Understanding the interplay of contextual factors affecting the integration of land use and transport planning

The Case of MAL 2019 planning process in Helsinki Metropolitan Region, Finland

Oya Duman
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**Abstract**

Current policy challenges are complex as they are caused by an interplay of natural and anthropogenic phenomena, traversing environmental, social, financial and bureaucratic borders. A key problem in public policies is their fragmented approach to such challenges. The urgency to move away from fragmented public policies has been visible within land use planning and transport planning. Inability to respond to the global crises due to hierarchical and sectoral fragmentation creates new demands for the practices of land use planning and transport planning. An integrated land use and transport planning approach bringing together diverse forms of sectoral expertise, different planning levels and separate administrative units has been proposed to address issues contributing to the global crises. However, regardless of how widely recognised the need for land use and transport planning integration is, effective processes of such integration have proven difficult. There has been a lack of academic research which provides insights into the convoluted nature of conditions influencing the integration of land use and transport planning processes, and elucidates the conditions for their effective implementation from a perspective acknowledging the multi-faceted and situated nature of integrated planning processes. Accordingly, the objective of this research is to provide in-depth process knowledge into the integration of land use and transport planning, by identifying and discussing the interplay of contextual factors affecting integrated processes. This research examines the integration of transport planning and land use planning processes in MAL 2019 planning process in Helsinki Metropolitan Region, Finland. The MAL 2019 planning process is a special case as it is a process specifically designed for integrating land use planning and transport system planning processes. In order to study the lived experiences of planning actors, this research employed interviews and policy document analysis, with supporting validation and visualisation methods. The research also includes a systematic review of factors affecting the MAL 2019 planning process. The findings of this doctoral research shed light on how the context of an integrated land use and transport planning process emerges through the interdependencies between different factors making up the context. The findings emphasise the importance of situating integrated planning processes within their specific contexts, acknowledging the complexity and historical development of factors influencing these processes. The findings challenge the notion of applying "best practice" examples universally and highlight the need to understand what works within each unique context. The findings point towards the most influential contextual factors, providing insights for process design in the context of the MAL 2019 planning process, which can offer valuable lessons to other governance contexts, as well. This knowledge allows for targeted and context-specific recommendations to improve integrated planning processes, enabling planning organisations to enhance their governance capacity.

**Keywords** land use and transport integration, transport policy
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Contents

1. Introduction ............................................................................................................. 13
   1.1 Research Context .......................................................................................... 13
   1.2 Research Gap, Research Questions and Methodological Approach ............. 17
   1.3 Outline of Dissertation ............................................................................... 22
2. Theoretical Background ...................................................................................... 25
   2.1 Understanding Policy, Integration, and Policy Integration ... 25
      2.1.1 Policy Integration in Previous Studies................................................. 30
      2.1.2 Degrees and dimensions of policy integration................................. 31
      2.1.3 Discussing policy integration from the perspective of governance capacity.......................................................... 35
   2.2 Integration of Land Use and Transport Planning Processes .. 37
      2.2.1 Connection between land use and transport ................................. 37
      2.2.2 Critique and status quo of land use planning and transport planning practices........................................................................ 39
      2.2.3 Defining integration of land use and transport planning ... 43
      2.2.4 Development of research on the integration of land use and transport planning.............................................................................. 44
      2.2.5 A procedural interest on the integration of land use and transport planning.................................................................................... 46
   2.3 Connection between Context and Integration of Land Use and Transport Planning Processes .......................................................... 49
      2.3.1 Understanding the notion of context .............................................. 49
      2.3.2 A contextual lens into the challenges of integrated land use and transport planning processes.............................................................. 53
3. Methodology ........................................................................................................ 57
   3.1 Research Design.............................................................................................. 57
      3.1.1 Research approach in connection to the research gap and objectives ................................................................. 57
      3.1.2 Case study research .............................................................................. 58
3.1.3 Selection of MAL 2019 planning process as the case study subject.................................................................................................................................59
3.1.4 Selection of research methods for the case study ................61
3.1.5 Research process........................................................................64
3.1.6 Research ethics .......................................................................66
3.2 Research Methods........................................................................67
3.2.1 Interviews ..................................................................................67
3.2.2 Document analysis.....................................................................77
3.2.3 Validation of results from the interviews and document analysis through meetings .................................................................................................79
3.2.4 Systematic Literature Review on the Factors Affecting the Case Study Subject .................................................................................................80
3.2.5 Visualisation of results from the interviews and documents analysis through complexity mapping .................................................................82
4. Case Study Context ........................................................................87
4.1 Land Use Planning and Transport Planning Practices in Finland ..............................................................................................................................87
4.1.1 Finland at a glance .................................................................87
4.1.2 Land use planning practice in Finland .................................89
4.1.3 Transport planning practice in Finland ..............................91
4.2 Case Study Subject: MAL 2019 Planning Process in Helsinki Metropolitan Region, Finland ........................................................................92
4.2.1 MAL Agreements in Finland ................................................92
4.2.2 Helsinki Metropolitan Region .............................................94
4.2.3 MAL 2019: Planning process .................................................99
4.2.4 MAL 2019: Resulting plan ..................................................103
5. Factors Affecting the Integration of Land Use and Transport Planning Processes ........................................................................................................107
5.1 Organisational Structures and Identities ...............................109
5.2 Educational Backgrounds and Professional Identities ..........111
5.3 Politics ......................................................................................113
5.4 Availability of resources .............................................................115
5.5 Methods in Use ........................................................................117
5.6 Interpersonal Communication between Planning Actors ....119
5.7 Legislation ................................................................................121
5.8 Physical and Historical Context of Planning ..........................121
5.9 Planning Process Organisation ..................................................123
6. Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process ............................................................................125
6.1 An Overall Look into the MAL 2019 Planning Process...125
6.1.1 Purpose of the MAL 2019 planning process ..................125
6.1.2 Challenges of the MAL 2019 planning process .............126
6.1.3 Successes of the MAL 2019 planning process .............128
6.1.4 Changes over time concerning land use and transport planning processes in Helsinki Metropolitan Region ......................... 130
6.2 Historical Background of MAL 2019 Planning Process ......... 132
6.2.1 Development of key legal and organisational changes ......132
6.2.2 Mapping the interplay of legal and organisational changes 135
6.2.3 Development of plans .............................................. 137
6.2.4 Mapping the historical progression of plans ................ 141
6.3 Factors Affecting MAL 2019 Planning Process ................. 143
6.3.1 Availability of resources ............................................ 143
6.3.2 Legislation ............................................................... 146
6.3.3 Organisational structures and identities ..................... 147
6.3.4 Interpersonal communication between planning actors ...150
6.3.5 Politics ................................................................. 151
6.3.6 Physical and historical context of planning ................... 153
6.3.7 Methods in use ..................................................... 154
6.3.8 Planning process organisation .................................. 156
6.3.9 Educational backgrounds and professional identities ......159
6.4 Interplay of Factors Affecting the MAL 2019 Planning Process160
6.4.1 Interplay of factors ................................................ 160
6.4.2 Bottlenecks in the MAL 2019 planning process .......... 162
6.4.3 Success factors ................................................... 164
7. Concluding Discussion .................................................. 165
7.1 Discussion on the Research Questions .......................... 165
7.1.1 How can different factors and their interplay, forming a specific context of a land use and transport planning integration process, be identified and analysed? ........................................................................................................ 165
7.1.2 How does such an analysis contribute to understanding the way the process works? ........................................................................ 168
7.1.3 What insights can be drawn from studying the interplay of factors affecting the MAL 2019 planning process about the integration of land use and transport planning processes? ........................................................................................................ 170
7.2 Reflecting on the Limitations of This Research ..................... 171
7.3 Contributions of the Research ................................. 173
7.4 Implications for Integrated Land Use and Transport Planning Practice in Finland ................................................................. 175
7.4.1 Significance of recognising the limits of integration within a land use and transport planning process .................................................. 175
7.4.2 Manageable and feasible integrated land use and transport planning processes ........................................................................... 176
7.4.3 Need for a flexible interpretation of integration................ 177
7.5 Future Research Directions.................................................... 178
References......................................................................................180

Appendix 1: List of Documents Included in the Document Analysis...199
Appendix 2: Complexity Maps.......................................................205
List of Figures

Figure 1. Hierarchy of policy integration (Stead & Meijers, 2009)……………….32
Figure 2. Continuum of policy integration (Fischer et al., 2013)………………..33
Figure 3. Land use and transport feedback cycle developed by Wegener & Fürst (1999).........................................................................................................................38
Figure 4. Expanding the land use and transport feedback cycle (Bertolini, 2012).................................................................................................................................39
Figure 5. Process of government policy to outcomes (Curtis & James, 2004) .................................................................................................................................47
Figure 6. PRISMA flowchart showing the steps of the literature review to systematically find and evaluate the chosen articles, book chapters and reports...82
Figure 7. An example of a complexity map, as understood in this dissertation..84
Figure 8. Map of Finland, including the neighbours Sweden, Norway, Russia and Estonia. Author’s own work................................................................................88
Figure 9. Map showing Helsinki Metropolitan Region, including the Capital Region KUUMA Municipalities, and HSL public transport zone. Author’s own work.........................................................................................................................96
Figure 10. Diagram explaining the step-by-step logic of the MAL 2019 planning process. Adapted from HSL (2017, p. 16), author’s own translation…………100
Figure 11. Diagram of preparation, steering and decision-making bodies of MAL 2019 planning process. Adapted and simplified from HSL (2017, p. 35), with the dissertation author’s own translations.................................................................102
Figure 12. A plan map showing the primary land use zones, housing production target by municipality, and transport investments planned to be launched by 2030 (Land Use, Housing and Transport Plan 2019, 2019, p. 16)..............105
Figure 13. Complexity mapping of key legal and organisational changes between 1990-2020 that form the context of the MAL 2019 planning process...........136
Figure 14. Timeline of plans and connected documents published between 1990-2020, author’s and Emily Johnson’s work.................................................................142
Figure 15. Complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process.................................................................161
Figure 16. Detailed complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process [Spread into four pages].......206
Figure 17. Detailed complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process, categorised according to the clusters of highly connected factors [Spread into four pages]..........................210
List of Tables

Table 1. Connections between research gap, objective and questions, and research methods ...........................................................................................................63
Table 2. Summary of scoping interviews and main topics of discussion.........65
Table 3. Research process .................................................................................66
Table 4. The list of interviewees for the semi-structured interviews. Interviewee reference numbers are randomly generated ..............................................69
Table 5. Codes used for the qualitative content analysis of the first set of interviews ...........................................................................................................73
Table 6. Codes used for the content analysis of the factors affecting integration of land use and transport planning in the MAL 2019 planning process ........76
Table 7. Statistical data representing the diversity of 14 municipalities taking part in the MAL 2019 planning process ..............................................................................97
Table 8. Statistical data representing the political inclinations of 14 municipalities taking part in the MAL 2019 planning process ..................................................98
Table 9. List of factors affecting the integration of land use and transport planning in the MAL 2019 planning process and their descriptions .........................108
Table 10. List of documents included in the document analysis outlined in Section 3.2.2 ........................................................................................................199
**List of Abbreviations and Symbols**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HELMET</td>
<td>transport system model used by Helsinki Region Transport</td>
</tr>
<tr>
<td>HLJ</td>
<td>Helsingin Seudun Liikennejärjestelmäsuunnitelma (Helsinki Metropolitan Region Transport System Plan)</td>
</tr>
<tr>
<td>HSL</td>
<td>Helsingin Seudun Liikenne (Helsinki Region Transport)</td>
</tr>
<tr>
<td>HSYK</td>
<td>Helsingin Seudun Yhteistyökokous (Helsinki Region Cooperation Assembly)</td>
</tr>
<tr>
<td>KPS</td>
<td>Kaupunkiseutusuunnitelma (Metropolitan Region Plan, a land use plan)</td>
</tr>
<tr>
<td>MAL</td>
<td>Maankäyttö, asuminen ja liikenne (Land use, housing and transport)</td>
</tr>
<tr>
<td>PARAS</td>
<td>Laki kunta-ja palvelurakenneuudistuksesta (Act on Restructuring of Local Government and Services)</td>
</tr>
<tr>
<td>PKS</td>
<td>Pääkaupunkiseudun tulevaisuuskuva (Capital Region Vision, a land use and housing strategy)</td>
</tr>
<tr>
<td>PLJ</td>
<td>Pääkaupunkiseudun Liikennejärjestelmäsuunnitelma (Capital Region Transport System Plan)</td>
</tr>
<tr>
<td>SOVA</td>
<td>Laki viranomaisten suunnitelmien ja ohjelmien ympäristövaikutusten arviointista (Act on Environmental Impact Assessment of Plans and Programs)</td>
</tr>
<tr>
<td>SUMP</td>
<td>Sustainable Urban Mobility Plan</td>
</tr>
<tr>
<td>TOD</td>
<td>Transit-oriented development</td>
</tr>
<tr>
<td>YTV</td>
<td>Pääkaupunkiseudun Yhteistyövaltuuskunta (Helsinki Capital Region Council)</td>
</tr>
</tbody>
</table>
Author’s Contribution

Oya Duman was responsible for the identification of the research gap, conceptualisation of the research goals, the development of research methodology, the application of data collection, analysis, validation and visualisation methods, the reporting, interpretation and discussion of the results, and writing and editing this dissertation.
1. Introduction

1.1 Research Context

In the last decades, the world has been tried again and again by multiple interconnected crises all happening simultaneously, such as the climate crisis, declining quality of life in cities, COVID-19 pandemic, and increasing distrust in public organisations (Huntjens & Kemp, 2022). These crises reminded the world that uncertainties are unavoidable, circumstances are constantly changing and decision-making in a constantly changing world full of uncertainties is a daunting task. Current policy challenges are complex due to the fact that they are brought about by the interplay of natural and anthropogenic phenomena, and, thus, traversing environmental, social, financial and bureaucratic borders (Briassoulis, 2004; Peters, 1998; Seppälä, 2021). Within this discourse, public organisations have an important role. Public organisations are tasked with making decisions so that essential services and public goods are provided in a way that is efficient, effective, sustainable and just at present, and at the same time in a way that ensures the well-being of societies in the future. Making decisions within a complex and ever-changing world requires public organisations to rethink their ongoing practices and to build the capacities to be adaptive in the face of short- and long-term uncertainties.

A key problem in public policies is that they have been suffering from fragmented approaches to challenges involving complex and interconnected social, environmental, political and financial issues (Cejudo & Michel, 2017; Feiock, 2013). The main reason for this fragmentation is that in present-day democracies, the administration of public affairs is decentralised and structured into specific policy domains handled by a rigid division of labour, i.e., single-purpose public organisations, within a clear hierarchical chain of command to ensure efficiency and accountability, following the Weberian model of bureaucracy (Sager & Rosser, 2009; Cejudo & Michel, 2017). As a result, public organisations have been suffering from institutional misalignment horizontally between different policy domains and vertically between different governance levels, competing objectives, and a general inability to effectively oversee planning and execution of adaptation and mitigation responses to the ongoing polycrises (Antonson et al., 2016; Candel & Biesbroek, 2016; Cejudo & Michel, 2017; Jordan et al., 2018). According to Hajer (2003), the creation and implementation of current policies takes place in an intricate network of formal and informal participants, procedures, and instruments. In this network, fragmentation experienced in policy-making and implementation does not allow for consistency and
continuity across policy processes, measures and outcomes, and it drags different individual or collective policy-makers towards divergent paths (May et al., 2005). As a result, policies frequently result in unfavourable outcomes in the short and long term because of their generally ambiguous, unpredictable and contextual impacts at various governance levels (Briassoulis, 2004).

The fragmentation and inadequacies in responses to the complex global crises are especially detrimental in urban areas, due to the fact that 56% of the global population resides in urban areas as of 2021 (UN-Habitat, 2022). What is more troubling is that by 2050, this number is projected to reach 68% which means 2.2 billion more individuals living in those urban areas (ibid.). The impacts of global crises, especially the climates crisis, have already been tough on cities and urban regions, according to the Intergovernmental Panel on Climate Change (IPCC, 2022). The climate crisis has caused severe and, in many cases, irreversible damages to the health and livelihoods of urban residents as well as to the key infrastructure in urban areas and regions. Fragmented urban policy manifests itself as ineffectiveness across urban infrastructures, land uses and mobility choices (Kim et al., 2021). In this discussion, in addition to unsustainable land uses (IPCC, 2023), the transport sector is a repeat offender. Transport sector is the “fastest-growing greenhouse gas emitter, responsible for around 25% of energy-related emissions” (UNEP, 2022, p. 16). Even though urban transport plays a crucial role in the lives of urban societies by ensuring access to fundamental activities; negative effects of urban transport on social, environmental and financial structures are consequential (Ryghaug et al., 2023; Holden et al., 2020; Urry, 2016).

By their very nature, urban areas are marked with a complex decision-making setting (see, e.g., Moroni & Cozzolino, 2019; Batty, 2016; De Roo, 2000). Decisions concerning urban areas are made by a myriad of formal and informal individual and collective actors (Healey, 2003; Pettersson & Hrelja, 2020). To illustrate, as seen in da Cruz et al. (2022) where the connections between organisations involved in transport development in London and New York were mapped, or as seen in Eräranta (2019) where connections between the individual actors involved in a local strategic spatial planning process in Finland were mapped; the plurality of stakeholders in urban decision-making processes is daunting and painful to navigate with. In addition, changes in the governance levels also contribute to the increasing complexity of the decision-making environment in which urban policies are produced and implemented. For example, in Europe, EU integration policies prompted a shift from state-centred, top-down approaches of urban governance to a multi-level governance framework (Marks et al., 1996), which in turn led to increasing ambiguity of responsibility over decisions concerning various geographical territories and sectoral matters.

The urgency to move away from fragmented urban policy approaches in the increasingly complex urban decision-making environment has been notably visible in the context of land use planning and transport planning. Just like many other public policies, these practices are traditionally organised around specific policy sectors, planning scales and administrative borders. Accordingly, urban
policies are usually designed for the specific aspects of the issues they are traditionally expected to take care of (Heeres et al., 2016). Similarly, the actors who operate at the intersection of land use planning and transport planning may belong to different governance levels as well as different funding arrangements, and approach the issues at hand with different forms of professional knowledge, habits and understanding (Hull, 2008). In addition, inherent differences between policy sectors and governance levels may result in issues with incoherence across government and administration (Rayner & Howlett, 2009). These mismatches can affect the legitimacy of the work produced within such a complex and contested policy-making environment (Mäntysalo et al., 2011). As a result, hierarchical and sectoral fragmentation have long been critical problems for land use and transport policies.

Inability to respond to the global crises, especially the climate crisis, due to hierarchical and sectoral fragmentation, creates new demands for the practices of land use planning and transport planning (Briassoulis, 2004; Jordan et al., 2018; Tennøy, 2010). Traditional planning methodologies are simply inadequate in responding to complex challenges. Overall, they function best when the planning problem is well-defined, stable or predictable (de Roo et al., 2020). On the other hand, the planning problems that land use and transport planning practices are expected to deal with require adaptive governance capabilities able to react to complex and ever-changing problems of the climate crisis (Brunner, 2010; de Roo et al., 2020). The segregated practices of land use planning and transport planning sectors have, therefore, been identified as a barrier to achieving sustainable and just cities of the future in various governance contexts both in Finland and elsewhere. Over time, it has become clear that narrow, single-dimensional, and uncoordinated policies are not adequate for promoting sustainable urban development. There is an imminent requirement for coordination, the establishment of horizontal structures for cooperation, and the joint creation and utilisation of collaborative working methods (Hajer, 2003). Briassoulis (2004, p. 3) argues that current policy problems display the characteristics of a complex system within which causal connections between sub-elements are non-linear and inconclusive, leading to single-sector and single-purpose policies that fall short in bringing about desired policy outcomes.

Attempts to address the complexities described above have underlined the importance of strategically purposive cooperation of actors beyond policy sectors, planning levels, and organisational and territorial boundaries (Högström et al., 2018; Seppälä, 2021). An integrated land use and transport planning approach bringing together diverse forms of sectoral expertise, different planning levels and separate administrative units has been proposed to address issues contributing to the environmental, social and financial crises (Gillett et al., 1992; Geerlings & Stead, 2003; Curtis & James, 2004; Hull, 2005; Kidd, 2007; Banister, 2012; Bertolini, 2012; Adelle & Russel, 2013; Hrelja, 2015; Paulsson et al., 2018; van Geet et al., 2019; Cao et al., 2022; Eräranta, 2023). Holden (2012) argues that integration of different organisations aims at addressing policy failures due to fragmented government action and siloed governance capacities; whereas in-
tegration of policy sectors aims at addressing policy failures due to the complexity of urban policies and the discrepancy between policies and their implementation.

The proposition of integrating land use and transport planning has been a long-standing topic in the academic discourse, originating from both theoretical and empirical research on the role of land use in preventing unsustainable urban mobility patterns (Curtis, 2008). Embracing an integrated approach to land use and transport planning entails a departure from conventional methods to safeguard the long term well-being of the planet as well as societies. This approach involves formulating a cohesive vision for the future by providing a flexible framework that facilitates action, rather than a prescriptive blueprint for the future, and considering a wide range of transport and land use planning and policy instruments that can be used synergistically (May, 1991). It also entails consciously managing trade-offs between different actions while highlighting coordination and cohesiveness among all involving parties across scales and sectors (UN, 2021), as the urgency for integrated climate action is intensifying at an unprecedented pace (IPCC, 2023). Finally, an integrated approach recognises the interconnectedness of different land uses, including transport infrastructure, within a shared spatial system, in order to prevent problems that may arise from sectoral approaches and to leverage potential synergies (Heeres et al., 2016).

The essential reason to pursue an integrated land use and transport planning approach is, arguably, to increase the governance capacity of planning organisations and even create new governance capacities, when it comes to dealing with complex issues, such as the ones outlined above, that cannot be dealt with a fragmented approach. Governance capacity can be broadly understood as “the organisational and systemic resources and skills necessary to make sound policy choices and implement them effectively” (Ramesh et al., 2016, pp. 3-4). In this context, governance capacity is directly connected to the ability of a public organisation to perform its functions and fulfil its duties through learning, experimenting, and adapting to threats and opportunities (Innes & Booher, 2003). It encompasses four main dimensions; namely, coordination capacity, analytical capacity, regulation capacity and delivery capacity (Christensen et al., 2016), all of which can be developed through integrated policy practices. By bringing together diverse forms of sectoral expertise, resources, approaches across various planning scales and administrative borders; integration of land use and transport planning helps planning actors experiment and develop new ways of working while ensuring their organisations expand their capacities and do not fall behind when the challenges are evolving over time.

The need for the integration of land use and transport planning is widely recognised across various governance contexts globally (e.g., Hicks et al., 2001; European Commission, 2001; World Bank, 2002; OECD, 2009; Communities and Local Government, 2011; Ministry of Infrastructure and the Environment, 2013; Zhao & Pendlebury, 2014; van Geet et al., 2019; Lee et al., 2022). Notably in the Nordics, the efforts to bring together the segregated practices of land use planning and transport planning have been a part of the mainstream urban planning
practice for many decades (Smas, 2017). For example, in Norway, the Integrated Land Use and Transport Planning Scheme was launched already in 1991 (see, e.g., Stenstadvold, 1996), to reduce the negative effects of road transport in the largest cities by integrating land use and transport planning. In addition, Urban Growth Agreements, aiming at multi-sectoral and multi-scalar policy packaging for land use and transport planning between the Norwegian state and municipalities, have been informally a key part of the Norwegian planning system since 2013 (see, e.g., Tønnesen et al., 2022b; Tønnesen et al., 2019; Westskog et al., 2020). Similarly, in Sweden, Strategic Choice of Measures has been used since 2013 as a collaborative arena between land use and transport authorities for national transport planning (see, e.g., Eckersten et al., 2021; Eckersten et al., 2022; Tornberg & Odhage, 2018), while Urban Environment Agreements have been in use since 2015 to finance sustainable mobility projects that harmonise land use, housing, and transport (see, e.g., Lidström & Heriting, 2021; Smas, 2017).

More specifically in the Finnish context, an integrated land use and transport planning approach has been on the agenda for many decades (Duman et al., 2022). Consequently, in Finland, the influence of transport policy on spatial planning has been regarded as high since the 2000s, according to a report on an analysis of European spatial planning systems (Nadin et al., 2018). To illustrate, the recently prepared National Transport System Plan for 2021–2032 (Ministry of Transport and Communications, 2021) regards the integration of land use and transport planning as crucial to ensure the development of the transport system in Finland towards sustainable and equitable principles. Following a decades-long incremental development, the MAL (land use, housing and transport) agreement procedure has been one of the clear examples as well as drivers of the integration of land use and transport planning in Finnish city-regions1.

1.2 Research Gap, Research Questions and Methodological Approach

Regardless of how widely recognised the need for land use and transport planning integration is, effective processes of such integration have proven difficult (Stead, 2003; Kaufmann & Sager, 2006; Rayner & Howlett, 2009; Stead & Meijers, 2009; Duffhues & Bertolini, 2016; Heeres et al., 2017; Isaksson et al., 2017; Trein et al., 2019; van Geet et al., 2019; Pettersson & Hrelja, 2020; Levin-Keitel & Reeker, 2021). Despite the increasing number of integrated plans, regardless of exact definition, few plans realistically pave the way for implementation of policies identified in the plans (McCain et al., 2023).

There are several ways to approach this so-called “implementation gap” (e.g., van Geet et al., 2019) in integration of land use and transport planning practices. Firstly, in practical terms, collaborative work of any kind may complicate the

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1 The historical development of the MAL agreement procedure is explained in detail as one of the key results of this doctoral research in Chapter 6.
daily work of actors needlessly (Brorström & Diedrich, 2020) with time-consuming processes, increased uncertainty around decision-making authority and doubts concerning the political legitimacy of decisions (Bousema et al., 2022). In these cases, planning actors may choose to continue with their already defined, tried and learnt sectoral routines.

Secondly, even when there is a politically-backed or legally-mandated motivation to adopt an integrated approach to land use and transport planning (lack of which, in itself, can be considered a reason for the implementation gap), the implementation can be hindered by simply having too many individual and collective actors with conflicting interests (da Cruz et al., 2022; Eräranta, 2019; Pettersson & Hrelja, 2020), with different formal and informal institutions (van Geet et al., 2019; Hrelja et al., 2017), and with incompatible knowledges (te Brömmelstroet & Bertolini, 2010) which are scattered across many governance levels (Howlett et al., 2017; Pettersson & Hrelja, 2020; Trein et al., 2023). As a result, the individual and collective actors involved in the process may simply not possess the required collaboration capacity. Detailed implementation plans might be simply unavailable due to the distributed responsibilities, leaving integrated plans as a wishing well (McCain et al., 2023).

Thirdly, despite the increasing number of case studies concerning integrated land use and transport planning processes, it may not always be easy and straightforward to learn from insights generated in another context, or even in the same context but in another project, concerning daily planning practices (Straatemeier & Bertolini, 2020; Pojani & Stead, 2015). This is due to the highly contextual nature of integrated land use and transport planning processes (Geerlings & Stead, 2003; Kaufmann & Sager, 2006; Jordan & Lenschow, 2010; Tornberg, 2011; Rye et al., 2011; Legacy et al., 2011; Hrelja, 2015; Tennøy et al., 2016; Hrelja et al., 2016; van Geet et al., 2021; Tornberg & Odhage, 2022), or any planning process for that matter. Geerlings and Stead (2002) argue that recommendations on how to develop an integrated approach appear to be straightforward and uncomplicated at first. Nevertheless, “putting them into practice successfully requires experimentation and careful adaptation to the legal, administrative and political requirements of the local situation.” (ibid., p. 228). In order to ensure learning from different implementation cases of integrated land use and transport planning processes, the particular context of the planning process needs to allow for interpretations through the collaborative and negotiated work of the planning actors themselves.

Acknowledging that one-size-fits-all solutions fall short in developing integrated approaches to land use and transport planning (Molenveld et al., 2020), the way attempted integration plays out on the ground is decided in local practices shaped over time within particular planning contexts (Tornberg & Odhage, 2022; Paulsson, 2018; Hrelja et al., 2016; Lloyd & Peel, 2005). Accordingly, the implementation gap of successful integrated land use and transport planning points towards procedural problems within a particular context, rather than substantive problems concerning which outcomes to achieve (Cejudo & Trein, 2023; Duffhues & Bertolini, 2016; Adelle & Russel, 2013; Legacy et al., 2012; Tornberg, 2011; Curtis & James, 2004; Geerlings & Stead, 2003). Within this
process orientation, to properly tackle the issue of integrating transportation and land use planning, it is not enough to simply try and combine the efforts of two organisations working towards a shared goal (Tornberg, 2011) as these goals may not result in actions supporting these goals (Duffhues, & Bertolini, 2016). Similarly, Tornberg & Odhage (2022) argue that an expanded awareness of the complex urban problems through cross-sectoral and cross-scalar collaboration does not necessarily guarantee an expanded capacity to tackle them. Therefore, it is crucial to consider the dynamic interaction between individuals involved in the process, emphasising the significance of both the resulting plans and the procedures involved (Tornberg, 2011). Instead of the outcomes of integrated public policy decisions, the interpersonal communication between the policy actors need to be scrutinised as those decisions emerge through the relationships among those actors (Long et al., 2023).

Deepening the procedural focus, Candle and Biesbroek (2016, p. 11) argue that comprehending the intricacies of a policy integration process necessitates a shift from focussing on a universal, comprehensive theory that defines the one truth of integration processes, towards focussing on a theory-informed examination of particular sequencing of steps and actions that regulate and guide the unfolding of those steps and actions. Therefore, the real challenge is to establish effective integration processes (Curtis & James, 2004) as there is still a lack of knowledge as to how integrated land use and transport planning processes work on the ground (Geerlings & Stead, 2003; Rayner & Howlett, 2009; Duffhues, & Bertolini, 2016; Tennøy et al., 2016; Marsden & Reardon, 2017; Ryghaug et al., 2023).

Recent work on integrated policy-making processes aims to establish integrated practices in complex, multi-level, and multi-stakeholder environments; by addressing the gap between administrative practices and available instruments, and established procedures as well as by attempting to correct prior limitations (Rayner & Howlett, 2009). Trein et al. (2021b) claim that, so far, academic research tackling the questions of governance capacity for policy integration has had a normative and explanatory nature, and neglected the procedural mechanisms and institutional conditions. In addition, policy maker-oriented studies have been marginal (Trein et al., 2023). With the complexity of the policy-making ecosystem increasing and the old and new institutional settings clashing (see, e.g., Isaksson et al., 2017), the need to understand the ways in which processes of policy integration evolve remains crucial. Looking from the broader perspective of transport policy research, there is also the need for impactful transport policy research that critiques the mainstream practices and also understands the underlying reasons behind decision-making within their own particular context (Marsden & Reardon, 2017).

Within this background, there has been a lack of academic research which provides insights into the convoluted nature of conditions influencing the integration of land use and transport planning processes, and elucidates the conditions for their effective implementation from a perspective acknowledging the multifaceted and situated nature of integrated planning processes (Isaksson et al., 2017; Hrelja et al., 2017; van Geet et al., 2019). Meijers and Stead (2004, pp. 12-
13) argue that “simply stating that policies should be more integrated and providing tools to do so, gives a rather simplistic representation of the complex endeavour of policy integration”. Beyond the understanding of enablers and barriers to land use and transport integration (see, e.g., Stead & Meijers, 2009), there exists a limit in the knowledge of the mechanisms through which both develop (Duffhues & Bertolini, 2016).

Addressing the knowledge gaps left unattended by research “engaging with the technical ‘what-ifs’ of policy, but not the actual realities of policy processes, choices and their implications” (Marsden & Reardon, 2017, p. 239), a grounded examination of the actual mechanisms of integrated decision-making processes is required (Eriksson, 2016; Hrelja & Rye, 2022), to enable a sustainable transition from fragmented land use policies and transport policies to integrated land use and transport policies. The current knowledge base of land use and transport planning calls for better insights into the ways in which conditions of the actual policy-making ecosystem influence the integration of land use and transport planning (Isaksson et al., 2017; Hrelja & Rye, 2022), as the organisational attempts at integrated land use and transport planning practices do not guarantee that such integration will happen (Legacy et al., 2012).

To unravel the complexity of integrated land use and transport planning processes as well as to improve the utilisation of limited resources of the planning practice through a more grounded understanding of such planning processes, it essential to evaluate the practical applicability of integrated strategies within their intended operational contexts (Bertolini, 2012). Accordingly, this doctoral dissertation builds on the premise that there are many factors affecting the integration of land use and transport planning practices. A highly complex interplay of these factors operating simultaneously towards strengthening and weakening each others’ effects is interpreted as “context” in this dissertation. In other words, the way different factors come together and interact with each other forms a specific context, and within this context, planning processes take place. These contexts allow for some integrated capacities to flourish within those processes while creating limits to others. By doing so, the way attempted integration plays out on the ground is determined by local practices shaped over time within a certain planning context. As the notion of “context” is an aggregate notion that is used quite loosely in the English language, and thus, difficult to approach analytically as it is, this dissertation aims to break it down to its constituent factors affecting integration processes. Therefore, looking for ways to understand and analyse the impact of context on processes, this dissertation focuses on the factors affecting the integration processes and their interplay which is understood as the context.

To summarise, to address the enduring issues in the implementation of effective land use and transport policy, comprehending the ways in which an integrated land use and transport planning process works and evolves is essential (Switzer et al., 2013). Correspondingly, an increasing number of studies call for more context-sensitive studies of land use and transport integration (Stead & Meijers, 2004; Hull, 2005; Healey, 2006; Kaufmann & Sager, 2006; Bertolini, 2012; Hrelja et al., 2016; van Geet et al., 2021; Tornberg & Odhage, 2022). There
is a need for research on planning practice that studies integrated land use and transport planning processes in a comprehensive and in-depth manner by paying attention to their contexts. Accordingly, the objective of this research is to provide in-depth process knowledge into the integration of land use and transport planning, from a contextual point of view by identifying and discussing the interplay of different factors forming a specific context which affects the integration processes.

By focussing on understanding how the context of an integrated planning process is shaped by the interplay of different factors and how this specific context then shapes integration processes, it is possible to understand and document:

- the factors affecting the studied integrated land use and transport planning process,
- The interrelations and interdependencies among those factors, and
- the outcomes created by those interrelations and interdependencies that enable or hinder integrated planning.

This dissertation aims at recognising the role of particular contexts in the integration of land use and transport planning processes, without attempting to outline a recipe for a “right kind of” integration. Accordingly, it is critical to emphasise that this dissertation does not claim that due to the strong impact of context on integration processes, it would not be possible to draw generic conclusions and learnings for processes taking place in different contexts. On the contrary, this dissertation aims at finding ways to understand the role of the planning context in making sense of the challenges and opportunities of the current integration processes. By doing so, this dissertation also aims at pointing towards approaches that can be useful in understanding the impact of context on integration processes in different contexts.

In particular, this dissertation seeks answers to three critical questions concerning integrated land use and transport planning processes:

- **RQ.1.** How can different factors and their interplay, forming a specific context of a land use and transport planning integration process, be identified and analysed?
- **RQ.2.** How does such an analysis contribute to understanding the way the process works?
- **RQ.3.** What insights can be drawn from studying the interplay of factors affecting the MAL 2019 planning process about the integration of land use and transport planning processes?

With these research questions, the purpose of this doctoral research is neither to provide an absolute list of factors affecting the integration of land use and transport planning practices, nor to offer definitive explanations to how these factors emerge and interact with each other. Rather, the purpose is to formulate the examination of a real integrated land use and transport planning process in order to question how contextual factors can be studied, understood and translated into the process development knowledge for integrated land use and transport planning processes.
This doctoral research is conducted as a case study, in accordance with the focus on exploring the impact of specific planning contexts. This research examines the integration of transport system planning and land use planning processes in Helsinki Metropolitan Region in Finland where the governance of these practices is distributed across mainly local and metropolitan scales, but also affected through regional and national scales. The case study subject is the Land Use, Housing and Transport (MAL 2 in short) 2019 planning process which took place from 2016 to 2019. The MAL 2019 Plan, with a rich historical context, is the first strategic land use, housing and transport plan in the Helsinki Metropolitan Region prepared in partnership with 14 municipalities in the metropolitan region, the metropolitan regional transport authority, and several regional and state authorities. In this sense, the MAL 2019 planning process is quite a special case since the process in itself is a means for the integration of land use planning (by extension, housing planning) and transport planning. In order to study the lived experiences of planning actors towards the factors affecting the MAL 2019 planning process, this doctoral research employed semi-structured interviews and document analysis as main data collection methods. In order to validate the interpretations of understanding of the context of MAL 2019 planning process, meetings with planning actors were utilised. In addition, in order to visually explore the interplay of factors forming the context of the MAL 2019 planning process, the method of complexity mapping was utilised. A systematic literature review was also conducted in order to deepen the knowledge of how the factors identified as critical for the MAL 2019 planning process are discussed in different governance contexts.

1.3 Outline of Dissertation

Building on the research setting presented in this chapter so far, Chapter 2 begins by presenting the larger research field of policy integration that encompasses land use and transport integration as a sub-field. Building on the understanding of how policy integration is understood in this dissertation, the second half of the chapter focuses on the integration of land use and transport planning processes. This part of the dissertation elaborates on the connection between land use and transport, explains the status quo of land use planning and transport planning practices, summarises the key points of land use and transport integration research, and outlines the growing academic interest in the processes of land use and transport integration. The last section of Chapter 2 outlines the connection between the context and integrated land use and transport planning processes. Moving forward with the methodological aspects of the research, Chapter 3 elaborates on how this doctoral research was conducted and presents the methodology by providing details on the research design, and research methods including data collection, validation and visualisation methods. Chapter 4 focuses on outlining the context of the case study, and

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2 MAL stands for the first letters of the Finnish words “maankäyttö (land use)”, “asuminen (housing)” and “liikenne (transport)”.
clarifies the planning environment within which the selected integrated planning process, i.e., the MAL 2019 Planning Process, takes place as well as the details of this planning process. **Chapter 5** presents the results of the systematic literature review on factors affecting the MAL 2019 planning process. **Chapter 6** presents the findings of this doctoral research. The chapter begins by providing an overall look into the MAL 2019 planning process based on the interviews with the planning actors. Next, the historical background of the MAL 2019 planning process is explained in detail based on the document analysis, to build the historical development narrative of the factors affecting the integration of the land use and transport planning within the MAL 2019 planning process. The chapter continues with explanations of how factors elaborated in Chapter 5 played out in the context of the MAL 2019 planning process. Finally, the chapter ends by presenting the results from the visual mapping of the factors affecting the planning process. The final chapter of the dissertation, **Chapter 7**, discusses the findings presented in Chapter 6 in the light of the research questions and the research gap. The chapter continues with presenting a reflection on the limitations of this doctoral research, summarising the potential contributions of the research, addressing potential implications for the land use and transport planning practice especially in Finland, and finally offering some ideas on future research directions.
2. Theoretical Background

This chapter presents the theoretical discussions upon which this dissertation is built. Since this doctoral research focuses on understanding the impact of contextual factors on an integrated land use and transport planning process, this chapter first presents an in-depth discussion of how integration is understood. Secondly, the chapter focuses on understanding integration specifically within the fields of land use planning and transport planning. Finally, the chapter concludes by discussing how context is understood and is discussed within integrated land use and transport planning studies.

2.1 Understanding Policy, Integration, and Policy Integration

Currently, a myriad of terms are used to describe a process of policy integration, and the term integration is used to describe a myriad of different policy-making processes (Stead & Meijers, 2009; Trein et al., 2021a; Trein et al., 2023). This is due to the fact that the need for integrated approaches, regardless of the exact meaning of policy integration or the policy sector considering such approaches, is widely recognised across numerous policy sectors, and each of these policy sectors explain what integration is in their own terms (Howlett & Saguin, 2018). Adding to the ambiguity is the lack of agreement also within individual policy sectors themselves. Both scholars and practitioners within the same policy sector may interpret the meaning, purpose, outcome and process of integration differently (Tosun & Lang, 2017; European Environment Agency, 2005). The plurality of interpretations has created a terminological ambiguity where different parties in different policy sectors use the same term to refer to different situations.

In order to bring some clarity to the discussion of what policy integration is, Tosun and Lang (2017) provide an exhaustive examination of different concepts linked to policy integration. They categorise these concepts under two main headings; namely, government-centred and governance-centred concepts. Without going into the details of different concepts and just to demonstrate the diversity of similar approaches and concepts, firstly, government-centred concepts mostly relate to the hierarchical management of cross-cutting issues through mainly structural methods. Among the concepts discussed by Tosun and Lang (2017) are comprehensive planning, holistic government, joined-up
government and whole-of-government approaches. Secondly, governance-centred concepts mostly relate to the ways in which cross-cutting policy problems can be solved and implemented through reinforcing appropriate ways of working. Among the concepts discussed by Tosun and Lang (2017) are holistic governance, policy mainstreaming and boundary-spanning policy regime approaches. Furthermore, network governance (see, e.g., Mu & de Jong, 2016), poly-centric governance (see, e.g., Bousema et al., 2022) and integrative governance (see, e.g., Tønnesen et al., 2022a) can also be added to this list.

The ambiguity in terminological interpretations present serious disadvantages to the policy-making practice regardless of the policy sector or policy level. Plurality in the definitions of policy integration held by the actors of the same policy process leads to difficulties in collaboration and policy implementation as there are usually unspoken differences about what kind of a process to have (Van Straalen, 2012). From the perspective of policy integration research, the plurality in the meaning of the concept leads to challenges in making full use of the theoretical ideas and empirical observations developed in numerous policy integration studies (Tosun & Lang, 2017). Consequently, organisations attempt to apply the concept of policy integration usually without a clear description crystallising what it indicates or how it can be implemented (Stead & Meijers, 2009). This is problematic given the fact that policy integration and the other related terms mentioned earlier are usually regarded as a principle to be followed and even put into the laws to be obeyed, when it comes to addressing the complexity of cross-cutting issues such as climate crisis adaptation (Jordan & Lenschow, 2010). However, enforceability, whether informally or legally, requires an unambiguous definition to be followed. This uncertainty in meaning might be advantageous in terms of increasing the acceptability of policy integration by both policy-makers and decision-makers; nevertheless, it also means increased difficulties in implementation as well as monitoring (European Environment Agency, 2005).

