection (observations and interviews), data analysis, interpretation of findings, and drafting of the manuscript. F.P-L. and R.H. contributed to defining the study aim and scope, interpreting results, and critically revising the manuscript.

Additional publications

Allansson, J. and Cannon, R. (2022). *Omprioritering av gatuutrymmet: En kunskapsöversikt.* K2. Lund. Available: https://www.k2centrum.se/sites/default/files/fields/field_uppladdad_rapport/kunskapsoversikt_-_omprioritering_av_gatuutrymmet.pdf

Author's contribution

J.A. contributed, jointly with R.C., to the conceptualisation, study design, literature review, interpretation of findings, and drafting and revising of the manuscript.

Allansson, J., Hansson, J., Pettersson-Löfstedt, F. (2024). *Planeringsverktyg för Bus Rapid Transit (BRT) i Sverige.* K2 Outreach 2024:2 Lund. Available: https://www.k2centrum.se/sites/default/files/fields/field_uppladdad_rapport/web_outreach_2024_2_tillg_nr6.pdf

Author's contribution

The report was co-written with two of my supervisors, Joel Hansson and Fredrik Pettersson-Löfstedt. J.A. contributed to conceptualisation, study design, survey design, data collection, data analysis, interpretation of findings, and manuscript drafting. J.H. and F.P-L., contributed to the conceptualisation, study design, survey

design, data collection, data analysis, interpretation of findings, and manuscript revisions.

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Author's contribution

The report was co-written with two PhD colleagues at LTH, Josefin Lindström Månefjord and Joakim Åström. J.A. contributed to conceptualisation, study design, survey design, data collection, interpretation of findings, and drafting and rewriting the manuscript. J.L.M. and J.Å. contributed to the conceptualisation, the study design, survey design, data collection, data analysis, interpretation of findings, and drafting and rewriting the manuscript.

10.2 Appendix B. Categories, parameters, and point levels in the Planning Tool for Swedish BRT

Urban design	20 p
Coordinated planning	2 p
Directness	3 p
Stop distances	5 p
Sharp curves	3 p
Barrier effects	3 p
Bicycle lanes	2 p
Access to bus stops	2 p

Vehicles and supporting systems	20 p
Identity	4 p
Real-time information	4 p
Boarding and alighting	10 p
ITS for headway adherence	2 p

Public transport infrastructure	46 p
Busway separation	8 p
Busway alignment	4 p
Other vehicles allowed in bus lanes	3 p
Exits in busways	2 p
Street parking	3 p
Speed bumps	3 p
Bus priority in crossings	7 p
Turn restrictions	3 p
Bus stops types and level boarding	10 p
Bus stop facilities	3 p

Operations	14 p
Daytime frequency	4 p
Evening and weekend frequency	4 p
Weekday operating hours	3 p
Weekend operating hours	3 p

BRT Level	Minimum points	Description
☆☆☆	85	Comparable to high-quality rail transit. Inspiration for other BRT projects in Swedish and international cities.
☆☆	65	Comparable to other high-quality BRT, or equivalent, systems in Europe.
☆	45	Considerably higher quality than a “ordinary” bus service. An inspiring solution for other Swedish cities that wants to improve their bus services.

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Planning for high-quality bus services

This thesis investigates the challenges of planning and implementing high-quality bus services in Sweden, focusing on organisational collaboration and public resistance. It studies coordination challenges due to conflicting roles, goals, and interpretations of what constitutes a high-quality bus service, and how arguments are used by opponents in efforts to delegitimise high-quality bus service implementation.

Overall, the thesis underscores the importance of early actor engagement, joint problem formulation, development of shared objectives and balancing efficiency arguments with fairness concerns to improve both organisational coordination and public acceptance.

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