Before discussing what policy integration is, it is helpful to briefly present how the terms “policy” and “integration” are understood in this dissertation. To begin with, the everyday use of the term “policy” is often connected to the management of actions by organisations, and polices are seen as a guide to collective action in a way that they bridge specific human activities to specific favourable results (Meehan, 1985). Briassoulis (2004, p. 9) explains that:

“a policy is not a single, discrete, unitary, disembodied phenomenon, but a series of decisions. It concerns what is actually done (or not done) as opposed to what is proposed or intended, which is the case of decisions; policy implementation and enforcement complete the actual policy process. The main constituent elements of a policy are its object (the characteristics of the problem considered and the theory about it), interested and/or involved actors, their goals (reflecting their value systems), the available structures and procedures (for formulation and implementation), and the instruments used to achieve the goals set.”.
As also highlighted by Howlett and Giest (2012), conceptualising policy-making processes solely as sequences of connected steps is a helpful approach yet such a conceptualisation overlooks the actual content of policy, the diversity of relevant policy actors with their divergent motivations, as well as the methods and sequence of methods required to involve these actors, and whether or not there are universally applicable developmental patterns across various issue domains, industries, or jurisdictions. These explanations bring the key points of a policy into the light, and sets the tone for how policy-making processes are understood in this dissertation. Accordingly, this dissertation sees policy-making processes as complex processes being shaped by many forces.

Next, the key concept to clearly define before discussing policy integration is, inevitably, “integration”, especially in terms of policies and policy-making processes. To begin with understanding how “integration” is interpreted in this dissertation, the basic meaning of the verb “integrate” is useful to look at. According to the Merriam-Webster online dictionary (2023b), to integrate means “to form, coordinate, or blend into a functioning or unified whole; to incorporate into a larger unit; or to unite with something else”. What this brings to mind is that integration, in its essence, has to do with bringing originally separate things together in a cohesive manner while bearing in mind the quality and functioning of the new “whole”.

Building on this definition, integration can be more thoroughly and concretely comprehended when contextualised together with the definition of "policy" as previously defined. In its simplest meaning, policy integration involves bringing policies together across different sectors and government levels to achieve a more coherent and effective approach to solving the original policy problem. According to Underdal (1980), one of the earliest scholars who offered some clarity to the policy integration concept, integrated policy is characterised by three core features: aggregation, comprehensiveness, and consistency. Aggregation refers to the ability to consider a wide range of policy outcomes, including temporal, spatial, and stakeholder dimensions. Comprehensiveness refers to a holistic perspective that evaluates policy alternatives from an overarching viewpoint. Finally, consistency entails implementing integrated policies across all the relevant policy levels and sectors. Aggregation and consistency essentially refer to what kinds of characteristics integrated policies should have at the end of a process; whereas, comprehensiveness hints at the process of integrating policies, even though rather lightly.

Policy integration is conceptualised in this dissertation in a way that it emphasises the process of policy-making. Policy integration, therefore, refers to the process of bringing together policy objects with varying theoretical frameworks, of policy actors with divergent and conflicting goals, competences and values, of policy formulation, implementation and monitoring mechanisms and instruments in a cohesive manner. Essentially, the making of public policy is in the spotlight when talking about policy integration, along with the subject matter and the outcomes as well as organisational and structural changes as a result of significant shortcomings of the established policy-making routines (Eriksson,
Within this perspective, integration is conceptualised as an ever-changing, ever-(d)evolving process, instead of a strictly defined end that is to arrive and to remain. Cejudo and Trein (2023) argue that policy integration is not a one-time event where all the tensions between diverse sectoral logics of policy-making are permanently solved, but rather a continuous process of deliberation to overcome the sector- and governance-level specific objectives.

With an interest specifically in the process of “bringing together”, a key question remains in understanding policy integration: What kind of “bringing together” are we talking about and to what end? Stead (2003) and Candel and Biesbroek (2016) have been formative in answering these questions for the purposes of this dissertation. Stead (2003, p. 334) defines policy integration as:

“the management of cross-cutting issues in policy-making that transcend the boundaries of established policy fields and do not correspond to the institutional responsibilities of individual departments”.

As referred to in this definition, some policy issues, such as climate crisis mitigation and adaptation, cut across multiple policy domains, and they are not the default responsibility of established, individual policy domains. This situation reveals cracks in how the responsibility to respond to such issues is currently organised, which forms the backbone of understanding what policy integration is all about.

To put more flesh on the bones, Candel and Biesbroek (2016, p. 217) define policy integration as:

“an agency-driven process of asynchronous and multi-dimensional policy and institutional change within an existing or newly formed governance system that shapes the system’s and its subsystems’ ability to address a crosscutting policy problem in a more or less holistic manner”.

This definition points towards further characteristics of policy integration that inform the understanding of the concept in this dissertation. First, this definition brings the idea of “institutional change” to the fore. As also explained in Stead’s (2003) definition, policy integration is mainly about the lack of appropriate institutional response mechanisms to cross-cutting issues, and (in)ability of established institutions to address a cross-cutting problem. Therefore, policy integration is inevitably connected to institutional change to overcome the shortcomings of established institutional boundaries. Second, this definition underscores the role of policy actors in effecting institutional change, framing policy integration as agency-driven, i.e., driven by policy actors’ capacity to act and make decisions that may have an effect on the social structure surrounding them3. Third, this definition emphasises the complexity of policy integration, characterised as discontinuous and multi-faceted, as also underscored in how policy is understood in this dissertation. All in all, the definitions of Stead

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3 For further discussion on agency, see, for example, Giddens (1984).
Theoretical Background

(2003) and Candel and Biesbroek (2016) summarise how the concept of policy integration is understood in this dissertation, as they recognise the (in)ability of established institutional boundaries to respond to cross-cutting issues, the need for institutional change, the agency-driven nature of policy integration, and multi-dimensional and complex nature of the process.

Further characteristics of policy integration as understood in this dissertation are that policy integration does not only look at the resulting, integrated whole, but acknowledges the interconnectedness and interdependence of different aspects of the policy problem to be solved (Stead & Meijers, 2009) as key components of the policy-making process. Acknowledging the interdependencies, policy integration requires that all actors involved share a common understanding of what they aim to achieve and how to achieve those aims (Briassoulis, 2004). Accordingly, policy integration demands a commitment to actions and targets that will bring about the desired aims (Stead & Meijers, 2009). This commitment reflects the active engagement of policy actors towards realising the agreed-upon aims, ensuring that they work together to achieve them. Finally, policy integration demands ambitious commitment towards reconciling existing - and, likely, conflicting - policy actions and the new integrated policy action proposals (Rayner & Howlett, 2009).

It is also noteworthy that this dissertation’s understanding of policy integration aligns closely with Tornberg’s (2011) interpretation, particularly in his emphasis on the significance of processes, the inclusion of other studies referring to "coordination" instead of integration, and the preference for the word "integration" over the word "integrative." Firstly, Tornberg (2011) suggests that integration pertains to the processes by which considerations of interdependencies between various policy domains, urban and transport planning in his case, are constructed. Secondly, Tornberg (2011) also notes the terminological ambiguity and inconsistency in the field, and maintains that “coordination” is inevitably included in his research due to discussions around “coordination” and “integration” boiling down to the same ideas in some studies4. Thirdly, Tornberg (2011) also acknowledges that “integration” may be considered as an end state whereas “integrative” may be associated with the process of arriving at integration and, thus, may be a more appropriate term to be used. Nevertheless, as Tornberg (2011) also noted, academic research on the concept has favoured the word “integration” over “integrative” so far. Therefore, adopting the established term “integration” in this research is a more suitable strategy to define the academic niche within which this dissertation is produced. In addition, and perhaps more importantly, as it was mentioned earlier, integration is conceptualised as an ever-changing process in this dissertation. This means that the terms “integration” and, even, “integrated” do not refer to a static end state when compared to the term “integrative”, due to the fact that “perfect policy integration is

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4 Coordination and integration are theoretically and practically different concepts, despite differences being minute, as also acknowledged by Tornberg (2011). Differences in cooperation, coordination and integration are discussed in detail in Section 2.1.2. Degrees and dimensions of policy integration.
not possible but it can nevertheless be improved” (Stead & de Jong, 2006, p. 4). This constitutes another reason to prefer “integration” over “integrative”.

2.1.1 Policy Integration in Previous Studies

Some early examples of the use of the term “integrated planning” or “policy integration” come from, for example, the field of health sciences in 1955 (Scott, 1955) and the field of marine policy in 1980 (Underdal, 1980). In the field of urban policy, Struthers & Williamson’s (1979) work on local economic development in Merseyside is one of the earliest examples of the use of the term.

It was not until the advent of the concept of sustainability that policy integration garnered the attention of a wider audience of scholars, policy-makers and decision-makers (Runhaar et al., 2014). The current conceptualisation of policy integration is mostly linked to the notion of sustainable development (Adelle & Russel, 2013; Briassoulis, 2004; Geerlings & Stead, 2003; Jordan & Lenschow, 2010). Recognition of the impact of climate crisis expanded the basic need for cooperation mostly due to efficiency reasons, into an elaborate approach to policy-making which increased the difficulty for public organisations to respond to the cross-cutting issues of the climate crisis alone (Rode, 2019). Especially since the 1990s, governments faced new challenges in environmental policy and were confronted with the need to accomplish more with limited resources. They also recognised the significance of not only increasing the available instruments, but also trying new combinations of instruments in various sectors towards achieving integrated policies due to sustainability concerns (Rayner & Howlett, 2009).

For example, in the EU, policy integration has been among the important policy issues across the union since the 1990s with its importance linked essentially to environmental action programmes (Geerlings & Stead, 2003). For example, 2030 Agenda for Sustainable Development argues that fruitful policies to achieve the Sustainable Development Goals present a high degree of integration across other policies (UN General Assembly, 2015). In that sense, pursuing the achievement of Sustainable Development Goals provides a normative structure by which different policy problems and solutions can be coordinated around (May et al., 2005).

The blanket reasons to pursue policy integration have been outlined rather well in the scholarly literature. In its most fundamental form, the reason for increased attention to policy integration is eliminating the patchwork kind of fragmented public policies with a narrow sectoral focus, and, instead, installing integrated policies that can offer coherency and consistency in policy goals and means and are better suited for complex, large-scale problems (Rayner & Howlett, 2009). Accordingly, Stead & Jong (2006, p. 4) explain that policy integration can:

- “promote synergies (win-win solutions) between sectors,
- reduce duplication in the policy-making process, both horizontally and vertically,
• promote consistency between policies in different sectors (horizontal) and at different levels of decision-making (vertical),
• improve the achievement of cross-cutting goals or objectives,
• give more focus to the achievement of a government’s overall goals rather than the achievement of narrower sector-oriented goals,
• help to promote innovation in policy development and implementation,
• encourage greater understanding of the effects of policies on other sectors."

Rode (2019) suggests additional reasons to pursue policy integration, such as preventing policy oversight, i.e., leaving certain policy issues unattended because there is no organisation or a unit within an organisation responsible for that specific issue, improving the order of actions taken within the policy-making process, enabling and reinforcing social learning, and encouraging organisational flexibility to promote innovation in policy-making.

Early research on policy integration establishing the need for integration across various scientific disciplines (see, e.g., Underdal, 1980; Barnes, 1993; Richardson, 1997; Banister, 1999) gave way to conceptual and theoretical developmental studies clarifying the meaning(s) of policy integration from different perspectives (see, e.g., Geerlings & Stead, 2003; Hajer, 2003; Briassoulis, 2004; Rayner & Howlett, 2009; Jordan & Lenschow, 2010). As the academic interest in policy integration has increased, it became apparent that acknowledging the need for policy integration and describing what it would mean ideally do not guarantee a successful implementation of policy integration. Subsequently, research focussing on the implementation of policy integration proliferated from various angles, such as facilitators and inhibitors of policy integration (see, e.g., Stead & Meijers, 2009), mechanisms explaining why policy integration increases or decreases in time (see, Biesbroek & Candel, 2020), instruments used for and within policy integration, (see, e.g., van Geet et al., 2021; Cejudo & Michel, 2021), and the role of formal and/or informal institutions in policy integration (Hrelja, 2015; Isaksson et al., 2017; Hrelja et al., 2017; van Geet et al., 2019; Trein et al., 2021b; Duman et al., 2022). In addition, the re-conceptualisation of policy integration as a process (see, Candel and Biesbroek, 2016; Tornberg, 2010) has also contributed to the policy integration research field theoretically.

2.1.2 Degrees and dimensions of policy integration

Further examination of the degrees and dimensions of policy integration can enhance the understanding of what policy integration is. To begin with, policy
integration can be conceptualised as a hierarchical concept which comprises various degrees of integrative qualities, ranging from cooperation to coordination to integration (Geerlings & Stead, 2003; Stead & Meijers, 2009). The idea behind this hierarchical concept is that even though integration includes cooperation and coordination, these three concepts differ in terms of their processes and outcomes. Accordingly, each degree also requires different degrees of input (e.g., the lowest degree requiring the least amount of resources) and provides different outputs (e.g., the lowest degree producing the least integrated policies).

As visualised in Figure 1, at the lowest level of the hierarchy is cooperation which essentially refers to dialogue and information sharing between different parties. Cooperation usually results in more efficient policies which are still confined to their own sector or policy level. One level above is coordination which refers to cooperation, and, in addition, coherence and transparency. Coordination aims to avoid policy conflicts and gaps in policy responses; however, involved parties do not necessarily work towards the same goals. Coordination usually results in coherent policies which are still rooted in their own sector or policy levels. Finally, at the highest level is policy integration which refers to coordination, and, in addition, joint working practices among the involved parties, attempts at creating synergistic, win-win situations between policies by using the same goals in policy formulation. Policy integration results in new joint policies to be implemented and monitored by all involved parties. Therefore, Stead and Meijers (2009) argue that policy integration necessitates higher levels of interaction and congruity, while highlighting higher levels of interdependence and interconnection, both as a requirement and an outcome. In addition, policy integration demands the establishment of formal institutions, including the allocation of additional and common resources, and abandoning stakeholder autonomy (ibid.)

![Figure 1. Hierarchy of policy integration (Stead & Meijers, 2009, p. 323).](image)

For further clarity in terminological preferences in this dissertation, in addition to cooperation, coordination and integration, the term “collaboration” should also be defined. Collaboration is understood as a way of working where multiple organisations work together towards a shared advantage (Huxham, 1996), and this way of working is required by all degrees of integration.
In addition, drawing on the same notions of differences between cooperation, coordination, and integration put forth by Stead and Meijers (2003), Fischer et al. (2013) propose a spectrum-based model for conceptualising policy integration. Fischer et al. (2013) assert that policy integration can be positioned along a spectrum that ranges from light integration to deep integration. In this spectrum, light integration corresponds to cooperation whereas deep integration corresponds to integration (see Figure 2.). The key contribution of this spectrum-based continuum model conceptualisation is to replace the idea of constantly attempting to move up in the hierarchy of integration, with the idea of finding the most effective point in the spectrum for each policy-making process. Within this discussion, Fischer et al. (2013) explain that, in their case study, the policy integration was the most effective in strengthening sectoral (in their case, land use and transport sectors) policies, programmes and plans when the observed level of integration lands around the centre of the spectrum which is close to coordination, rather than cooperation or integration on each end. Therefore, Fischer et al. (2013, p. 22) argue that “less integration was sometimes ‘more’ in terms of the pursuit of policies, plans, programmes and projects that effectively supported one another”. Similarly, Candel (2019) indicates that, even though policy integration seems indisputably advantageous in tackling cross-cutting policy issues, the actual implementation of policy integration is strongly linked to the availability of resources that can be allocated to policy integration which challenges the notion of universal desirability of the concept.

![Figure 2. Continuum of policy integration (Fischer et al., 2013, p. 5).](image)

Before moving to the dimensions of policy integration, two core concepts to clarify are “policy domain/sector” and “policy level” as, without policy domains and levels, it is not possible to discuss the integration of those domains and levels. Firstly, a policy domain can be understood as an element of the political system which is structured around the same policy subjects (Burstein, 1991, p. 328). These political sub-systems, i.e., policy domains, are devised, favoured and selected by policy actors in order to address bounded substantive problems based on a substantively determined common purpose (Laumann and Knoke, 1987, as cited in Wu & Knoke, 2012). Some examples of policy domains are education, agriculture, energy, and public health. This doctoral research specifically focuses on the policy domains of land use and transport. Finally, in this dissertation, policy domain and policy sector are used interchangeably.

Secondly, similar to the policy domain, policy levels should also be clarified, as it is not possible to discuss the vertical dimension of integration without different levels of policy-making. Policy level is a commonly used term, along with government levels, tiers of government, and governance levels, despite theoret-
ical differences, to refer to the administrative levels at which policies are prepared and implemented. Depending on the country, each level has varying degrees of responsibility and authority over different aspects of public policy. Most commonly, policy levels consist of the local, regional, national and international level, with possible additional levels (e.g., state level, federal state level, county level and so on) depending on the specific administrative structure of each country. Brenner (2001) suggests that policy levels should be understood as a provisional discourse to discuss responsibilities of and practices in different levels of governments, without inflating the importance of any level, so that their interdependencies can be understood better.

Moving on to the discussion of policy integration dimensions, several scholars so far have offered alternative conceptualizations of dimensions of policy integration (see, e.g., Briassoulis, 2004; Kidd, 2007). In this dissertation, Geerlings and Stead’s (2003) elaboration of policy integration dimensions is used as a basis to discuss policy integration dimensions. This is owing to the fact that Geerlings & Stead (2003) focus on dimensions of policy integration from the point of view of involved stakeholders, which aligns well with the process-oriented discussion of policy integration in this dissertation. In addition, the dimensions identified by Geerlings & Stead (2003), especially vertical and horizontal dimensions, are the most commonly used dimensions of policy integration both in research and in practice, which facilitated the discussions around the subject during the interviews conducted as a part of this doctoral research.

Geerlings & Stead (2003) identify four dimensions of policy integration. Firstly, vertical integration broadly refers to policy integration between multiple policy levels, e.g., in order to improve consistency between policy levels. Secondly, horizontal integration broadly refers to policy integration between different policy domains, e.g., in order to steer away from siloed thinking. Similar to the multiplicity of terms to refer to policy integration, there are various terms employed by different scholars based on theoretical nuances of horizontal integration. Kidd (2007) uses the term “sectoral integration” to denote the joining up of different public policy sectors, and describes two types of it, namely, cross-sectoral integration and inter-agency integration. In this case, cross-sectoral integration refers to the integration between different policy domains which can operate at various scales ranging from trans-national to the level of one single agency. The second dimension, inter-agency integration, which is also recognised by Cowell & Martin (2003), relates to the integration between different agencies which could be public or private. In connection, a clarification can be

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5 Policy levels in Finland, which are of interest to dissertation, are explained in Chapter 4.
6 In this dissertation, the term “dimension” is preferred over “type” to reflect the idea of policy integration as a complex process that involves various stakeholders from different policy sectors and levels. This approach contrasts with the conceptualisation of sectoral and scalar differences as distinct types of policy integration, which are considered to be unrelated and unaffected by one another. The preference for “dimension” underscores the interconnectedness and interdependence of different aspects of policy integration, and it is consistent with the recognition of the multifaceted and dynamic nature of policy-making processes in this dissertation.
made: Horizontal integration can be inter-organisational, i.e., involving multiple organisations, or intra-organisational, i.e., involving multiple sections or professions within one organisation (Geerlings & Stead, 2003; Cowell & Martin, 2003). In this dissertation, horizontal integration specifically refers to integration between different policy domains, regardless of whether it is intra-organisational or inter-organisational. Thirdly, inter-territorial integration broadly refers to integration of different policy domains between neighbouring local governments with shared interests, in order to essentially address cross-border or regional challenges and achieve economies of scale in infrastructure and service provision. Finally, intra-sectoral broadly refers to policy integration across different sectors within one department, according to Geerlings and Stead (2003). Nevertheless, as described in horizontal integration above, intra-sectoral integration is considered a part of horizontal integration in this dissertation, to provide terminological clarity. All in all, this dissertation discusses the dimensions of policy integration across three dimensions, namely, vertical, horizontal and inter-territorial.

2.1.3 Discussing policy integration from the perspective of governance capacity

To reiterate, in this dissertation, policy integration is understood as an ever-changing, ever-(d)evolving, continuous process of deliberation to overcome vertically, horizontally or inter-territorially disparate objectives and procedures; instead of as a one-time event where all the tensions are solved to reach a strictly defined end that can be arrived at. In light of this understanding, governance capacity and organisational learning emerge as meaningful concepts to broaden the discussion of policy integration.

To begin with, governance capacity can be defined as “the organisational and systemic resources and skills necessary to make sound policy choices and implement them effectively” (Ramesh et al., 2016, pp. 3-4). In this context, governance capacity is directly connected to the ability of a public organisation to perform its functions and fulfil its duties through learning, experimenting, and adapting to threats and opportunities (Innes & Booher, 2003). There are other terms similar to governance capacity, such as state capacity (see, e.g., Cingolani, 2013), institutional capacity (see, e.g., Domorenok et al., 2021) and policy capacity (see, e.g., Wu et al., 2015). Nevertheless, governance capacity aligns well with the way policy-making processes and policy integration are interpreted in this dissertation, especially in terms of how governance is linked to private and civil society actors’ diverse steering mechanisms, resources and instruments for collective deliberation and interactive production of public policy towards the achievement of common goals (Ansell & Torfing, 2022; Treib et al., 2007).

Despite a lack of studies exploring the connection between governance capacity and policy integration in detail (Howlett & Saguin, 2018), it is clear that reconciling vertical, horizontal and inter-territorial discrepancies in policies requires certain competences and readiness from organisations as well as actors, to avoid the danger of producing a new integrated policy that is less efficient and
Theoretical Background

effective than the previous policies (Kern & Howlett, 2009). Therefore, an increasing number of cross-sectoral and cross-scaler policy issues have shifted focus to developing governance capacities to be able to respond to them. Organisations need increased governance capacities to be able to generate new integrated policies and to incorporate existing policies into new joint policies, despite the path-dependent nature of policies as well as policy-making processes. In light of this, what policy integration essentially requires to begin with, and provides throughout and at the end is an increased ability to manage “cross-cutting issues in policy-making that transcend the boundaries of established policy fields and do not correspond to the institutional responsibilities of individual departments” (Stead, 2003, p. 334). Accordingly, the presence of governance capacity for policy integration increases the likelihood of not only being able to set up a policy integration process but also actually implementing the integrated policy (Cejudo & Trein, 2023).

According to Christensen et al. (2016), governance capacity can be discussed in terms of different dimensions such as capacities of coordination, analytical, regulation and delivery. Firstly, coordination capacity refers to the ability of organisations to collaborate with other organisations to achieve common goals. Coordination capacity is essential in policy integration situations where various actors need to come together to share resources, exchange information and work towards a common goal, as organisations with higher coordination capacity are better equipped to respond to the emerging challenges of policy integration. Secondly, analytical capacity concerns the ability to collect, analyse and interpret information in order to make informed policy decisions. Analytical capacity is critical in policy integration, as it expands organisations’ capacities to define and solve the policy problem at hand when the problem concerns different organisations across vertical, horizontal and inter-territorial policy spaces. Thirdly, regulation capacity refers to the ability to establish and enforce rules, standards and procedures as well as to monitor compliance with them. In policy integration, regulation capacity is especially critical in ensuring that actions are taken in accordance with the existing protocols and guidelines as the policy integration processes usually involve individual and collective actors in policymaking situations outside of their defined responsibilities. In addition, regulation capacity is also vital in establishing new kinds of procedures and guidelines to effectively and efficiently implement policy integration. Finally, delivery capacity pertains to the ability to implement policies effectively and efficiently. Delivery capacity is essential in moving from problem definition and solution stages of policy-making to actually realise the integrated policy actions. All in all, engaging in policy integration processes both requires and enhances each dimension, and different aggregations of these dimensions generate different degrees of policy integration (Domorenok et al., 2021).

Building the governance capacities for policy integration goes beyond learning more about one or two technical skills that may be required in a single project. It refers to developing long term organisational resources and skills in the face of ever-changing policy problems as policy integration demands a comprehen-
sive approach. Therefore, investing in the resources and skills to build the governance capacities to respond to cross-cutting policy issues is a long-term, continuous effort, which brings the concept of organisational learning into the discussion. Organisational learning, understood as

“a social system whose members have learned conscious communal processes for continually generating, retaining and leveraging individual and collective learning to improve performance of the organisational system in ways important to all stakeholders; and monitoring and improving performance” (Drew & Smith, 1995, p. 5),

is unequivocally critical in building governance capacities for policy integration. Simply put, organisational learning needs to be put on the spotlight, if organisations want to ensure that they do not fall behind when the challenges they are expected to tackle are evolving at an unprecedented pace.

2.2 Integration of Land Use and Transport Planning Processes

2.2.1 Connection between land use and transport

Studies to date have firmly established the bilateral connection between land use and transport. The physical layout of an urban area plays a major role not only in determining the demand for transport but also in how people travel, by outlining mobility options such as private cars, public transport or active modes such as cycling and walking (Banister, 2008; Bertolini, 2012). Van Lierop et al. (2017) argue that land use was planned and developed (in the modern meaning of the words) around existing transport for the first time in the 19th century when horse-drawn trams started to run on rails and thus, rails became a permanent component of cities. Studying the two-way relationship between land use and transport in a methodological manner, the land use and transport interaction studies go back as far as to the 1950s with, for example, Mitchell and Rapkin (1954). In their book, Mitchell and Rapkin (1954) aim at providing a more systematic underpinning for discussing the interaction of urban land use and traffic movement. For this purpose, they argue for a methodological framework that would connect the allocation of land uses in an urban setting with transport infrastructure elements such as highways and railroads.

The “land use and transport feedback cycle” developed by Wegener & Fürst (1999) has been among the most influential descriptions of the interaction between land use and transport. According to this concept, land use and transport affect each other in a linear order in a cyclical manner (as also shown in Figure 3) Land use choices affect where people’s activities, such as living, working and shopping, take place. Movement from one activity location to another creates the basis for transport system developments. The transport developments affect the accessibility of activity locations, and finally accessibility level of locations lead to (or do not lead to) new land use developments.
Discussing the land use and transport feedback cycle, Bertolini (2012, p. 20) argues that “the simplicity of the transport land use feedback cycle is both its strength and its weakness” as there is a much bigger variety of influences to be taken into account while trying to conceptualise the relationship between land use and transport, requiring that the feedback cycle should be observed as an open system regulated by those influenced. Bertolini (2012) points out that, as shown with dashed arrows in Figure 4 as additions to the original land use and transport feedback cycle of Wegener & Fürst (1999) shown in Figure 3; transport developments, activities, land use developments and accessibility do not only affect each other in a simplistically linear manner, but they are also affected by many other factors. In addition, duration of impact from one to another varies greatly, as a direct result of the complexity of the feedback cycle. For example, activity patterns may increase or decrease rather instantaneously in a matter of days, months or couple of years; whereas adjustments in transport demand and supply may take much longer such as decades.

Providing a more practical view to the discussion, Banister (1999) establishes three key relationships between land use and transport:

- “Density of development: As the density of development increases, the average trip length, the use of the car, and distance travelled all reduce.” (p. 316)

- “Settlement size: The larger the settlement size, the shorter the trips and the greater the proportion of trips by public transport.” (p. 317)

- “Location: Decisions being made now by the planning authorities over the allocation of new housing will significantly affect patterns of travel for the next 50 years.” (p. 318)
Building on these key relationships, from a sustainability perspective, sustainable transport unequivocally requires cutting the length of travel substantially (Banister, 2011). Ewing and Cervero (2010) argue that increased accessibility is strongly correlated to decreased vehicle miles travelled and, particularly, that walking as a sustainable travel mode is heavily dependent on “measures of land use diversity, intersection density, and the number of destinations within walking distance” (p. 265) in their meta-analysis of more than 50 studies published about urban travel and built environment. The strong effects of urban form on sustainable mobility choices can also be seen from the perspective of energy use. Different urban forms allowing higher population densities lead to reductions on average energy use of individuals for transport (Næss et al., 1996). Reducing transport demand by influencing a coordinated development of land use and transport systems has been a common goal in European policies and research programmes (for a review, see Geerlings & Stead, 2003).

2.2.2 Critique and status quo of land use planning and transport planning practices

Land use planning and transport planning processes have been criticised in the last decades for their shortcomings in addressing complex urban issues, such as the climate crisis or decreasing quality of life in cities, holistically, effectively and efficiently. To begin with:

“traditional land-use planning, as more passive, pragmatic, and localised planning, aims at controlling land use through a zoning system. ... Moreover, most land-use plans have a predominant focus on ‘physical’ aspects, providing ‘physical’ solutions to social or economic problems” (Albrechts, 2004, p. 745).
Such shortcomings of the traditional land use planning practice, such as proposing fragmented, reactive and short-term fixes to long-term, complex problems requiring a comprehensive and proactive approach, and the inability to effectively engage multiple stakeholders, led to the proliferation of spatial planning ideas (Nadin, 2006). Nadin (2006) writes that spatial planning refers to a comprehensive path towards the management of urban environments. Unlike land use planning, spatial planning transcends the fragmented approach of zoning land for specific uses, and emphasises the spatial configuration of human activities spread across a physical space and the resulting function of that space. In addition, spatial planning acknowledges the interconnectedness of several components of urban environments, such as housing and transport systems, and aims at promoting sustainable development, higher quality of life in urban areas through increased social and financial harmony.

Discussing policy integration through a spatial planning lens, some scholars (e.g., Vigar, 2009; Kidd, 2007; Stead & Meijers, 2009; Rode, 2019) see integration as an essential feature of spatial planning. In this discussion, spatial planning is considered to be a holistic form of land use planning that encourages long-term strategic visions, supports sustainable urban mobility choices, and improves collaboration between stakeholders (van Straalen, 2012). Accordingly, it is argued that integration in spatial planning may be regarded as a tautological concept (Vigar, 2009), while others suggest that the understanding of how complex the integration within the realm of spatial planning theory and practice remains in its early stages (Kidd, 2007). Stead and Meijers (2009) further suggest that spatial planning plays a dual role in policy integration by serving as an integrating force between sectors and by steering sectoral policies. When considering the former role, a sectoral policy framework is critical for policy integration, and spatial planning can provide such a framework by serving as a channel of inter-sectoral communication and formulating planning concepts that establish a framework for sectoral policies. In terms of the latter role, long-term spatial visions or strategies are instrumental in drawing in and allocating resources across various sectors within a region, increasing the coherence of resource allocation, and alleviating short-sightedness in political decision-making within public policy. Therefore, in this perspective, spatial planning can be regarded as an essential element of policy integration that can serve as a canvas for other policy domains to be integrated into, and provide a framework for sectoral policies while playing a critical role in steering them.

Owing to the fact that this dissertation interprets policy integration in terms of processual questions, “land use and transport planning integration” is chosen as appropriate, instead of “spatial planning” as an encompassing term or the term “spatial planning and transport planning integration”. This is because, firstly, as described above, use of the term spatial planning can obfuscate the discussion of policy integration due to spatial planning being regarded as an all-encompassing term. Secondly, as the aim of the dissertation is to bring about the processual questions of how two different policy sectors come together,

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7 For a detailed comparison of differences between land use planning and spatial planning, see Nadin (2006).
holding the discussion within the limits of spatial planning only is too restrictive as it would not allow a deeper consideration of transport planning issues.

On the other hand, traditional transport planning is usually marked with a technical-rational approach necessitated mainly by financial considerations such as cost effectiveness in terms of minimising time spent in travel assigned a monetary cost, where the planner is an objective observer who cannot and will not be a part of the transport system, facts can be clearly formed independent from sociological realities, and transport modelling and data analysis offer uncontestable facts for proposing the one, correct solution (Willson, 2001; Banister, 2008; Schiefelbusch, 2010). In this approach, transport policy is expected to be generated strictly according to the estimation of societal transport demand (Banister, 2008), i.e., the so-called predict-and-provide approach. However, such technical-rational approaches usually result in oversight of experiences, goals and needs of stakeholders involved in the planning processes or impacted by the processes (Head, 2022). Transport planning processes marked by technical-rational approach usually lead to fragmented responses shaped by sub-optimisation of urban transport (Hrelja et al., 2017; Tornberg & Odhage, 2018; Hansson, 2013). Marsden and Reardon (2017), through their study of 100 articles circulated in two most well-known journals of transport policy, argue that such approaches remain the most dominant in current transport policy research, and lead to critical discrepancies between applied studies of transport policy-making and the actual applicability of those studies as such studies do not sufficiently and accurately address the realities of transport policy-making.

In connection, there has been a transition away from the predict-and-provide approach, criticised for increasing traffic congestion and perpetuating private car use. Instead, an accessibility approach materialised, with the potential of developing inclusive and sustainable transport systems and prioritising the needs of residents (Geurs & van Wee, 2004; Curtis & Scheurer, 2010; Cheng et al., 2017; Straatemeier, & Bertolini, 2020; ITF, 2021). As defined by Hansen (1959, p.73), accessibility is “a measure of the intensity of the possibility of interaction rather than just a measure of the ease of interaction”. An accessibility approach focuses on fostering transport systems that emphasise equitable and sustainable access to key services, amenities, and opportunities for all members of society.

As a response to the shortcomings of the current transport policy-making processes, communicative rationality has garnered the interest of transport scholars (Willson, 2001; Tornberg & Odhage, 2018). Communicative rationality favours open and inclusive dialogue between all stakeholders affecting and affected by planning processes, to achieve social equity, transparency, accountability, and consensus. On the other hand, communicative rationality falls short in efficiency due to time-consuming engagement of many stakeholders, and in ignoring the power perspective that suggests that weaker stakeholders may be marginalised. Nevertheless, the communicative ideals garnered the attention of many researchers, leading the way towards collaborative processes.

Along with the change in mindset from being mobility-oriented to accessibility-oriented in a communicatively rational discussion, collaborative issues of
transport planning started to receive attention from transport planning scholars and practitioners, as such a shift brings about questions of bringing different stakeholders’ competences, objectives and needs together to collectively ponder upon and develop the problem definitions, means and ends to urban transport problems as well as far-reaching social problems (Willson, 2011; Legacy et al., 2012; Tornberg & Odhage, 2018; Paulsson et al., 2018). As the transport planning practices have become more interdisciplinary in the last 3 decades (Holden et al., 2019), Hrelja et al. (2020) point out two collaborative challenges. The first challenge relates to the complexities experienced in establishing efficient public transport systems, such as the coordination of schedules, consistent ticketing systems and so on. The second challenge relates to the complexities experienced in forming an integrated approach to land use and transport planning, which constitutes the key problem addressed by this doctoral research.

Currently the systematic connection between land use planning and transport planning is weakened due to different professions being responsible for different parts of the same system, which suggests a “strange estrangement” between the professions involved (Neuman & Smith, 2010). Similarly, Mäntysalo & Kankaaninen (2013) define this estrangement as two autonomous policy domains - in a sense that each operates according to their own conceptualisations, analysis approaches and methods, and production methods - in a relatively balanced relationship - in a sense that they are dependent on each other to exchange information and contribute cohesively to sustainable urban development. As the problems to be tackled by land use planners and transport planners are getting increasingly complex, each profession has developed even more specialised approaches and tools to increase their capacity to address such complexity, further segregating the practices from each other (Tornberg, 2011).

According to te Brömmelstroet & Bertolini (2010), there are institutional and substantive differences leading to the foundations of how land use planning and transport planning practices operate within their own silos. Te Brömmelstroet and Bertolini (2010) explain that institutional differences concern long-standing and widely accepted rules and procedures recognised in land use planning and transport planning practices. Examples include a number of difficulties, including institutional obstacles like unique budgets, separate operating procedures, and a lack of institutional interest in integration, as well as cultural obstacles like a reluctance among departmental cultures and ineffective management practices (ibid.). Substantive differences, on the other hand, concern issues related to how land use planners and transport planners frame the problem at hand and devise their procedural approach to the problem. Accordingly, substantive differences include differences in “planning objects (places vs. networks/flows); tools and instruments (e.g., spatial GIS vs. mathematical transport models); operational modes (holistic visioning vs. optimising problem solving); and educational careers” (ibid., p. 86). Substantive differences shape land use planners’ and transport planners’ professional identities, and these professionals show up to integrated planning processes with sectoral approaches, further segregating the land use planning and transport planning practices while each getting increasingly specialised.
Ironically, the more specialised and segregated land use planning and transport planning have become, the smaller their governance capacity to respond to the complexity of the contemporary urban questions has gotten. The reasons for this reduced governance capacity are manifold. Firstly, with the increasing number of collective and individual actors taking part in urban planning processes (da Cruz et al., 2002; Eräranta, 2019), coordination capacity of organisations is continuously strained as both the land use and transport actors possess tools and approaches tailored to their sectoral and scalar needs. Secondly, changes in different policy levels’ responsibilities and emergence of more informal planning spaces (e.g., emergence of soft spaces, Hrelja et al., 2017; Mattila & Heinilä, 2022; Pettersson & Frisk, 2016) and more networked forms of governance (Juhola & Westerhoff, 2011; Mu & de Jong, 2016) result in challenges in coordination, regulation and delivery capacities due to increased specialisation. Finally, in urban areas, density, diversity and design of land uses (Cervero & Kockelman, 1997) display a high level interdependency with the transport system as explained in Section 2.2.1, which has critical implications on the delivery capacity of both land use planning practice and transport planning practice as fragmented areas of accountability, and competing interests limit their ability to offer higher levels of accessibility (Hrelja et al., 2020).

2.2.3 Defining integration of land use and transport planning

Integration of land use and transport planning can be conceptualised as “a specific form of policy integration” (van Geet et al., 2021, p. 129). This specific form of policy integration is particularly targeted at issues emerging out of the siloed practices of land use planning and transport planning.

The reasons to pursue integration of land use and transport planning purposes have followed the same development path as the policy integration literature in general, mainly revolving around the subjects of sustainable urban development and sustainable urban mobility. The premise here has been the necessity to diminish the need to travel by planning compact cities (Pharoah, 1996; Banister, 1999).

Building on the definition of policy integration outlined in Section 2.1., in this dissertation, integration of land use and transport planning is conceptualised in a way that processual aspects are highlighted. Accordingly, integration of land use and transport planning is an ever-changing, ever-evolving process where sectoral and scalar tensions of land use planning and transport planning practices are continuously and collectively deliberated to reach a temporary consensus on problem definition and measures to address the problem. Correspondingly, integration of land use and transport planning requires long-term changes in the formal and informal institutional structures of land use planning and transport planning practices (Stenstadvold, 1996; Curtis & James, 2004; Stead & de Jong, 2006; Hatzopoulou & Miller, 2008; Hrelja, 2015; Isaksson et al., 2017; Hrelja et al., 2017; van Geet et al., 2019), while also recognising the agency-driven nature of policy integration processes (Stead & Meijers, 2009) as well as the complex nature of these processes (Tornberg & Odhage, 2022). The end goal, in this case, is not a comprehensive blueprint kind of deterministic
plan, but to concentrate on the interdependencies and interconnections in the urban environment within a siloed institutional framework (Heeres et al., 2016).

In the scholarly literature, integration of land use and transport has been conceptualised in different ways, e.g., as consisting of a strategic level and an operational level (see, e.g., van Geet, 2021), as the three highest levels of an eight-levelled integration ladder (Hull, 2005) or as the external solution space of a three-ranged integration model (Heeres et al., 2016). Owing to the process focus of this dissertation, degrees and dimensions of policy integration explained in Section 2.1.2. are applied to the conceptualisation of integration of land use and transport planning. Accordingly, integration of land use and transport planning is placed on a spectrum ranging from cooperation to coordination to integration between numerous stakeholders taking part in integrated land use and transport planning processes. Similarly, dimensions of land use and transport integration consist of a horizontal dimension concerning land use planners and transport planners, a vertical dimension concerning the local municipal level, the regional/metropolitan level and the state level, and an inter-territorial dimension concerning neighbouring municipalities or regions that make up a functional urban area (see Dijkstra et al., 2019 for functional urban area definition).

In this dissertation, “land use and transport integration”, “integration of land use and transport planning” and “integrated land use and transport planning” are used interchangeably due to the reasons outlined above.

2.2.4 Development of research on the integration of land use and transport planning

Following the recognition of reduced governance capacity of land use planning and transport planning practices, integration of these practices has been on the research agenda for quite some time (Stead, 2003). The basic argument to pursue the integration of land use and transport planning is the expectation that through such planning practices, these two policy domains can achieve a holistic and synergistic approach to the current sustainability challenges in cities and regions in a manner that neither of them is capable of achieving separately (Geerlings & Stead, 2003; Curtis & James, 2004; Kidd, 2007; te Brömmelstroet & Bertolini, 2010). In other words, integration of land use and transport planning aims at increasing the governance capacity of these practices both individually and together, in order to ensure that they can function efficiently and effectively in a world that is in constant flux.

Land use and transport integration as a stand-alone research field has started to appear more commonly around the early 1990s. One of the main focuses of land use and transport integration research has been on practical measures that planning and/or transport authorities should implement (see, e.g., Perkins & Mackintosh, 1994; Banister, 1999; Rooney et al., 2010; Mesa et al., 2023; McCain et al., 2023). To illustrate, Perkins and Mackintosh (1994, p. 176) propose that urban areas should prioritise mixed uses, high quality pedestrian and cycling infrastructure, urban amenities, and jobs around railway stations, as an
integrated land use and transport strategy. Such ideas are mostly reflected in the transit-oriented development (TOD) studies. TOD, originated in the USA and then appeared in Europe expanding to the regional scale (Staricco & Brovarone, 2018), is seen as one of the key tools to promote the implementation of land use and transport integration (McLeod et al., 2017; Vale et al., 2018; van Geet, 2019). TOD can be defined as “land use and transportation planning that makes walking, cycling, and transit use convenient and desirable, and that maximises the efficiency of existing public transit services by focusing development around public transit stations, stops, and exchanges” (Thomas & Bertolini, 2017). In practical terms, TOD generally aims at developing dense neighbourhoods following density, design and diversity principles (Cervero & Kockelman, 1997) around rail stations and promoting the use of public transport and active transport modes such as walking and cycling, which is arguably the epitome of the integration of land use and transport planning manifested physically. An important issue, however, in relation to the land use and transport integration research, and specifically to this dissertation, is that a TOD strategy in itself is not a guarantor of bringing about the claimed outcomes of TOD. The outcomes of TOD implementations are contingent on a number of contextual factors (Ibraeva et al., 2020).

As the number of studies examining the practical measures to be taken under the umbrella of land use and transport integration increased, it has also become clear that the cases of successful implementation remained rather limited (Curtis, 1999; Geerlings & Stead, 2003; Hull, 2005; McEldowney et al., 2005; Hatzopoulou & Miller, 2008; Vigar, 2009; Stead & Meijers, 2009; Preston, 2010; Holden, 2012; Duffhues & Bertolini, 2016; Isaksson, 2017; van Geet et al., 2021) as did the academic research concentrating on the implementation of integrated land use and transport policy (Geerlings & Stead, 2003). Several scholars theorised as to why there is a gap between the high levels of implementation will and interest, and the low levels of implementation success. For example, according to Hull (2005), there are two reasons. Firstly, it has remained unclear what kind of role the integration of land use and transport planning can and should assume at the local practical policy level. Secondly, solutions generated within integrated land use and transport planning processes have to be both financially justifiable with the traditional transport planning mindset and at the same time, fulfil the broader criteria set by sustainability measures which are usually in disagreement with such financial considerations. Similar to the former argument, Stead & Geerlings (2005, p. 451) assert that the concept of policy integration remains “fuzzy for many policy-makers, somewhat analogous to the concept of sustainable development”, which results in ambiguity in means to achieve land use and transport integration. From a different perspective, McEldowney et al. (2005) argue that even when integrated land use and transport strategies aiming to achieve sustainable urban goals are accepted at large; at the level of implementation, NIMBY-ism can inhibit such efforts due to the fact that decision-makers, i.e., elected officials, review the proposals based on the public will and popularity.
In connection to the implementation gap described above, barriers and enablers have become a key part of land use and transport integration research (e.g., Stenstadavold, 1996; Stead & de Jong, 2006; Stead & Meijers, 2009; te Brömmelstroet & Bertolini, 2010; Tornberg, 2011; Lee et al., 2022). Most notably, Stead and Meijers (2009) have provided an exhaustive list of facilitators and inhibitors for policy integration. Stead and Meijers (2009) explain five categories of barriers and enablers; namely, political (e.g., political backing or lack thereof), institutional/organisational (e.g., standardised procedures or lack thereof), economic/financial factors (e.g., shared costs of implementation or departmental/sectoral budgets), process, management and instrumental factors (e.g., systematic dialogue between sectors or lack thereof), behavioural, cultural and personal (e.g., good historical relationships among personnel or lack thereof), showcasing the wide range of issues that enable or inhibit the integration of land use and transport planning. Stead and Meijers (2009) also point out that it is impossible to assign a weight for each category in comparison to each other, and argue that none of the factors alone can ensure successful policy integration and none of the factors alone can lead to a policy integration failure. Under different circumstances, different barriers and facilitators can gain more importance, which forms the foundations of the key problematic of this doctoral research.

2.2.5 A procedural interest on the integration of land use and transport planning

The built environment is shaped by the actions, interpretations, and negotiations of individual and collective planning actors (Healey, 2006). Such processes through which vertical, horizontal and inter-territorial discrepancies among planning actors are reconciled to shape the built environment require a detailed examination (Stead & Meijers, 2004; Curtis & James, 2004; Legacy et al., 2012). This is because what is written and claimed in normative terms about land use and transport integration in academic papers or policy documents, can be drastically different from the actual changes pursuing policy may bring to the everyday work of planning actors (Adelle & Russel, 2013). Nevertheless, despite a well-grounded understanding of enablers and inhibitors of the integration of land use and transport planning, the knowledge of processes where those enablers and inhibitors emerge as well as are dealt with is scarce (Duffhues & Bertolini, 2016). Accordingly, at present, the study of the integration of land use and transport planning processes is not in need of a universal integration theory, but a theory-driven examination of those iterative steps of collaborative decision-making (Cejudo & Trein, 2023). Consequently, as a reaction to the recurrent discussions on the implementation challenges experienced in the integration of land use and transport planning processes, a conceptual and empirical interest in the actual processes of such integration have emerged lately, with specific interest in how integrated policy processes can be reinforced and encouraged (Hudson et al., 2019).

From a theoretical standpoint, as shown in Figure 5, Curtis & James (2004, p. 278) explain the basic progression of an integrated policy process:
“Government policy is progressed by institutions towards the desired outcome by virtue of the approach institutions take to land use transport integration, the use of resources and tools, and the relationships between the agencies within the institution. The achievement of the desired outcomes then informs government policy thereby closing the loop. In practice the process is not linear and can comprise numerous iterations within this loop as each stage informs previous stages.”

![Figure 5. Process of government policy to outcomes (Curtis & James, 2004).](image)

It is crucial to understand that these steps do not always take place one after another, take the same amount of time and are not stable across different governance contexts. On the contrary, they take place in a nonlinear fashion iteratively and get affected by a multitude of factors shaping their mode of operation (Tennøy et al., 2016). They are all connected to each other affecting, altering, reinforcing, enabling or restricting each other, forming the planning process itself.

Offering an influential conceptual contribution to the discussion of policy integration processes is Candel and Biesbroek (2016) where the authors define policy integration with a processual perspective in mind. The authors recognise the dynamic, non-linear nature of policy integration processes in constant flux affected by the contextual conditions. Consequently, they assert that “policy integration should be understood as a process that entails various elements that do not necessarily move in a concerted manner but may develop at different paces or even in opposite directions” (Candel & Biesbroek, 2016, p.211). This argument stems from the earlier conceptualisation that policy integration is often understood in normative ways, and thus, seen as a static, desired outcome to be reached. The study of this desired outcome would, naturally, solely focus on whether policy integration is implemented or not, leaving the mechanisms for its progression or regression neglected. Therefore, Candel and Biesbroek (2016) argue for a processual shift from a “desired outcome approach” toward a “differentiated processual understanding of integration” that would raise questions such as “when integration is fully realised, what elements constitute integration processes and how these may develop over time” (Candel & Biesbroek, 2016, p.213). What Candel and Biesbroek (2016) offer is a conceptual expansion from a linear progression of a homogeneous process, to a heterogeneous process that consists of many components evolving and devolving simultaneously as a result of various factors affecting such changes. Such heterogeneity also invalidates the idea of reaching one kind of outcome that is defined as desired according to certain criteria, and replaces it with the questions of mechanisms affecting the degrees of integration.
Within land use and transport integration research, the emphasis on the importance of processes has been demonstrated in different - but less conceptually elaborate - ways. For example, Tornberg (2010, p. 149) focuses on the land use and transport integration processes that lead to different perspectives, instead of aiming at absolute consensus, and argues that “the challenge of coordinating transport and land use planning cannot merely be seen as a merger of activities from two organisational entities through common plans, but it has to be understood in terms of interaction between people, and their participation in common planning processes”. Also paying attention to the interrelationships between actors instead of the desired outcomes of the processes, Hrelja et al. (2020) highlights the significance of the long-term capacity-building nature of processes, and describes land use and transport integration processes as a step-by-step learning and trust-building process where the evolving interrelationships between actors as well as actors’ own behavioural patterns determine the increase in collaborative practices over time. Approaching the process discussion from a different perspective, van Geet et al. (2021) emphasise the importance of land use and transport integration instruments compared on the basis of how they structure the interrelationships between actors.

Bringing together the academic discussions on the subject, the current understanding of integration of land use and transport planning processes suggest that such processes consist of iterative steps of decision-making through the interactions between individual and collective planning actors. Therefore, the integration of land use and transport planning is anything but an unambiguous process defined, conducted and monitored by one organisation (Paulsson, 2018). In more traditional depictions, planning processes are illustrated as a linear series of decision-making steps where each step locks-in the possibilities, meanings and needs for the following step, in alignment with a technical-rational approach (Tornberg & Odhage, 2018; Lejano, 2012). Nevertheless, with new knowledge and understanding being developed as the governance capacities increase along the way, each step creates new possibilities for the upcoming steps as well as raises new questions for the previous steps, generating an iteratively deliberative, uncertain, contested planning process (Tornberg & Odhage, 2018; Lejano, 2012). Within the subject of integrated land use and transport planning, the procedural aspects are characterised by a series of carefully outlined phases, with each phase encompassing interdependent tasks, and thus, the order, inclusion and exclusion of these tasks regulate the degree of integration in the planning process (Rode, 2019).

There are further intricacies of integration of land use and transport planning processes than the aforementioned. Heeres et al. (2016) point out that while vertical, horizontal and inter-territorial discrepancies of land use and transport planning are reconciled, there is the risk of negotiated nonsense if the nature and frequency of collaborative actions among individual and collective actors are not followed by institutional arrangements. In addition, the authors also point out that due to the differences in distinct stages of planning processes in terms of objectives and needs (e.g., early stages dealing with goal formulation whereas later stages dealing with implementation), the challenges transform
along the way (ibid.). Underscoring the significance of process structures alleviating the risks of vagueness and irrelevance, Tornberg and Odhage (2022, p. 2398) write that:

“increased understanding of a problem is not synonymous with increased ability to handle it, and although a zoomed-out comprehensive perspective may illuminate inter-sectoral relationships, it comes with the risk of vagueness and a perception of irrelevance by the actors involved”.

Finally, a contemporary discussion on the processes of integration of land use and transport planning would be incomplete without mentioning the Sustainable Urban Mobility Plans (SUMPs) due to them being among the most developed examples of process structures for integrated land use and transport planning, despite essentially being a mobility plan. A SUMP is “a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. It builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles” (Eltis, n.d.). Taking integration as one the key principles, SUMPs emphasise evaluating existing governance capacities to leverage them as well as to identify improvement points, and promote horizontal, vertical and inter-territorial collaboration in every step of the way. Despite its checklist type of process description diminishing the complex interplay and iterations between different stages and presenting them in a linear fashion until the last step (Marsden and Reardon, 2017)\(^8\), the SUMP process accurately describes the breadth of issues to be taken into account during a process of land use and transport integration.

### 2.3 Connection between Context and Integration of Land Use and Transport Planning Processes

#### 2.3.1 Understanding the notion of context

Despite the common calls for context-specific studies of land use and transport integration, the way context is understood, operationalised and analysed is not consistent across the research field. This is, arguably, due to the word itself being rather generic and not referring to a specific epistemological standpoint. Despite the lack of a standard definition within the research field, it is still possible to find some categories within the interpretation of context in urban planning studies, as exemplified by Adelfio et al. (2021) and Couch et al. (2011). Adelfio et al. (2021) identify seven types of context, namely, historical, political, planning, legislative, physical-geographical, economic, and social; whereas Couch et al. (2011) focus on economic, demographic, land use, and governance contexts. Both studies utilise the notion of context analytically in a manner that is needed for their specific studies, rather than drawing from a previously established idea

\(^8\) See Hartl et al. (2023) for a review of shortcomings of SUMP processes from the perspective of sustainability transitions.
of context. On the other hand, there are also other studies that revolve around a narrower understanding of context—but not necessarily strictly limited to one kind of understanding—such as the physical-environmental context (see, e.g., Zemp et al., 2011), the legal-administrative context (see, e.g., Hytönen, 2016; Klein & Juhola, 2018), the social-cultural and political context (see, e.g., Watson, 2016) or the historical context (see, e.g., Fischer et al., 2013).

Due to a lack of commonly agreed understanding of the notion of context within land use and transport planning studies, a similar approach taken to define “integration” earlier in this chapter is also helpful here: starting from the basics of the words to understand what they essentially refer to, before jumping into complex academic arguments. In the Merriam-Webster online dictionary (2023a), context is defined as “the interrelated conditions in which something exists or occurs; environment; setting”. Taking this as a premise, many interrelated factors intersect, and the emergent situation is defined as the context within which integrated land use and transport planning processes take place. In other words, the way various factors interplay with each other forms a specific context, and within this context, planning processes take place. Since the notion of context is described as the emergent, aggregate situation, it is challenging to approach it analytically, recognising the complex interplay of its individual components. Therefore, looking for ways to understand and analyse the impact of context on integrated land use and transport planning processes, this dissertation focuses on the factors and their interplay affecting the integration processes and their interplay which is understood as the context.

Based on the aforementioned categorisations of context, the concept of institutions is worth exploring further, since institutions encompass several factors of contexts in terms of legal-administrative, historical and socio-cultural underpinnings. A substantial part of contextual factors are institutional. To begin with, institutions are here understood as underlying patterns of public norms, and these patterns dictate certain constraints and resources on social interactions (Salet, 2018a, 2018b). Similarly, North (2016, p. 74) argues that institutions are socially constructed “rules of the game of a society” which provide a restrictive framework to eliminate ambiguity in political, financial and social interactions. The value of decreasing uncertainty is that formulation and enacting of social engagement rules require immense resources, and thus, institutions help with saving resources by providing a legitimate set of public norms to be followed (North, 1991). In other words, what institutions essentially do is lessen

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9 It is critical to note that categorisations included in these studies neither are mutually exclusive nor offer a definite list of all possible ways to talk about context. They merely serve to explain the general approaches within the notion of context, and thus, they show that ways to approach and discuss the notion of “context” vary across the research field, with no unified or standard way to define or analyse it.

10 At this point, the concept of “planning culture” (see, e.g., Othengrafen & Reimer, 2013) may come to mind. Nevertheless, especially due to being discussed mainly in national terms and being criticised as too ambiguous to serve an analytical concept (see Purkarthofer et al., 2021 for an in-depth discussion of shortcomings of planning cultures), discussion of planning cultures is excluded from this dissertation.

11 See North (2016) and Moroni (2010) for a brief elaboration on the differences between institutions and organisations which may be used interchangeably in some cases.
the uncertainty that may emerge in the interactions of individual and collective actors by providing them a set of guidelines outlining what is allowed, expected or prohibited, and this also explains why and how institutions persist over time. Salet (2018a) explains that institutions do not only have a structuring function, but they also codify the roles that individual and collective actors are supposed to play, by legitimising the practices of these actors. Institutions formulate the public norms to be considered by an individual or an organisation in a particular position or function, and provide the source of authorisation to execute certain operations in those functions and positions (ibid.).

Salet (2018a) elucidates a critical point as regards to how institutions impose certain public norms to human interactions by comparing the differences in the pragmatist and institutionalist approaches. The author explains that pragmatism, simply put, focuses on solutions to existing problems since the pragmatist approach does not focus on historical, underlying or social origins or motives of problems. Institutions, on the other hand, are not orientated towards solutions to problems but they function as rules to be followed while approaching those solutions. These public norms do not define how to solve the problem at hand, but define normative social conditions that have to be paid attention to during decision-making and problem-solving. In other words, institutions are generally accepted social standards which function as factors affecting human (inter)actions, through the individuals’ and organisations’ interpretations and policy inferences of institutional rules., without prioritising a specific problem-solution pair.

As the focus of the institutionalist approaches gradually grew to acknowledge the impact of social processes beyond the legal-administrative framework expanding the contextual impacts, the so-called New Institutionalism emerged (Bell, 2002; Hodgson, 1998)12. New institutionalism broadly refers to social theories that emphasise the function of institutions in determining social outcomes while acknowledging the individuality of its members as well as the social construction of meaning among its members (Schmidt, 2014; March & Olsen, 1983). New institutionalism recognises the importance of both formal and informal institutions (Munck af Rosenschöld et al., 2014), underscoring that institutions are also socially constructed and subject to change over time.

Hall and Taylor (1996) claim that new institutionalism13 serves as an umbrella term for three separate approaches, i.e., historical institutionalism, rational choice institutionalism and sociological institutionalism. The historical and sociological institutionalisms played a critical role in defining the contextual approach of this dissertation. Historical institutionalism underscores the significance of path dependence in the gradual change of institutions over time (Hall & Taylor, 1996, p. 7). In this view, the historical context and earlier decisions enable, limit and form the subsequent possibilities for action and change within institutions. On the other hand, sociological institutionalism highlights the im-

12 See Lawrence et al. (2011) for a brief discussion of traditional institutional theories.
13 From now on, the term “institutionalism” is used in this dissertation, instead of “new institutionalism” for easier reading.
portance of interactive, reciprocal and bilaterally constitutive nature of the connections between the actions of the individuals and the institution that they are a part of (Taylor & Hall, p. 15). In this view, while acknowledging that individuals act within the frameworks delineated by institutions, individuals’ actions are also partly responsible for the reproduction of institutions. In connection, Alexander (2005, p. 212) explains the process of institutionalisation as:

“a historic accretion of culturally specific forms and practices (even including organisational myths and ceremonies), with their origins and diffusion related to their specific contexts: sectors, societies and subcultures”.

Moroni (2010) argues that the process of institutionalisation is essentially an emergent social framework that does not follow a preconceived scheme or strictly defined states of change over time, but emerges as an open-ended mechanism whose future state cannot be fully forecast. Accordingly, Moroni (2010) argues that institutions are not passed down through generations exactly as they are, but they are picked up, internalised and changed through experience and action. Therefore, institutional frameworks of planning processes evolve and they shape those processes over and over again, while the processes themselves also feed into the institutional frameworks.

A final notion to discuss regarding institutions is formal and informal institutions, which allows for a further analytical approach to understand contexts. Essentially, formal institutions can be understood as those defined by law and as more explicit, whereas informal institutions as those not bound by law and as more implicit. Examples of formal institutions include laws, regulations, and property rights (North, 1991). Informal institutions, on the other hand, may include customs, codes of conduct, professional habits, commonly shared understandings of certain professional norms, cultural and political outlooks, governance cultures, and methods in use (North, 1991; Hrelja et al., 2016).

Besides the institutional factors, we can also talk about some substantial non-institutional factors which are also essential components of contexts. To begin with, physical-geographical factors are a central part of the understanding of context within land use and transport planning studies and practice. These factors are mainly related to the urban form, existing transport infrastructure, and existing blue-green structures. Similarly, demographics can also be given as an example of non-institutional factors which can be a major factor in the development of a planning process. In addition to these non-institutional factors, there are also factors which have both institutional and non-institutional characteristics. For example, political contexts can be institutional in a sense that there are roles given to politicians by national legislation (i.e., a formal institution). At the same time, trust development between a specific set of politicians of a certain region at a certain time, and the resulting nature of political deliberation in that region can be thought of as non-institutional factors, which are more related to the specific social context of a planning process, rather than informally institutionalised and stabilised factors.
2.3.2 A contextual lens into the challenges of integrated land use and transport planning processes

Integrated land use and transport planning processes are remarkably contextual processes (Geerlings & Stead, 2003; Kaufmann & Sager, 2006; Jordan & Lenschow, 2010; Tornberg, 2011; Rye et al., 2011; Legacy et al., 2011; Hrelja, 2015; Tennøy et al., 2016; Hrelja et al., 2016; van Geet et al., 2021; Tornberg & Odhage, 2022). They are affected by the available transport infrastructure, by the laws that define the purpose of a plan, by the previous policy and planning decisions, and so on. As a result, the manner in which integrated land use and transport planning processes take place in reality is determined by local contextual realities shaped over time (Tornberg & Odhage, 2022; Paulsson, 2018; Hrelja et al., 2016; Lloyd & Peel, 2005). Therefore, despite the fact that an integrated approach to land use and transport planning is easy to agree at the outset, actually operationalising these integrated approaches demands a meticulous experimentation and adaptation to the local contexts (Geerlings & Stead, 2002).

Tornberg and Odhage (2022) suggest that implementation challenges of land use and transport planning integration differ extensively depending on the urban and regional context as well as historical, cultural and professional path dependencies, emphasising the need for further case study research able to connect these to each other and explain the institutional factors affecting policy integration. In order to reveal the complexity of land use and transport integration processes and allocate resources more efficiently and effectively, proposed land use and transport strategies and measures should be assessed and enhanced in their practical context where they are meant to operate (Bertolini, 2012) so that the integration concept can be understood in action (Stead & Meijers, 2009).

However, the range of issues that need to be observed within is rather broad. Kaufmann and Sager (2006, p. 353) explain that:

“factors located both at context level regarding morphological and geographical conditions as well as institutional settings and case-specific idiosyncrasies regarding organisational structure, past policy decisions, as well as vocational cultures that determine the possibility for urban areas to meet the need for policy coordination”.

Therefore, different contextual factors affecting the integrated land use and transport planning processes need to be scrutinised. A contextual approach to planning practice posits that the practice needs to be studied and made sense of in a way that the wider societal context made up of individual and collective actors is recognised, leading to richer insights into the way planning practice works (Healey, 2007). Healey (2007, p. 63) also explains that:

“This richer understanding also shifts the attention of the planning imagination from a focus on specific material projects and material outcomes to a focus on interventions in the design of the institutional infrastructure which frame what project ideas come forward, how they get evaluated and who gets involved in governance processes and through what modes or styles of governance.”
Questioning the reasons why implementation of land use and transport integration is challenging, several scholars turned their attention to the more institutional factors of contexts to understand the circumstances framing planning processes, in line with Healey’s (2007) notions (e.g., Hrelja, 2015; Isaksson et al., 2017; van Geet et al., 2019). Einem (1982, p. 20) argues that the difficulties in coordinating sectoral policies are not solely caused by administrative choices, but “institutional barriers, and - most important of all - conflicts of values, interests, and goals among agencies and interest groups” result in such difficulties. Accordingly, Salet (2018b, p. 3) argues that “the role of institutions is not just to constrain, but also to enable purposive action by providing the reliability of mutual expectations”. This reliability -and thus, stability- raises questions of implementability of integrated land use and transport planning, since the basic assumption of the integration of land use and transport planning is to go beyond the existing institutional confines (Stead, 2003) to increase governance capacity.

Geerlings and Stead (2002, p. 226) simply explain that “cross-sectoral issues are largely unprecedented and the institutional structures to cope with them often do not exist”, creating the need for new institutional settings (Stenstadvold, 1996; Curtis & James, 2004; Hull, 2005; Stead, 2008; Hatzopoulou & Miller, 2008; Paulsson et al., 2018; Lee, 2020). As much as the organisational changes are important, it is not possible to implement integrated land use and transport policy and planning without supporting institutional changes (Stead & de Jong, 2006) while the success of such implementation hinges on the interaction of planning actors shaped by the old and new institutional conditions (Tornberg, 2011; Switzer et al., 2013; van Geet et al., 2019; Pettersson & Hrelja, 2020; Levin-Keitel & Reeker, 2021), bringing both the historical and sociological institutional perspectives into the discussion.

Integrated policies of any sort are seldom developed without any prior policy context. In this perspective, van Geet et al. (2019) point out that there are two ways in which changing institutions create tensions while attempting to implement an integrated land use and transport planning approach. The first one is through a temporal misfit between “between institutions which developed within the same development path but in different timeframes”, and the second one is through a contextual misfit “between institutions which developed in separate development paths which interrelate in multi-actor action situations” (van Geet et al., 2019, p. 90). Similarly, Isaksson et al. (2017) identify “parallel policy making” as a cause for implementation challenges. What this means in practice is that when the integrated land use and transport planning process has explicit goals pointing to one direction and the daily practice, shaped by the institutional context, points to another direction serving other goals, an implementation gap occurs.

In addition to conflicts arising between the old and new institutions clashing during the integration of land use and transport planning processes (see, e.g., Isaksson et al., 2017), several authors emphasise that both formal and informal institutions are necessary for effective implementation (see, e.g., Juhola & Westerhoff, 2011; Hrelja et al.; 2017; Pettersson & Hrelja, 2020; Levin-Keitel &
Reeker, 2021). Hrelja et al. (2017) simply explain that informal institutions help “oil the wheels” of policy-making and policy-implementation through formal structures which generated fragmented policy responses to begin with. Hrelja et al. (2020, p. 192) indicate that most of the informal working practices that produced some level of success had the common denominator of making “it possible for the actors to go beyond their familiar roles and positions, and allowed them to bypass the statutory planning process that cause problems, concerns and dissatisfactions that must be dealt with in some way”.

To conclude, in this chapter, integration of land use and transport planning is described as an ever-changing, ever-evolving process where sectoral and scalar tensions of land use planning and transport planning practices are continuously and collectively deliberated to reach a temporary consensus on problem definition and measures to address the problem. In order to develop these processes towards more effective and efficient collaborative spaces of increased governance capacity, extensive changes in the land use and transport planning practice are required (Curtis, 1999; Lee et al., 2022), spanning from the larger legislative framework of urban planning all the way down to individual planning approaches of planners, highlighting the highly complex and contextual nature of these processes. Therefore, this dissertation examines the interconnectedness of different factors affecting these integration processes. In the next chapter, the way this examination is structured and conducted is discussed in-depth.
This chapter presents the methodology of this doctoral research, outlining the systematic approach taken towards designing and conducting the research. Accordingly, the chapter is divided into two main sections, namely, research design and research methods. In the first section (Section 3.1.), the research design is elaborated by focusing on the research approach, theoretical background of the case study research and selected methods, the research process as well as the research-ethical considerations for conducting the research. In the second section (Section 3.2.), the research methods employed in this doctoral research, namely, interviews and document analysis, are explained in detail. These explanations include a brief summary of the theoretical background of interviews and document analysis, followed by in-depth presentation of the processes of utilizing these methods within this doctoral research. In addition, this section on research methods also contains details about data validation and visualisation methods for the results achieved via interviews and document analysis.

3.1 Research Design

3.1.1 Research approach in connection to the research gap and objectives

This doctoral research started with the idea of understanding integrated land use and transport planning processes in their own context, within their own complexity. The reason to do so is that the current knowledge base of land use and transport planning calls for better insights into the ways in which institutional conditions of the actual policy-making ecosystem influence the integration of land use and transport planning processes (Isaksson et al., 2017; Hrelja & Rye, 2022). Therefore, the ultimate purpose is to identify the institutional factors that affect an integrated land use and transport planning process and understand the potential connections between them to reveal the procedural mechanisms and institutional conditions. By doing so, a procedural know-how of integrated land use and transport planning processes can be generated on that basis, to address the research gap for empirical studies that aim to understand integrated land use and transport planning practices from a holistic perspective.
In order to ensure that the understanding of the contextual nature of institutional factors achieved in this dissertation are in line with the priorities and expectations of the planning actors themselves as well as with what is feasible and needed under the current circumstances, this doctoral research prioritised learning about integrated land use and transport planning processes from the planning actors’ own experiences. Accordingly, this doctoral research was conducted as a single-case study that enabled translating planning actors’ experiences to a grounded understanding of the contextual nature of institutional factors affecting the integration of land use and transport planning processes. Therefore, this doctoral research has been mainly empirically guided and of exploratory nature. In light of this, this doctoral research looked at a policy process phenomenologically, by examining it in its real-world context and describing it as it is experienced and observed, allowing for a more refined perception of the complexities and dynamics inherent in policy implementation (Lejano, 2012).

In addition, this research also followed an abductive logic relying on a variation between empirical and theoretical where both research results and methods reflected the emergence of unforeseen empirical discoveries as well as theoretical understandings throughout the research process (Dubois & Gadde, 2002).

### 3.1.2 Case study research

A case study is a type of inquiry in which the researcher creates an extensive analysis of a case, for example, a program, event, activity, process or individuals (Creswell & Creswell, 2017). Researchers use a variety of data collection techniques to gather in-depth information about cases that are constrained by time and activity (ibid). Yin (2018) points out that case studies are especially beneficial and favourites in cases where a how question is posed over a recent phenomenon within its own context that the researcher is not in a position to influence. Accordingly, a case study is required to generate a context-dependent understanding which is key in enhancing one’s learning about the subject being studied (Flyvbjerg, 2006). Briefly, while case studies are advantageous in terms of being based on real-life experiences and of being able to explicate complex social phenomena, they are disadvantageous in terms of lack of possibilities for generalisation and of their potential for confirmation bias towards researcher’s own ideas (Krusenvik, 2016; Flyvbjerg, 2006).

This doctoral dissertation aims at providing in-depth process knowledge into the integration of land use and transport planning, by identifying and discussing the interplay of different factors forming a specific context which affect these processes. Therefore, it was crucial to design the research in a way that allows for unravelling how contextual factors emerge and then affect integration processes. Accordingly, due to being advantageous in terms of being based on real-life phenomena and generating context-dependent understanding (Yin, 2018; Krusenvik, 2016; Flyvbjerg, 2006), case study research was determined as the research approach.
3.1.3 Selection of MAL 2019 planning process as the case study subject

The selection process of the case study subject was done meticulously. A random selection to allow for preventing systematic biases (Flyvbjerg, 2006) was not suitable to the objectives of this doctoral research. The selected planning case had to have purposeful attempts to integrate land use and transport planning processes with a historical development path behind these attempts as well as a documented process development procedure. Consequently, an information-oriented selection approach (Flyvbjerg, 2006) was followed, to ensure that the examination into the context of an integrated land use and transport planning process was possible. In addition, since an in-depth understanding of context is the primary aim of this doctoral research, single-case study was more appropriate rather than a comparative multi-case study. In single-case studies, the information-oriented selection approach is also preferable to maximise the usefulness of the selected case.

Within the information-oriented selection approach outlined by Flyvbjerg (2006), selection of a critical case, i.e., a case characterised by its strategic significance to the broader research problem under study, was in line with the objectives of this research. Critical cases are advantageous in helping to establish key insights that are likely to apply to a larger set of cases, and thus, allow for analytic generalisations (Yin, 2018). Within this discussion, it is imperative to clarify the idea of analytic generalisations from this specific study focussing on the notion of context, as it may sound contradictory to talk about generalisations from context-specificity. Yin (2018) points out that the idea of analytic generalisations, unlike statistical generalisations looking for statistically significant inferences, is to seek lessons learnt to offer further insights into the “how” questions posed as research questions. Therefore, the case study subject selected for this doctoral research is an illustrative example of an integrated land use and transport planning process which is deliberately designed for this integration purpose. It can offer lessons learnt about the emergence (Research Question 1) and effect (Research Question 2) of context in such integration processes, while allowing for analytical generalisations that can inform the implementation challenges of land use and transport integration across different governance contexts (Research Question 3).

Accordingly, MAL (Land use, Housing and Transport) 2019 Planning Process is chosen as the case study subject for this doctoral research. The particular reasons for selecting the MAL 2019 planning process are as follows. Firstly, and most simply, the basic purpose of the MAL 2019 planning process is to bring together land use planning (and by extension, housing policy\textsuperscript{14}) and transport planning. In other words, the planning process is, in itself, a means to integrate land use planning and transport planning processes. Therefore, the MAL 2019 planning process can contribute to the theoretical and practical discussions on challenges of integration of land use planning and transport planning.

\textsuperscript{14} Housing issues were mostly taken care of in connection to the land use issues in the MAL 2019 planning process. Therefore, inclusion of the housing sector into a study of the integration of land use and transport planning processes did not have a critical effect on the study.
Secondly, this doctoral research aims to identify and elucidate the contextual factors and their interplay that influence the integration of land use and transport planning processes, with a specific focus on understanding the emergence of these conditions over time. Thus, it was essential to choose a planning process with a significant historical background. In this regard, the MAL 2019 planning process emerged as an ideal choice, given that its present form took more than two decades to materialise with enduring implementation issues along the way. Furthermore, as the planning process took place in its current form for the first time, it allowed for a natural breaking point in the development timeline so that it was possible to identify how the previous policy-making and planning processes and their outcomes affected the current planning process structure.

Thirdly, metropolitan regions are especially challenging as it is common to see a clash of local-level priorities of land use planning and metropolitan-level needs of transport planning, especially supporting public transport (Pettersson & Hrelja, 2020). From this perspective, the MAL 2019 plan allows for analytically interesting questions concerning both the horizontal and vertical dimensions of land use and transport integration. In addition, OECD (n.d.) postulates that 65% of the targets set within Sustainable Development Goals can only be achieved with the involvement of local and regional governments. Therefore, focusing on a planning process involving local and regional governments is also critical in terms of climate crisis responses.

Fourthly, Finnish integrated land use and transport planning practice is, arguably, in its infancy, since such integrated processes started to become mainstream only in the last decade. While legislation, such as the Land Use and Building Act (1999), emphasises the integration of two disciplines, it does not include specific process information to be implemented on the ground. Due to the fact that such integrated processes usually take place in the informal planning spaces, it is challenging to access the recorded and institutionalised process knowledge of integration of land use and transport planning. Being considered as a part of Nordic governance culture with strong municipalities operating within a statutory and hierarchical planning culture, Finland can, of course, learn many lessons from studies from Sweden (e.g., Hrelja, 2015; Isaksson et al., 2017). Similarly, studies from the Netherlands (e.g., van Geet et al., 2019) can also prove helpful. Nevertheless, due to the highly contextual nature of the integration of land use and transport planning processes (Geerlings & Stead, 2003; Kaufmann & Sager, 2006; Tornberg, 2011; Rye et al., 2011; Legacy et al., 2011; Hrelja, 2015; Tennøy et al., 2016; Hrelja et al., 2016; van Geet et al., 2021; Tornberg & Odhage, 2022), it is critical to build process knowledge that aligns with local legislative, administrative, and political conditions, while learning from studies from different contexts. Therefore, given the small networks of land use and transport planning professionals in Finland, who require support in integrating land use and transport planning processes within the Finnish context, dedicated studies are necessary to provide support and advance process knowledge specific to Finland.
Fifthly, as mentioned in the previous point, Finland is part of the Nordic governance culture, with similar contexts to other Nordic countries, especially Sweden. Therefore, analytical insights coming from a study of the MAL 2019 planning process is highly relevant to the Nordic integrated land use and transport planning practice and research.

Sixthly, the MAL 2019 Plan is not a one-off planning project but a cyclical process that takes place continuously with four-year long periods tied to the mandate of local governments. This allows room for experimentation within the process as well as continuous reflection from the planning process actors on what went wrong and what could be improved. Consequently, these characteristics make the planning process ideal for interview-based qualitative research, since the planning actors are familiar with reflecting on this particular planning process.

Finally, the MAL 2019 Plan was prepared as a basis for a larger agreement procedure, i.e., MAL Agreements which build around strong financial incentives to be negotiated by political decision-makers. This aspect introduced a strong political element to the planning process, as the plan had to be ratified by the city councils consisting of elected officials. From this perspective, the MAL 2019 plan is a fruitful case study subject to study connections between political aspects and other contextual conditions affecting integrated land use and transport planning processes.

3.1.4 Selection of research methods for the case study

There is no specific method for case study research. It rather points towards methods that can build the in-depth contextual knowledge of the phenomena being studied. Accordingly, as summarised in Table 1, the research gap, objective and questions guided the selection and specific use of each method selected for the case study. Since this doctoral research aims at studying the context of an integrated land use and transport planning process, research methods that are able to build knowledge of the context of MAL 2019 planning process overall, specific factors whose interplay builds this context and the effect of the interplay of these factors on the process, are selected. In addition, Yin (2018) highlights that a standard approach to select case study methods is to ensure that empirical evidence comes from several origins to agree on consistent and same results.

To put it briefly, key methodological components of this research are semi-structured interviews and document analysis, which capitalise on different benefits and are limited in terms of different shortcomings. Interviews provided insights into the challenges and successes of the MAL 2019 planning process, what are the factors within the process affecting these challenges and successes and how these factors connect to each other, as experienced by the planning actors. Document analysis, on the other hand, offered insights into the key recorded developments over time that had an impact on the MAL 2019 planning process, especially the legal, organisational and procedural changes since the 1990s which emerged as critical through the interviews. In addition, meetings with planning actors were employed as an extra validation method, since an accurate
understanding of the context of the planning process had to be ensured for the research objective. Furthermore, a complexity mapping technique served as a visualisation method, in order to add a visual representation layer into the understanding of the connections between factors affecting MAL 2019 planning process. Finally, a systematic literature review on how the factors identified within MAL 2019 planning process have been discussed in the previous studies was also conducted to synthesise the existing knowledge on those contextual factors. The purpose was to be able to better identify the impact of factors affecting the MAL 2019 planning process as well as to keep the results of the study compatible with the previous studies to allow for consistent representations of the lessons learnt. Table 1 summarises how research gap, objectives, questions and methods are connected to each other.
<table>
<thead>
<tr>
<th>Research gap</th>
<th>Research objective</th>
<th>Research questions</th>
<th>Research methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>The current knowledge base of land use and transport planning calls for better insights into the ways in which conditions of the actual policy-making ecosystem influence the integration of land use and transport planning.</td>
<td>The objective of the research is to provide in-depth process knowledge by understanding the interplay of contextual factors affecting integrated land use and transport planning processes.</td>
<td>RQ1. How can different factors and their interplay, forming a specific context of a land use and transport planning integration process, be identified and analysed?</td>
<td>Interviews to understand how factors affecting MAL 2019 planning process connect to each other. Document analysis to understand the historical development of legal, organisational and procedural factors affecting MAL 2019 planning process. Meetings with key planning actors to validate the interpretation of connections between the factors affecting MAL 2019 planning process. Literature review to deepen the understanding of how each contextual factor affecting MAL 2019 planning process works. Complexity mapping to visualise the connections between factors affecting MAL 2019 planning process.</td>
</tr>
<tr>
<td>RQ2. How does such an analysis contribute to understanding the way the process works?</td>
<td>Interviews to identify the factors affecting the MAL 2019 planning process, according to the lived experiences of the interviewees. Interviews to establish the ways in which identified factors explain the successes and challenges within MAL 2019 planning process. Document analysis to understand the successes and challenges within the MAL 2019 planning process from a historical point of view. Meetings with key planning actors to validate the interpretation of the effect of identified factors on MAL 2019 planning process. Complexity mapping to identify the successes and bottlenecks within MAL 2019 planning process.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQ3. What insights can be drawn from studying the interplay of factors affecting the MAL 2019 planning process about integration of land use and transport planning processes?</td>
<td>Interviews, document analysis and complexity mapping results to bring out learnings on addressing the implementation challenges of integrated land use and transport planning processes. Literature review to identify common and MAL 2019-specific effects of factors.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**3.1.5 Research process**

This doctoral research started with a literature review on land use and transport integration. Among many other topics covered, this review mainly focussed on three topics: a) theoretical understanding of policy integration and land use and transport integration as a type of policy integration, b) focusses of previous research conducted on land use and transport integration and research needs identified by them, and c) practical know-how of land use and transport integration processes through case studies. Before describing the subsequent steps of this doctoral research, it is important to note that, despite being the primary step at the start of the research process, the literature review had been a continuous step of the research that extended through all the other steps until the very end. Through this literature review, the research gap was identified, and the research objective was set up.

Following the identification of research gap and objective, the decision to conduct a case study was made, since the case study research provides the opportunity to examine real-world situations to generate context-specific insights. Once the case study subject, i.e., the MAL 2019 Planning Process, was chosen due to the reasons elaborated in Section 3.1.3., another literature review was conducted specifically focussing on a) urban and/or regional contractual agreements in the Nordics, b) MAL Letters of Intent and Agreements in Finland, c) MAL 2019 Planning Process in Helsinki Metropolitan Region and d) Helsinki Metropolitan Region itself. In order to address the knowledge gaps within this literature review, three scoping interviews were conducted with planning experts and academics, prior to the beginning of designing and conducting the actual interviews. The selection of these interviewees was based on personal connections and recommendations as these interviewees were identified as knowledgeable on the topics that required reflections by actors within the planning ecosystem as well as the literature review conducted. These topics as well as the backgrounds of interviewees are outlined in Table 2. It is crucial to reiterate here that these interviews are not a part of the formal data collection procedure of this doctoral research. Instead, they complemented the literature review conducted to establish the knowledge base about the case study subject and provided a well-rounded understanding of the planning ecosystem in Finland and especially in the Helsinki Metropolitan Region. All three scoping interviews were conducted in English, audio-recorded in accordance with the consent of interviewees, and detailed notes are written down based on the recordings.
Table 2. Summary of scoping interviews and main topics of discussion.

<table>
<thead>
<tr>
<th>Interviewee Background</th>
<th>Interview Date</th>
<th>Main Topics of Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban planner and academic</td>
<td>09 June 2020</td>
<td>Characteristics of fringe municipalities (i.e., KUUUMA municipalities explained in Section 4.2.2.) from the perspective of land use and transport planning in Helsinki Metropolitan Region. Delineation of political climate in Helsinki Metropolitan Region municipalities, in connection to resident attitudes Planning cultures in fringe municipalities Attitudes of urban planners towards land use and transport integration in Helsinki Metropolitan Region municipalities and related path dependencies in planning organisations</td>
</tr>
<tr>
<td>Urban planner</td>
<td>02 July 2020</td>
<td>Delineation of political climate in the core municipalities in Helsinki Metropolitan Region municipalities (i.e., Capital Region Municipalities explained in Section 4.2.2.) MAL Agreements (explained in Section 4.2.1.) and their advantages and disadvantages for the participating organisations Processes of MAL Agreements and MAL 2019 Planning from the perspective of their non-statutory position within the Finnish Planning system (explained in Section 4.2.1, 4.2.3. and 4.1.2 respectively.) Process of MAL 2019 Planning from the perspectives of land use and transport integration and of core municipalities and key actors</td>
</tr>
<tr>
<td>Academic and urban activist</td>
<td>06 July 2020</td>
<td>Previous MAL Agreements, their contents and current political discussions around them Potential disadvantages and shortcomings of MAL Agreements for the participating organisation and from the perspective of citizen engagement Delineation of political climate in Helsinki Metropolitan Region municipalities, in connection to historical development of urban policies since the 1940s</td>
</tr>
</tbody>
</table>

Building on the knowledge gained from the literature review and the scoping interviews, the first primary data collection method, i.e., interviews, was organised and carried out as the following stage of the research process. Interviews were conducted in three phases whose rationale and process are described in Section 3.2.1. Following the learnings from the interviews, a document analysis focusing on the historical background of factors affecting MAL 2019 planning process, identified from the interviews, was conducted, which is presented thoroughly in Section 3.2.2. Following the second phase of the interviews and the completion of the document analysis, meetings with the planning actors of the case study subject were held, to function as a validation method, as explained in detail in Section 3.2.3. During these meetings, while ensuring the validity and accuracy of the results, some knowledge gaps were also revealed. Accordingly, the third phase of the interviews were conducted, followed by one more meeting with the planning actors which was the final step of the results validation. Next, following the results validation through the meetings, a systematic literature review was conducted specifically on the factors affecting the case study subject, to allow for a comprehensive discussion of the impact of context on integrated land use and transport planning processes. The process of this literature review is described in Section 3.2.4. in this chapter, and its results in Chapter 5. Finally, complexity maps were drawn in order to visually present the connections and interdependencies between the key factors affecting MAL 2019 Planning Process, as explained in Section 3.2.5. Finally, the research process concluded with
the writing of this dissertation. The process of this doctoral research is summarised in Table 3.

### Table 3. Research process.

<table>
<thead>
<tr>
<th>Time</th>
<th>Research Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2019-May 2020</td>
<td>Literature review on land use and transport integration in general</td>
</tr>
<tr>
<td></td>
<td>Building the research gap + identifying the research objective</td>
</tr>
<tr>
<td></td>
<td>Case study subject selection</td>
</tr>
<tr>
<td>May-June 2020</td>
<td>Literature review on the case study subject</td>
</tr>
<tr>
<td>June-July 2020</td>
<td>Scoping interviews on the case study subject</td>
</tr>
<tr>
<td>Aug-Sep 2020</td>
<td>Interview prep</td>
</tr>
<tr>
<td>Oct-Nov 2020</td>
<td>1st set of interviews</td>
</tr>
<tr>
<td>Dec 2020-Jan 2021</td>
<td>Interview analysis</td>
</tr>
<tr>
<td>Feb-March 2021</td>
<td>2nd set of interviews</td>
</tr>
<tr>
<td>May 2021</td>
<td>Interview analysis</td>
</tr>
<tr>
<td>May-Aug 2021</td>
<td>Document analysis</td>
</tr>
<tr>
<td>Sep-Oct 2021</td>
<td>First results</td>
</tr>
<tr>
<td>Nov 2021</td>
<td>1st validation meeting</td>
</tr>
<tr>
<td>December 2021</td>
<td>Second results</td>
</tr>
<tr>
<td>January 2022</td>
<td>2nd validation meeting</td>
</tr>
<tr>
<td>January-April 2022</td>
<td>3rd set of interviews + interview analysis</td>
</tr>
<tr>
<td>May 2022</td>
<td>3rd validation meeting</td>
</tr>
<tr>
<td>June-Oct 2022</td>
<td>Literature review on the factors affecting the case study subject</td>
</tr>
<tr>
<td>Nov 2022 - June 2023</td>
<td>Complexity mapping</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
</tr>
</tbody>
</table>

#### 3.1.6 Research ethics

Research ethics are a crucial aspect of any academic research, protecting the participants as well as their rights while ensuring the credibility of the research process especially in a qualitative research process (Flick, 2007). Accordingly, the author of this doctoral dissertation paid the utmost attention to research ethics at every step of the research as much as possible.

Ethical considerations were especially relevant to the interviews in this doctoral research. To begin with, informed consent was verbally obtained from all interviewees before conducting interviews. The purpose of the research, how the collected material would be utilised, and who would have access to the collected data were clearly outlined. The author communicated to the interviewees in the beginning of every interview that they have the option to withdraw from the study at any point without consequences, including stopping the interview at any time without providing a reason.

Anonymisation was a key step to protect the identity of the interviewees. Given the small professional networks within land use and transport planning practice in Finland and especially in the Helsinki Metropolitan Region, it would be very easy to identify the interviewees based on their titles or on their organisations.
Therefore, interviewees were referred to by their overall sectoral expertise (e.g., land use expert) and the planning level of their organisation (e.g., metropolitan) to ensure their anonymity. Additionally, when using quotes from interviews in this dissertation, the author conducted meticulous editing to remove any details that could potentially reveal the identity of the interviewees. Further information on this editing process can be found at the end of Section 3.2.1.

Furthermore, in compliance with Aalto University’s research data management policies, sensitive data such as interview recordings and transcripts were stored exclusively in Aalto University-regulated folders. By implementing these ethical considerations, the author, to the best of her ability, aimed at maintaining the principles of respect, privacy, and confidentiality for all participants involved.

3.2 Research Methods

3.2.1 Interviews

This doctoral research contains 28 semi-structured interviews. This section includes the following subsections that concentrate on interviews as a research method, process of interviews within this doctoral research, process of analysing these interviews and process of editing the quotes from interviews when used in this dissertation.

*Interviews as a research method*

Interviews are among the most common data collection methods utilised in case study research, as humans are conversational social beings (Brinkmann, 2014). Interviews generally allow for in-depth explanations of how and why certain events occurred in the way they did with immediate clarifications possible (Yin, 2018). Making recording and analysing the subjective experiences of interviewees possible (Hopf, 2004), interviews provide certain advantages such as being able to target precisely the case study subject, and offering insights into perceptions, mindsets, habits, reactions and positions of interviews (Yin, 2018). However, just like any other data collection method, interviews are not risk-free. Interviews are prone to inaccuracies due to weak recollection of prior events, due to confusing or unclear wording of questions, or due to subconscious inclination of interviewees to tell what the interviewer hopes to hear (ibid.).

Semi-structured interviews are the most commonly used form of interviews (Brinkmann, 2014; Kallio et al., 2016). They are advantageous in terms of being able to exploit the knowledge generation potential by allowing the interviewees to speak freely on the subjects they regard as significant while still allowing the interviewer to keep the conversation contained within the framework of the research (Flick, 2007). Accordingly, semi-structured interviews were the preferred approach in this doctoral research.

*Interview process*

Interviews for this doctoral research were conducted in three periods. The reason to do so was connected to the study’s objective of understanding the specific
context of the MAL 2019 planning process. Accordingly, it was crucial that the factors affecting the planning process would be revealed through the lived experiences of the planning actors themselves, not through a preconceived list of factors identified in previous research. Therefore, the first interviews provided a list of factors that the planning actors saw as relevant for the MAL 2019 planning process. Subsequently, the second set of interviews deepened the understanding of how these factors affect the planning process. Finally, the last set of interviews ensured that there was no knowledge gap in the interpretation of the results, following validatory meetings with the planning actors and their reactions to the initial results.

For the first two interview periods, interviewees were selected based on three criteria, since sampling is critical in interviews to allow for representativeness of diverse perspectives and guarantee reliability (Flick, 2007). Firstly, all sectors - land use, housing and transport - had to be represented by at least two different interviewees15. Secondly, all major categories of organisations had to be represented (HSL, Capital Region Municipalities, KUUMA Municipalities, ministries and state-level authorities or agencies). This way, even though it was not possible to interview every single organisation participating in the process, every major point of view was represented from an organisational point of view. Thirdly, different levels of professional experience with the process were sought after during interviewee selection. This way, it was possible to reach different views from less experienced actors on their struggles with adapting to a large, complex process as well as from more experienced actors on their historical-comparative views and the recurrent challenges within the process. For the third interview period, the interviewee selection was stricter. Based on the discussions during validation meetings with the planning actors, certain issues were identified as crucial to be addressed so that knowledge gaps can be avoided within this doctoral research. In order to protect the anonymity of these interviewees, those key issues will not be separately mentioned in this dissertation. The list of interviewees is shown in Table 4.

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15 Housing expertise is usually blended into land use planning expertise, especially in small municipalities due to limited human resources.
Table 4. The list of interviewees for the semi-structured interviews. Interviewee reference numbers are randomly generated.

<table>
<thead>
<tr>
<th>Interviewee Reference</th>
<th>Expertise</th>
<th>Planning Level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Transport</td>
<td>National</td>
</tr>
<tr>
<td>81</td>
<td>Land use and transport</td>
<td>National</td>
</tr>
<tr>
<td>59</td>
<td>Land use and transport</td>
<td>National</td>
</tr>
<tr>
<td>21</td>
<td>Land use and transport</td>
<td>National</td>
</tr>
<tr>
<td>47</td>
<td>Land use</td>
<td>Regional</td>
</tr>
<tr>
<td>69</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>35</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>39</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>34</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>20</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>22</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>38</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>23</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>64</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>52</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>50</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>88</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>86</td>
<td>Transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>63</td>
<td>Land use, housing and transport</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>15</td>
<td>Transport</td>
<td>Municipal</td>
</tr>
<tr>
<td>17</td>
<td>Land use</td>
<td>Municipal</td>
</tr>
<tr>
<td>25</td>
<td>Housing</td>
<td>Municipal</td>
</tr>
<tr>
<td>53</td>
<td>Land use and housing</td>
<td>Municipal</td>
</tr>
<tr>
<td>99</td>
<td>Land use and housing</td>
<td>Municipal</td>
</tr>
<tr>
<td>74</td>
<td>Political decision-making</td>
<td>Municipal</td>
</tr>
<tr>
<td>56</td>
<td>Consultant</td>
<td>N/A</td>
</tr>
<tr>
<td>26</td>
<td>Consultant</td>
<td>N/A</td>
</tr>
<tr>
<td>45</td>
<td>Land use</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*This planning level corresponds to the level and organisation that the interviewees had been working during their involvement in the MAL 2019 planning process. As the interviews were conducted after the end of the planning process, some interviewees were working at a different organisation than stated in this table at the time of the interview.
Each interviewee was interviewed only once. All interviews were conducted by the author of this dissertation in English, and are fully recorded and transcribed. All but one were conducted online, in the form of a voice call or a video call in Microsoft Teams. All interviews were one-on-one to help the interviewees speak freely (Brinkmann, 2014), except one interview which included a main interviewee and a supporting interviewee in case the main interviewee struggles with finding words in English. This was done so at the request at the main interviewee, and the analysis only included the responses of the main interviewee.

It is also worth noting that during the interviews, the terms “integration” or “land use and transport integration” were used as little as possible. The reason was to avoid misunderstandings or unclarity in the communication, due to the fact that neither the interviewer, i.e., the author of this dissertation, nor the interviewees spoke English as their mother tongue. As also explained by Van Straalen (2012, p. 10), “concepts such as coordination, cooperation, cross-border projects, synchronisation of policies speak to the mind of interviewees and might more easily spark integrative planning processes, than the vague, or rich, concept of integration.” More importantly, the interviewees’ working language is exclusively Finnish. Therefore, it was of utmost importance to make sure that the interviewees felt comfortable speaking in another language than the language they use for their work on a daily basis. Accordingly, more straightforward phrases were preferred, such as “working together with sector X”, “collaborating with organisation X” or “working with different kinds of knowledge from different sectors”.

Each interview was accompanied by an interview guide tailored to the position and experience of the individual interviewee, while following a general thematic framework used in all interviews. The interviewee guide included themes which were in an order of general-specific-general first, and then in an order of priority in case the allocated time would not be enough. When interviewees were contacted by email, the purpose of the research and the reason to contact the interviewee were clearly indicated. The author of the dissertation asked for 1-hour long interviews. Overall, the interviews lasted approximately between 35 minutes to 90 minutes, with the majority being around 55 minutes. Each interviewee was contacted a couple of days prior to the interview and provided with a list of key themes and questions to be discussed during the interview.

The first interview period consisted of twelve interviews conducted between 26 October - 20 November 2020. The purpose of this set of interviews was to understand how the actors describe the MAL 2019 planning process in their own words and what kinds of issues they were pointing towards in the planning process, in order to build a practice-based understanding of the key aspects of the MAL 2019 planning process in terms of land use and transport integration and the factors affecting the planning process. Therefore, the interview questions covered a variety of topics, without leading towards the idea of “factors affecting the process”, and invited the planning actors to talk about the planning process more freely to unravel the issues they deem significant. Consequently, the interview themes were as follows:
Methodology

- How the interviewee describes the purpose of the MAL 2019 planning process and its steps
- What kinds of challenging and successful aspects of the planning process the interviewee recognises
- What kinds of changes the interviewee has seen throughout the MAL 2019 planning process or when thought together with earlier planning processes in terms of, for example, changes in organisational roles and responsibilities, in process design, in needs and expectations and so on
- How the process of working with other organisations went (for example, working with municipalities, with state agencies and ministries, with regional bodies)
- How the interviewee describes the experience of working with different kinds of sectoral expertises
- What kinds of differences the interviewee has noticed in different experts’ or different organisations’ willingness, interest and preparedness to be a part of the planning process
- At which stage of the planning process the interviewee thinks it is easier or more difficult to work together as land use and transport experts

The second interview period consisted of twelve interviews conducted between 9 February - 11 March 2021. The purpose of this set of interviews was to focus on the identified issues during the first set of interviews and to deepen the understanding of the underlying mechanisms of those issues as they pointed towards the contextual factors affecting the MAL 2019 planning process and the connections between them. Therefore, the interview themes were as follows:

- In which terms the interviewee sees the benefit of the MAL 2019 planning process for their organisation as well as for themselves as an individual planning actor
- How the interviewee explains the differences in their daily work, if any, when the separate planning processes of land use, housing and transport planning were brought together under the umbrella of MAL 2019 Plan
- How the interviewee experienced the differences in metropolitan and local legislations, resources and priorities within the planning process and how such differences affected their own involvement in the planning process
- How the interviewee sees the role of impact assessment in the whole planning process and how they reflect on their own involvement in the impact assessment process
- Whether the interviewee sees any sector stronger and/or more involved than the other sectors

The third interview period consists of four interviews conducted between 26 January - 5 April 2022. The purpose of these interviews was to address the knowledge gaps that were identified following the validatory meetings with planning actors. As mentioned earlier, the topics discussed with these four interviewees are not separately mentioned in this dissertation, in order to protect the identity of the interviewees. Since the professional circles in Finland are
quite small, mentioning the topics would make the identities of interviewees easily identifiable. Nevertheless, the discussion topics overall revolved around the larger subjects of MAL agreements, political side of MAL 2019 planning process and historical development of MAL agreements and plans.

Content analysis of interviews
The first set of interviews was analysed via a qualitative content analysis method in order to identify the patterns and main themes within MAL 2019 Planning Process, before moving on to the second set of interviews. Qualitative content analysis is a common method to analyse text-based data in terms of recurrent key words or themes which are called “codes” (Flick, 2007). During this analysis, a conventional approach to qualitative content analysis, where codes are derived from the transcripts and defined during the analysis itself, was adopted (Hsieh & Shannon, 2005). The purpose was to avoid pre-conceived notions of what is important for the planning process in question and to let the actors of the process themselves reveal what is important and regarded as a key factor affecting the integrated land use and transport planning process. Special attention was paid to how the interviewees themselves describe the planning process and how they reflect on working with a different set of actors and organisations when compared to a single-sector-single-organisation kind of planning processes as was the norm. Because the goal of this doctoral research is to explore the interplay between various contextual factors impacting the integration of land use and transport planning processes, special emphasis was placed on the connections between the various experiences mentioned by the interviewees. The coding scheme used for this analysis can be seen in Table 5. Once all of the 28 interviews were completed, this content analysis that covered the first 12 interviews initially was also applied to the remaining interviews. The reason was to provide a holistic picture of the MAL 2019 planning process based on the experiences of the interviewees. Accordingly, the analysis results presented in Section 6.1 cover all the interviews, not only the first 12 interviews.
<table>
<thead>
<tr>
<th>Code</th>
<th>Code Name</th>
<th>Code Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1_describe:proc</td>
<td>Process description</td>
<td>How the interviewee describes the steps and tasks of the planning process</td>
<td>“Because at the start of the planning process, we luckily defined the goals.”</td>
</tr>
<tr>
<td>1_describe:purp</td>
<td>Purpose of the process</td>
<td>What the interviewee sees as the main reason to undertake the MAL 2019 planning process</td>
<td>“The biggest purpose of the MAL plan is the cooperation between the municipalities in Helsinki region.”</td>
</tr>
<tr>
<td>1_describe:change</td>
<td>Changes in the planning process over time</td>
<td>What kinds of changes the interviewee has experienced throughout the planning process or when compared to the previous planning processes</td>
<td>“We started this MAL Project Group at the beginning of 2019 plan.”</td>
</tr>
<tr>
<td>1_success</td>
<td>Successful points in the process</td>
<td>What the interviewee found successful in the planning process</td>
<td>“People liked a lot the planning and impact assessment iteration process.”</td>
</tr>
<tr>
<td>1_challenge</td>
<td>Challenging points in the process</td>
<td>What the interviewee found challenging in the planning process</td>
<td>“The amount of data was too big.”</td>
</tr>
<tr>
<td>1_work-with:munic</td>
<td>Experience of working with different municipalities</td>
<td>Interviewee’s own experiences with working with a variety of municipalities</td>
<td>“We have 14 municipalities in Helsinki region. 14 different systems of how they operate and how they do the decision-making.”</td>
</tr>
<tr>
<td>1_work-with:HSL</td>
<td>Experience of working with HSL</td>
<td>Interviewee’s own experiences with working with HSL, if the interviewee works in another organisation</td>
<td>“HSL has a leading and somewhat prominent role in the MAL planning process.”</td>
</tr>
<tr>
<td>1_work-with:state</td>
<td>Experience of working with different state actors</td>
<td>Interviewee’s own experiences with working with various state-level actors</td>
<td>“I have an impression that there is no one unique state level actor, but there are several.”</td>
</tr>
<tr>
<td>1_work-with:reg</td>
<td>Experience of working with different regional actors</td>
<td>Interviewee’s own experiences with working with various regional-level actors</td>
<td>“They do understand our problems, but what comes to solutions, what comes to long term planning, what comes to regional objectives, they always need to somehow verify from a higher level on the state side.”</td>
</tr>
<tr>
<td>1_work-with:sect</td>
<td>Experience of working with different sectoral expertise</td>
<td>Interviewee’s own experiences with working with different expertise concerning land use, housing or transport sectors</td>
<td>“And also we have to adapt a lot of information that we don’t understand.”</td>
</tr>
<tr>
<td>1_diff:task</td>
<td>Experience of working with organisations with different tasks</td>
<td>Interviewee’s own experiences with working with various organisations which are tasked with different responsibilities legally or traditionally</td>
<td>“We always have our own sectoral kind of things that come from the organisations that we work under or maybe from legislation.”</td>
</tr>
<tr>
<td>1_diff:resource</td>
<td>Experience of working with organisations with different resources</td>
<td>Interviewee’s own experiences with working with various organisations which possess different resources to be allocated to the planning process</td>
<td>“They have no resources enough to make it in the very best way.”</td>
</tr>
<tr>
<td>1_diff:legis</td>
<td>Experience of working with organisations bound by different legislations</td>
<td>Interviewee’s own experiences with working with various organisations whose responsibilities differ because of different legislative arrangements</td>
<td>“As long as there is no legislation that says that HSL should do the land use planning for the whole region, it won’t happen.”</td>
</tr>
<tr>
<td>1_diff:willing</td>
<td>Experience of working with organisations with different willingness to participate in the process</td>
<td>Interviewee’s own experiences with working with various organisations which show different levels of willingness to take part in the planning process</td>
<td>“I think that’s because they don’t have the motivation to do the work that it demands from them.”</td>
</tr>
<tr>
<td>1_diff:prep</td>
<td>Experience of working with organisations with different preparedness to participate in the process</td>
<td>Interviewee’s own experiences with working with various organisations which possess different levels of preparedness and competences to take part in the planning process</td>
<td>“Land use planners are definitely more equipped or people who do general planning.”</td>
</tr>
<tr>
<td>1_diff:priori</td>
<td>Experience of working with organisations with different priorities in the process</td>
<td>Interviewee’s own experiences with working with various organisations which has diverging priorities concerning the planning process</td>
<td>“It’s not always easy since the goals of municipalities, the state and other stakeholders may differ.”</td>
</tr>
<tr>
<td>1_integ:needed</td>
<td>More land use and transport integration needed within the planning process</td>
<td>Why the interviewee thinks the integration of land use and transport planning should be more advanced, based on their own understanding of such integration</td>
<td>“I think that it was clear that it could be useful to combine these three different separate plans or strategies as one comprehensive MAL plan.”</td>
</tr>
<tr>
<td>1_integ:not-needed</td>
<td>Land use and transport integration not needed as much</td>
<td>Why the interviewee thinks the integration of land use and transport planning should not be pursued further, based on their own understanding of such integration</td>
<td>“That’s a hard thing to get everybody on board in this level of plan that has not so much influence on people’s everyday lives now.”</td>
</tr>
<tr>
<td>1_impact-assess:proced</td>
<td>Impact assessment procedure</td>
<td>How the interviewee explains the steps and tasks within the impact assessment procedure</td>
<td>“HSL has planned the impact assessment process very systematically.”</td>
</tr>
<tr>
<td>1_impact-assess:role</td>
<td>Role of impact assessment procedure in the planning process</td>
<td>How the interviewee sees the role of impact assessment procedure within the whole planning process</td>
<td>“We use the impact assessment as a planning tool.”</td>
</tr>
</tbody>
</table>
Following the learnings from the first set of interviews, second and third sets of interviews were conducted. Once all interviews were completed, another analysis including all of them was conducted based on the identified factors affecting the MAL 2019 planning process. In line with the identified research need of better insights into the ways in which conditions of the actual policy-making ecosystem influence the integration of land use and transport planning, the rationale behind this analysis was to understand how identified factors connect to each other and how these connections explain the current challenges and successes of the MAL 2019 planning process. The coding scheme used for this analysis can be seen in Table 6.
**Table 6.** Codes used for the content analysis of the factors affecting integration of land use and transport planning in the MAL 2019 planning process.

<table>
<thead>
<tr>
<th>Code</th>
<th>Code Name</th>
<th>Code Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>2_org</td>
<td>Organisational structures and identities</td>
<td>Effect of having different organisations, structuring of different units and departments within the same organisation, organisational identities</td>
<td>“Planning, we do it together as a whole region, but when it comes to the individual projects, every municipality wants to have their own projects.”</td>
</tr>
<tr>
<td>2_edu-prof</td>
<td>Educational backgrounds and professional identities</td>
<td>Effect of having different educational frameworks for land use planners and transport planners, different ways of thinking and doing things professionally</td>
<td>“It sometimes creates issues when people are from different backgrounds, and they don’t necessarily have the same knowledge base.”</td>
</tr>
<tr>
<td>2_polit</td>
<td>Politics</td>
<td>Effect of political decision-makers, their ways to influence planning processes</td>
<td>“There was this political will that changed a big part of the plan.”</td>
</tr>
<tr>
<td>2_reso</td>
<td>Availability of resources</td>
<td>Effect of availability or lack of financial and human resources</td>
<td>“The commitment to the process is very hard to do if you really don’t have time to participate and do the work between the meetings.”</td>
</tr>
<tr>
<td>2_meth</td>
<td>Methods in use</td>
<td>Effect of using different methods, tools and procedures by land use and transport planners, effect of using the same methods over long periods of time</td>
<td>“We use the transport model a lot. And that model was a big part of planning.”</td>
</tr>
<tr>
<td>2_comm</td>
<td>Interpersonal communication between planning actors</td>
<td>Effect of different ways individual planning actors interact with each other in a social system</td>
<td>“As the years go by, we learn to work together and find the right balance.”</td>
</tr>
<tr>
<td>2_legis</td>
<td>Legislation</td>
<td>Effect of laws and legally-mandated responsibilities</td>
<td>“The current organisation is tied to the political forces and legislation that they work with.”</td>
</tr>
<tr>
<td>2_cont</td>
<td>Physical and historical context of planning</td>
<td>Effect of urban morphological and geographical characteristics and development of processes over time</td>
<td>“There is also strong and long term pain points, which is difficult.”</td>
</tr>
<tr>
<td>2_proc</td>
<td>Planning process organisation</td>
<td>Effect of different ways the steps and interactions within the planning processes are organised</td>
<td>“We have tried to develop the planning process toward a more discussing process, so that you can leave your own interests a little bit behind.”</td>
</tr>
</tbody>
</table>
A Note on the use of quotes from interviews in this dissertation

When used in this dissertation, all quotes from the interview transcripts are meticulously edited with utmost attention given to preserving the original meaning. The reason to do so was twofold. Firstly, it was crucial to protect the anonymity of the interviewees. Therefore, where necessary in the quotes, the name of interviewee’s organisation, their specific task within the MAL 2019 planning process and any other detail that might reveal the identity of the interviewee is replaced with an explanatory word written in brackets. Secondly, only when necessary, the quotes were modified for length and clarity. The interviews were transcribed verbatim from audio recordings. Therefore, the quotes were of casual daily language which were long and incomprehensible at times. Examples of such editing included:

- Removal of filler words (e.g., “like” or “uhm”)
- Removal of repeated words (e.g., “And, and in a way, in a way it’s... Well, well, that’s the thing...” was edited as “And in a way it’s... Well, that’s the thing...”)
- Addition of helping words due to grammatical reasons (e.g., adding “to”, “of”, “for”, “is” or “are”)
- Addition or changing of words to clarify the meaning if the excerpt requires so (e.g., “They were not happy with it.” would be edited as “[The planners] were not happy with [the meeting].”).
- Removal of unnecessary sentences and words for the topic at hand, which is marked with “[...]” within the quote.

Finally, the interviewees were referred to by the planning level they worked at and their generalised type of expertise, in order to avoid any possibilities to identify the interviewee.

3.2.2 Document analysis

As the other main research method of this dissertation, a document analysis was conducted. This section includes the following subsections that concentrate on document analysis as a research method and the process of document analysis within this doctoral research.

**Document analysis as a research method**

Document analysis is a method for systematically obtaining, reviewing and analysing textual and/or visual documents (Bowen, 2009). In this doctoral research, document analysis was employed to follow the historical changes concerning the MAL 2019 planning process and to supply contextual information on these changes (ibid.). Document analysis is advantageous in terms of non-reactivity and stability as the previous events cannot be changed according to the ongoing case study, of specificity concerning the precise details such as names and years of the recorded event, and of broad coverage to include multiple events through a long period of time (Yin, 2018; Bowen, 2009). On the other hand, document analyses suffer from lack of details due to being limited to only what is recorded concerning the event, selection bias due to missing documents,
inaccessibility and irretrievability if some documents are not public or stored at a specific physical location only (ibid.).

**Document analysis process**

The second data collection and analysis method employed within this doctoral research is a document analysis. This analysis was conducted in collaboration with Research Assistant Emily Johnson\(^{16}\) between June and September 2021. The main goal of this document analysis was to understand the emergence and evolution of factors impacting the MAL 2019 Planning Process over time. Accordingly, the objective of the analysis was to fill the knowledge gap regarding how the historical development of the planning context influenced the integration of land use and transport planning during the MAL 2019 planning process. The analysis provided valuable information for constructing stepwise progression of laws and plans concerning metropolitan land use and transport planning integration in the Helsinki Metropolitan Region.

The process of document analysis was iterative. Since the documents that are relevant for this research on land use and transport integration were not systematically produced and published due to the changing planning environment, it was necessary to adopt a systematically iterative document sampling approach. Accordingly, small sets of documents were analysed, insights were gained from them, and further readings were conducted to check the documents, planning processes, and actors they referred to. This iterative process continued until a saturation point was reached, allowing for a comprehensive understanding of the historical, legislative and organisational developments. This iterative approach ensured consistency throughout the analysis while allowing for constant comparison of results from the document analysis with the results from the interviews.

Within this iterative approach, the sampling strategy had two main criteria. Firstly, specific factors which came up as influential during the interviews provided a thematic sampling criteria. These factors essentially focussed on legislative and organisational changes that took place leading up to the MAL 2019 planning process. Secondly, due to unsystematic production of relevant documents as explained earlier, the sampling criteria included two categories of documents: primary and supplementary. The sampling started from the primary documents, and supplementary documents were only utilised when primary documents required a supplement to complete the narrative. The complete list of analysed documents can be found in Appendix 1, Table 10.

Primary documents were those that were directly connected to land use and transport planning in the Helsinki Metropolitan Region. These were transport system plans and/or land use and housing plans created for the Capital Region

\(^{16}\) Ms. Johnson was hired specifically to collaborate with while conducting the document analysis. During her employment as a Research Assistant at the Department of Built Environment during June-September 2021, her main tasks included finding documents according to the agreed sampling strategy and skim-reading them, and listing the events/changes that took place between 1990-2020 according to the documents read. She also supported the process of building a narrative of important events/changes that impacted the MAL 2019 planning process.
and/or the Helsinki Metropolitan Region from 1990 to 2020. These plans’ framework programmes (i.e., documents outlining the planning process) were also included. The descriptions of planning processes, including actors involved, steps taken, the purpose of the process, expectations, and related laws, were found in framework programmes. Accordingly, laws, acts and other legal regulations implemented during this period and deemed to have influenced the formal and informal institutionalisation of land use and transport integration in the metropolitan region were also included. Additionally, the analysis looked for information on the requirements and/or support provided by laws in connection to integrated land use and transport planning, which were found in the laws themselves. Furthermore, the predecessors and successors of identified laws and acts were also checked to ensure comprehensiveness. Finally, previous MAL Agreements and Letters of Intent were also included among the primary documents, as they were specifically produced to promote land use and transport integration in the metropolitan region. Supplementary resources such as governmental records, implementation programs, and committee meeting minutes, were also utilised during the analysis, when an inconsistency or a void is recognised concerning the chronological development path of implementing land use and transport integration in the Helsinki Metropolitan Region. Implementation programmes were used as supplementary as their production was inconsistent over time.

This document analysis only utilised public records. It was important to ensure the authenticity and trustworthiness of the selected public documents. Therefore, only the documents that included a listed author were used.

3.2.3 Validation of results from the interviews and document analysis through meetings

In order to validate the results from the interviews and document analysis, this doctoral research utilised meetings with the planning actors of the case study subject, i.e., MAL 2019 planning process. By definition, use of both document analysis and semi-structured interviews allows for data triangulation. However, in order to magnify the focus on planning actors’ own lived experiences in relation to the research focus on contextual factors, an additional validation method is chosen.

Meetings as a tool for validation of results

As this doctoral research underscores the significance of understanding integrated land use and transport planning processes within their own context, it was critical that the validation of the results was also carried out in the same manner. Accordingly, regular meetings with some of the key planning actors involved in the case study planning process were utilised as a validation method. This validation method draws on the theoretical basis of “informant feedback” which is a method used for assessing and increasing legitimacy of qualitative research (Onwuegbuzie & Leech, 2007), based on the ideas of communicative validity (Sandberg, 2005). Informant feedback “involves systematically obtain-
ing feedback about one’s data, analytic categories, interpretations, and conclusions from the study group” (ibid., p. 241). By doing so, as argued by Onwuegbuzie and Leech (2007) the study group participants are involved in determining the legitimacy of the researcher’s results, allowing the researcher to avoid inaccurate representation of the study group’s lived experiences.

Process of validation through meetings with the planning actors

The author of this dissertation attended three meetings with some of the key actors of MAL 2019 planning process, to regularly share the research progress and present the results achieved up until that point, in November 2021, January 2022, and May 2022. It is important to note that these meetings were not exclusively organised for the purpose of this doctoral research but were recurring gatherings where the author’s research group and a key stakeholder of the case study subject meet and discuss topics of common interest, the most important being the MAL planning procedure. These meetings served to foster collaborative deliberation on the research findings and to assess the validity of the results. The intention was both to ensure the validity and accuracy of the results, and to identify any crucial points that may have been unclear or omitted in the presented results.

These meetings were not recorded or systematically analysed since their primary purpose was to support the main data collection methods, i.e., interviews and document analysis, by offering a reliable validation method. Therefore, the meetings served a corroborative function, enabling the author of this dissertation to share the research results with some of the key planning actors and gather their impressions regarding the interpretations of the results. These meetings were instrumental in corroborating the interpretations of the findings and identifying knowledge gaps that were subsequently addressed through the third set of interviews.

By incorporating these meetings as a validation method, this research ensured the active involvement of the planning actors in assessing the validity of the researcher’s results, since the objective of the research requires an appropriate understanding of the interpretation of the interviews and document analysis. The collaborative nature of the meetings allowed for an open dialogue, promoting a deeper understanding of the research findings and mitigating the risk of inaccurate representations of the lived experiences of the interviewees. The meetings provided a valuable platform for feedback, validation, and refinement of the research results, contributing to the overall robustness and credibility of the research outcomes.

3.2.4 Systematic Literature Review on the Factors Affecting the Case Study Subject

In order to deepen the understanding of the factors affecting MAL 2019 planning process, a literature review was conducted specifically focussing on how the identified factors are discussed within different contexts as reported in previous research on integrated land use and transport planning processes. This systematic literature review enabled the author of this dissertation to interpret
the interplay of factors affecting the MAL 2019 planning process in a more grounded and comprehensive manner. This review also facilitated the process of clarifying the contributions of this doctoral research, through a synthesis of existing knowledge on the connection between the integration process and its context. By doing so, the lessons learnt from this doctoral research can be consistently carried forward to different governance contexts. The results of this review are presented in Chapter 5.

**Systematic literature reviews as a research method**

Literature reviews are one of the most common research methods used across the scientific realm. The central purpose is to provide a comprehensive understanding of the existing knowledge in a specific field by synthesising the knowledge acquired through a specific sample of previous publications. Through this synthesis, it is possible to contextualise the research by enabling the researcher to place their work within the broader research field, to understand the existing theories, methods and findings, and to identify research gaps. Wee and Banister (2016) argue that the added value of a literature review may be about providing empirical insights or conceptual models, overview of prevalent methods and theories, knowledge for real-world applications, or a research agenda. Systematic reviews are the most well-known type of reviews (Grant & Booth, 2009). Systematic reviews follow specific protocols to retrieve publications, assess their relevance, and evaluate their content against a specific purpose set for the review, in a way that the process is replicable, transparent and meticulous (ibid.). Nevertheless, they can be disadvantageous, in terms of potential hindrances against critical engagement with the sampled literature, since they may restrict the inclusion of some crucial, high-quality publications (Grant & Booth, 2009; Boell & Cecez-Kecmanovic, 2015; Greenhalgh & Peacock, 2005).

**Process of systematic literature review**

The process of the systematic literature review mainly adhered to the PRISMA guidelines (Moher et al., 2009), i.e., a standardised guideline for reporting systematic literature reviews, with adjustments made according to the needs of the literature review for this dissertation (see Figure 6). The adjustments were made in order to avoid the potential disadvantage of excluding a potentially critical publication, and thus, to be able to accommodate the inclusion of records identified via citation searching, i.e., finding new records by looking at the citations of records identified earlier. This was an important step due to the fact that the term “integration” is not a term commonly accepted and used in the same way in every context, leading to the use of different terms referring to the same ideas. For example, sources that referred to “coordination” were also included when found via citation searching. Two databases were used to identify records; namely, Scopus and Web of Science, and the final searches were made on October 25th, 2022.

The following search query was used in Scopus:
The following search query was used in Web of Science:

\[
((\text{AB}=(\text{integrat*})) \text{ AND } \text{AB}=(\text{"land use"})) \text{ AND } \text{AB}=(\text{transport*}) \text{ AND } \text{AB}=(\text{plan*})
\]

Figure 6. PRISMA flowchart showing the steps of the literature review to systematically find and evaluate the chosen articles, book chapters and reports. [LUTI = Land use and transport integration].

While writing the factors affecting the integration of land use and transport planning processes, 33 records identified via the procedure described in Figure 6 provided the main discussion points while 91 records assessed for eligibility provided occasional supporting examples to further elaborate the main discussion points.

3.2.5 Visualisation of results from the interviews and documents analysis through complexity mapping

As this doctoral research aims at exploring the interplay of factors affecting the integration of land use and transport planning process, a visualisation method for charting such connections in an explorative manner was deemed necessary. Inspired by network analysis (see, e.g., Wellman, 1983; Borgatti et al., 2009) and actor network theory (see, e.g., Latour, 1996), this doctoral research strives to explore the role of both human actors, such as individuals and
organisations, and non-human actors, such as institutions, laws and technologies, by revealing their interconnectedness and interdependencies, instead of analysing these in isolation. By doing so, the objective is to add one more layer to a grounded understanding of how land use and transport integration processes take place in the way they do within their own context. Therefore, the complexity mapping method was chosen as a suitable visualisation method of the results from interviews and document analysis to explore the interconnectedness as well as the emergent behaviour of factors affecting the MAL 2019 planning process.

**Complexity mapping as a tool for visualisation of results**

Complexity theory has been influential in determining the focus of this doctoral research on the interplay of contextual factors affecting the processes of land use and transport integration. In complexity theory, interrelationships within complex systems are not fixed and do not follow simple cause-effect connections, but are dynamic and generate new behaviour in the system (Beeson & Davis, 2000). In other words, in a complex system, the system’s heterogeneous composition made up of smaller components interacting in a non-linear manner leads to intricate emergent behaviours of the whole system. Therefore, complexity theory:

“expands on the reductionistic framework by not only understanding the parts that contribute to the whole but by understanding how each part interacts with all the other parts and emerges into a new entity, thus having a more comprehensive and complete understanding of the whole” (Turner & Baker, 2019, p. 2).

Connecting these ideas to policy-making, Innes and Booher (2003, p. 30) argue that complexity theory directs its attention to the greater, dynamic framework of collaborative policy-making and implementation where adoption of a comprehensive and adaptive strategy in addressing societal challenges is required. Innes and Booher (2003) also point out that this holistic and adaptive approach is necessitated by the old-fashioned ideas of siloed policy-making practices operating with the assumption that a policy process, just like a machine, can be broken into its constituting parts when something is wrong, these parts can be fixed individually, and then the policy continues to work as usual when the fixed parts are put back together. Nevertheless, policy-making processes display the properties of a complex adaptive system in reality, rather than a machine (Innes and Booher, 2003; Briassoulis, 2004). This is because policy-making processes consist of numerous individual and collective actors behaving within formal and informal institutions and interacting in diverse manners, while being challenged with the wicked nature of policy problems (Innes and Booher, 2003; Briassoulis, 2004; Eräranta, 2019; Rittel & Webber, 1974).

In addition, Alexander (2020) recommends that the term complexity needs to be interpreted and used metaphorically if the purpose is to examine the planning practice within an uncertain and changing world, instead of direct interpretations found in other disciplines such as biology and mathematics. Accordingly, this doctoral research is influenced by the complexity theory to study the
integration of land use and transport planning processes by placing them within a wider governance context while recognising interdependencies within the process as well as between the process and its context, instead of studying the planning process in isolation and by analysing its components separately without context.

Complexity mapping is a method of visualising components of complex phenomena and the connections between them by producing diagrams or maps. Complexity maps serve to make sense of the setting of a complex phenomenon, by clarifying the interconnections and interdependencies between the components (Suoheimo & Miettinen, 2018). Through visualising the phenomenon’s components and how they connect to each other, it is possible to make sense of how the phenomenon looks as a whole and what are the points of intervention, such as leverage points and weaknesses, within this whole.

The visual foundation of a complexity map is components –or nodes– (visualised as circles in Figure 7) and the connections between them (visualised as lines in Figure 7) decided according to an internally and externally consistent set of rules determined based on the purpose of the complexity map.

![Figure 7. An example of a complexity map, as understood in this dissertation.](image)

Fundamentally, a complexity map is not too different from a network graph, with its nodes (i.e., factors representing human and non-human actors, inspired by Actor Network Theory in the case of this doctoral research) and edges (connections between these actors). In this doctoral research, the case study subject, the MAL 2019 planning process is considered as a complex adaptive system whose emergent behaviour cannot be anticipated by examining its parts in isolation and which displays non-linear behaviour owing to the interdependencies between a large number of those parts – an approach highly influenced by Complexity Theory. In addition, Social Network Analysis may also come to mind within this discussion. Nevertheless, this research utilises nodes which are not social units, and thus, does not fit into the foundational conceptualisation of Social Network Analysis, despite making use of the “degree centrality” concept which is explained in the upcoming section. Consequently, complexity mapping
is a more suitable terminological choice in this doctoral research, to emphasise the mapping process of a complex system, i.e., the MAL 2019 planning process.

**Complexity mapping process**

The process of creating complexity maps to visualise the results of interviews and document analysis included several steps. Firstly, the factors influencing the MAL 2019 planning process were listed based on the findings from the first set of interviews. The next step was to make a list of the main points within these factors that were discussed in all of the interviews or outlined in the document analysis, with the help of the literature review outlined in Chapter 5. Subsequently, each main point under the identified factors was represented as a node in the complexity map, while connections between those nodes were also determined according to the interview and document analysis results.

When selecting the nodes, all factors were included without judgement or evaluation at that initial stage, regardless of whether they were considered "facts" (e.g., introduction of a law, establishment of a new organisation) or "learnings" (i.e., insights obtained from interviews or document analysis). This comprehensive approach ensured that a wide range of factors were considered. In addition, inclusion of a wide range of factors was also enabled by including both a law (e.g., the law mandating that HSL has to draw a transport system plan) and the specific legal responsibility of an organisation related to that law (e.g., the responsibility of HSL as an organisation to follow the law and draw a transport system plan) as separate factors, instead of only having the law as a node.

While establishing the connections between nodes, a straightforward approach was adopted to avoid creating forced or speculative connections. Connections were made if a direct link between two nodes was revealed through interviews and/or document analysis. If the reasoning for a connection was based on speculation (e.g., "if this node operates in this way, then maybe this other node might be affected in that way"), no connection was established.

While visualising the connections, for clarity of interpretation, one-way arrows were used to represent the connections. If one node led to another and the second node also influenced the first, two arrows were depicted between those nodes, rather than a single arrow with two directional heads.

The software Gephi was used for the complexity mapping. The Force Atlas algorithm was employed for node layout, placing nodes that were connected to each other in closer proximity. In order to analyse and visualise the interplay of factors affecting the MAL 2019 planning process, the outdegree centrality measure was utilised, inspired by Social Network Analysis. This measure shows the importance of a node based on counting how many outgoing connections the node has. In other words, the more outgoing connections a node has, the more influence the node has on the connecting nodes and thus on the whole system. In the case of this research, higher outdegree centrality means that if a node has a higher outdegree centrality, it means that the specific factor has more influence on the connecting factors. Accordingly, the nodes were visualised according to their outdegree centrality in a manner that the larger the node, the higher
its outdegree centrality, and thus, the stronger its influence. In addition, modularity classes were applied as an additional visualisation method for clustering and identifying communities of highly interconnected factors. These communities, in the case of this research, mean that factors forming a community have more influence on each other when compared to the other nodes in other communities. In other words, communities of nodes can be considered as thematic groups of factors affecting the MAL 2019 planning process. The same steps were followed for both the mapping of historical development of the factors (Figure 14) as well as the mapping of the interplay of current factors (Figures 16, 17 and 18).

To conclude, this chapter has presented the rationale behind each methodological choice by connecting them to the research objectives, followed by an itemised description of each research method. The next chapter will introduce the case study subject in detail.
4. Case Study Context

This doctoral dissertation examines an integrated land use and transport planning process titled MAL 2019 Planning Process which took place in the Helsinki Metropolitan Region in Finland. Accordingly, the chapter will first summarise the planning system in Finland, and then will move on to the description of the MAL 2019 planning process.

4.1 Land Use Planning and Transport Planning Practices in Finland

4.1.1 Finland at a glance

The Republic of Finland (commonly referred as “Finland”) is a country located in Northern Europe (see Figure 8). The population of Finland is 5,563,970 as of December 31st, 2022 (Statistics Finland, 2023a). The geographical size of the country is 338,440 km² (European Union, n.d.), with only 1.4% being built up land whereas over 70% is forests (European Environment Agency, 2021). Finland’s neighbours are Sweden, Norway, and Russia. Being an EU member country since 1995, Finland is a parliamentary republican state, with its parliament based in the capital Helsinki. The country has 19 regions, and 310 municipalities and cities (Ministry of Finance, n.d.). Finland has two official languages, Finnish and Swedish, and according to the Finnish constitution, Sami, Karelian and Romani languages are covered under linguistic rights (Ministry of Justice, n.d.).

With about one third of the population living in the southern regions of the country (Statistics Finland, 2023a), especially the northern and eastern regions of Finland are sparsely populated (Purkarthofer & Mattila, 2023). The average population density across the country is 18 inhabitants/km² according to the latest World Bank data (World Bank, n.d.). Urbanisation in Finland experienced significant growth primarily after the 1950s. By 1990, around 60% of the population resided in urban areas, a notable increase compared to the mere 30% living in urban regions during the 1950s (Purkarthofer & Mattila, 2023). It is worth emphasising that this rapid urbanisation predominantly took place in the form of suburban areas (ibid.).
Administratively, Finland is characteristically Nordic in a sense that the administrative framework is notably influenced by the relatively low population density, while the central state assumes a significant position in management with the help of powerful local governments and regional agencies (Nadin & Stead, 2013). Within this context, Finland consists of three levels, namely, the national, regional and local levels\textsuperscript{17}. While the national level includes the government, parliament, ministries and other public bodies linked to these; the regional level essentially includes AVI (Regional State Administrative Agencies)

\textsuperscript{17} City-regional or metropolitan level non-statutorily stand between local and regional levels.
and ELY Centres (Centres for Economic Development, Transport and the Environment) (both representing the national state), and Regional Councils (consisting of appointed representatives of cities and municipalities in the region). Since the beginning of 2023, there are also twenty one Wellbeing Services Counties operating as the statutory bodies taking care of healthcare, social welfare and rescue services. Their members are elected by the citizens residing in each county.

At the local level, there are municipalities and cities which are not differentiated in administrative terms. Municipal/city councils function as the political decision-making bodies whose members are elected every four years during local elections. These local governments are marked by their right to self-governance guaranteed by the Finnish constitution since 1865 when municipalities gained autonomy following a transfer of secular matters from the church to local governments as well as by the ratification of the European Charter of Local Self-Government in 1991 (Vakkala et al., 2021), similar to the other Nordic countries such as Sweden. Cities and municipalities are statutorily responsible with the provision of many public services including but not limited to basic education, cultural services, sports services, land use planning, water and waste management, and technical infrastructure. Cities and municipalities are also authorised to levy taxes to ensure that they have enough resources to carry out their duties. Nevertheless, the national state must also safeguard the continuation of public service provision by local authorities through subsidies as well as enforcing related economic policies (Vakkala et al., 2021).

4.1.2 Land use planning practice in Finland

Finnish land use planning is a hierarchical planning system outlined and standardised by the Land Use and Building Act (1999). The objective of the act is:

“to ensure that the use of land and water areas and building activities on them create preconditions for a favourable living environment and promote ecologically, economically, socially and culturally sustainable development. The Act also aims to ensure that everyone has the right to participate in the preparation process, and that planning is high quality and interactive, that expertise is comprehensive and that there is open provision of information on matters being processed” (Land Use and Building Act, 1999, p.1).

As defined by the Land Use and Planning Act, the land use planning system operates at three levels where higher levels steer the lower levels. At the highest level, which is the state level, the Ministry of the Environment assumes an important position by creating the planning legislation, including the Land Use and Building Act (1999), and by preparing the National Land Use Objectives. These objectives are the overarching planning goals and objectives that must be adhered to by regional and other land use planning initiatives in order to facilitate their realisation. These objectives, presented in the form of a written text rather than a visual map, stipulate that nationally consequential issues such as ecological sustainability are attended at the regional or municipal/city level.
At the middle level, which is the regional level, Regional Councils function as cooperative municipal authorities with appointed, not elected, members. Regional Councils are in charge of, among other things, drafting and approving Regional Land Use Plans that have legal force. These plans are drafted in a strategic way that their level of detail only guides but does not strictly constrain the municipal decision-making on land use issues. Therefore, regional land use plans give municipalities considerable flexibility for dealing with specific land use and development issues in their communities. Regional transport infrastructure development is among the subjects handled in regional plans apart from regional level land use issues. In addition, Regional Councils take on the creation of Regional Development Programmes and Strategies and play a key role in implementing the EU Cohesion Policy (Purkarthrofer & Mattila, 2023).

At the lowest level, which is the local municipal or city level, municipalities have exclusive land use planning rights which afford them the responsibility for creating land use plans and other non-statutory planning instruments to govern the urban development within their borders. While regional and national organisations are not in a position to veto or change the local plans, compliance with regional land use plans and national guidelines is legally required. Plans may be challenged legally by organisations, public authorities, and private citizens if they conflict with higher-level plans. The ultimate decision regarding whether to modify or revoke the plan rests with the court.

Local governments create legally binding local master plans and local detailed plans, which must be approved by the elected municipal council. Local master plans steer the spatial structure of the municipality, and can be of strategic nature or focus on a particular planning issue such as the green and blue structure. On the other hand, local detailed plans are more strict in nature as they form the basis for construction permit decisions. They specify the land uses as well as urban morphological characteristics to be adopted within the municipal borders. Municipalities have significant influence over land use planning due to their ownership of land and statutory land policy instruments, which gives them significant agency in acquiring land and influencing potential future development (Puustinen et al., 2017; Hytönen, 2016).

In addition to above-mentioned statutory planning instruments, in Finland several informal, i.e., outside of the statutory planning system, planning instruments are also in use. For example, the Ministry of Environment, together with the Finnish Environment Institute, prepares development visions to produce information about the current as well as the future state of Finnish urban regions (Ministry of Environment, n.d.a). In addition, various city-regions adopt structural schemes to deal with the lack of strategic perspective in statutory instruments at the disposal of city-regions and regions (Mäntysalo et al., 2015). At the local level, municipalities may choose to prepare additional supporting planning instruments such as city strategies (see, e.g., City of Helsinki, 2021). Finally, the MAL agreements and plans are also prominent examples of informal planning instruments, which are the main object of study for this doctoral dissertation.
Culturally, Finnish land use planning practice is characterised with a generally consensus-seeking approach (see, e.g., Rainio-Niemi, 2008). Social values such as order, respect for nature and trust in institutions are also visible in the planning culture (Othengrafen, 2010). In Finland, illegal forms of urban development are not commonplace, since authorised plans are followed as they should (ibid.) Professionally, land use planners are predominantly architects, (Kangas-oja et al., 2010; Puustinen et al., 2013) with geographers and other professionals have also started to enter the field.

4.1.3 Transport planning practice in Finland

When it comes to the transport planning practice in Finland, the Ministry of Transport and Communications is the leading authority at the state level. According to the Act on the Transport System and Highways (2005), the Ministry of Transport and Communications is the main responsible authority for the preparation of the national transport system plan to be approved by the Finnish government. The national transport system is prepared for 12-year long periods but can be updated if the government of the day sees fit. The aim of the national transport system plan is: “to consolidate informed decision-making by means such as developing information on the transport system and its development and impact assessment” (Ministry of Transport and Communications, 2021, p. 8). Accordingly, “the national transport system plan presents an assessment of the current state of the transport system and the future operating environment, goals for the transport system and proposed measures to achieve the goals” (Act on the Transport System Plan, 2005, § 15 a). In addition, the national transport system plan recognises the Land Use and Building Act (1999) as the main basis for land use issues, while the Act also recognises transport planning as a part of land use planning. Other than the Ministry of Transport and Communications; transport responsibilities have been divided across three organisations: the Finnish Transport and Communications Agency (Traficom), the Finnish Transport Infrastructure Agency (Väylävirasto), and the Traffic Management Company Ltd. (Fintraffic) which are the other key actors in the national level transport planning practice working as the administrative arm of the Ministry of Transport and Communications in Finland (Olin & Mladenović, 2022; Mladenović et al., 2020). Traficom is responsible for matters concerning licensing, digitisation, and traffic safety among others. On the other hand, Väylävirasto is responsible for planning and maintaining the roads, railways and sea routes. Finally, Fintraffic takes part in the management of land, air and sea traffic.

At the regional level, the Centres for Economic Development, Transport and the Environment (ELY Centres) and Regional Councils are responsible for carrying out the regional development functions of the central government concerning transport system matters. In matters concerning transport, ELY Centres are tasked with road maintenance and projects, administrative tasks concerning transport systems, public transport services, and other similar functions. Regional Councils are involved with coordinating the regional plan concerning transport matters elsewhere than the Helsinki Metropolitan Region.
the local level, municipalities have varying transport planning practices depending on the size and urban fabric of the municipality. In addition, in some city-regions such as Helsinki and Tampere, joint transport authorities take care of public transport planning and provision.

4.2 Case Study Subject: MAL 2019 Planning Process in Helsinki Metropolitan Region, Finland

This doctoral dissertation focuses on an integrated land use, housing and transport planning process called the MAL 2019 Plan that took place between 2016 and 2019. As the objective of the research revolves around understanding the context of the planning process in connection to the planning process itself, most of the details of the MAL 2019 planning process and its overall background are revealed in the following chapters on the results of the research. Therefore, in this chapter, only the overall view is presented.

4.2.1 MAL Agreements in Finland

The MAL 2019 plan was drawn up to be the basis of the MAL Agreement 2020-2031. Therefore, it is helpful to start off with explaining these agreements briefly. Urban contractual policies, such as the MAL Agreements, have become essential procedures between local governments and central governments concerning issues of sustainable urban development, especially in the Nordics (Smas, 2017). In order to empower local governments in achieving sustainable urban development, there has been a transition from direct interventions of the state in local issues towards indirect mechanisms of impact with adoption of voluntary collaborations and contractual procedures (Tønnesen, 2015). Consequently, state-level involvement has led to greater attention and will for addressing the climate crisis at the municipal level (ibid.). In connection with this, state funding into municipal-level implementation has also been shown as critical in ensuring provision of sustainable urban development outcomes (Hull, 2008; Tønnesen, 2015).

Building on the same premises, MAL Agreements are agreements signed by the Finnish government and the seven\footnote{Initially, the agreement procedure only consisted of the four largest city-regions in Finland; namely, Helsinki, Tampere, Turku and Oulu. As of 2021, three more city-regions are included in the procedure. These city-regions are Kuopio, Jyväskylä and Lahti.} largest city-regions in Finland. The objective is:

"to facilitate and support the cooperation between municipalities in urban regions and between municipalities and the State in the guidance related to the urban structure and coordination of land use, housing and transport. The key aim is to improve the functioning and competitiveness of urban regions and ensure a balanced development of municipalities. The matters specified in the agreements include the objectives for land use development and
In addition to the city-regions’ municipalities, the agreements are prepared together with the Ministries of Environment, Transport and Communications, Economic Affairs and Employment, and Finance, while the Housing Finance and Development Centre of Finland (ARA), Väylä, Traficom, and ELY Centres are also involved representing the Finnish government. Each agreement possesses a distinctive character to be able to address challenges particular to the respective city-region. The first round of the agreements were signed for different target years of sometime between 2011-2015 in different city-regions. The second round of agreements were for the target years of 2016-2019, and the third round for 2020-2031, which was the round concerning the case study subject of this doctoral dissertation.

MAL agreements are primarily created to make it easier to share the costs of investing in transport infrastructure and to guarantee the availability of affordable housing in Finland’s major city-regions, with the ultimate goal of promoting sustainable urban development in these areas. The Finnish state and the municipalities within the city-regions make a commitment to support city-regional collaboration by signing the agreement. On the state side, the Ministry of Environment, the Ministry of Transport and Communications, and the Ministry of Finance sign the agreement. This commitment is demonstrated by the municipalities engaging in joint planning of land use, housing and transport matters in their city-regions, while the state provides partial financial support for infrastructure initiatives. Therefore, these agreements can be interpreted as the Finnish government’s active backing to city-regional level informal and networked planning initiatives co-existing with the statutory planning instruments (Bäcklund et al., 2018). MAL agreements are currently legally non-binding, which means there are no sanctions in case of non-compliance with a signed agreement. The agreement procedure is not regulated by a dedicated law, either.

MAL agreements have generally garnered positive feedback from participating municipalities, primarily due to the associated financial incentives (Häkli et al., 2020). According to a study conducted by the Association of Finnish Municipalities on the status of MAL agreements (Hemminki & Lönnqvist, 2022), the participating municipalities appreciate that the agreement policy allows for increased predictability and continuity in the development of Finnish city-regions. Nonetheless, criticisms have arisen, such as concerns regarding their lack of procedural transparency, limited avenues for public engagement, potential conflicts with other legally binding municipal and regional plans (Bäcklund et al., 2018; Bäcklund et al., 2023), and some participants’ lack of authority to make decisions on the subjects discussed during the negotiations (Hemminki & Lönnqvist, 2022). In addition, a recent study by Bäcklund et al. (2023) suggests that some members of city councils which approve the agreements on behalf of their own cities feel that their role is rather limited due to the strong position of
the financial incentives by the state as well as the highly complex levels of technical knowledge required to comprehend the options presented in the agreements.

4.2.2 Helsinki Metropolitan Region

Helsinki Metropolitan Region\textsuperscript{19} is situated in Southern Finland, and encompasses 14 municipalities (see Figure 9) within the Uusimaa Region of Finland consisting of 26 municipalities. Helsinki Metropolitan Region, as the most populous city-region in Finland as well as the administrative, financial, educational and cultural hub of the country, plays an important role on a national level, with about one third of the country’s population living in the Helsinki Metropolitan Region. Accordingly, the Finnish state tends to pay special attention to the spatial development of the city-region.

Among the 14 municipalities of Helsinki Metropolitan Region, 4 of them (Helsinki, Espoo, Vantaa, and Kauniainen) are called the Capital Region municipalities. The Capital Region municipalities form the urban core\textsuperscript{20} of the city-region. Kauniainen is a rather special case among these Capital Region municipalities as it is quite a small municipality located completely within Espoo, as can be seen in Figure 9. The remaining ten municipalities (Hyvinkää, Järvenpää, Kirkkonummi, Kerava, Mäntsälä, Nurmijärvi,Pornainen, Sipoo, Tuusula, and Vihti) are collectively called the KUUMA municipalities whose name comes from Keski-Uusimaa (Central Uusimaa in English). KUUMA is a cooperation network organisation set up by the municipalities for joint advocacy. KUUMA municipalities form the suburban belt around the Capital Region municipalities. Within KUUMA municipalities, there is no individual municipality with a leading role. At the beginning of the MAL 2019 planning process\textsuperscript{21}, the Helsinki Metropolitan Region had a population of about 1.5 million, with approximately 1.2 million living in the Capital Region municipalities and about 300 000 living in KUUMA municipalities (Statistics Finland, 2023b).

In addition to these groups of municipalities, there is also the HSL area within the Helsinki Metropolitan Region (see Figure 9). HSL area is the joint public

\textsuperscript{19} The English name for the region is not agreed upon. The Finnish name “Helsingin seutu” or the Swedish name “Helsingforsregionen” literally translates to “Helsinki Region” in English. However, Helsinki Region is both used to refer to the 14 municipalities of the region (see, e.g., Land Use, Housing and Transport Plan 2019, 2019) and the 4 municipalities forming the core of the region (see, e.g., Helsinki Region Infoshare website www.hri.fi). An alternative translation is “Greater Helsinki”. Nevertheless, this name has not made its way into official publications, either, except for the Greater Helsinki Vision 2050, an international idea competition, organised by the 14 municipalities of the region. In addition, Greater Helsinki may be confusing and can be interpreted as the 4 municipalities forming the core of the region, rather than the constellation of 14 municipalities. Therefore, for the sake of consistency and clarity, in this dissertation, the 14-municipality region is called “Helsinki Metropolitan Region” whereas the 4-municipality region is called “Capital Region”.

\textsuperscript{20} This “urban core” is to be understood in Finnish standards, as the country is not densely populated in general.

\textsuperscript{21} The first month of 2016 is taken as the beginning of the planning process, for statistical purposes.
transport area, and consists of 8 municipalities of the Helsinki Metropolitan Region (Helsinki, Espoo, Vantaa, Kauniainen, Kirkkonummi, Kerava, Sipoo, and Tuusula) and, in addition, the Municipality of Siuntio which does not take part in the MAL planning.

The 14 municipalities forming the Helsinki Metropolitan Region differ from each other in terms of urban structure, population and political climate, as shown in Table 7 and Table 8. Helsinki, Vantaa, and Espoo (especially the eastern and southern parts of Espoo) show stronger urban characteristics (e.g., extensive public transport network, higher population and building density, availability of urban amenities) than the rest of the municipalities. These municipalities’ political decision-makers tend to support public transport and densification projects, but, of course, not unanimously. Municipalities along the railway lines, such as Kerava, Järvenpää and Hyvinkää, mainly grew around the train stations. Therefore, these municipalities are also generally known to support public transport-related initiatives, as can also be inferred from their voting pattern similarities as the larger cities. On the other hand, municipalities which cover a large geographical area but do not benefit from an extensive public transport network or train connections, such as Vihti, Nurminjärvi and Sipoo, are more sporadically developed in urban morphological terms, with over 50% of the housing units being single-family houses or twin houses. These municipalities’ political decision-makers tend to support road network expansion projects and tend to criticise urban densification projects which mostly target municipalities with good public transport and railway connections.
Figure 9. Map showing Helsinki Metropolitan Region, including the Capital Region KUUMA Municipalities, and HSL public transport zone. Author’s own work.
Table 7. Statistical data representing the diversity of 14 municipalities taking part in the MAL 2019 planning process. The table contains population data in the beginning of 2016 to represent the conditions in the beginning of the planning process (Statistics Finland, 2023b), and household type data also in 2016 (Statistics Finland, 2023c) to represent the urban structure of the municipalities. Darker grey represents Capital Region Municipalities, and lighter grey represents KUUMA municipalities.

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Population, in the beginning of 2016</th>
<th>Household units by type within the municipality, by percentage, in 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single family houses &amp; twin houses</td>
</tr>
<tr>
<td>Helsinki</td>
<td>628,546</td>
<td>7%</td>
</tr>
<tr>
<td>Espoo</td>
<td>269,789</td>
<td>26%</td>
</tr>
<tr>
<td>Vantaa</td>
<td>215,003</td>
<td>24%</td>
</tr>
<tr>
<td>Kauniainen</td>
<td>9,436</td>
<td>33%</td>
</tr>
<tr>
<td>Hyvinkää</td>
<td>46,495</td>
<td>32%</td>
</tr>
<tr>
<td>Nurmijärvi</td>
<td>41,953</td>
<td>58%</td>
</tr>
<tr>
<td>Järvenpää</td>
<td>40,983</td>
<td>31%</td>
</tr>
<tr>
<td>Kirkkonummi</td>
<td>38,722</td>
<td>46%</td>
</tr>
<tr>
<td>Tuusula</td>
<td>38,496</td>
<td>57%</td>
</tr>
<tr>
<td>Kerava</td>
<td>35,297</td>
<td>24%</td>
</tr>
<tr>
<td>Vihti</td>
<td>28,905</td>
<td>53%</td>
</tr>
<tr>
<td>Mäntsälä</td>
<td>20,707</td>
<td>66%</td>
</tr>
<tr>
<td>Sipoo</td>
<td>19,435</td>
<td>70%</td>
</tr>
<tr>
<td>Pornainen</td>
<td>5,114</td>
<td>86%</td>
</tr>
</tbody>
</table>
Table 8. Statistical data representing the political inclinations of 14 municipalities taking part in the MAL 2019 planning process. The table contains data on the political parties and their percentage of votes by municipality in the municipal elections in 2017 (Statistics Finland, 2023d), as the municipal councils elected in 2017 elections are the ones who decided on the approval of MAL 2019 plan. Darker grey represents Capital Region Municipalities, and lighter grey represents KUUMA municipalities.

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Political parties by percentage of votes received in the municipality in the municipal elections in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helsinki</td>
<td>KOK (28.3) VIHR (24.1) SDP (13.8) VAS (11.2) PS (6.7) RKP (5.8) KESK (2.8) KD (2.8)</td>
</tr>
<tr>
<td>Espoo</td>
<td>KOK (33.7) VIHR (22.3) SDP (12.5) PS (9.8) RKP (8) KESK (3.9) VAS (3.9) KD (3.6)</td>
</tr>
<tr>
<td>Vantaa</td>
<td>SDP (25) KOK (24.4) VIHR (17.8) PS (12.4) VAS (7.4) KESK (4.3) KD (3.8) RKP (2.9)</td>
</tr>
<tr>
<td>Kauniainen</td>
<td>RKP (44) KOK (34.2) VIHR (10.2) PS (3.6) SDP (3.2) KD (2.2) KESK (1.5) VAS (0.5)</td>
</tr>
<tr>
<td>Hyvinkää</td>
<td>SDP (26) KOK (24.1) VIHR (13.6) PS (12.9) VAS (8.6) KESK (8) KD (5.7) RKP (0.3)</td>
</tr>
<tr>
<td>Nummijärvi</td>
<td>KOK (27.6) KESK (20.2) VIHR (14.1) PS (12.3) VAS (3.7) KESK (8) KD (3.4) RKP (0.5)</td>
</tr>
<tr>
<td>Järvenpää</td>
<td>KOK (20.1) SDP (19.3) VIHR (15.4) PS (8.8) VAS (8.4) VAS (6.6) KD (4.4) RKP (0.4)</td>
</tr>
<tr>
<td>Kirkkonummi</td>
<td>KOK (24.6) RKP (22) VIHR (21.4) SDP (14.3) PS (7.8) VAS (4.2) KD (3.3) VAS (3.3)</td>
</tr>
<tr>
<td>Tuusula</td>
<td>SDP (22.9) KOK (20.9) KESK (10.6) VIHR (6.8) PS (5.5) VAS (3.5) KD (3.4) RKP (0.9)</td>
</tr>
<tr>
<td>Kerava</td>
<td>SDP (24.9) KOK (23.8) VIHR (17.3) VAS (12.2) PS (10.9) KESK (5.5) KD (3.5) RKP (1.3)</td>
</tr>
<tr>
<td>Vihti</td>
<td>KOK (23.2) KESK (22.3) SDP (20.7) PS (11.5) VIHR (9.1) VAS (6.2) KD (3.2) RKP (1.5)</td>
</tr>
<tr>
<td>Mäntsälä</td>
<td>KESK (26.2) SDP (25) KOK (20.6) PS (8.2) VIHR (5.5) VAS (5.3) KD (2.4) RKP (0.3)</td>
</tr>
<tr>
<td>Sipoo</td>
<td>RKP (38.5) KOK (24) VIHR (11.2) SDP (10.9) KESK (5.9) PS (5.8) KD (1.5) VAS (1.4)</td>
</tr>
<tr>
<td>Pornainen</td>
<td>KESK (35.5) SDP (25.2) KOK (16.3) PS (15.1) VIHR (7.9) VAS (0) RKP (0) KD (0)</td>
</tr>
</tbody>
</table>

As for the urban mobility situation in the Helsinki Metropolitan Region that was taken into account for the MAL 2019 planning process, approximately 4 million daily journeys were made within the metropolitan region, most of which cross municipal borders (Land Use, Housing and Transport Plan 2019, 2019, pp. 8-9). Despite 60% of all journeys being made by sustainable transport modes (i.e., walking - 29%, cycling - 9%, and public transport - 22%), private car usage is still widespread in parts of the city-region where public transport services are limited (ibid.).

4.2.3 MAL 2019: Planning process

MAL 2019 Plan is a strategic land use, housing and transport plan formulated jointly with the cooperation of 14 municipalities in the Helsinki Metropolitan Region and Helsinki Region Transport (HSL), as well as representatives from Ministry of Environment, Traficom, Väylä, ELY Centre of Uusimaa Region, and other relevant organisations. The fundamental purpose of the plan is to be the basis for the negotiations of the upcoming MAL agreement (i.e., MAL Agreement 2020-2031). Accordingly, the overarching aim was to ensure that the content and the investment plan of MAL Agreement 2020-2031 reflect the joint needs and demands of the Helsinki Metropolitan Region municipalities as outlined in the MAL 2019 plan, by trying to reduce the possibility of individual municipalities negotiating measures prioritising their own municipal needs over metropolitan-level needs during the agreement negotiations with the state. Ideally, an already agreed metropolitan plan approved by all municipalities could reduce such possibilities in the following agreement negotiation phase, even though it would not be possible to completely eliminate them.

The MAL 2019 Plan describes how the Helsinki Metropolitan Region is estimated to grow between the years 2019 and 2050, with more concrete measures planned until 2030. The plan is based on the estimation that the population of the metropolitan region will rise from 1.5 million in 2016 to 2 million in 2050, and there will be almost 6 million daily journeys mostly crossing the municipal borders within the metropolitan region (Land Use, Housing and Transport Plan 2019, 2019, p.7). The vision set out for the MAL 2019 plan is “an attractive Helsinki region offering versatile housing options with district centres each with their distinctive characteristics where people travel on foot, by bike and by public transport” (Land Use, Housing and Transport Plan 2019, 2019, p. 10). Accordingly, the plan envisions the Helsinki Metropolitan Area as operating as a coherent whole with improved accessibility primarily based on sustainable transport modes, which is also attractive to businesses. While densely built urban cores prioritise sustainable urban mobility and urban amenities, the surrounding communities offer a wide range of different housing options and closeness to nature.

The MAL 2019 plan was prepared in its current form for the first time, as the previous plans were prepared separately for land use, housing and transport issues on the metropolitan level. This joint process was developed as an original approach to alleviate the policy integration challenges encountered in the Helsinki Metropolitan Region since the 1990s, such as different organisations being
responsible for different subjects and the mismatch of several metropolitan-level plans without proper political and practical backing. The MAL 2019 Plan was not a one-off project, but a long-term planning process with 4 year-long cycles roughly tied to the local governmental elections.

The planning process of the MAL 2019 Plan officially started in 2016, with some preparatory work done towards the end of 2015, and lasted until 2019. The primary aim of the process design was to facilitate the integration of previously distinct land use, housing, and transport system planning procedures. The process is described to be a building constructed step-by-step while each level relies on the previously developed knowledge and decisions made (HSL, 2017).

As shown in Figure 10, mapping of starting points of the plan based on the learnings from the previous plans, strategies and policies was the first foundational step of the process. Based on these, the goals, content, and process of MAL 2019 Plan were outlined in the framework programme as the next foundational step. Framework programme also served to ensure that all participating actors would agree on the content and goals of the plan as well as they would have a common understanding of the planning process. The pillars resting on these foundations were different themes to be explored through in-depth studies (e.g., public transport network study, congestion pricing study, park-and-ride study, and so on) all of which were discussed by the MAL Project Group. Methods of impact assessment to be used throughout the planning process were also outlined at this point. Resting on the pillars was the step when the plan was drafted. Drafting of the plan included several iterations while each iteration was connected to an iteration of the impact assessment. Finally, the last step was the political decision-making to approve the MAL 2019.

Figure 10. Diagram explaining the step-by-step logic of the MAL 2019 planning process. Adapted from HSL (2017, p. 16), author’s own translation.

The MAL 2019 planning process included a variety of organisations as well as several ad-hoc as well as permanent preparation groups (HSL, 2017). As seen in

22 These challenges are described in detail in Section 6.2., as a part of the findings of this doctoral research.

23 The plan that followed MAL 2019 is called MAL 2023. It is essentially an update of MAL 2019, and outlines the development targets for 2040 and lays out a metropolitan vision for 2060. As of October 9th, 2023, MAL 2023 is approved by the HSL Executive Board, HSYK, and KUUMA Executive Board, and pending approval by individual municipalities.
Figure 11, on the coordination and preparation level, three working groups (a land use group, a housing group, and a transport system group) were established. Each working group included both municipal and HSL experts, in order to ensure horizontal integration. To oversee the planning process, a special MAL Project Group was formed. This group, in addition to the experts from the municipalities and HSL, included state and regional representatives from, for example, the Ministries of Environment, and Transport and Communications, Väylävirasto, Traficom, and Uusimaa Regional Council. The MAL Project group discussed the central issues of in-depth studies, impact assessment as well as other topics related to the planning process. On top of their transport system-related tasks, HSL also served in a coordinator capacity, with the chairperson and secretary of the MAL Project Group being from HSL.

At the steering level, two pre-existing boards (MAL Advisory Board and Transport System Board) strategically oversaw the development of the MAL 2019 plan. The MAL Advisory Board, consisting of the leading land use and housing officers appointed by each municipality, held discussions mostly on the land use and housing issues. On the other hand, the Transport System Board, consisting of leading officers from the municipalities and HSL as well as state representatives, focused on the issues of the transport system in the Helsinki Metropolitan Region, with the HSL CEO acting as the chairperson. The joint meetings of these two boards occurred regularly, while the preparations for these meetings were handled by the MAL Project Team. These boards mainly consisted of leading authorities of municipalities and HSL, as well as additional representatives of the region and state, for example, from the Ministry of Environment, Uusimaa ELY Centre, Uusimaa Regional Council, Traficom, and Väylävirasto.

Finally, at the decision-making level, several bodies were tasked with approving the goals and framework programme of the plan as well as the final MAL 2019 plan. Following the approvals of the HSYK and HSL Executive Board, KUUMA Executive Board had to provide approval. Finally, each municipality had to approve the MAL 2019 plan individually, especially the parts of the plan that concerned their own municipality. It should also be noted that the political decision-makers did not get involved with the plan only on the approval stage, but also during the drafting of the plan through joint meetings organised for the involvement of the political decision-makers.

The MAL 2019 planning process also included a scenario planning activity, planned specifically as a part of the process (HSL, 2017). This scenario planning activity contributed to the thematic delineation of the MAL 2019 planning process, the awareness of potentially important developments and how to influence them. The first step of the activity was to determine and classify various change phenomena such as wild cards, mega trends, and weak signals (Mäntysalo et al., 2023). Following an evaluation of their likelihood and importance, their potential implications on Helsinki Metropolitan Region’s land use, housing and transport arrangements were deliberated on, and this deliberation served as a kind of “risk assessment” for discussion on whether these change phenomena
would increase or decrease the likelihood of achieving the MAL 2019 plan goals (ibid., p. 637).

Within the planning process, an impact assessment process was a central element. The legal background of the impact assessment is that the transport system plan was to be assessed through a detailed environmental impact assessment procedure as stipulated by the SOVA Act (2005). Nevertheless, in order to support the planning of the whole land use, housing and transport plan, the impact assessment procedure included broader themes than required by the SOVA Act. It was mostly the HSL actors who undertook the impact assessment process due their legal responsibility, with other actors also participating in the impact assessment process. Seven core indicators were set for the impact assessment to ensure the achievement of vision of the plan, the majority of which relates to the transport system. These core indicators and their target levels are (Land Use, Housing and Transport Plan 2019, 2019, pp. 12-13):

1. Greenhouse gas emission from traffic decreases by 50% by 2030 when compared to 2005 level (decisive target level).
   a. Target: - 50%
   b. Change expected from the MAL 2019 plan according to the impact assessment: - 50%

2. Labour force accessibility improves by 10% from the current level.
   a. Target: + 10%
   b. Change expected from the MAL 2019 plan according to the impact assessment: + 16%

3. Differences between different neighbourhoods decrease and social segregation does not increase.
a. Target: Decrease in neighbourhood-based differences and social-integration at least remaining the same  
b. Change expected from the MAL 2019 plan according to the impact assessment: The measures of the plan contribute to positive development.

4. Socio-economic efficiency at the system level (benefits/costs) is over 1.  
a. Target: 1,0  
b. Change expected from the MAL 2019 plan according to the impact assessment: 1,5

5. At least 90% of the new housing is located in the primary land-use development zones.  
a. Target: 90%  
b. Change expected from the MAL 2019 plan according to the impact assessment: 94%

6. The share of sustainable modes of transport is at least 70%.  
a. Target: 70%  
b. Change expected from the MAL 2019 plan according to the impact assessment: 65%

7. At least 85% of the population is located in sustainable mobility zones.  
a. Target: 85%  
b. Change expected from the MAL 2019 plan according to the impact assessment: 89%

The section of the environmental impact assessment mandated by the SOVA Act primarily involved GIS-based analyses to assess environmental impacts. However, the broader impact assessment of the MAL 2019 plan relied on the HELMET transport model, which played a crucial role in the planning process. The plan underwent three iterations, with each iteration culminating in an impact assessment that informed subsequent refinements of the draft, which was a novel approach at that point. The initial stages of the process required fixed parameters for land use and population growth in accordance with the requirements of the four-step transport model, HELMET.

4.2.4 MAL 2019: Resulting plan

The resulting plan was approved by the HSL Executive Board on March 26th, 2019, by HSYK on March 28th, 2019, and by the KUUMA Executive Board on May 23rd, 2019 (HSL, 2019), followed by the individual municipalities approving the relevant parts of the plan. The approved MAL 2019 Plan had three key measures as described in Land Use, Housing and Transport Plan 2019 (2019, pp. 14-15):

1. Directing the new growth to the existing urban structures and to areas well-connected by public transport: The plan aims that at least 90% of new housing production is located within the primary development zones (see Figure 13 for primary development zones), prioritising infill development where possible.
2. Housing development in adequate numbers and quality: The plan aims that 16,500 new apartments are built per year in the Helsinki Metropolitan Region (see Figure 13 for housing production targets per municipality). These apartments will provide a different range of living solutions across the metropolitan region, while also tackling segregation through financial incentives. Energy efficiency of constructed buildings will also be supported by financial incentives as well as relevant legislative changes.

3. Transport investments primarily into rail transport and cycling: The plan aims that the existing transport infrastructure is effectively used by way of small-scale improvements. Multi-modality and coverage of the transport system is improved by new rail and light rail lines as well as necessary land use arrangements for public transport nodes. Investment of about 3.3 million euros is allocated for public transport and about 0.3 million euros for cycling infrastructure. On the other hand, road transport is developed mainly targeting freight transport and public transport, with 0.3 million euros allocated. Overall, the plan aims for a transport investment programme of about 340 million euros per year until 2031 (i.e., the target year of the MAL Agreement 2020-2031 to be signed based on the MAL 2019 plan).

Figure 12 shows the MAL 2019 plan with its primary land use zones (which are primary zones for further housing production) and forecasted housing production numbers by city in these zones, and the new transport investments planned to be launched by 2031 (Land Use, Housing and Transport Plan 2019, 2019, p. 16). The connection between the primary land use zones and the transport projects can be clearly seen in the plan. It is also noteworthy that the transport investments are outlined in detail in the plan and its investment programme whereas such details concerning land use and housing projects are left out of the plan.

The plan’s approval was followed by the MAL 2020-2031 Agreement signed by the Ministry of Environment, Ministry of Transport and Communications, and Ministry of Finance, and Ministry of Economic Affairs and Employment, the municipalities involved in the agreement negotiations, the Centre for Economic Development, Transport and the Environment in Uusimaa, Traficom, Väylävirasto, HSL, and the Housing Finance and Development Centre of Finland (ARA). The agreement clearly states that its central starting point is the MAL 2019 plan, while also taking into account the Government Programme of Prime Minister Sanna Marin, international and national climate treaties and strategies, the Finnish Parliament’s letter on housing needs, national land use goals as well as the national transport system plan (Avtal mellan Helsingforsregionens kommuner och staten rörande markanvändning, boende och trafik 2020-31, 2020, pp. 12-13).
Figure 12. A plan map showing the primary land use zones, housing production target by municipality, and transport investments planned to be launched by 2030 (Land Use, Housing and Transport Plan 2019, 2019, p. 16). [Notation “A-S” refers to a detailed list of transport projects included in the plan until 2031.]

To conclude, this chapter has presented the background, goals, process, and outcome of the MAL 2019 planning process. By doing so, this chapter aimed at providing a well-rounded understanding of the planning process, so that the findings of this doctoral research can be discussed against it.
5. Factors Affecting the Integration of Land Use and Transport Planning Processes

This chapter provides a presentation on how factors deemed important for the MAL 2019 planning process were discussed within previous studies on land use and transport planning. A systematic literature review was conducted to establish the current knowledge base on how these contextual factors affect the integration of land use and transport planning processes in various governance contexts and how the factors emerge as well as influence each other, through a synthesis of previously discussed empirical insights on the subject (see Wee & Banister, 2016 for typology of literature reviews). The literature review focussed on academic articles, dissertations and reports that describe the process of integrated land use and transport planning in a detailed enough manner so that the author of this doctoral dissertation could draw conclusions about how these factors influence the integration of land use and transport planning, with the categorisation decided according to the case study subject, i.e., MAL 2019 planning process, in order to allow for a detailed examination in the following chapter.

As described in the Methods (Chapter 3), a list of factors affecting the MAL 2019 planning process was identified through interviews (see Table 9). This list was compiled to avoid big-picture categorisations and, instead, to provide a more explicitly defined way of looking at what makes the context of MAL 2019 planning process through an interplay of these categories.
Table 9. List of factors affecting the integration of land use and transport planning in the MAL 2019 planning process and their descriptions.

<table>
<thead>
<tr>
<th>Name of the factor</th>
<th>Description of the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational structures and identities</td>
<td>Effect of having different organisations, structuring of different units and departments within the same organisation, organisational identities</td>
</tr>
<tr>
<td>Educational backgrounds and professional identities</td>
<td>Effect of having different educational frameworks for land use planners and transport planners, different ways of thinking and doing things professionally</td>
</tr>
<tr>
<td>Politics</td>
<td>Effect of political decision-makers, their ways to influence planning processes</td>
</tr>
<tr>
<td>Availability of resources</td>
<td>Effect of availability or lack of financial and human resources</td>
</tr>
<tr>
<td>Methods in use</td>
<td>Effect of using different methods, tools and procedures by land use and transport planners, effect of using the same methods over long periods of time</td>
</tr>
<tr>
<td>Interpersonal communication between planning actors</td>
<td>Effect of different ways individual planning actors interact with each other in a social system</td>
</tr>
<tr>
<td>Legislation</td>
<td>Effect of laws and legally-mandated responsibilities</td>
</tr>
<tr>
<td>Physical and historical context of planning</td>
<td>Effect of urban morphological and geographical characteristics and development of processes over time</td>
</tr>
<tr>
<td>Planning process organisation</td>
<td>Effect of different ways the steps and interactions within the planning processes are organised</td>
</tr>
</tbody>
</table>

By no means, the author of this doctoral dissertation claims that the list provided in Table 9 is exhaustive and absolute. This list was developed through the learnings from the case study subject. The critical point here is not to provide an absolute list, but to explain the complexity of integrated processes by discussing different factors in a categorically easy to understand manner. Therefore, for other academic or practical purposes in different governance contexts, another list might be more useful. It is also noteworthy that the factors described in Table 9 are not mutually exclusive. There is a myriad of interrelationships in between, which is the key idea behind this doctoral research. Yet, they are analytically clear enough to explain the way each factor works in the context of the MAL 2019 planning process for the purposes of this dissertation.

It is also noteworthy that these categories are not purely institutional or non-institutional. The way the interplay and the effect of these categories discussed in the MAL 2019 planning process showed clear interdependencies between institutional and non-institutional factors, as discussed in detail in Section 2.3. Therefore, the list also follows the same logic.

The ordering of factors in this chapter is based on the frequency with which they are mentioned in the reviewed literature. However, in Chapter 5, the order in which factors are presented is determined by the level of attention they received from the interviewed planning actors themselves.
5.1 Organisational Structures and Identities

The effects of organisational structures and identities on the integration of land use and transport planning processes received a generous amount of attention in the scholarly literature. In order to discuss their effects, it is helpful to first understand what organisational structure and organisational identity mean in brief. To begin with, Ranson et al. (1980) define organisational structure as “a configuration of activities that is characteristically enduring and persistent; the dominant feature of organisational structure is its patterned regularity”. Through this patterned regularity, organisational structures provide a scheme of the connections and disconnections between individual and collective actors, their functions and operating procedures to fulfil organisational objectives (Ahmady et al., 2016). In addition, Gioia et al. (2013) define organisational identity as the “guide for what an organisation’s members should do and how other organisations should relate to it (p. 161)”. Organisational identities are shaped by organisations’ fundamental principles and narratives as well as members’ experiences of being a part of the organisation (ibid.). Overall, these definitions are well-aligned with the institutional approach of this doctoral research to understanding the factors affecting the integration of land use and transport planning processes. The effects of organisational structures and identities will be discussed accordingly.

By definition, integrated land use and transport planning processes take place outside of or in between established organisational structures of public planning organisations. Therefore, the sectoral and hierarchical structure of an organisation may be influential in how an integrated process is shaped. Firstly, organisational structures define the limit of an individual planning actor’s responsibilities and authorisation as outlined by their organisation. Therefore, in most cases, despite the fact that a land use and transport planning process starts with the aim of bringing various stakeholders together, when these stakeholders step out of their established organisational structures, they are still bound by their roles in their own organisations, which lead to difficulties in negotiations during the planning process (Stenstadvold; 1996; Stead, 2008; van Geet et al., 2019; Pettersson & Hrelja, 2020; Busscher et al., 2013). For example, Pettersson & Hrelja (2020) point out that integrated planning processes are inevitably influenced by the ambiguities concerning whether the planning actors involved in the process have the authority to make conclusive decisions or not while being bound by their organisations’ structural raison d’etre.

Secondly, organisational structures reflect the sectoral or scalar goals and priorities of an organisation that the organisation is essentially tasked with protecting and advancing in the first place. Stepping out of structural boundaries of organisations to partake in an integrated process does not change the organisational goals to be pursued. Self-interests of planning organisations taking part in integrated land use and transport planning processes are evident in the way they formulate and regulate their planning processes without prioritising how those will relate to others’ processes (Busscher et al., 2013). For example, Stenstadvold (1996) writes in his study of a Norwegian integrated land use and transport planning scheme that one of the critical and evident reasons for the
systemic deficiencies in the planning process was the differences between the
goals introduced in the plan and the goals traditionally followed by one of the
key stakeholders. This irreconciliation led to impasses in the planning process.
Another perspective here is related to the effects of organisational structure on
commitment to an integrated process. Tornberg (2012, p. 27) writes in his study
concerning the integration of state-level transport infrastructure planning and
local-level urban planning in Sweden that level of commitment may vary de-
pending on how commitment is understood within the specific planning pro-
cess. Tornberg (2012) writes that, in his study, the railway agency mainly fo-
cussed on the substance of cooperation (which is the transport system), while
the municipality focussed on the process of cooperation (which is the progres-
sion of the planning process). This exemplifies that the commitment to the in-
tegrated planning process is inherently connected to the priorities of the organ-
isations.

Due to the challenges outlined above, cross-cutting issues that integrated
planning processes are meant to address require new organisational structures
allowing collaborative policy-making across departments, organisations and
governance levels (Hull, 2005). Accordingly, establishing joint units (Stead,
2003; Koglin, 2015) or creating a new central agency responsible for integration
of different processes (Curtis & James, 2004; Rooney, 2010) are recommended
in the land use and transport integration literature. These recommendations are
aimed at altering organisational structures towards structures that are more
conducive to integrated approaches. For example, on establishing joint units,
Koglin (2015) argues that the fact that urban and transport planning depart-
ments are set up differently in Stockholm (two different departments under the
same organisation) and Copenhagen (under the same department) leads to dif-
differences in their successes of implementing cycling measures. On establishing a
central agency responsible for integration, Kaufmann and Sager (2006) argue
the opposite of the advantages proposed by Curtis & James (2004) and Rooney
(2010). Kaufmann and Sager (2006) argue that the efficient work identified in
their case study was due to a lack of intermediaries which allows for increasing
the information flow by decreasing the distance between the actors involved.
This goes to show that structural changes are not guaranteed to deliver the ex-
pected results (Levin-Keitel & Reeker, 2021), as working relationships can still
remain fragmented under the disguise of an overarching structure (Legacy et
al., 2012). Alternatively, the new organisational structures can fall short due to
the discrepancies between the geographical area that the new organisational
structure is supposed to cover, on one hand, and the geographical area within
which the daily mobility patterns of residents take place, on the other hand
(Stead, 2003).

In the lack of structures supportive of integrated approaches, the decisive ele-
ments affecting the formation and implementation of integrated policies are
“traditions, intra-governmental working relationships, and justifications that
pertained within each organisation” (Hrelja, 2015, p. 10). This brings the topic
of organisational identities into the discussion. Despite having the same legal
Factors Affecting the Integration of Land Use and Transport Planning Processes

foundation, different planning organisations may exhibit different characteristics and approaches to handle the issues of integrated land use and transport planning (Eriksson, 2017; Paulsson et al., 2016), which is an example of a non-institutional factor emerging through the contextual interpretation of an institutional factor. As legally defined administrative organs, municipalities or regional authorities in the same country may look similar in their organisational charts but due to their geographic particularities or collective experience of their employees over time may generate different organisational identities (Eriksson, 2017). As a result of such differences; mechanisms and relationships set in place may facilitate or hinder advancing integrated land use and transport planning approaches and, thus, these approaches should be developed in tandem with the existing organisational identities (Hrelja, 2015).

5.2 Educational Backgrounds and Professional Identities

Educational backgrounds and professional identities also received extensive attention in academic literature due their critical effect in the integration of land use and transport planning processes. Integrated land use and transport planning processes bring together many individual actors, each with their own unique skills and perspectives. Haas (1992) discusses epistemic communities which are defined as a “network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain or issue-area” (p. 3).” Within epistemic communities, professional habits, preferences, approaches, and methods implicitly and inevitably are related to how each actor with a specific educational background performs their duties within a multidisciplinary setting, which are examples of informal institutions. Rein and Schön (1993, as cited in Tennøy et al., 2016) explain this by pointing out that the basis for practitioners' decisions and actions in planning practice is their professional knowledge, i.e., “their primary basis for knowing and acting”, which affects how they approach problem formulation, analysis, interpretation, and the choice of measures for proposals. The authors contend that planners' priorities and knowledge significantly and inevitably influence the plans they develop. The advantage of keeping the epistemological community is, of course, the possibility to establish clear-cut roles and tried-and-true knowledge to guide professional work (Trein et al., 2023).

Land use planners and transport planners, and other actors who take part in integrated land use and transport planning processes for that matter, form their own epistemic communities which display differing and sometimes conflicting authority positions to the interconnected and interdependent issues of sustainable urban development, due to the differences in their primary bases for knowing and acting. Consequently, developing and executing integrated policies of land use and transport can be stalled by such differences in professional practices and educational backgrounds (Stead & de Jong, 2006). The more dissimilar each professional group’s frames of reference are from one another, the more challenging it is for them to comprehend one another's lexicons, operating procedures, and habits (Wenger, 1999). Thus, the effectiveness of these processes
Factors Affecting the Integration of Land Use and Transport Planning Processes

of integration relies on the inter-professional and interpersonal abilities of the practitioners involved (Stead, 2003) while creating new ways of approaching and working with the problem at hand in an integrated manner.

Differences between land use planners’ and transport planners’ educational backgrounds and professional identities have been mentioned by a number of scholars (e.g., Tornberg, 2011; Tennøy, 2010; te Brömmelstroet & Bertolini, 2008; te Brömmelstroet & Bertolini, 2010; Stead & Geerlings, 2005). The effects of disparities in educational backgrounds and professional identities of planners on integration processes are revealed by previous research on the integration of land use and transport planning processes. First and foremost, differences in framing what is the problem to solve may result in further differences in what to expect from the planning process, what can be and should be achieved with the resulting plan and what kind of commitment is appropriate based on those (Tennøy, 2010; Tennøy et al., 2016). Consequently, meanings attributed to the same planning process and its resulting plan may differ significantly between land use planners and transport planners (Tornberg, 2010). Another example of how different professional identities and approaches affect integration of land use and transport planning processes relates to the competences of planners to influence the process. Based on the learnings from an integrated process in Norway, in circumstances where there are significant disparities in the sectoral approaches and competences of the actors, such disparities may result in the most powerful actor dictating the fate of the process (Stenstadvold, 1996), which is essentially contradictory to setting up an integrated process. In their study of how planners use expert knowledge in strategic land use and transport planning processes in Sweden, Denmark and Norway, Tennøy et al. (2016) identify that when conflicting objectives arise during the planning process, planners do not always make the effort to come up with new ways of looking at the problem at hand. Instead, they resort to applying their own educationally and professionally shaped prior knowledge, even though doing so may result in the application of inaccurate and out-of-date information to complex problems of today.

In a slightly different professional identity comparison, Håkansson (2005, as cited in Tornberg, 2011) reports on a comparison between the educational backgrounds and sectoral approaches of land use planners and environmental officials. The author points out that the educational backgrounds of these two professional groups have significant impacts on their beliefs and perspectives. They frequently stereotype one another through overly simplistic and standardised depictions, which prevents them from understanding one another’s viewpoints that can help with moving forward with the planning process. This comparison can also be applied to integrated land use and transport planning processes as it is highly likely that land use planners and transport planners may stereotype each other the same way in the absence of long-standing cooperation structures.

It is important to acknowledge that land use planners and transport planners are also heterogeneous within their own epistemic communities, not only when compared to each other. For example, Kaufmann and Sager (2006) write in their case study of several Swiss cities that vocational practices evolve over time as illustrated by the fact that the coordination culture of more senior members
of transport planning staff was limited when compared to that of more junior members. Similarly, Stead and Geerlings (2005) report that due to changes in education, the job market, and recruitment practices where planning actors receive on-the-job training and gain experience working in multiple departments, local authorities are now more likely to have planners with cross-disciplinary skills, leading to improvements in their capacity to integrate policies and participate in integrated processes. In addition, Stead and Geerlings (2005) also point out that new ideas about transport planning favouring integrated approaches can be prevalent in planners’ approaches in one part of a country, in their case Copenhagen in Denmark, and in another part of the country they can be ignored by the planners due to geographical and political differences, which is another example of an interdependence between institutional and non-institutional factors.

Educational differences of land use planners and transport planners can also cater for different opportunities for integration of land use and transport planning processes (Kaufmann & Sager, 2006), as it allows for expanding one’s way of framing a certain problem as well as revealing previously unthought problem-solving and decision-making mechanisms.

5.3 Politics

Political decision-making is one of the most recognised factors affecting the integration of land use and transport planning processes in the research field, due to the highly political nature of such processes. Kaufmann and Sager (2006, p. 368) assert that “achieving policy coordination and implementing coordinated solutions are two different affairs” due to the fact that a policy developed integratively to respond to the integrated goals commonly decided by participating planning actors can still be shut down by the political decision-makers. This is due to the competing priorities and objectives of politicians, which can reduce the acceptability of integrated measures (Hrelja, 2015). This is especially true when the emphasis revolves around political bargaining rather than engaging in a strategic policy-making dialogue for achieving the integration of land use and transport planning (van Geet et al., 2019).

The political landscape and the institutions that enable land use and transport planning are evolving considerably more slowly than the prevailing paradigm surrounding these practices (Legacy et al., 2012), even though these paradigms are also slow to change. Therefore, in the grand scheme of things, political decision-makers prefer short-term and clear policies that can be used for garnering electoral benefits (such as constructing a new road section in their own constituency) over long-term planning decisions affecting a larger geographical area that are not easily noticeable, which is usually the case for integrated land use and transport policy-making (Levin-Keitel & Reeker, 2021; Athey et al., 1999; Stead, 2003; Stead & Geerlings, 2005; Hull, 2005; Curtis, 1999).

There are multiple ways in which the political decision-makers decide differently than the way plan-makers do. One noticeable way is undermining the outcomes of impact assessment procedures that are produced by planning actors.
Factors Affecting the Integration of Land Use and Transport Planning Processes

for the political decision-making phase (Sager, 1995). In his study of a Norwegian integrated land use and transport planning scheme, Stenstadvold (1996) reports that in many cases, political intervention influences the outcomes of integrated land use and transport planning initiatives, leading to recommendations that are primarily defined by political considerations rather than being grounded in analytical findings. Consequently, politically motivated proposals tend to prioritise solutions that are tailored to past and present political demands, rather than being guided by the technically feasible options proposed by planning actors. Similarly, Hrelja and Rye (2022) highlight the cases where the municipal strategies point in one direction towards sustainable transport mobility goals and yet the resulting practice points towards car-oriented strategies due to politicians’ preferences, in their study of land use and transport planning processes in two Swedish cities.

The success of an integrated land use and transport planning process can be influenced not only by differences between planners and politicians, but also by political divisions among politicians themselves. Stead and Geerlings (2005) provide an example of this phenomenon, noting that in Denmark at the time of their study, the national government was centre-right while local politics in Copenhagen was oriented around centre-left ideas. As a consequence, the process of reconciling the Greater Copenhagen Transport Plan with the national transport investment plan was complicated by the need to negotiate compromises between these divergent political perspectives. Such political divides can also have an impact at the local level, as discussed by Kaufmann & Sager (2006; p. 370), who argue that differences in political parties can influence "the political legitimacy of environmental concerns, occupational culture, and the morphological and geographic context" of Norwegian city-regions. These factors, in turn, hold significant influence in shaping the potential for integration between land use and transport.

An interesting way for the political decision-making priorities to be reflected in the planning processes is planners’ “self-censorship” (Tennøy et al., 2016), which is a form of self-regulation that occurs when individuals refrain from expressing certain ideas. Tennøy et al. (2016) refer to cases where planners engage in self-censorship by choosing not to propose certain measures to politicians, even if they believe these measures would be effective in achieving integrated planning goals. This can occur when the measures are politically unpopular, go against the current political agenda or are perceived as too costly.

As noted by Paulsson et al. (2018), collaborative efforts alone may not always suffice to achieve integrated goals. This underscores the importance of clear political support and priorities, in order to facilitate successful collaborative approaches, which can in turn lead to concrete outcomes. In other words, while collaboration can be a valuable tool for achieving shared objectives, it cannot operate effectively in a vacuum of planning officials, and must be situated within a broader political context. Only with a clear set of priorities and overarching support can collaboration be expected to function optimally and achieve its intended goals. Stead and de Jong (2006, p. 13) argue that there may be instances where there is a momentum towards achieving integrated goals with the help of
legislation and financial incentives that influence the decision-makers’ tendencies. Nevertheless, a degree of idealist behaviour and risk-taking is frequently necessary (ibid.).

5.4 Availability of resources

Land use planning and transport planning practices have been operating with their own sectoral resources (e.g., people, time, information, operational funding, tools24) that have accumulated and been refined over time to fit to the purposes of each sector. On the other hand, to facilitate the integration of land use and transport planning processes, a more diverse array of resources is required beyond those traditional, single-sector resources that have been in use for a long time (Curtis & James, 2004). In addition, by exchanging resources, planning actors can also align their objectives and expectations for the integrated process, as strong resource complementarities can help form efficient partnerships (Mu & de Jong, 2016). Therefore, resources are considered to be one of the most crucial preconditions for the integration of land use and transport planning processes (Stead & Jong, 2006, p. 18).

In the selected literature, an unequal level of resources available to different parties is considered as a critical point in establishing an effective and efficient integrated process of land use and transport planning, especially in terms of sectoral resource inequalities (Eriksson, 2017) and municipal-level lack of resources (Tønnesen, 2015). Hrelja et al. (2016, p. 9) assert that the presence of significant resource discrepancies poses challenges to formulation of a planning process where open and transparent dialogue can take place. To illustrate the criticality of resource equality, Stead and Geerlings (2005) report from their study concerning Copenhagen that a stronger partnership and sense of shared responsibility between the participating departments resulted from the fact the plan was carried out by both the transport and environment departments with an equal distribution of resources and personnel. An interesting aspect to consider here is that even in the cases where integrated strategies are mandated by law, this might not guarantee the allocation of required resources to parties involved in the process (Stead de Jong, 2006). For example, in their study of a bill proposed and accepted to help California, USA to reach their climate policy goals, Barbour and Deakin (2012, p. 70) write that “regional and local planners express concerns about inadequate resources for implementation. Without strong state or federal mandates or incentives that favour the policy outcomes envisioned in [the bill], the law expects more from [metropolitan planning organisations] than they can easily accomplish.”.

Especially the availability of necessary funds can be singled out in this discussion of the impact of availability of resources on the integration of land use and transport planning processes. Adequate financial backing is necessary for the successful planning and implementation of planned actions within land use and transportation policies (Brannigan & Paulley, 2008; Stead, 2003; McEldowney

24 Tools are discussed in detail in Section “Methods in Use”.
et al., 2013; Kaufmann & Sager, 2006). Simply put, if there is no budget to develop and then to implement integrated solutions, then there is no real impact on the ground resulting from integrated processes. The challenge of obtaining financial support for integrated land use and transportation planning can stem from a shortage of revenue funding for operational expenses, obstacles to securing funding for joint, informal projects that transcend beyond the defined responsibility of individual departments, or difficulties in bringing together the right individual or collective actors (Brannigan & Paulley, 2008). In order to overcome such challenges, Stead and de Jong (2006) argue that limited resources should be designated pursuant to the overall objectives of organisations, rather than that of specific sub-units. The authors also point out the importance of making joint funds available to cross-unit and cross-sectoral projects to overcome already established inflexible planning procedures as well as the importance of establishing incentive schemes to encourage integrated thinking among planning actors.

The impact of availability of necessary funding on integrated land use and transport planning processes can be discussed in two perspectives; namely, funding provided by one public organisation (e.g., the national state) to another (e.g., a municipality), and funding provided within the same organisation for cross-sectoral and cross-unit processes. Firstly, to begin with the effects of funding provided by one public organisation to another, several examples can be provided. Instead of relying on planning practice and research pointing towards different priorities, political decision-makers can base their decisions on what is favourable in terms of receiving funding for their own constituency. For example, when state funding is provided for proposals that aim to stimulate growth at the regional or metropolitan level, local decision-makers can opt for such proposals while disregarding the need to focus on measures to manage shrinking (Fischer et al., 2013). Similarly, if the national planning law or regulations in effect require integrated projects to fulfil particular criteria to release certain funds to be used by local authorities, it also affects the choice of steps within an integrated land use and transport planning process (Kaufmann & Sager, 2006). Another example is the need to consider the priorities and expectations of many stakeholders to be able to gather sufficient support for acquiring necessary funding and the resulting derailment from the original integration needs, which is usually the case when local governments themselves are not in a position to fund their own integrated projects and rely on state support (Stead & Geerlings, 2005). Finally, in the grand scheme of things, when funding is provided by an external actor, there are more considerations to take into account which could be completely irrelevant to the integrated policy-making needs at hand. Budget cuts, the diminished purchasing power of public offices, and rising political and public scrutiny of public offices make it challenging to secure funds for many projects, including those that aim at integration of land use and transport planning processes, as such realities shape the overall policy-making environment (Rooney et al., 2010).

Secondly, as an illustration of funding provided for cross-unit processes within the same organisation and how this affects integration efforts, Stead
(2008) points out that inter-unit competition for internally financed projects may result in a decline in trust and will for consensus-seeking among different units. Nevertheless, differences in financial resources can also prompt cooperation between departments. To illustrate, van Geet et al. (2021) report in their study of multiple Dutch provinces that imbalances between funding allocated to land use department and transport department are generally recognised by the planning actors. Nevertheless, their interviewees also described instances of how differences in financial resources generate an understanding of interdependencies between the work of different departments and spark new sectoral interactions.

5.5 Methods in Use

As discussed in the Section “Educational Backgrounds and Professional Identities”, planning actors carry out their tasks utilising the approaches and methods that they developed as a part of their professional development learnt within their own epistemic community. It is argued that it is the use of appropriate procedural tools that make the most difference in integrating the processes of land use and transport planning (van Geet et al., 2021; Peters, 1998). This is because procedural instruments indirectly shape policy outcomes by influencing the behaviour and interactions of planning actors (Stead, 2021). In contrast, substantive instruments, which directly target policy outcomes, may not adequately address the complexities and interconnectedness of the integrated policy-making process. Van Geet (2021) writes that “when promoting land use transport integration, three forms of fit are important: the fit of goals and instruments, the fitting of goals and instruments over time, and the goodness-of-fit of instruments to context”. In this section, especially the fit of goals and instruments is discussed.

Established assessment procedures are a critical discussion point for the integration of land use and transport planning processes, as they bring about questions of fit of goals and instruments. In this discussion, especially the use of cost-benefit analyses and impact assessments as procedural tools is highlighted. Cost-benefit analysis has been one of the most influential methods used in transport planning (Talvitie, 2000). At the same time, it is also one of the methods that has been criticised the most recently (Vickerman, 2017; Martens & Di Ciommo, 2017; Talvitie, 2000). Key criticisms are difficulties in the communication of the results and mistrust in parameter selection (Beukers et al., 2012).

Firstly, the professional knowledge of those who prepare the results, most likely in a mono-sectoral context, and those who interpret the results might significantly differ in an integrated planning process. As a result, there may be misunderstandings and misinterpretations of the results, leading to potential disagreements and obstacles in the integrated decision-making process. Secondly, there might be a mistrust in the selection of parameters used for calculations. The chosen parameters are reflective of the conceptions and interpretations of

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25 The effects of this are mentioned in Section “Interpersonal communication between planning actors”.

117
those who construct the assessment framework for land use and transport integration, and these conceptions and interpretations may be different than those of who interpret the results coming from different sectoral and scalar contexts. This can lead to concerns about the fairness and accuracy of the assessment process and ultimately impact the decision-making process (Beukers et al., 2012). It is also noteworthy that there are challenges in reconciling the measurement of qualitative environmental and quality of life goals with the measurement of quantitative economic goals. While environmental and quality of life goals are often measured qualitatively, economic goals are typically measured quantitatively using cost-benefit analysis. This leads to reconciliatory challenges within integrated planning processes, as it can be difficult to balance and compare the different types of goals (Stead & Geerlings, 2005).

Impact assessments, especially environmental impact assessments, also emerge as one of the most common methods used in planning processes. Nevertheless, the use of already existing impact assessment procedures may be problematic as they tend to be developed to answer mono-sectoral questions, and thus, raise questions of fit of goals and instruments in an integrated planning process. For example, Curtis (1999) explains from her study of integrated land use and transport planning in Western Australia, that urban development projects are assessed following an already-decided set of criteria, such as setbacks required within the plot, leading to discrepancies between the initial integrated policy objectives and assessment results that were not carefully thought out. Another challenge in utilising already existing impact assessment procedures is that the existing procedures may produce outcomes connected to what political decision-makers value as information, but not connected to what an integrated thinking requires for land use and transport planning. Paulsson (2018) discusses that sustainability measures concerning an integrated land use and transport policy are difficult to translate into quantitative impact assessment measures, which are the valued form of information by political decision-makers.

Similarly, use of transport models or integrated land use and transport models has been commonplace in integrated land use and transport planning processes. A serious shortcoming of integrated land use and transport models is the overwhelming number of studies that are solely focussed on model development (see, for example, Dur et al., 2014; Vale et al., 2018; Guzman, 2018), largely neglecting the actual contribution of such models to the integrated land use and transport planning practices (te Brömmelstroet & Bertolini, 2008). This may lead to discrepancies in their intended use and what they can provide. One critical issue with relying on transport models and on claims developed via transport models is that they offer a definitive representation of reality formed by the model maker, which leads to difficulties in involving alternative representations produced with the involvement of other planning actors (Tornberg, 2011). Another issue is that transport models often do not contain enough information about active travel modes which are key transport modes that an integrated land use and transport policy promotes (Switzer et al., 2013).
Factors Affecting the Integration of Land Use and Transport Planning Processes

To make informed decisions concerning the urban environment, bring about desired integrated strategies, and achieve impactful action on the ground; it is crucial to use suitable assessment tools to monitor progress and evaluate the efficacy of integrated land use and transport plans (Curtis, 1999). By utilising the right assessment techniques, the strengths and weaknesses of the plan can be identified, making it possible to adjust and refine the approach as necessary. However, even in the cases where planning actors agree on the impact assessment methods and results, political decision-makers can still ignore the results and decide based on other considerations (Sager, 1995).

5.6 Interpersonal Communication between Planning Actors

Interpersonal communication between planning actors has also received attention in land use and transport planning integration literature, which is also an example of a non-institutional factor. By their very nature, integrated planning processes bring together a multitude of individual planning actors with their own individual conceptions of the process as well as with their own roles and responsibilities defined by their organisations. In such processes, conflict is inevitable. Despite commonly accepted theories of rational decision-making, more recent research has shown that people do not act only in self-interest to achieve one-sided advantages in a conflicting scenario, but it is possible to reach consensus and mobilise resources for collective action (Holahan & Lubell, 2022). In this discussion, as a way to manage conflicts and strengthen the possibilities to compromise; genuine, inclusive, transparent and constructive communication is seen as key (Pettersson & Hrelja, 2020; Eckersten et al., 2022; Hrelja et al., 2016; Stead & Geerlings, 2005), even though such communication alone cannot guarantee the success of integrated land use and transport planning approaches (Pettersson & Hrelja, 2020).

In its simplest form, existence of amicable relationships among planning actors helps moving forward with the planning process (Fischer et al., 2013). Accordingly, “the building up of trust, the understanding of different professional cultures and the cementing of working relationships between the organisations” have to be present for the integration of land use and transport planning processes (Hull, 2005, p. 327). This perspective suggests that building and maintaining strong interpersonal relationships among the participants in the planning process is pivotal to the success of integrated planning initiatives, as it fosters a collaborative and supportive planning environment.

While discussing the role of strong interpersonal relationships in integration of land use and transport planning processes, it is also important to recognise the long-term nature of building stable and reliable relationships. Existence of trust indicates the existence of earlier positive interpersonal experiences among planning actors, and the relative success of these experiences depending on the definition of success in each case (Mu & de Jong, 2016; Rode, 2019). In these cases, positive experiences of collaboration and long-standing commonly agreed visions contribute to the continuation of collaboration in new planning processes. In connection, Hrelja et al. (2016) emphasise the stepwise nature of
trust-building in collaborative processes involving different planning actors. The authors recognise that, among other qualities, open dialogue is a necessary precondition for engendering trust over time. In this case, an integrated approach to land use and transport planning involves a series of successive steps, each of which depends on trust-building, appropriate sequencing of events, and temporality of actions.

Despite the existence of legal frameworks supporting integrated processes, due to the complexities in legally defined multi-stakeholder relationships, stakeholders can still rely on trust among each other to navigate through the planning process (Hrelja et al., 2016). In this case, establishing a platform for open dialogue and facilitating opportunities for building personal connections can be seen as essential outcomes of an integrated land use and transport planning approach. For example, Pettersson and Frisk (2016) argue that the most tangible result of their regional planning approach is the enhanced influence of a regional perspective on local-level planning issues through the cultivation of continuous dialogue among planning actors. In addition, Stead and Geerlings (2005) mention in their study reporting on two British authorities that thanks to some of the planning actors having been colleagues previously, a newly established joint authority could operate effectively building on the already existing strong personal and professional networks. In addition, Mu & de Jong (2016) argue that finding a stakeholder to undertake public transport operations in accordance with their integrated land use and transport planning goals was only possible because of earlier joint projects among the stakeholders that helped build the relationships over time.

Some scholars also report on the practicalities of building strong interpersonal relationships among planning actors. For example, the atmosphere of meetings can be quite important, as it can be decisive in continuation of those meetings. In this matter, Paulsson (2018) writes that it was a helpful detail to communicate that the meetings throughout the planning process are intended as amicable events rather than laborious and difficult events of conflict. Another perspective is the frequency of such meetings. According to Hrelja et al. (2017), it was crucial to arrange interactions among planning actors as frequently as possible and without delay in response to emerging needs, which underscores the significance of timely and continuous collaboration among planning actors. Finally, Stead and Geerlings (2005) remind that while staff exchanges among different units is beneficial to building interpersonal relationships among planning actors across units, a high turnover rate of staff also creates ruptures in the trust-building process.

An interesting take on long-term building of interpersonal relationships between planning actors concerns the role of hierarchical structures. Rode (2019) argues in his study of integration of land use and transport planning processes in London and Berlin that the stability of long-term relationships among planning actors is due to the existing hierarchical structures, instead of the networked governance approaches usually argued in the academic literature. The author suggests that hierarchical structures provide a framework for organising
the planning processes in a continuous way and reduces the uncertainty in collaborating under an ad-hoc planning process. This, in turn, increases the chances for building trust over time without interruptions.

5.7 Legislation

The role of legislation in integration of land use and transport planning processes is often mentioned in the academic literature, despite lacking in-depth explorations of the role of this formal institutional factor. Legislative frameworks define what must be done by planning organisations as well as what these organisations are allowed to do, making it challenging to connect restrictive sectoral and scalar boundaries defined by legislation, in order to establish integrated approaches (Kaufmann & Sager, 2006; Stead & de Jong, 2006; Barbour & Deakin, 2012; Rooney et al., 2010). Therefore, not only for making the process effective, but also for making the process possible to begin with, aspirations for integrated land use and transport planning must be supported by appropriate legal frameworks (Rooney et al., 2010; Kaufmann & Sager, 2006). In addition, the legal frameworks should also incentivise organisational and institutional changes towards integrated approaches (Rooney et al., 2010).

Limited reflections on how legislations in use affect the integration of land use and transport planning processes are provided by some scholars. To begin with, Hrelja et al. (2020) note that regardless of variations in the legislations in place, different countries experience similar challenges in planning their public transport systems in an integrated manner. In these cases, difficulties emerge in connection with the composition and content of the law. For example, Stenstadvold (1996) and Tornberg (2011) explain, in their studies on integrated land use and transport planning processes in Norway and Sweden respectively, that arranging land use policy as a municipal responsibility and transport policy as a regional responsibility is one of the most critical barriers against bringing land use and transport planning practices together. Finally, it is also critical to note that the existence of laws supporting integrated land use and transport planning is not a guarantee in achieving such processes. For example, Barbour and Deakin (2012) explain in their study of one of the first federal laws for combating urban sprawl to reduce CO2 emissions in the USA, i.e., Senate Bill 375, that despite having this ambitious law, in the absence of strong incentives and mandates connected to the goals of this law, metropolitan planning organisations are expected to deliver more than they are actually able to deliver.

5.8 Physical and Historical Context of Planning

Physical and historical particularities of the planning area that an integrated land use and transport planning process is supposed to address also play a role in the integration process of these practices, despite a lack of in-depth studies exploring these factors. In this discussion, while urban morphological and geographical characteristics limit what kinds of goals are seen as possible by the
planning actors; historical characteristics limit what kinds of actions are seen as implementable.

To begin with, the physical context for which integrated land use and transport policies are made matters in bringing land use planning and transport planning actors together, in terms of how existing infrastructure as well as urban fabric affect the choices to be made during the integrated planning process (Kaufmann & Sager, 2006; Jang et al., 2011). For example, in their study of Swiss cities, Kaufmann and Sager (2006) question the possibility of advancing the integration of regional land use and public transport planning for achieving sustainability goals if a regional railway infrastructure does not exist to begin with. Similarly, Pettersson et al. (2021) report on how the existence of road networks and ongoing investments on them create a physical barrier in considering sustainable alternatives. From another perspective, McLeod and Curtis (2019) and McEldowney et al. (2003) question the recent integrated land use and transport policies’ ability to reflect local community expectations and discuss how the planning processes are affected when the integrated goals are not seen in line with the local community expectations. Finally, Lee et al. (2021) argue that the physical context of the planning area should be taken into account in implementing integrated land use and transport policies, especially to ensure that divergent priorities and needs of different locations are addressed. (Pettersson et al., 2021)

The historical context of planning also affects integrated land use and transport planning processes, because previous efforts of integrated land use and transport policy have an impact on current policy decisions (Kaufmann and Sager, 2006). As a key argument of historical institutionalism, path dependence briefly suggests that arbitrary events and past developments create a lock-in to a path where new developments inevitably follow (Pierson, 2000). Kaufmann and Sager (2006, p. 363) summarise path dependence in policy-making by writing that “in terms of policy development, path dependency captures the tendency for a policy step in one direction to encourage the next step to be in a similar direction. Fundamentally, the way policies are organised influences future choices.”

In the discussion of historical context and path dependence, long-term stability of certain policies is also critical. For example, May (2004) emphasises the importance of long-term policy stability by pointing out that one of the reasons why Singapore was successful in developing integrated land use and transport policies is that the related city strategy has remained more or less unchanged for almost 30 years. In addition, Hrelja and Rye (2022) demonstrate that long-term stability of policies is also connected to long-term political stability, leading to few changes in the transport policy objectives from one election cycle to another. According to the authors, this leads to political decision-makers’ disagreeing mostly about the scale and scope of implementation instead of what to implement in the first place. The authors also note that discourses, e.g., unavoidsability of car dependence in their case study city as an enduring, difficult-to-question rhetoric, also endure over time and have an impact on the planning processes in addition to long-term policies.
5.9 Planning Process Organisation

In the land use and transport planning integration literature, the way the planning process is organised (e.g., interaction methods between planning actors, sequencing of events throughout the planning process, process leadership) is mentioned as a factor that affects the integration of land use and transport planning processes (Curtis, 1999; Stead, 2003; Tornberg, 2011). This is due to the fact that in most cases integrated land use and transport planning processes are built on top of or alongside already existing sectoral processes which may be unfavourable to an integrated approach, which may reflect the characteristics of “parallel policy-making” (Isaksson et al., 2017). Accordingly, advantages and disadvantages of having an integrated approach to land use and transport planning highly depend on the capabilities of planning actors to introduce appropriate planning processes (Paulsson, 2018). Nevertheless, this knowledge of how to actually organise an integrated land use and transport planning process is rather sporadic, which is one of the key problematics that this doctoral dissertation is aiming to address.

To begin with a higher level look into how the formulation of an integrated planning process affects the integration itself, Tornberg and Odhage (2018) emphasise the non-linear and iterative qualities of planning processes and argue that these qualities are integral to collaborative planning. The authors point out that planning processes highlighting learning and consensus building among planning actors through continuous re-visiting of previous assumptions are possible through an iterative and non-linear interpretation of planning processes. Another discussion point within this debate concerns the most critical stage of integrated land use and transport planning processes which, arguably, is the stage where strategic objectives are interpreted and transformed into operational actions (Duffhues & Bertolini, 2016; Jordan & Lenschow, 2010; Paulsson et al., 2016; Trein et al., 2023). Due to lack of incentives and monitoring mechanisms in place, planning actors usually continue concentrating on their own sectoral tasks despite the appearance of strategic integrated goals generating or influencing those tasks (Duffhues & Bertolini, 2016).

To continue with a more practical look into how the formulation of an integrated planning process affects the integration of land use and transport planning, the scholarly literature offers snippets of process knowledge. First, Curtis (1999) suggests that all relevant stakeholders should be involved and their roles should be clearly defined and disclosed. Second, Stead (2003) and Fischer et al. (2013) argue that it is beneficial if one of the stakeholders takes a leading role within the process, to clear out decision-making bottlenecks. Third, Stead and Geerlings (2005) advise a critical approach to team sizes within the integrated land use and transport planning process. The authors explain that while a small team is favourable in terms of harnessing the benefits of close cooperation and managing the collaboration, a bigger team offers a wider range of professional know-how. Fourth, Kaufmann and Sager (2006) recommend that planning actors who work at the operational levels of the integrated planning process should be involved in the political decision-making process in order to ensure the use of planning and policy solutions by the decision-makers. Finally, Tennoy
et al. (2016) argue that impact assessment procedures should not be left to the very end of the process, close to the political decision-making stage, where there are limited opportunities to re-think the proposed plan.

To conclude this chapter, integrated land use and transport planning processes are affected by a myriad of factors in different ways, as shown in this chapter. Understanding the complex mechanisms of impact of these factors is required to establish effective processes of land use and transport integration. Therefore, the next chapter will explore how these factors played out specifically in the context of the MAL 2019 planning process, by building on the learnings from this chapter.
6. Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

This chapter presents the findings of this doctoral research. The chapter starts by providing an overall look into the MAL 2019 planning process based on the interviews with planning actors. Next, the findings from the document analysis are presented to explain the historical developments leading up to the MAL 2019 planning process which offer historical insights into the factors affecting the process. Next, the findings about the factors affecting the MAL 2019 planning process are presented, through combining the findings from both the interviews and document analysis. Finally, the chapter ends by presenting the findings from the complexity maps showing the interplay of factors.

6.1 6.1. An Overall Look into the MAL 2019 Planning Process

6.1.1 Purpose of the MAL 2019 planning process

The analysis of the interviews suggest that the interviewees have varying perspectives on the purpose of the MAL 2019 Plan, which may relate to the challenges experienced in the planning process. Firstly, interviewed planning actors indicate that the purpose of the planning process is to form a common vision of how the Helsinki Metropolitan Region will grow in the upcoming decades. From that perspective, some interviewees suggest that the collaboration that is required to form this common vision is the real purpose of the process, as without the MAL 2019 planning process, there is not any other mechanism for municipalities and HSL to come together for discussing land use, housing and transport planning issues and reconcile the different priorities and needs of the sectors as well as the organisations participating in the planning process:

“I think that’s also what MAL work is really all about. I mean, you are like in the middle of this thing, how to put together all these different angles and perspectives and make them work together. I think that’s MAL work [is] all about.” - (99) Municipal land use and housing expert
This suggests that the interviewees acknowledge the value of collaboration and negotiation facilitated by the MAL planning process. They appreciate the ability of municipalities, HSL, and the other regional and state actors to engage in dialogue and reach agreements on important questions concerning the development of the Helsinki Metropolitan Region. They believe that forming a common understanding and transcending municipal boundaries are crucial for fostering a cohesive planning work for the region.

Secondly, the interviewed planning actors suggest that one of the main reasons for them to participate in the planning process is the state funding opportunities that would be needed for their transport projects. The process is seen as a means to make participating organisations’ cases, demonstrate their need for investments, and align their interests with the available resources:

“[The plan] gives [municipalities] motivation, […] like a monetary motivation to municipalities to participate when they think […] and look for some funding to their projects.” - (50) Metropolitan transport expert

Furthermore, the MAL plan and the agreement that follows are considered political documents that influence decision-making and resource allocation.

“It’s good to understand that this MAL plan and the result is a political paper. And municipalities want to get as much money as possible for their purposes, and how they get that money is […] in this planning program. […] So if you want to get money, you must be involved in the process.” - (56) Consultant

### 6.1.2 Challenges of the MAL 2019 planning process

The interviewed planning actors pointed toward several challenges experienced in the MAL 2019 planning process. Firstly, the MAL planning process encountered challenges due to the diverse perspectives and conflicting interests of stakeholders involved. Varying priorities, goals, and opinions among municipalities, government agencies, and HSL made it difficult to reach consensus. Such variety emerges from the organisational and legal responsibilities of the municipalities as well as their physical characteristics.

“There’s also differences in […] how much the municipalities are thinking of […] the whole region, and how much of just their own things and what is best for them.” - (34) Metropolitan transport expert

“[There are] 14 municipalities and it’s quite large area. There are some very rural area municipalities and then there is Helsinki, Vantaa and Espoo. And they are political, they have different values. [In] many levels, they have had big differences.” - (80) National transport expert
Secondly, one significant challenge identified is the monopoly of municipalities in land use planning. The absence of a metropolitan-level land use planning institution allows each municipality to maximise its own optimal outcomes, often disregarding the overall metropolitan perspective. This leads to suboptimal planning decisions and conflicts between municipalities regarding housing distribution and other land use aspects, while allowing for decisions made for political self-interest of the involved stakeholders.

“There are some fundamental problems that the monopoly for land use planning is within the municipalities and they are trying to maximise their own optimal [which is] sub-optimals if you’re looking from the perspective of a whole region. There is no whole region-level land use planning institution, that doesn’t exist yet.” - (69) Metropolitan land use, housing and transport expert

Thirdly, the interviewees highlight the voluntary nature of land use planning in the metropolitan level compared to the mandatory requirement for metropolitan transport system planning. In other words, while metropolitan transport system planning is backed by legislation, metropolitan land use planning lacks a similar legal framework, which complicates the planning process.

“We would need [...] HSL of land use. That’s what we would need. And then that should be integrated [into] transport system planning because there is no mandatory need to do the land use planning in the Helsinki region, together. It’s totally voluntary. But the transport system planning has to be done by legislation. So that makes it... it’s a bit interesting, a bit tricky sometimes.” - (69) Metropolitan transport expert

In connection to the discrepancies in legislative mandates, the interviewed planning actors pointed towards the discrepancies in the resources available for the MAL 2019 planning process. While HSL actors had the resources to dedicate to the MAL 2019 planning process due to their metropolitan transport system planning mandate providing them with required resources, municipal actors had to make do with their limited resources as they did not have resources to be allocated to the voluntary metropolitan-level processes.

“A lot of the time, the municipalities do not have the same resources [as] HSL does to do the MAL planning. So there [was] a lot of frustration from municipalities just because they didn’t have time.” - (20) Metropolitan transport expert

Finally, some interviewees criticised the MAL 2019 planning process for operating at a lower degree of integration than it is claimed, e.g., due to the process organisation or the way selected methods (such as the transport model) function.

“These three [land use, housing and transport] teams [have] written [...] their own blocks somehow [in the report]... But still, there
are three different blocks and opinions are given about the blocks, and only put in the same documents somehow.” - (53) Municipal land use and housing expert

“If you look at MAL 2019, you could get that impression that now it’s really integrated. But maybe it’s important to understand what is integration really... It’s not just the same thing as cooperation, it’s taking into account from the beginning different possibilities in land use and transport. And now, the situation has not changed in that way that land use plans are the background and you are getting [housing] numbers and [land use] plans, and then you are putting your transport system [on top].” - (56) Consultant

6.1.3 Successes of the MAL 2019 planning process

The analysis of the interviews highlights several aspects of the MAL 2019 planning process regarded as successful by the planning actors. Firstly, the interviewed planning actors regarded the trust building and collaboration opportunities enabled by the MAL 2019 planning process as highly positive, despite the challenges experienced throughout the planning process. The interviewees highlighted the positive impact of working together and building trust among stakeholders across the Helsinki Metropolitan Region. They noticed an improvement in trust and collaboration as the process progressed, leading to more effective cooperation and positive outcomes.

“I have felt that [the] more we work together, [the] more we trust together. So that’s really nice to see.” - (35) Metropolitan transport expert

“I hadn’t taken part in those committee meetings for a couple of years before I left [for a personal reason], but when I came back, [...] I really noticed a change there that the attitudes and the ways that people talk had changed, they’ve improved. It was like, I could really [...] like touch it. I think it was a remarkable change that... Well, of course, when people [did] work [...] together, so the trust had been built and, and I think [...] it was a lot better.” - (22) Metropolitan transport expert

In connection to increased trust and collaboration, the interviewees mentioned that the MAL planning process provided a platform for stakeholders from different municipalities and HSL as well as regional and state-level authorities to come together and discuss regional issues, which was also seen as the main purpose of the process as mentioned earlier. They considered this opportunity valuable for fostering dialogue, sharing perspectives, and building relationships. This collaborative environment facilitated mutual learning and understanding among participants. The process acted as a planning school, allowing officials to exchange knowledge and expertise.
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

“I think one of the [...] best things in the MAL issues [is] people having different backgrounds, coming from different municipalities. They have the same common aim to get [a] good MAL agreement. And so, the people get to know each other, they understand each [other] much better. They know, they learn from each other. So perhaps that’s one of the main positive things in the MAL process, perhaps not the plan. Not everybody reads the MAL report, they perhaps don’t, can’t remember what’s written there. And the politicians in the municipalities, they hardly read anything. They only check whether their road is there in the list. But for the officials, it’s much more important. It’s kind of a planning school for everybody involved in the process.” - (59) National land use and transport expert

Secondly, another aspect of the MAL 2019 planning process that many interviewees regarded as successful is the iterative impact assessment procedure whose role in the planning process was central in bringing the impacts of the plan into question throughout the planning process, not only at the end of the planning process.

“I think it was quite a good example of how planning and impact assessment should be combined, and they should go hand in hand. There were these three iterative rounds. And I think that was, yeah, I think it was quite a good example of that impact assessment.” - (21) National land use and transport expert

Thirdly, several interviewees mentioned the positive effect of starting the planning process with setting common goals. The interviewees emphasised the importance of goals in guiding the planning process. They found it beneficial to have clear objectives that helped align the work and ensure that the goals were met.

“We’ve been really trying to meet the goals and really working on them. So it’s something that guides the whole process.” - (39) Metropolitan transport expert

In connection, some interviewees also mentioned that the fact the goals were not too restricted helped, especially the municipalities, with achieving those goals.

“They were [...] more common in their written words that they left some [...] imagination [to] the municipalities. So it’s easier to achieve them, of course, if we can have some flexibility [for] the municipalities to do it. So most of the aims and goals are written like they have that kind of flexibility in the municipalities, and that makes it easier, of course.” - (25) Municipal housing expert
Finally, during the interviews, HSL (which assumed the leading and coordinating role in the process) was praised for its hard work, expertise, and effective management.

“I really like the way HSL and their experts and managers are working, and [...] they work hard and they're really good experts.”
- (15) Municipal transport expert

6.1.4 Changes over time concerning land use and transport planning processes in Helsinki Metropolitan Region

One of the questions asked during every interview concerned what kinds of changes the interviewees observed concerning the process of making a land use and transport plan, to be able see what kind of factor may have affected which part of the process and led to what kind of change in the process. As the MAL 2019 planning was the first time that a joint land use, housing and transport plan was prepared, the question intended to probe what kinds of changes the interviewees experienced when this new planning process was introduced as a key part of integrated land use and transport planning system of Helsinki Metropolitan Region.

The biggest change the interviewed planning actors pointed towards is the increased collaboration between transport, land use, and housing experts. Previously, separate plans were developed for each sector, leading to disjointed discussions and limited collaboration opportunities. However, the transition to the MAL planning framework placed greater emphasis on involving all stakeholders throughout the process. To facilitate collaboration, the process aimed to ensure that key players from different sectors were involved in decision-making tables, enabling a more comprehensive understanding of the planning process. In addition, the project planning and the planning of stakeholder interactions were done together with different sectors and organisations, unlike the previously separately planned processes.

“The integration of land use and transport [...] had been developing long before this MAL plan already, like this HLJ 2015 plan was done very much simultaneously with the [...] transport system planning, but [...] when [...] we started calling it MAL plan from the beginning, it of course, [...] put a sort of pressure and motivation to land use and housing people to be [...] involved all the time. And also of course, [...] the project groups and everything [...] was planned as a whole.” - (50) Metropolitan transport expert

In connection, an important difference compared to the previous planning processes is the increased possibilities for collaboration and mutual understanding, through established working groups consisting of different expertise.

“We have [...] more common groups, for example, that the transport specialists are discussing with the land use planners and
the housing people. That’s, of course, one practical thing that people understand each other much better.” - (59) National transport and land use expert

In addition, some interviewees mentioned that one of the most noticeable changes in the process is the increase in the number of stakeholders attending the process as well as the expertise, priorities and ideas they are representing, despite also leading to some challenges.

“This MAL process has grown in specialty, expertise, scope, in geographical area and the number of people. So this co-creation becomes increasingly difficult, as it becomes more complex.” - (15) Municipal transport expert

Another important change pointed out by many interviewees is the role and procedure of impact assessment. Unlike the previous planning processes which included an impact assessment only at the end of planning processes, the impact assessment of the MAL 2019 Plan was iterative and seen as an integral part of the planning process. The interviewees suggest that the impact assessment now plays a crucial role in the planning process, driving more attention and interest in its tools and methodologies. In addition, the involvement of consultancies in the impact assessment procedure was reduced, enabling HSL experts to control and steer the procedure better. This shift allowed for more active involvement of civil servants, who conducted analyses and developed expertise, striking a balance between internal and external contributions.

“The most important [difference] was I think that the most of the work in practice was made in MAL 2019 by [HSL experts’] hands with [...] HSL [...] impact assessment group, not by consultants for the first time. And very important was [that] the assessment started from the first planning version, and that the whole planning process was iterative, so that the impact assessment could guide the next plan version.” - (86) Metropolitan transport expert

From the perspective of state-level actors taking part in the MAL 2019 planning process, a visible change concerned their involvement opportunities:

“It’s easier for the government and the ministries to participate in this kind of planning and see the whole. [...] Earlier when there was only this transport system plan, there is this transport system group where the Ministry of Transport is also present and they are focused on the transport system issues. But I’m not sure if the government or governmental organisations were involved in the land use or housing issues before but now this MAL planning brings an instrument that makes it also easier for [...] the government to say what [the government and ministries] think and participate in the planning.” - (21) National land use and transport expert
Finally, some planning actors mentioned during their interviews that it is not easy to identify changes as this planning process - or the mentality that surrounds it - has been in the making for almost three decades:

“The changes did not happen at one step like this, but step by step, one by one.” - (86) Metropolitan transport expert

6.2 Historical Background of MAL 2019 Planning Process

This section presents the findings from the document analysis, supported with complexity maps visualising the connections between the historical developments shaping the MAL 2019 planning process.

6.2.1 Development of key legal and organisational changes

The concept of the integration of land use and transport planning received increasing interest in Finland, especially in the Capital Region, in the early 1990s following the Rio Earth Summit preparations as well as the growing European-wide interest in the integration of these two planning practices (Granqvist et al., 2020). During this period, the Helsinki Capital Region Council (known as YTV, short for Pääkaupunkiseudun yhteistyövaltuuskunta in Finnish) had been serving as a legally authorised cooperative body for the municipalities of Helsinki, Espoo, Vantaa and Kauniainen (collectively known as the Capital Region, as explained in section 4.2.2) for almost two decades since 1973. Among its various responsibilities, YTV has facilitated public transport cooperation among member municipalities, including developing and implementing a transport system plan for the Capital Region. In 1990, YTV initiated the mandatory process of planning a transport system, named PLJ 1994, for the four municipalities of the capital region, as required by specific legislation. From the development of the PLJ in 1994 until the dissolution of the YTV in 2009, the YTV was primarily responsible for the preparation of legally mandated plans for the transport system for the municipalities in the Capital Region. To enhance the statutory transport system plans by incorporating a land use and housing perspective, YTV also prepared two non-legally binding land use visions for the municipalities of the Capital Region.

At the same time, critical changes occurred in the financial framework of municipalities in Finland during the 1990s, particularly about how municipalities receive support from the national government, while maintaining their municipal autonomy. The background of this change is that between the 1960s and 1980s, Finnish local authorities experienced an increase in their service responsibilities in social services, health, education, and recreation and culture, done in cooperation with the state (Vakkala et al., 2021). This broadly meant increasing dominance of state economic control, which led to a decrease in the degree of local autonomy (ibid.). However, in the early 1990s, the economic downturn caused the state to reduce its mandate, regulatory measures, and role in overseeing local government, thus spurring the expansion of local administration. However, the declining economy put a strain on locally available resources, as
well. As a result, changes in municipal funding mechanisms in the 1990s gave local governments greater autonomy while increasing their accountability, which led to many small Finnish municipalities struggling to bear the financial burden of municipal service provision. Consequently, the provisional Act on Restructuring of Local Government and Services (abbreviated as the PARAS act) (2007) was introduced, to address the challenges arising from the inadequate size and capacity of many municipalities in fulfilling their service obligations.

The PARAS Act was in effect from 2007 to 2012 and it was primarily aimed at improving municipal service delivery through urban restructuring, encouraging municipal mergers, and other measures. Of particular importance is the seventh article of the Act playing an influential role in fostering the integration of land use, housing and transport planning between municipalities in 17 city-regions, including the Helsinki Metropolitan Region. This section is one of the main legal encouragements for the horizontal integration of land use and transport planning, building on matters of ecological sustainability, functional inefficiencies due to uncoordinated planning with financial impacts, as well as competition for taxpayers among municipalities in the region. With section 7, the PARAS Act required the 17 biggest city-regions in Finland, Helsinki Metropolitan Region being the biggest, to develop city-regional strategic plans that comprehensively address the issues of integrated land use, housing and transport planning.

As the initiation of PARAS Act had been known already before its introduction, the 14 municipalities comprising the Helsinki Metropolitan Region had already entered into a collaboration agreement in 2005, for metropolitan services such as land use, housing, and transport. This agreement laid the foundation for the establishment of the Helsinki Region Cooperation Assembly (referred to as HSYK, an abbreviation for Helsingin seudun yhteistyökokous in Finnish), which served as a collaborative body comprising decision-makers from the 14 Helsinki Metropolitan Region municipalities. In 2006, the HSYK decided to take the seventh section of the PARAS Act into consideration, and formulated a unified strategic city-regional plan to coordinate land use, housing, and transport on a city-regional level. This plan, named KPS 2007, received approval in 2007, without any legal power on municipal land use planning.

Despite the PARAS Act only requiring the four Capital Region municipalities to develop a city-regional plan, the HSYK opted to involve all 14 member municipalities in the planning process. This decision can, arguably, be attributed to the recognition among the municipalities that the functional urban region surrounding the Capital Region stretches well beyond the region. Another factor could be the shared interest among the 14 municipalities in demonstrating effective collaboration while maintaining their independent status, without the necessity of merging into one metropolitan city, since municipal mergers were among the central measures of the PARAS Act to alleviate the municipal service provision challenges. During this period, metropolitan policy began to emerge as a concern within the Finnish government, primarily referred to in 2007 in the government program of the day. Simultaneously, noteworthy amendments were made to the Land Use and Building Act (1999) in 2008 and again in 2016, requiring the Capital Region municipalities to establish a joint master plan for
land use. Nevertheless, municipalities have put it aside, because of the fact that
the amendment does not specify a time limit to draw the joint land use plan.

Concurrently with the establishment of the HSYK, significant changes oc-
curred in the formal structure of metropolitan transport planning, resulting in
the dissolution of YTV and an expansion of the cooperation area beyond the
Capital Region. The Act on Cooperation in Municipal Waste Management and
Public Transport in the Capital Region (2009) disbanded YTV. This change
meant transferring of responsibilities concerning the transport system plan-
ning, procurement of transport services, and collection of public transport fares
from YTV to Helsinki Region Transport (HSL) which is a consortium of munic-
ipalities. HSL was established and started its operations in 2010. Similar to the
PARAS Act, this new act mandated the creation of a municipal consortium ex-
clusively for the four Capital Region municipalities while making it possible for
other municipalities to take part. Consequently, HSL was formed with six mem-
ber municipalities (Helsinki, Espoo, Vantaa, Kauniainen, Kerava, and Kirkko-
niummi), instead of four, and with three more municipalities (Sipoo, Tuusula,
and Siuntio) joining afterwards. These nine municipalities collectively make up
the HSL-area, which represents the designated public transport zone (as shown
in Section 4.2.2). HSL assumed the task for developing the initial transport sys-
tem plan for the Helsinki Metropolitan Region, named HLJ 2011. Despite HSL
officially consisting of only six municipalities at that point, the HLJ 2011 plan
covered all 14 municipalities in the Helsinki Metropolitan Region voluntarily.
Thus, HSL obtained the legal authority to engage in transport system planning
within the metropolitan region, even beyond the boundaries of the HSL area.

On the other hand, metropolitan-level land use planning did not follow a sim-
ilarly robust formal restructuring or status. Following the founding of HSL, the
Finnish government proposed the foundation of a metropolitan government
which would have assumed broader jurisdiction than the Uusimaa regional
council in the Helsinki Metropolitan Region, including the MAL issues. In es-
sence, it would have integrated HSL and HSYK into itself. However, the pro-
posal did not go through and such an organisation does not exist at the moment,
possibly owing to the desire of municipalities to maintain the self-governance
right as well as the rights pertaining to land use planning and tax collection
(Hytönen et al., 2016).

Additionally, in 2005, transport system planning in the Helsinki Metropolitan
Region became subject to an environmental impact assessment procedure un-
der the Act on Environmental Impact Assessment of Plans and Programs, com-
monly known as the SOVA Act (2005). Consequently, HSL also assumed re-
ponsibility for the environmental impact assessment of the transport system
plans. This, arguably, played a crucial role in the institutionalisation of inte-
grated land use and transport system planning practices in the Helsinki Metro-
politan Region, since the impact assessment of the transport system plan had to
be carried out with appropriate tools whereas there is no formal need to assess
the impacts of metropolitan land use plans.

The aforementioned changes resulted in a tricky planning context. Metropol-
itan land use planning occurs voluntarily with 14 municipalities in the Helsinki
Metropolitan Region cooperating, untouched by the loosely defined obligation in the Land Use and Building Act. In this arrangement, HSYK serves as a cooperative body. On the other hand, HSL undertakes transport system planning with a formal institutional authority defined by law to implement transport system planning and its impact assessment in the metropolitan region.

### 6.2.2 Mapping the interplay of legal and organisational changes

Figure 13 shows the connections between documents and significant events that took place between 1990 and 2019. What is striking in this mapping is that there are two clearly defined and separate clusters which include mostly transport planning-related matters on the left, and mostly land use planning-related matters on the right. This suggests multiple ideas. Firstly, as there is not a connection from the transport side (left side of the map) to the land use side (right side of the map), it is not visible from this map what was the reason from the transport practice-side to establish the MAL planning procedure which is intended to combine transport and land use (by extension, housing) issues into one joint procedure. The upper right hand-side of the map includes several nodes that show that the state involvement into local planning matters was caused by the need for funds for transport infrastructure projects, which is connected to other nodes that mention combining land use, housing and transport issues as a new approach to metropolitan level urban planning. This visualisation brings up an interesting result where the need for state funding for transport infrastructure projects led to an integrated land use and transport planning process which does not seem to stem from the planning practice-related needs of individual policy domains. This also brings up questions related to the top-down mainstreaming of the integrated land use and transport planning ideas due to sustainability concerns, instead of a bottom-up need for integrated approaches.
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

Figure 13. Complexity mapping of key legal and organisational changes between 1980-2020 that form the context of the MAL 2019 planning process.
Secondly, what Figure 13 suggests is the parallel, yet separate development of transport planning and land use planning over the years in the Helsinki Metropolitan Region. What this means in practice is that land use planning and transport planning practices have co-existed for many years, without officially coming together. This parallel development further strengthens the sectoral tools, approaches, fundings, organisational structures and identities, while leading to difficulties for integrated approaches down the line.

Thirdly, and perhaps the most importantly, another interesting conclusion that can be drawn from Figure 13 is the differences in the way connections between nodes are formed. Within the mainly transport planning-related matters (on the left), the connections seem to be more straightforward with fewer nodes. In addition, the node sizes are larger (i.e., higher outdegree centrality), which means stronger impact, and are also less varied overall. This points out that the developments within the transport planning sector have been rather clear-cut and less unambiguous. The developments leading to the long history of transport planning within Helsinki Metropolitan Region, including the YTV’s legal obligation to draft transport system plans early on, and the foundation of HSL, appear as the central points for the stable development of the transport planning sector in the region. Accordingly, transport planning approaches are rather established on the metropolitan level.

Within the mainly land use planning-related matters (on the right), on the other hand, the complexity map has more nodes connected with more complex connections. Moreover, the node sizes are more varied with only a few larger nodes. This implies that the developments within the land use planning sector have been many yet rather ineffective, with only two large nodes denoting a bigger impact on the other historical developments. In this part of the complexity map, it can be seen that municipalities’ land use planning authority and turning down the initiative of setting up a metropolitan land use planning organisation appear as the critical historical events that override the effectiveness of other developments such as foundation of HSYK and requirement to prepare city-regional plans for land use, housing and transport together, despite playing an encouraging role for metropolitan level land use planning. Weak formal institutional backing for metropolitan level land use planning leads to having parallel land use planning and transport planning processes, and it remains weak despite the introduction of MAL agreement procedures to the planning ecosystem. Weak formal institutional support for metropolitan level land use planning also leads to the lack of established metropolitan-level land use planning approaches, unlike the transport planning approaches established in the region, which can raise questions of unequal participation possibilities during MAL planning processes.

6.2.3 Development of plans

Metropolitan-level transport and land use plans as well as their processes in the Helsinki Metropolitan Region underwent several iterations, experiments, and resolutions, while striving for an effective integration of land use and transport
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

objectives. To begin with, the initial transport system plan for the Capital Region, called PLJ 1994 and prepared by YTV, emphasised the necessity for densification of urban structures as a means to reduce the demand for mobility and improve public transport patronage as well as active mobility options such as walking and cycling. This emphasis constitutes a positive starting point to build on when it comes to integration of land use and transport policies in the Helsinki Metropolitan Region. Nevertheless, the monitoring report of PLJ 1994 highlighted that land use policies should play a more prominent role in the upcoming transport system planning processes, as the plan fell short in outlining more concrete steps to do so.

The PLJ 1998 Plan was built on the same premises as the PLJ 1994, with one critical difference concerning a greater attention to be placed on the integration of land use and transport strategies throughout the planning process. The development of PLJ 1994 was carried out in parallel to the drafting of the PKS 2020, a strategy document dealing with land use and housing issues in the Capital Region. Both PLJ 1994 and PKS 2020 were prepared by YTV, under the responsibility of separate units within the organisation. These units based their planning works on the same population and land use forecasts, which allowed for a certain level of congruence. However, an interesting detail here is that only the transport system plan was legally-binding, leaving the land use and housing strategy on a voluntary level despite building on similar premises taking both land use and transport into account. Additionally, a land use and transport interaction model served to assess the impacts of the proposed measures in the PLJ 1998 concerning land use and transport developments in various parts of the Capital Region.

The next planning cycle followed a similar approach as the previous cycle: A transport system plan, PLJ 2002, and land use and housing strategy, PKS 2025, were drafted in parallel. The overall goals of the plans as well as the organisational structure of the planning processes remained the same, with YTV being responsible for both. Similarly, basing the plans on the same population and land use forecasts was again a part of the planning processes. At this point, certain shortcomings started to become apparent in the approach, as the land use considerations mainly functioned as a means to ensure the validity of the transport system plan, instead of a key component of the planning process where exploration of land use planning issues would lead to alternative development paths for the transport system plan. Another critical incident in this planning cycle was the state involvement in these processes concerning the Capital Region. With the recognition that state funding for certain transport infrastructure projects is needed to ensure their implementation, a Letter of Intent was signed. The signatories were the municipalities in the Capital Region and the Ministry of Transport and Communications representing the national level. The main purpose of the Letter of Intent was to financially facilitate the

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26 Inconsistencies concerning the years in the name of the plans prepared during the same planning cycle (e.g., PLJ 1994 and PKS 2020) are due to the preferences of stakeholders on whether to name the plan according to the year when its planning process ends (as in the case of PLJ 1994) or according to the target year of the plan (as in the case of PKS 2020).
measures outlined in the PLJ 2002 on matters concerning transport infrastructure.

The subsequent planning cycle witnessed an expansion on both the number and the geographical coverage of the planning documents prepared for the region. First of all, building on the previous transport system plans, the tradition of PLJ transport system plans continued with PLJ 2007 prepared for the Capital Region. PLJ 2007 followed the same approach of using land use projections without extensively integrating them into the planning process, despite one of the five objectives of PLJ 2007 being the need to acknowledge land use policy as a key measure within the transport system planning process. A Letter of Intent also followed the drafting of PLJ 2007, similar to PLJ 2002. A critical difference in the way PLJ 2007 was prepared when compared to the previous planning processes is that PLJ 2007 was evaluated based on the recently established Act on Environmental Impact Assessment of Plans and Programs (2005), the so-called SOVA Act. This marked a significant point in the development of transport system planning for the Helsinki Metropolitan Region as it solidified the impact assessment procedure with a legal mandate. While the PLJ 2007 was being prepared, a new land use plan, called KPS 2007, was prepared for the first time by the newly established Helsinki Region Cooperation Assembly (HSYK) for all of the 14 municipalities of the Helsinki Metropolitan Region. This plan, prompted by the PARAS Act aiming to enhance the cooperation between land use, housing and transport stakeholders, was the first land use plan for the entire metropolitan region, and also meant that the voluntary land use planning work for the metropolitan region transferred to HSYK from YTV while expanding the geographical coverage from the 4 municipalities of the Capital Region to the 14 municipalities of the Metropolitan Region. In order to strengthen the implementation strategies of KPS 2007 as well as to increase the quantity of available housing in the metropolitan region, MAL 2017 and MA 2017, were drafted as implementation programmes. The signatories were municipalities in the Helsinki Metropolitan and the Finnish state, which underscored the involvement of the state also concerning these matters alongside the transport infrastructure costs. When the recently established HSYK drafted the KPS 2007 plan and its implementation programmes MAL 2017 and MA 2017 for the entire Helsinki Metropolitan Region, PLJ 2007 still remained only on the Capital Region level.

The next planning cycle witnessed the drafting of a new transport system plan, called HLJ 2011, which is the first transport system plan covering the entire Helsinki Metropolitan Region, when the Helsinki Region Transport (HSL) started its operations in 2010. The impact assessment concerning the measures of the HLJ 2011 was conducted according to the SOVA Act, while utilising a four-step transport model called different names including the name HELMET. HLJ 2011 emphasised the importance of an integrated approach to land use and transport planning through referring to such an approach as a core component of the planning process. Without concrete steps to achieve such integration within the planning process, HLJ 2011 also fell short in its aims to enhance land use and transport integration, despite signalling a critical transition in planning processes to come. Nevertheless, an important step towards integrating strategic
land use, housing and transport planning was taken in conjecture with HLJ 2011. The municipalities in the Helsinki Metropolitan Region as well as HSL signed a MAL Letter of Intent 2012-2015, in addition to other signatories including ministries and state agencies, covering the subjects of land use, housing and transport together. An implementation programme called MAL 2020 was also drafted to support the fulfilment of HLJ 2011 and MAL Letter of Intent 2012-2015. The organisational aspects of this planning cycle experienced changes as HSYK and HSL had to cooperate for the first time, with the first being responsible for land use and housing and the latter for transport issues, even though this cooperation was based on unequal footings on legal terms with metropolitan land use planning being voluntary and metropolitan transport system planning being mandatory.

The subsequent planning cycle offered noticeable changes in the approaches towards the integration of land use and transport planning processes in the Helsinki Metropolitan Region. HLJ 2015 (the transport system plan), MASU 2050 (the land use plan) and ASTRA 2025 (the housing strategy) were drafted in parallel. This joint effort in addressing land use, housing and transport issues together and strategically signalled a clear change in planning practices in the Helsinki Metropolitan Region, despite retaining the siloed characteristic of the planning processes. Nevertheless, another step was also taken to enhance integrated approaches in land use, housing and transport planning by transforming the MAL Letter of Intent procedure to MAL Agreement procedure. Accordingly, the MAL 2016-2019 agreement was signed between the municipalities of the Helsinki Metropolitan Region, HSL and the Finnish state with the objective of ensuring funding for transport infrastructure projects and affordable housing supply. HLJ 2015, MASU 2050 and ASTRA 2025 collectively constituted the foundation for the projects and measures to be included in the MAL Agreement 2016-2019.

The last planning cycling that took place before this doctoral research began was the MAL 2019 planning process, which is also the study subject of the research. The MAL 2019 plan, which constituted the foundation for the MAL Agreement 2020-2031, marked a significant milestone as it was the first time strategic land use, housing, and transport issues were tackled together in the same plan. Having the municipalities and HSL in the Helsinki Metropolitan Region as key stakeholders, the MAL planning process sought to the previously segregated processes of land use, housing and transport planning. The MAL 2019 planning process also included critical changes in the planning process beyond larger organisational changes (such as founding HSYK, dismantling YTV and founding HSL). Cross-sectoral working groups focussing on themes of land use, housing or transport were founded, with experts from the Helsinki Metropolitan Region municipalities and HSL while experts from several ministries and other state agencies taking part in a supporting role. In addition, a MAL Project Group was established to oversee the planning work undertaken mainly in the aforementioned working groups. In terms of planning process organisa-
tion, HSL accepted a coordinating role for the MAL 2019 planning process including not only transport issues but also land use and housing issues quite prominently.

HSYK, who has been coordinating the land use and housing planning work on the metropolitan level until that point, resumed its functions in a steering and decision-making capacity. With this comprehensive change in the planning process organisation concerning land use, housing and transport in the Helsinki Metropolitan Region, MAL 2019 planning process emerges as a critical point in the overall historical development of land use and transport integration in the region. It is also important to note that the changes seen in the planning process organisation were not accompanied by relevant legislative changes, which led to a planning situation where only the transport system strategies and measures included in the MAL 2019 plan are mandatory. Despite agreeing on the land use and housing measures to be able to receive the funding support from the Finnish state through signing the MAL Agreement 2020-2031, municipalities in the region still had no legal obligation to follow the land use and housing measures and strategies outlined in the MAL 2019 plan.

As a central part of the MAL 2019 planning process, the impact assessment procedure was primarily focused on the transport system aspect of the plan, as required by the SOVA Act, despite including a large number of targets and measures concerning not only transport but also land use and housing. Consequently, this procedure was mainly undertaken by HSL experts using the HELMET transport model.

6.2.4 Mapping the historical progression of plans

As shown in Figure 14, the study of plans and related documents reveals the stability of transport system plans since the 1990s, despite organisational changes such as dismantling YTV and founding HSL, or even geographical coverage changes such as expanding the planning area to include 14 municipalities instead of 4 municipalities. Even though these transport system plans were supported by letters of intent or implementation plans, in essence the transport system planning practice gradually built its own approaches and methods in the Helsinki Metropolitan Region. On the other hand, the lower part of the Figure 14 marked with orange, shows that several plans, visions, implementation plans and letters of intent were produced for land use and housing challenges in the Helsinki Metropolitan Region, revealing a constant effort over the years to establish a joint land use planning mechanism for the region. Nevertheless, none of these efforts remained stable over the years, and they were incorporated into the MAL 2019 with the mandatory transport planning practice, without changing the voluntary nature of land use and housing planning on the metropolitan level.
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

Figure 14. Timeline of plans and connected documents published between 1990-2020, author's and Emily Johnson’s work.

- **1990**
  - PLJ 1994 plan
  - YTV’s transport system plan for 4 municipalities.
  - PLJ 1998 plan
  - YTV’s transport system plan for 4 municipalities.
  - PLJ 2002
  - YTV’s transport system plan for 4 municipalities.
  - PLJ 2007 plan
  - YTV’s transport system plan for 4 municipalities.
  - HLJ 2011 plan
  - HSL’s transport system plan for 14 municipalities.
  - HLJ 2015 plan
  - HSL’s transport system plan for 14 municipalities.
  - MAL 2019 plan
  - HSL’s and municipalities’ land use, housing, and transport plan for 14 municipalities.

- **2020**
  - PKS 2020
  - YTV’s land use and housing strategy for 4 municipalities.
  - PLJ 2002 letter of intent
  - Between state and 4 municipalities, for PLJ 2002 implementation.
  - PLJ 2007 letter of intent
  - Between state and 4 municipalities, for PLJ 2007 implementation.
  - PKS 2007
  - HSYK’s land use plan for 14 municipalities.
  - MAL 2017
  - HSYK’s implementation plan for PKS 2007.
  - MA 2017
  - City of Helsinki’s implementation plan for PKS 2007.
  - MAL 2020
  - HSYK’s implementation plan for HLJ 2011.
  - MAL 2012-15
  - Letter of Intent
  - Between state and 14 municipalities.
  - MAL 2016-19 agreement
  - Between state and 14 municipalities.
  - ASTRA 2025
  - HSYK’s housing strategy for 14 municipalities.
  - MASU 2060
  - HSYK’s land use plan for 14 municipalities.

**Transport system plans**

**Land use and housing plans, MAL plans, letter of intents, agreements**
In addition, a consistent effort to integrate land use and transport planning practices is also seen in the study of the development of plans for the Helsinki Metropolitan Region. Such efforts were taken within transport system planning processes in the beginning. Afterwards, ad hoc interventions (such as preparation of implementation plans or signing letters of intent covering land, housing and transport issues) took place in the planning ecosystem. Co-drafting of the HLJ 2015 transport system plan with the MASU 2050 land use plan and ASTRA 2025 housing strategy revealed the need as well as the benefit of an integrated approach, paving the way for the MAL 2019 plan encompassing all three sectors.

In summary, the evolution of metropolitan land use and transport system plans in the Helsinki Metropolitan Region has witnessed a gradual integration of land use and transport considerations. While early plans laid the foundation for such integration, subsequent iterations demonstrated varying degrees of success in coordinating and integrating these two planning practices. Despite efforts to improve cooperation, coordination and integration, the planning processes remained relatively unchanged in their separate silos despite establishment of new organisations and new planning processes.

6.3 Factors Affecting MAL 2019 Planning Process

This section presents the findings on factors affecting the MAL 2019 planning process in detail. In this section, the factors impacting the MAL 2019 planning process are arranged according to the level of attention they received from the interviewed planning actors themselves.

6.3.1 Availability of resources

The effects of availability of resources on the MAL 2019 planning process are discussed mainly in terms of:

- Municipal resources dedicated only for municipal land use planning
- Lack of dedicated resources for municipalities to use in MAL 2019 planning process
- Municipal actors' lack of time to work on the MAL 2019 planning process
- Municipal actors' struggle with keeping up with material from HSL
- Lack of an overview of MAL 2019 planning process
- Municipal actors' lack of time to understand and discuss results of different iterations of impact assessment
- HSL's allocated funding for metropolitan transport planning
- HSL actors' possibility to conduct analyses, studies and reports

Availability of resources is among the factors which are discussed the most in the context of the MAL 2019 planning process. Two perspectives, which are essentially the two sides of the same coin, were deliberated on: lack of municipal-level resources to be used in the MAL 2019 planning process as opposed to the resources available to HSL actors to be used in the MAL 2019 planning process. Stemming from the legislative differences leading to certain organisational
structures, explained in further detail in the upcoming sections, this resource inequality between the two main groups of actors is a matter of funding dedicated to the organisational responsibilities of municipalities and HSL:

“That's difficult, because we have a very long tradition where you are a representative of your own organisation. And because the money is coming from different organisations, you need to [ensure] that our money is used where we want to put it.” - (56) Consultant

From the municipal side of the story, due to the municipal resources being dedicated only for municipal land use planning as the municipal laws and funding arrangements only allow so, municipal actors struggled to find time to work on the non-statutory MAL 2019 planning process, which has been pointed as a challenge by almost all of the interviewed planning actors:

“The commitment to the process is very hard to [find] if you really don’t have time to participate and do the work between the meetings actually, that’s the most important thing. There’s no point if you just can attend a meeting and do nothing between the meetings. [...] I have to admit that I have that problem myself a little bit. [...] And in the smaller municipalities of the region, I think the situation is like this, almost in every municipality.” - (25) Municipal housing expert

“[Municipalities] don’t have enough time for the MAL planning process. They don’t have any people for that. They have to be involved, but it’s better to be involved somehow than be out.” - (59) National land use and transport expert

Lack of municipal resources dedicated to the MAL 2019 planning process also resulted in municipal actors’ lack of process overview because they struggled with keeping up with the large number of meetings to attend and report to read. This challenge also resulted in the municipal actors, especially those who are coming from smaller municipalities, mostly focusing on the issues within the plan that directly concern their own municipality, instead of the overall metropolitan issues being discussed in the planning process:

“To be honest, my main goal in this MAL work was just to keep up, [...] just to hang on. There were so many parts in this work, the amount of material was insane. And the rhythm was super fast. And at the same time you don’t leave [your other municipal tasks] for MAL work, you have so many of the [municipal] tasks to do, so many other works to do. And the schedules are super tight. So the way I see it, the only way to survive is to focus on the main things and stick with those, because if I expand, I’m doomed. So I really have to clarify my thoughts and focus on things that matter the
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

In connection to the lack of municipal workers’ time to work on MAL 2019 planning, the municipal decision-makers were also in a similar situation, even though political decision-makers’ lack of time were not really discussed in previous research so far:

“Since [being a city council member is] kind of something that people do, in addition to [...] their daily [...] lives and jobs, and that they have their political committees and council things that they do as an extra [thing] to their jobs. And that’s something that people tend to reserve time for [...]. And then this sort of [non-binding] MAL process comes on top of that. So, it also means that [...] it can be hard for people to find the time to prepare, and to get a really good understanding of the full picture. And you could see that [...] there were a lot of people [...] in the MAL 2019 process, who were looking at the things only from their own municipalities’ perspective. And [...] trying to design the whole when people are just looking at things from their own local perspective, is kind of hard.” - (74) Political decision-maker

The other side of the resource inequality coin is that HSL’s allocated funding for metropolitan transport planning makes it possible for HSL actors to conduct analyses, studies and reports as they see necessary for the planning process. This results in disparities in sectoral detailing of the MAL 2019 plan as well as power in the planning process:

“There is always the problem that [...] the housing and the land use group, [...] they feel that there is too much of the transport [issues], and it takes too big [a] role in the plan and maybe in the impact assessment as well. But then there is the problem that they don’t have the workforce, and we want to do our job.” - (34) Metropolitan transport expert

“In theory, we do [the planning of the planning process] together. But in practice, [...] we cover a lot of work in that, and a lot of work also gives us maybe a bit more power in the process, because we have time to think about more and be prepared.” - (35) Metropolitan transport expert

“The land use planners didn’t want to [put] so much [...] content to land use in MAL plan. They decided that the primary areas are [...] good to put [into] and plan in MAL process, but not more. And [...] that’s somehow, I think the most important reason why [...] we do not have so much content in land use even now.” - (86) Metropolitan transport expert
6.3.2 Legislation

The effects of legislation on the MAL 2019 planning process are discussed mainly in terms of:

- HSL's legal responsibility to draw transport system plan for Helsinki Metropolitan Region
- HSL's metropolitan-level transport planning authority
- HSL's legal responsibility to do environmental impact assessment work on the transport system plan
- Municipalities' municipal level land use planning authority
- Mismatch between municipal land use planning authority and metropolitan transport planning authority
- MAL planning process as an extra task for municipal actors
- MAL 2019 planning process not included in statutory planning system
- Parallel planning processes alongside MAL 2019 planning process
- Uncertainty of how MAL 2019 plan connects to other planning processes
- Lack of clear guidance on how MAL 2019 planning process should look like
- Uncertainty of MAL 2019 planning process for some actors due to no legal guidelines
- Flexible MAL 2019 planning process due to no legal guidelines
- Possibility to experiment within MAL 2019 planning process

In the MAL 2019 planning process, the impact of legislation is discussed in connection to legal frameworks defining what must be done and what organisations are allowed to do. For example, even though HSL functioned as the coordinating body, their role is limited by the legislation behind their organisation:

“I think HSL itself can’t do a lot. I mean the current organisation is tied to the political forces and legislation that they work with.” - (69) Metropolitan transport expert

As HSL is tasked with metropolitan transport system planning and this is the only planning process mandated by law at the metropolitan level, a certain inclination to prioritise transport issues over land use and housing was observed by some interviewed planning actors, while MAL 2019 planning process is an extra task for the municipal planners:

“It’s because of the legislation and responsibilities [...] of different actors. That’s [...] the history there. But yeah, [...] that’s what I think that the MAL plan is. It has this emphasis on the “L”, the transport part. And it comes [...] just basically from the legislation, I think and the municipalities’ roles [on land use planning].” - (39) Metropolitan transport expert

“Only a minority of effects are related to land use and housing... It might be the reason for that [...] the transportation planning for the greater Helsinki area, [...] that is mandated by law. The land use and housing plan is voluntary.” - (88) Metropolitan transport expert
In connection, the arrangement of land use policy and planning as a municipal responsibility and transport policy and planning as a regional responsibility is identified as a critical barrier in the MAL 2019 planning process:

“[There is] the integration problem of land use planning and transport system planning but again we don’t have a legislation for that or even the government will to do it. HSL can’t do anything...” - (69) Metropolitan transport expert

Another point concerning the effect of legislation on the MAL 2019 planning process relates to the non-statutory position of the MAL 2019 plan. When the plan is not legally-binding, there are no clear guidelines about the process which may be confusing to some of the planning actors:

“If you think about the zoning planning process in the city, there’s a law that says that this is the way it goes. And so there’s somebody in the city, [an] official who is doing the design, and then the committee is making a decision, and then it goes to the City Board, and then it goes to the city council who makes the decision. So there’s a kind of a defined process for how it happens. But for MAL, since it’s more of a framework, there are things happening on multiple different levels. And it can be hard to discern which ones in them are really important. What’s their importance?” - (74) Political decision-maker

On the other hand, non-statutory position also creates possibilities for flexibility and experimentation in the planning process:

“It’s flexible, it works well, there is no bureaucracy, it’s more like a networked form of governance. [...] When you do a law, everything is fixed. But it’s not the only way to do things, [...] you can have different ways [to do things]. So [municipalities] were saying that we shouldn’t have a law on this because it functions well like this, right?” - (45) Land use expert

Another point regarding the non-statutory position of the MAL 2019 plan relates the doubts over its actual impact on the ground:

“I’m not sure if [a common regional understanding is] so important, especially since it’s not legally binding. So [...] if there’s some municipality that wants to go its own way and do something different, the MAL plan doesn’t really prevent them from doing that.” - (74) Political decision-maker

6.3.3 Organisational structures and identities

The effects of organisational structures and identities on the MAL 2019 planning process are discussed mainly in terms of:

- Differences in priorities between municipalities during MAL 2019 planning process
• Difficulty in reconciliation of municipal and metropolitan interests
• Municipalities’ prioritisation of legally-binding planning processes over MAL 2019 planning process
• Lack of metropolitan-level land use planning authority in the Helsinki Metropolitan Region
• Municipal actors’ discomfort in prioritising municipal matters over metropolitan matters
• Municipal actors’ focus on issues that matter to their own municipality
• State actors’ lack of planning process overview
• Divides between different state actors in the MAL 2019 planning process

To begin with, self-interests of the participating municipalities result in different priorities, which further leads to difficulties in reconciliation of municipal and metropolitan interests with different stakeholders pushing their own agenda:

“I think there are still people in municipalities who are very centred on the municipality, and not the region. So I think this is definitely a problem. And some people are more and some people are less, but I do understand that it’s a kind of [...] duty to think of the interests of the municipality, but it’s definitely a problem.” - (22) Metropolitan transport expert

“HSL, they have their intra-organizational goals, and individual cities have their own goals. And in these meetings, then you push your own agenda.” - (15) Municipal transport expert

“Municipalities do not want that HSL and Uusimaa Regional Council [...] involve too much [in] their detailed planning in land use and traffic. Difficulties rise if [a] municipality wants to build [a] car-city, not [a] public transport-oriented city. [...] If the goals are not the same, it is difficult to find common actions, solutions.” - (86) Metropolitan transport expert

“Since you have to get agreement from all the municipalities, you can’t really present scenarios where basically all the newcomers go into Helsinki, and well, the few who don’t go into Espo and Vantaa even if, you know, if Helsinki decided to increase its housing production to 12,000 or 15,000 apartments a year, that would happen, very likely. So there’s kind of an inbuilt bias that the process is incapable of considering options that would look bad for some of the municipalities.” - (74) Political decision-maker

In connection, municipal actors may display signs of professional discomfort while participating in the MAL 2019 planning process as they have to focus on issues that matter to their own municipality:

“We all have our local responsibilities, our own goals, and we all are promoting our own interests into this MAL plan. And I think this has a huge effect [in the] MAL work
because there’s no right or wrong way of doing MAL plan. It’s all about valuing, pricing, ranking, working different kinds of issues. And for example, I represent [this organisation] but I also represent [another organisation] and like I said, our main goal was to say no to [a certain measure]. That was the […] project that we have been arguing for several years. And now we finally got it. […]. And at the same time, you want to be professional, you want to take part as [a sectoral] expert, but at the same time, you have this organisation that tells you what you are really doing and what is important to us. And at the same time, you are representing yourself as a human being. So there’s almost like three different actors in myself who [are] participating [in] this MAL work.”
- (99) Municipal land use and housing expert

The lack of a metropolitan-level land use planning authority is also mentioned in relation to the organisationally defined roles and responsibility and the existence of 14 separate municipalities:

“One problem is that we have 14 different communities, they get [tax] from the people who are living in their areas. So that’s a very difficult situation because they need to get tax-payers. And that is influencing […] the [metropolitan] land use. We cannot look at the regional land use if we have this kind of system.” - (56) Consultant

“As long as we have […] separate experts and separate expertise [on] transportation, traffic, land use and housing… We have separate organisations, we have HSL which is only concentrating on transportation related topics. I feel it’s quite… It’s not impossible, but it’s difficult to find that balance between all those three letters M, A and L.” - (88) Metropolitan transport expert

Resulting from the lack of a metropolitan-level land use planning authority and a related legislation, municipalities’ tend to prioritise legally-binding planning processes over MAL 2019 planning process, as their organisational responsibilities are defined only on the municipal level.

“In my position, I have to prioritise actually other things. So at the same time, as this [MAL] 2019 plan was prepared, also the regional plan of Uusimaa was […] planned […]. And, and there is this [MAL 2019] plan, which we can follow, but if we don’t, we are not punished for it. But then there is [the] regional plan which has a role that the law […] gives to it… So if we have to prioritise one of these… So it’s definitely the regional plan and trying to influence how [the regional plan] turns out to be.” - (53) Municipal land use and housing expert

Finally, due to the organisational structuring on the state-level, the state actors represent a divided front in the MAL 2019 planning process, and thus, may lack a comprehensive overview of the planning process.

“The state is divided. It’s not like one state that speaks from, like, with one mouth. […] There are these different viewpoints. […]"
Maybe there is no [...] steering [...] from this state.” - (34) Metropolitan transport expert

“All the governmental branches of government, they have their own budgets. And for example, I as a representative of [this] branch of government can't make any promises or [...] anything when we are talking about [...] for example, [another ministry’s] budget or issues. So, that is something we must try to develop in the future that we could have [...] more like one voice from the government.” - (21) National land use and transport expert

6.3.4 Interpersonal communication between planning actors

The effects of interpersonal communication between the planning actors on the MAL 2019 planning process are discussed mainly in terms of:

- High satisfaction with MAL 2019 planning process
- HSL actors’ appreciation of involvement of municipal actors
- Municipal actors’ appreciation of efforts from HSL actors
- Building a culture of collaborative planning
- Individual and organisational learning over time
- Trust-building between actors over time
- Growing respect between actors over time
- Possibilities to find common ground in the MAL 2019 planning process
- Positive environment to find win-win solutions
- Building professional networks to rely on for other projects
- A good overview of MAL 2019 planning process
- Low satisfaction with MAL 2019 planning process
- HSL actors’ frustration with other actors falling behind
- Interruptions in individual and organisational learning processes
- Interruptions in trust-building over time

The discussions on the impact of interpersonal communications between the actors of the MAL 2019 planning process can be categorised into two parallel positions: conditions leading to high satisfaction with the planning process and those leading to low satisfaction. To begin with, the high satisfaction with the process was mostly related to the long history of the planning process that allowed for trust-building and network-building among the planning actors. With the presence of trust, it has been easy to build a collaborative culture where it has been possible to find common ground in the MAL 2019 planning process.

“It’s nice that [the MAL 2019 planning process] can give like a platform to [everyone] to discuss with [...] colleagues from another city. So I think that’s a really good thing. [...] As the years go by, we learn to work together and find the right balance.” - (35) Metropolitan transport expert

“The people that work with MAL planning [...] in municipalities, for instance, [...] I think that they kind of respect the work we [at
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

HSL] do when it comes to [...] impact assessments and things like that. They [...] probably can trust our work and how we do it. So [...] expectations from that side are kind of respectful, I think.” - (39) Metropolitan transport expert

“They trust us because of the work that was done. The [transport] system plan was, [...] before 2011, it was only for these four municipalities, Helsinki, Espoo, Vantaa and Kauniainen. And HSL made lots of work to get those [KUUMA] municipalities [...] involved in this planning, in [the] years 2009 and 2010.” - (38) Metropolitan transport expert

“We do rely on the expertise of HSL.” - (88) Metropolitan transport expert

On the other hand, low satisfaction with the MAL 2019 planning process had to do with interruptions in trust-building and learning when there is a high employee turnover as well as when municipal actors could not keep up with HSL actors due to different time resources available.

“What] makes it very difficult for those people who come [to] this MAL 2019 round [is not] knowing anything about the previous rounds.” - (53) Municipal land use and housing expert

“Of course there are some times [...] that it’s not nice to hear from the stakeholders that HSL is going so fast. [HSL has] so [many of] these transport issues they need, they asked [municipalities] and [municipalities] don’t have time to think about [them] so much. So it’s not nice to hear that even when you have done a lot of work, thinking about the process and thinking this is [a] good way [that] we want to do it, and then the other people [say that they] don’t have time.” - (35) Metropolitan transport expert

6.3.5 Politics

The effects of politics on the MAL 2019 planning process are discussed mainly in terms of:

- Politicians’ responsibility to their voters on municipal level
- Political pressures on municipal actors to prioritise municipal-level gains
- Diversity of municipalities in terms of political climate
- Actors’ frustration with the political side of the MAL 2019 planning process

Focus on political bargaining and lobbying rather than shared objectives has been one of the recurrent issues in the MAL 2019 planning process. Politicians’ preference for short-term and visible policies for electoral benefits over long-term planning decisions resulted in steering the plan-makers to different directions.
“Close to home is always what a politician is doing. [They are] making sure that the voters’ questions are sort of most important [...]. But here, of course, is the whole tension of this MAL work, which is [...] that the benefits for even those voters, they can be reached, not directly by trying to really grasp to the particular demand that they have and [trying] to get as much euros or something as much as you can for those voters.” - (26) Consultant

“I know that in [...] certain municipalities, the political guidance or steering is quite strong. And so it’s just when a person comes and says, [this is ] what we want, [...] it’s not that person’s view. But [...] it’s the political agenda that’s talking there.” - (22) Metropolitan transport expert

“There’s a [legally-binding] regional plan and [legally-binding] general plan, [that] municipal planners don’t want or their politicians don’t want that HSL prohibits [their] municipalities’ own development systems, for example, to put [unwanted measures by a municipality] on land owned by [...] municipalities.” - (86) Metropolitan transport expert

“I think, from a political and democratic point of view, it’s problematic. Because whenever you have these systems where you have, you know, in the municipality, you have elected people who are making decisions. That means that there is a clear connection between the people making decisions and the people who voted them. But when you go into these sorts of processes, like MAL is where you have [14] or so municipalities, and then there’s some process by which every community sends some members, and then everybody... Each of those municipalities should agree on the same outcome. It means that the democracy is diminished.” - (74) Political decision-maker

A connected discussion concerned the situations where plan-makers struggled with frustration and disappointment with the role political decision-makers play in the MAL 2019 planning process as well as the larger MAL agreement procedure.

“The closer we went to the political decision-making [stage] again, the more frustrating it went. Because it became so irrational.” - (69) Metropolitan transport expert

“And I think we felt good co-working spirit with the people from municipalities in general, although they sometimes had to do what the politicians forced them to do.” - (86) Metropolitan transport expert

Another discussion point concerning the effect of politics on the integration of land use and transport planning concerned the diversity of municipalities in
their political priorities, which resulted in difficulties in finding consensus throughout the MAL 2019 planning process.

“It always gets so [...] complex in Helsinki [Metropolitan Region] because we have 14 municipalities in [the] region, 14 different systems of how they operate and how they do the [political] decision-making.” - (69) Metropolitan transport expert

6.3.6 Physical and historical context of planning

The effects of physical and historical context of planning on the MAL 2019 planning process are discussed mainly in terms of:

- Diversity of municipalities in terms of size
- Diversity of municipalities in terms of population
- Diversity of municipalities in terms of urban structure
- Heterogeneity of proposed solutions in MAL 2019 plan for all Helsinki Metropolitan Region municipalities
- Long history of metropolitan transport planning in the Helsinki Metropolitan Region
- Transport system planning approaches and methods established in the Helsinki Metropolitan Region
- Lack of metropolitan-level land use planning approaches and methods established in the Helsinki Metropolitan Region

The physical context of the planning ecosystem is discussed mostly in relation to the diversity of participating municipalities in terms of their size, population and urban structure. This diversity not only led to difficulties in finding consensus but also raised questions of applicability when the proposed solution in the MAL 2019 plan was not heterogeneous enough.

“What is interesting is that there are 14 different communities involved, and they are very, very different, from Helsinki [which is a big community] to Pornainen which is a very, very small community.” - (56) Consultant

“We have been able to achieve [the plan’s] goals together. Of course, there are some compromises made, as you can assume when we have those big cities like Helsinki, Vantaa and Espoo, compared to those more rural municipalities like Pornainen and Hyvinkää and [...] Nurmijärvi.” - (25) Municipal housing expert

“Inside the Helsinki region, there are actually two different regions, there is the capital region and then [there is this] KUUUMA region, and in many issues [...] the opinions differed a lot, maybe not 180 degrees, but a lot anyway, between Capital Region municipalities and KUUUMA municipalities. And when we are, for example, talking about pricing of the private car use, should we implement some kind of road tolls, for example? Or how do we curb the growth of road traffic? Then it’s clear that the measures that are
acceptable [were] partly different in KUUMA region and in Capital Region municipalities, so that made it quite inevitable that we need [...] lots of discussion and we couldn’t reach any... Or at least every meeting could not end up with some kind of clear decisions.” - (21) National land use and transport expert

“So we [had] difficulties in including these [MAL 2019 plan] goals into our own decision making and into our own local planning. So, for example, public transport which has a huge part in the [MAL] 2019 plan, it’s quite difficult [for] us because [our] municipality is [...] geographically [a] very large municipality, and [...] [public transport system has to] be paid by the municipality. So there are a lot of those main principles that are set in the MAL 2019 plan [that] don’t actually work in our own context. [...] Some of these cross-sectoral goals are set thinking only about the larger cities and also the cities like Kerava, Järvenpää [in] which there [are] railway connections and so on.” - (53) Municipal land use and housing expert

The historical context of the planning ecosystem is discussed mostly in relation to the long history of metropolitan transport planning in the Helsinki Metropolitan Region, leading transport system planning approaches and methods established in the region.

“Only a minority of effects are related to land use and housing... It might be the reason for that [...] the transportation planning for the greater Helsinki area, [...] that is mandated by law. The land use and housing plan is voluntary. There's a long tradition with transportation system planning in greater Helsinki area, it has been done since the 60's but land use and housing planning came along in 2011.” - (88) Metropolitan transport expert

“I think that more than planning together was [the] question of developing the impact assessment system by the after-plan assessment of MAL 2015. And developing HELMET to serve better the MAL [planning] process. Of course the assessment was more developed by the side of transport – perhaps because of the longer history and methods used traditionally.” - (86) Metropolitan transport expert

6.3.7 Methods in use

The effects of methods in use on the MAL 2019 planning process are discussed mainly in terms of:

- Impact assessment procedure within MAL 2019 planning process
- Differences in levels of detail between land use and transport components of the MAL 2019 plan
- More detailed transport measures in the MAL 2019 plan
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

- Land use measures focusing on primary development areas and housing production numbers
- Use of HELMET model for impact assessment of MAL 2019 plan
- Limitations on what kind of input can be put into HELMET
- Land use planning input provided for HELMET in early stages of MAL 2019 planning process
- Land use planning ideas not fully reflected in impact assessment procedure by HELMET

The impact of methods in use in the MAL 2019 planning process was mostly discussed in terms of the impact assessment procedure and the transport model, i.e., HELMET, that was used mainly, not exclusively, for the impact assessment. Firstly, almost every interviewed planning actor pointed out that the iterative impact assessment procedure that was followed for the first time, was quite decisive in the MAL 2019 planning process.

“'The goal was that impact assessment would be essential part of the planning process. And our goal was that [the impact assessment] supports planning [...] and it's [a] much more integrated part of the process.” - (52) Metropolitan transport expert

“[We used] this sort of framework for impact assessment and [made] it clear for everybody that this is [...] how we justify [...] different decisions.” - (50) Metropolitan transport expert

“The impact assessment process produces data throughout the process, and we need to take that into consideration and combine [...] our somewhat different views and try to create a truly [...] integrated plan that somehow meets the objectives and we are aiming at the same direction [about] the goals of the [plan].” - (88) Metropolitan transport expert

What prompted a discussion concerning the use of HELMET was the influence of the model’s capabilities on defining, and in some cases, limiting the possibilities of horizontal integration of land use and transport planning. As the land use planning input had to be provided for HELMET in early stages of the MAL 2019 planning process, land use planning ideas were not fully reflected in the impact assessment process by HELMET.

“So, in land use, there was only the primary areas and in housing practically, how many houses can be produced and where. [...] The content of impact assessment [is] mostly related to transport. Land use and housing do not produce as much data to be evaluated in [the impact assessment] process. Of course part of the land use planning will be evaluated together with the traffic investments they are related to. [...] Why is impact assessment process related to transport? Partly because of legislation, SOVA-law. Partly because HSL has resources to coordinate the MAL process,
and abilities [have] been developed by having persons to do [impact assessment] as their almost main job, and of course because of the transport forecasting model HELMET.” - (86) Metropolitan transport expert

“We tried to make it as clear and as concise as possible […] so that we would have some figures that we could rely on. But of course, nothing is perfect. […] We use the [transport] model a lot. And that model was a big part of [planning]. And not all measures can be modelled and not [all of it is] perfect. It’s a good tool but it’s not perfect.” - (22) Metropolitan transport expert

“And now, the situation has not changed in that way that land use plans are the background and you are getting [housing] numbers and [land use] plans, and then you are putting your transport system [on top].” - (56) Consultant

Different legislations concerning the transport and land use parts of the MAL 2019 plan, especially the SOVA Act, also had an impact on the methods used in the planning process. The lack of legislative requirement for metropolitan land use planning and impact assessment was mentioned as an important detail:

“In the MAL process, it’s much more free to decide what kind of, first of all, themes you will handle in the MAL plan, and then, of course, what kind of impact assessments you’ll want to make, if you want to see the kind of social justice things you want to take [and] also climate impacts but not only transport climate impacts, but also housing climate impacts, and so on, so on. Because there is not this kind of demands that are now written in the land use and building act, for formal impact assessment.” - (47) Regional land use expert

6.3.8 Planning process organisation

The effects of planning process organisation on the MAL 2019 planning process are discussed mainly in terms of:

- MAL 2019 plan prepared as a basis for MAL agreements
- Adjustment of expectations from MAL 2019 plan according to MAL agreements
- HSL as coordinator for land use, housing and transport system planning work
- Letting HSL actors take the lead for MAL 2019 planning process
- HSL actors’ possibility to lead MAL 2019 planning process
- Increased number of actors in MAL 2019 planning process
- Increased number of materials & reports in MAL 2019 planning process
- Need to build collaboration methods
- Need to keep MAL 2019 planning process manageable
• Cyclical MAL planning process

The planning process organisation was discussed in various terms by the interviewed planning actors. One discussion point concerned the overall purpose of the MAL 2019 plan as the basis for the following MAL agreement round. The expectations from the MAL 2019 planning process were adjusted to what is required by the agreement procedure, which resulted in an adjustment of what kind of topics and stakeholders should be involved in the planning process.

“One of the problems is also [to] get more and more and more to this plan. We have [...] to know what is the essence.” - (38) Metropolitan transport expert

Identification of a primary stakeholder or organisation leading the integrated land use and transport planning process is also a key discussion point when it comes to the effect of process organisation on the planning process. HSL has assumed the role of coordinator for this land use, housing and transport system planning work, as they have the possibility to lead and coordinate the process due to their resources. The other side of the coin is that municipalities are also willing to let HSL take the lead as they understand that, with limited resources, it is not possible to undertake the extensive MAL planning work. This leadership position also raised questions concerning the more prominent transport focus of the planning process when compared to the land use and housing sectors.

“HSL has a leading and somewhat prominent role in the MAL planning process, and they possess resources and expertise that individual municipalities are lacking at the moment. Sometimes I do feel overwhelmed by the amount of information we receive from HSL during the MAL planning process, I also feel that there’s no time to deeply study the reports provided by HSL during the process, that’s a small problem, I feel.” - (88) Metropolitan transport expert

“If we start off with the role of HSL, then I think it’s at least for now, it has been quite important that we need some or at least it helps a lot if we have some kind of regional organisation that can be the coordinating body in this kind of planning. But we have to remember at the same time that HSL is a transport organisation, transport system planning organisation and public transport organisation. So HSL has quite good resources, but they are focusing on the transport system part plus, of course, the coordination.” - (47) Regional land use expert

“Because HSL is the leading [organisation], [the planning process is] very much focused on public transport and personal traffic. So it’s not really very good in other issues, for example, goods transport.” - (59) National land use and transport expert
Finally, effects of how the planning process is organised are discussed in terms of the increased number of actors and materials in the MAL 2019 planning process, and how this increase influences the quality of interaction in the planning processes, revealing the need for developing collaboration methods. In connection, the need to keep the planning process manageable is an important part of the planning process organisation as pointed out by some interviewed planning actors.

“But the problem is that the MAL process is too huge. There are so many meetings, so many reports, no one can read. And it seems to be a purpose in itself, this whole MAL process, it’s too huge. People really don’t have time for that so much. It should be focused on central things. And it takes very much from my time to sit in the meetings and I don’t see them all so useful. If we look at the MAL agreement, and we look at all those reports and meetings and all that money [that] was used, and there is only a very, very small group of people who can understand the whole thing and understand what’s written in the report and how it is linked to the MAL plan. [...] How is it really useful to have such a huge machine?” - (59) National land use and transport expert

“And it’s not easy to keep everyone informed. And it’s not maybe even, maybe not even possible.” - (22) Metropolitan transport expert

“The agenda was packed with issues, a lot of things, and the number of participants in [steering group] meetings [...] was rather high, say 20 people. So, in a meeting of 20 people, what kind of cooperation do you expect to have? Well, if you’re really eager, you can get an opportunity to speak your mind for a minute or two, but it can’t really be anything in depth. And I think this is one of the potential hurdles of the process that it involves so many people. And the meetings may have 20 people. So it’s not a planning session.” - (15) Municipal transport expert

“It has reduced the quality of the integrated planning that we have so many persons in the process. And I think that’s because they don’t have the motivation to do the work that it demands from them.” - (25) Municipal housing expert

“Oftentimes, it seems that in many of the MAL occasions, there is a lot of talk and a lot of material, but it might not always be right on the spot of what is the...What are the key issues that need to be sort of collaboratively discussed and dealt with? So, I could observe both kinds of things. So, on the one hand, [...] very information intensive events where a lot of this impact assessment, for example, material was presented. And then a couple of persons from many, many, many people would say something like the pre-
prepared comments to some one thing and I wouldn’t have assessed that to be particularly collaborative.” – (26) Consultant

6.3.9 Educational backgrounds and professional identities

The effects of educational backgrounds and professional identities on the MAL 2019 planning process are discussed mainly in terms of:

- Wide use of transport system planning tools for MAL 2019 process
- Lack of education in collaborative planning methods and processes

In the MAL 2019 planning process, the interviewed planning actors had rather limited discussions concerning the educational backgrounds and professional identities. One discussion point was connected to the wide use of transport system planning tools for the MAL 2019 planning process, historical development of which was explained earlier.

“Those are not necessarily very accessible terms for everyone involved in the process. [...] So I have to [...] discuss with different words, I guess... And also, I think, people don’t necessarily understand costs or benefits in that economic viewpoint. So I think anything to do with transport economics can be hard or hard for people, which is understandable.” – (20) Metropolitan transport expert

“In [an] optimal way, it should be that the goals and objectives and [measures] should be done separately from the tools. And then [...] we should, after that, choose what tools do we use for these objectives [...] and [measures]. But, but we know that can’t be done, because [...] building a tool [...] like HELMET is 10 years of process or something. So we can’t [use] all the tools [...] that we need to, we have to use [the] ones we have.” – (39) Metropolitan transport expert

“I am responsible for [this part of the planning process], and I work at [this organisation]. And my background is [...] in the transport sector. So it [...] always goes a little bit like transport ahead. And the transport model is such a big tool for us. So that also leads to the transport [being more prominent].” – (34) Metropolitan transport expert

Lack of education in collaborative planning methods and processes was also mentioned in the context of receiving joint training to develop collaborative skills as it had not been available before.

“There training sessions were very well received, because it was new to most of the people, this sort of like [an] actual approach to learn for this kind of [collaborative working].” – (26) Consultant
6.4 Interplay of Factors Affecting the MAL 2019 Planning Process

6.4.1 Interplay of factors

The discussion points listed and elaborated on in the previous section (Section 6.3.) are put into complexity maps (Figures 15, 16 and 17) to present the connections between them.

Figure 15 shows the overall look into how the context, i.e., the interplay of factors, of the MAL 2019 planning process affects the process, with each colour representing one factor family. At first glance, this map looks messy with colours spread around without a clear pattern. Nevertheless, a more detailed look clarifies that it is this “messy” look that explains the emergence that is the MAL 2019 planning process itself. This map suggests that all the factors identified from the literature review find their role in the MAL 2019 planning process and affect the planning process in a convoluted manner. The lack of clearly defined groups (except the one on the right hand side of Figure 15) points out that it is neither possible nor fruitful to take one factor, e.g., methods in use, out of the planning process, improve it, and try to insert it back to the process in anticipation that this isolated improvement will solve the problems experienced in the remit of that specific factor. On the contrary, Figure 15 underscores the significance of the interplay of factors that will complicate such isolated efforts.

In order to present the findings from the mapping of interplay of factors affecting the MAL 2019 planning process in a more detailed manner, Figure 16, to be found in Appendix 2, shows the same map as Figure 15, but with the labels of each factor included.

There are several findings a closer look into the interplay of factors mapped out in Figure 16 can provide. Starting with the largest node, i.e., the most impactful factor within the whole planning process with the highest outdegree centrality, located towards the centre of Figure 16, the mapping of the interplay of factors suggests that the municipal actors’ lack of time to work on the MAL 2019 planning process has been quite influential in the MAL 2019 planning process. Affecting a variety of topics, from the need to keep the MAL 2019 planning process manageable to letting HSL to take the lead of the MAL 2019 planning process, municipal actors’ lack of time to work on the MAL 2019 planning process brings up the importance of ensuring that the necessary resources are allocated to the integrated land use and transport planning processes.

Another impactful factor within the planning process is the trust-building between the planning actors over time, located at the right hand-side of Figure 16. Unlike the previously discussed node of municipal actors’ lack of time resources, this node concerning trust-building creates a more closed effect within the process. In other words, the planning process clearly benefits from the presence of trust between the stakeholders to keep the process going, nevertheless, the effects are not as easily distributed as a more centrally located node. This situation brings about the question of how to proceduralise, distribute and capitalise on the positive effects of presence of trust between the participating municipalities, HSL, and other regional and state authorities, as it is usually described as an
important factor affecting the integration of land use and transport planning processes (see, e.g., Hrelja et al., 2016).

Figure 15. Complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process.

Another interesting result that is revealed by Figure 16 is the interplay of factors towards the central-upper part of the map. Unlike what most of the interviewed planning actors suggested, the reasons for the presence of more detailed transport-related measures in the resulting plan are manifold, not only because
Exploring the Factors and Their Complex Interplay Affecting the MAL 2019 Planning Process

it is the legislation dictating the transport system plan part of the MAL 2019 or HSL leading the planning process. This suggests the process development efforts concerning a more equal integration of land use and transport practices may require quite extensive efforts, understanding the complex nature of such integration processes.

### 6.4.2 Bottlenecks in the MAL 2019 planning process

Another way to present the findings from Figure 15 is to identify the communities, i.e., clusters of highly connected factors within themselves, which is presented in Figure 17 in the Appendix 2. The clustering of highly connected factors reveals five bottlenecks in the planning process and one success factor.

**Municipal actors’ lack of time to work on the MAL 2019 planning process and its impacts**

As previously mentioned, municipal actors’ lack of time to work on the MAL 2019 planning process constitutes a clear bottleneck in the planning process. This factor mainly stems from the legislation ensuring that municipalities enjoy a land use decision-making monopoly but, at the same time, limiting municipalities’ resources to the municipal-level activities. The interviewed planning actors revealed that they accept the lack of municipal resources to be allocated to the MAL 2019 planning process, as they simply must accept the fact that this is how the legislation is set up. Nevertheless, as revealed by the mapping of interplay of factors affecting the MAL 2019 planning process, the effects of this bottleneck are quite extensive across the planning process. Especially the municipal actors’ tendency to prioritise legally-binding processes as well as issues that matter to their own municipalities emerge as critical challenges in the MAL 2019 planning process. In order to remedy this bottleneck, the process is structured in a way that municipalities follow HSL’s lead in the process, which results in further problems. On the other hand, the need to keep the planning process manageable appears as a potential solution to this bottleneck, even though it raises questions of different degrees of integration.

**Municipal land use planning authority and its impacts**

Being connected to the previous bottleneck, municipal land use planning authority also presents a bottleneck in the MAL 2019 planning process, especially when coupled with the metropolitan level transport planning authority given to HSL. This bottleneck has a historical side to it, as the municipal land use planning authority has been a feature of the Finnish governance system since 1865. Leading to a lack of a metropolitan level land use planning organisation as well as a lack of institutionalisation of metropolitan land use planning approaches in the Helsinki Metropolitan Region, municipal land use planning authority creates an imbalance between land use planning practice and transport planning practice. This has cascading effects on the MAL 2019 planning process as it results in land use-related measures discussed during the planning process being limited to main residential development areas across the region. As one of the
purposes of integration of land use and transport planning processes is to increase the analytical governance capacity of the participating stakeholders, consistently limiting the land use considerations also limits the benefits of this integrated land use and transport planning process. This limitation revealed by the mapping of interplay of factors also provides a new perspective to the discussion of the effects of using the HELMET model, as the interviewed planning actors mostly mentioned the (in)capabilities of the HELMET model in utilising land use data, but downplayed the criticality of what is offered by the land use planning-side to the HELMET model.

Municipal differences and priorities and their impacts
Another bottleneck that is revealed by the mapping of interplay of factors affecting the MAL 2019 planning process is the effect of municipal differences. This bottleneck underscores the significance of understanding the role the physical context of urban planning practice plays in an integrated land use and transport planning process. The physical diversity of the planning context gives way to varying political views which then further impact the planning process.

HSL’s role in the MAL 2019 planning process and its impacts
HSL’s role in the planning practice is a bottleneck that is not only revealed by the mapping of the interplay of factors affecting the MAL 2019 planning process, but also discussed extensively by the interviewed planning actors. In that sense, Figure 17 does not expand our understanding of the situation much further. Nevertheless, one interesting finding concerning this bottleneck is that this cluster connects to all the other clusters, which is not the case for any other cluster. Therefore, the interplay of factors within the cluster concerning HSL’s role in the MAL 2019 planning process suggests that HSL’s role as the leading organisation within the planning process has far-reaching effects on the planning process, despite the interviews mostly concentrating on the use of transport planning-related methods as well as on the transport measures of the MAL 2019 plan being more detailed than the measures concerning land use and housing sectors.

Process organisation-related factors leading to low satisfaction with the MAL 2019 planning process
Finally, several process organisation-related factors form a cluster that points towards a bottleneck concerning a low satisfaction with the MAL 2019 planning process. This bottleneck lacks a clear central factor unlike the previous bottlenecks. In this case, the emergent effect of the cluster, i.e., low satisfaction with the MAL 2019 planning process, emerges as a factor in itself that may affect the rest of the system. Even though the effects of this cluster are rather contained with the cluster, which is a positive situation, the existence of certain factors still leads to the frustration of some planning actors. Interruptions in the trust-building among the planning actors, and in individual and organisational learning processes, both caused by high personnel turnover, seem critical in this discussion. Nevertheless, it is not too surprising given the fact that they are the
exact opposite of factors leading to high satisfaction with the planning process, which will be explained in the upcoming section.

### 6.4.3 Success factors

*Trust-building between the actors and its impact on high satisfaction with the process*

Interestingly, the presence of trust between the planning actors appears as the only success factor in the MAL 2019 planning process. What makes it interesting is that, during the interviews, most interviewees mentioned the impact assessment procedure as a success factor. Nevertheless, the mapping of interplay of factors as shown in Figure 17 suggests that investment in trust-building as well as building a culture of collaborative planning may have further-reaching benefits than investments in developing the HELMET model. The connection between this cluster and the cluster concerning HSL’s role in the MAL 2019 planning process suggests that further improving this success factor may alleviate some of the challenges caused by HSL’s leading role in the planning process. Therefore, emphasising the cyclical nature of MAL planning processes while finding ways to improve the interpersonal relationships can be decisive in the upcoming planning rounds.

Finally, the existence of both low satisfaction-inducing factors and high satisfaction-inducing factors in the same planning process suggests that the planning actors simply find a way to make the process work, despite all the bottlenecks described earlier.

To conclude, this chapter has presented the findings from interviews, document analysis and complexity mapping visualisations in detail. In the next chapter, these findings will be discussed in connection to the research objective and questions, as well as in connection to previous research.
7. Concluding Discussion

Addressing the research gap in understanding the impact of context on the integration of land use and transport planning processes, this Concluding Discussion chapter discusses the research findings. The chapter first discusses the findings according to the three research questions. Next, limitations, contributions and implications of the research are discussed, followed by suggestions for future research.

7.1 Discussion on the Research Questions

7.1.1 How can different factors and their interplay, forming a specific context of a land use and transport planning integration process, be identified and analysed?

The findings of this doctoral research shed light on how the context of an integrated land use and transport planning process emerges through the interdependencies between different factors making up the context.

As for availability of resources, as discussed in Chapter 5, sectoral resource inequalities (Eriksson, 2017) and municipal-level lack of resources (Tønnesen, 2015) pose challenges to formulation of a planning process where open and transparent dialogue can take place (Hrelja et al., 2016, p. 9). Emerged as a natural outcome of legislation-led organisational roles, actors of the MAL 2019 planning process partook in the process with different levels of resources. This imbalance was especially prominent between the metropolitan transport planning resources of HSL and municipal land use planning resources of municipalities, which meant that municipalities simply did not possess resources to the extent that the MAL 2019 planning process could lead to more integrated solutions. Municipal decision-makers were also in a similar situation with limited resources to allocate to metropolitan questions, even though political decision-makers’ lack of time has not really been discussed in previous research so far.

As for legislation in place, the MAL 2019 planning process experienced several challenges as a result of the connection between legislation shaping organisational roles, funding opportunities and available resources. One of the most critical challenges was in regards to arranging land use policy as a municipal responsibility and transport policy as a regional responsibility which is also identified as one of the most common and challenging barriers against bringing land use and transport planning practices together (Stenstadvold, 1996; Tornberg,
This factor presented the key challenges limiting the integration possibilities within the MAL 2019 planning process.

As for organisational structures and identities, similar to the cases exemplified in Chapter 5 (see, e.g., Stenstadvoid; 1996; Stead, 2008; van Geet et al., 2019; Pettersson & Hrelja, 2020; Busscher et al., 2013), MAL 2019 planning actors were still bound by their roles in their own organisations, which led to difficulties in reconciling the organisational differences during the planning process. Stemming from the legislation-based organisational roles, such as municipal roles in land use planning, there was an inbuilt limit into the range of integrated solutions that the MAL 2019 planning process could bring. Municipalities were reluctant to accept measures that would impose conditions on their municipal land use.

As for interpersonal communications between planning actors, the presence of positive relationships built among the MAL 2019 planning actors played a key role in the perceived success of the process. According to Hrelja et al. (2016), as explained in Chapter 5, trust-building among the stakeholders helps with navigating through the planning process, and more importantly, it also helps with creating a platform for open dialogue through which vertical, horizontal and inter-territorial discrepancies of land use and transport planning can be reconciled. In that sense, it can be argued that the most important outcome of the MAL 2019 planning process is the increased opportunities to collaborate, possibly enhanced by the existing consensus-seeking culture in Finland (see, e.g., Rainio-Niemi, 2008). In addition, the presence of positive relationships among the planning actors alleviated several challenges that are connected to other factors such as the methods used in the planning process and educational and professional differences.

As for politics, the case of MAL 2019 planning process shows similarities in Hrelja and Rye (2022) where the municipal strategies point in one direction towards sustainable transport mobility goals and yet the resulting practice points towards car-oriented strategies due to politicians’ preferences. Affected by the diverse physical contexts of the Helsinki Metropolitan Region municipalities as well as the self-governance right outlined in legislation, the political decision-makers tend to push for planning measures that benefit their own municipalities.

As for the physical and historical context of the planning process, as noted by other scholars (see, e.g., Kaufmann & Sager, 2006; Jang et al., 2011, in Chapter 5), the existing infrastructure and urban fabric affect the choices that are deemed acceptable in the MAL 2019 planning process. Due to the physical and demographic diversity in the Helsinki Metropolitan Region municipalities, both municipal planners and municipal political decision-makers had to advocate for planning measures that are oriented towards their own challenges. These differences also seep through the organisational identities and lead to differences in organisational priorities. The historical context of the MAL 2019 planning process was also a crucial factor that shaped several other factors such as the methods in use and planning process organisation.
As for the methods in use, the use of the 4-step transport model HELMET for the impact assessment was decisive in the case of the MAL 2019 planning process. As argued by Tornberg (2011) in Chapter 5, transport models offer a definitive representation of reality formed by the model maker. Similarly, the use of the HELMET model meant that the MAL 2019 plan would be largely based on what the HELMET model was able to produce. Despite causing some considerable integration challenges along the planning process, the presence of positive interpersonal communications between the planning actors, especially the respect shown for the work of HSL actors, helped mitigate the level of challenges in the process.

As for planning process organisation, the MAL 2019 planning process followed similar ideas as discussed in Chapter 5, such as having one of the stakeholders taking a leading role in the process to avoid decision-making bottlenecks (Stead, 2003; Fischer et al., 2013) or not leaving the impact assessment procedure to the end (Tennøy et al., 2016). Nevertheless, affected by other factors such as resource imbalances and methods in use, specifically the transport model in use, the planning process organisation remained limited in providing integration opportunities.

As for educational backgrounds and professional identities, in Chapter 5, Stenstadvold (1996) argue that when there are significant disparities in the sectoral approaches and competences of the actors, such disparities may result in the most powerful actor dictating the fate of the process, which is essentially contradictory to setting up an integrated process. In the case of the MAL 2019 planning process, HSL’s coordinating role showed similar characteristics, e.g., in terms of a transport-led planning process and use of transport-related methods and tools such as the HELMET transport model for impact assessment. This situation, nevertheless, was a natural response to another factor concerning imbalances of available resources to HSL and to municipalities for metropolitan-level MAL 2019 planning. Despite this situation creating challenges in the integration of land use and transport during the MAL 2019 planning process, the effects of another factor, positive interpersonal communications between the planning actors, alleviated the challenges since the other planning actors openly acknowledged the good work done by HSL.

To summarise, as shown in the discussed examples above, different factors affecting the MAL 2019 planning process came together during the planning process in a way that they simultaneously enable and inhibit each other’s effect on the process. As suggested by Complexity Theory, a system’s heterogeneous composition made up of smaller components interacting in a non-linear manner leads to intricate emergent behaviours of the whole system. This emergent behaviour through interplay of factors leads to a certain level of operational context within which the MAL 2019 planning actors attempted to reconcile the differences of land use planning and transport planning.
7.1.2 How does such an analysis contribute to understanding the way the process works?

The findings of this doctoral research suggest that the context of planning processes has a critical role to play in the understanding of why individual integrated land use and transport planning processes are the way they are. In other words, cultural, historical, administrative, legislative, organisational, procedural, geographical, political, methodological and many other aspects of an integrated land use and transport planning process define the contextual factors affecting the planning process in a unique way. This, in turn, explains why each integrated process is unique in itself, requiring tailored solutions to achieve higher governance capacities through integration. Therefore, the findings of this doctoral research not only emphasise the highly contextual nature of integrated land use and transport planning processes, as identified by previous research (Geerlings & Stead, 2003; Kaufmann & Sager, 2006; Tornberg, 2011; Rye et al., 2011; Legacy et al., 2011; Hrelja, 2015; Tennøy et al., 2016; Hrelja et al., 2016; van Geet et al., 2021; Tornberg & Odhage, 2022), but also opens up a discussion on how these contextual particularities actually emerge.

To begin with, as explained in Section 6.2. in detail, in the Helsinki Metropolitan Region, transport planning practices and land use planning practices have been developing in parallel with many connection points but without a unifying framework. The stability of legal frames of references has been largely responsible for this development. On the one hand, the law mandating a metropolitan transport system plan has continually supported the development of transport system planning approaches and methods while ensuring the availability of resources to be allocated to the planning processes. On the other hand, the law (in fact, the Finnish constitution) guaranteeing the municipal self-governance rights and responsibilities has continually led to municipalities prioritising their municipal land use planning objectives to ensure that they can fulfil their mandatory obligations in the most efficient manner. With these two laws existing at the same time for many decades, any planning process operating in this environment is bound to be affected by the formal institutional conditions these laws create (such as politicians’ decision-making tendencies, lack of resources to be allocated to a non-legally binding process, and so on).

The organisational context of the MAL 2019 planning process has shown a similar development path as the legal context, due to the very simple fact that it is usually the laws that define the organisational delineations and structures. As the transport system planning-law remained the same, even a change between responsible organisations (from YTV to HSL) has not created a breaking point in the development of metropolitan transport system planning approaches. On the contrary, the new organisation (HSL) was able to strengthen the transport system planning process in the region. On the other side of the coin, a formal organisational structuring to strengthen the metropolitan land use planning process has not emerged so far. Consequently, these administrative structures, or lack thereof, paved the way for recurrent issues in the MAL 2019 planning process.
The findings also show that while historical and administrative aspects of an integrated land use and transport planning process create the unique conditions within which the planning process takes place, these aspects also define what is possible and needed in each integrated planning process. In other words, contextual factors, born out of specific historical and administrative developments over time, create their own inhibitors and facilitators (Stead & Meijers, 2009). What is written and claimed in normative terms about land use and transport integration in academic papers or policy documents, can be drastically different from the actual changes pursuing policy may bring to the everyday work of planning actors (Adelle & Russel, 2013). Consequently, a universal recipe for integrated land use and transport planning implementation is virtually impossible. Instead, each integrated land use and transport planning process needs to explore what kinds of integrated actions can be taken within the process and to what end, so that each process is built to fit into the specific conditions within which they take place. For example, in the case of the MAL 2019 planning process, it is pointless to legally require that municipal actors participate in the planning process in the same way as HSL does, even if, at first glance, it might appear to solve the problem of the plan being transport-focused as such a legal requirement would also come with dedicated resources. Nevertheless, the municipalities’ land use planning authority will always downplay the development of a legally-binding metropolitan land use plan, since the municipalities need to prioritise their own municipal needs over metropolitan needs. Therefore, as explained earlier, the municipalities and HSL focus only on the primary housing development areas and nothing more, even though this drastically limits the participation of the land use sector in the integrated MAL 2019 plan.

The findings of this doctoral research also re-iterate the results of previous research on institutional conditions affecting the integration of land use and transport planning processes (see, e.g., Hrelja et al., 2017; Isaksson et al., 2017; van Geet et al., 2019) in a sense that both formal and informal institutions heavily influence the planning processes. Legislation as a formal institution example and methods in use as an informal institution example both have critical effects on the challenges experienced in the MAL 2019 planning process. On one hand, formal institutional elements relate the recurrent challenges in the planning process (e.g., the land use planning monopoly of municipalities and its effect on the lack of municipal resources dedicated to MAL 2019 planning process) so that the planning actors essentially build the planning process around them (e.g., HSL leading the planning process). This opens up questions about how planning actors see integration in a fluid manner, accepting the planning situation as it is, rather than seeing it in normative terms and cancelling the planning process as it is not “perfectly integrated”. On the other hand, the impacts of informal institutional factors are more nuanced. For example, the use of the HELMET model has sparked both pride in the planning process and a challenge to be resolved.

Exploring the impact of the interplay of contextual factors affecting the integrated land use and transport planning process, inspired by the Complexity
Theory, the findings illustrate the impossibility of isolating a problem in an integrated land use and transport planning process and attempting to solve it in isolation in anticipation that it will help improve the planning process. The connections between the factors affecting the MAL 2019 planning process show that not only solutions developed in isolation will not solve the procedural issues, but also their “solved” version may lead to further unexpected behaviour in the system, due to the integrated land use and transport planning processes showing characteristics of complex adaptive systems.

Also related to the previous point, the connections between the factors affecting the integration of land use and transport planning processes show that there are non-linear interdependencies between these factors which leads to emergent behaviour in the planning system. To illustrate, in the MAL 2019 planning process, interaction of political factors with the legislative factors lead to a planning process which limits its own coordinative capacity. Coordinative capacity, which is essential in policy integration situations where various actors need to come together to share resources, exchange information and work towards a common goal, suffers in this case from municipal decision-makers’ prioritisation of local issues as prompted by the legal mandate of municipalities in land use planning decisions.

Finally, the connections between the factors influencing land use and transport integration also explain why it is challenging to increase different types of governance capacities at the same time. Even if coordination capacity may be increased by improving the interpersonal communicative factors within the integrated land use and transport planning process, the analytical capacity may still lag behind as legislative factors may limit possibilities of different sectors’ participation in the planning process.

7.1.3 What insights can be drawn from studying the interplay of factors affecting the MAL 2019 planning process about the integration of land use and transport planning processes?

Candle and Biesbroek (2016, p. 11) argue that comprehending the intricacies of a policy integration process necessitates a shift from focussing on a universal, comprehensive theory that defines the truth of such processes, towards focussing on a theory-informed examination of particular sequencing of steps and actions that regulate and guide the unfolding of those steps and action. With this in mind, the MAL 2019 planning process offers several analytical insights that can support the development of effective integrated land use and transport planning processes in different governance contexts.

Firstly, the MAL 2019 planning process shows that providing a stable collaboration platform through careful process design makes it possible to proactively alleviate some integration challenges, even if not all due to contextual limitations. One of the biggest changes between previous planning processes and the MAL 2019 planning process is the increased collaboration between transport, land use, and housing experts, as noted by the interviewed planning actors. Some interviewees suggested that the collaboration that is required to form this common vision is the real purpose of the process, as without the MAL 2019
planning process, there is not any other mechanism for municipalities and HSL to come together for discussing land use, housing and transport planning issues and reconcile the different priorities and needs of the sectors as well as the organisations participating in the planning process. Previously, separate plans were developed for each sector, leading to disjointed discussions and limited collaboration opportunities. However, the transition to the MAL planning framework placed greater emphasis on systematically involving all stakeholders throughout the process. To facilitate collaboration, the process aimed to ensure that key players from different sectors were involved in critical decision-making points, enabling a more comprehensive understanding of the planning process. Since the basic premise of the MAL 2019 planning process is to bring together land use, housing and transport, forming cross-sectoral working groups that meet regularly had strong impacts. In addition, the project planning and the planning of stakeholder interactions were done together with different sectors and organisations, unlike the previously separately planned processes. As a result, increased collaboration occurring as a result of the MAL 2019 planning process is a critical insight towards building effective land use and transport integration processes.

Secondly, in connection to the previous point, since developing positive interpersonal relationships emerged as a critical success factor, the process of MAL 2019 plan itself can be argued as a means to build those relationships. Regular meetings that take place over a four-year long process are quite effective in trust-building. In addition, the consensus-seeking culture of Finland is also a helpful quality in this perspective.

Thirdly, the interviewed planning actors often referred in a rather negative light to the fact that the end goal of the planning process is to ensure that state funding will be available to all participants. Nevertheless, when every organisation involved offers something that the other participants need through negotiation, this also creates a strong incentive to navigate through the challenging process of integrated land use and transport planning (Tornberg & Odhage, 2022; Innes & Booher, 2018). In that sense, the MAL 2019 planning actors set up the process to achieve the common goals and did not pull out of the process when challenges arose. They still chose to invest their time in this process. This suggests that financial incentives should not only be connected to ensure that there are required resources for the realisation and progression of the integration planning process, but they should also be interpreted as rewards for following through a challenging integration process. In other words, guaranteed funding makes the integrated land use and transport planning process rather attractive, which is a key lesson from studying the MAL 2019 planning process.

7.2 Reflecting on the Limitations of This Research

This doctoral research, naturally, has certain limitations. First of all, it is wise to acknowledge that the nine factors identified as important for the integration of land use and transport planning processes are devised specifically for this doc-
toral research. Therefore, they do not constitute the whole truth of such integration. Even though this research does not aim to provide such comprehensive truths and does not even believe that it is possible to provide it in the first place, it is still crucial to recognise that the selected factors and the way they are delineated inevitably leave certain issues outside. For example, discussion of power (see, e.g., Lukes, 2021) is considered critical in integrated planning processes or any planning process for that matter, as different stakeholders participate with different levels and forms of power in the process. If a power perspective had been taken into consideration in this study, the findings, especially those concerning the interpersonal relationships between planning actors and organisational priorities, needs and resources, the results might have been different.

Secondly, the limitations of the chosen data collection methods need to be discussed. Semi-structured interviews are the one of the main data collection methods employed in this doctoral research. Due to the very small size of the professional networks in the Finnish urban planning practice, it is highly possible that the interviewees were occasionally prone to response bias where they felt obliged to give socially desirable answers, as their views may easily point towards their identity. This situation might have caused an over-emphasis on the presence of a high level of trust between the stakeholders. In addition, Yin (2018) points out that quality of interviews may suffer from incorrect answers due to badly formulated questions as well as weak recollection of events by the interviewees. These possibilities should be noted as limitations in this doctoral research, especially because the interviews were held in a different language than the interviewees use on a daily basis for their work, and because the interviews were conducted after the 4-year long planning process of MAL 2019 plan had ended and the interviewees had already started thinking about the next planning round.

Selection of interviewees is another limitation to be mindful of. The high number of transport actors working at the metropolitan level included in the list of interviewees (i.e., 12 interviewees out of 28 in total) might open up questions concerning a potential bias towards the experiences and ideas of this group. Nevertheless, most of the actors within this group -but not all- work at the organisation tasked with coordinating the planning process. This provided them a well-rounded view of the planning process, beyond sectoral boundaries. Regardless, the fact that the transport experts constituted a considerable section of the interviewee list may have affected the over-importance attributed to some subjects, e.g., the use of the HELMET model for the impact assessment process, while downplaying collaborative qualities and events in the planning process.

The document analysis was another data collection method employed in this doctoral research. As the documents included in the analysis were not systematically produced and published, it is possible that some important documents were missed, leading to an incomplete picture of the planning context, which falls into retrievability and selectivity biases of document analysis (Yin, 2018; Bowen, 2009). Even though the results of interviews showed concordance with the results of document analysis, combination of which was then validated
through meetings with case study subjects, it is still important to keep this limitation in mind.

Thirdly, when it comes to the visualisation methods, it is also important to recognise that complexity maps need to be interpreted with a healthy level of scepticism. As much as visually showing the connections between different phenomena may reveal interesting results that cannot be unravelled by textual descriptions, these visualisations are also limited in a sense that only what can be visualised can be shown and anything that cannot be visualised will be omitted. Even though this doctoral research attempted to alleviate this shortcoming by combining visual descriptions with textual descriptions, it is still crucial to understand this limitation while interpreting the results of the research.

In connection to the complexity maps, it is also noteworthy to understand that the author’s interpretation of the connections may be incomplete, even if not inappropriate. Being one of the critical results of this doctoral research, integrated land use and transport planning processes are complex. Therefore, the author may have simplified certain parts of this complex process unknowingly.

Finally, generalisability is always a challenge in case studies. The unique emergence of the MAL 2019 planning process may not resonate with every other integrated land use and transport planning process, despite a high correlation between the systematic literature review and the findings from the MAL 2019 planning process as well as the lessons provided in the previous section. As this dissertation underscores the contextual nature of land use and transport integration processes, the results of this study need to be interpreted within its own context. The broader insights to be drawn from this study emerge from an improved understanding of the role of context in developing integrated land use and transport planning processes, and from methodological implications of how it can be analysed.

### 7.3 Contributions of the Research

The overarching objective of the research was to provide in-depth process knowledge by understanding the interplay of contextual factors affecting integrated planning processes. By doing so, this study contributes to filling a critical gap in the literature by focusing on the contextual understanding of such processes.

This research attempts to contribute to the theoretical understanding of transport policy and integrated land use and transport planning. It goes beyond previous studies that predominantly focused on planning organisations and planning environments, by also considering the role of actors within these processes. Furthermore, this research emphasises the importance of situating integrated planning processes within their specific contexts, acknowledging the complexity of many different factors influencing these processes. The findings challenge the notion of applying "best practice" examples without paying attention to the local conditions, and highlight the need to understand what works within each unique context.
The research approach of this study emphasises the importance of combining historical analysis with an exploration of the current state of integrated land use and transport planning processes, providing a nuanced perspective on the dynamics of these processes. Methodologically, this research contributes by examining the historical development of factors and connecting them to present-day challenges in integrated planning processes. By adopting a complexity mapping approach, it provides a broad visualisation of the factors affecting the integration of land use and transport planning processes and their interrelationships. This mapping enables a holistic understanding of the planning process and helps identify key nodes within the process, which then helps with identifying bottlenecks and success factors in the planning process.

The research offers several practical contributions to the integrated land use and transport planning practice. By understanding the dynamics and historical background of the factors influencing these processes, planning organisations can better allocate their limited resources in the most efficient and effective manner. The complexity mapping approach identifies the most influential factors and those most affected by others, providing insights for process design and decision-making. This knowledge allows for targeted and context-specific recommendations to improve integrated planning processes, enabling planning organisations to enhance their governance capacity. These practical contributions are particularly relevant in the context of addressing the challenges posed by the climate crisis, where the need for responsive and effective integrated planning is extensive.

In addition, the results of the systematic literature review in Chapter 5 is also an important contribution of this research. Synthesising the scattered knowledge of how different factors affecting land use and transport integration play out in different contexts, the author of this dissertation aims at providing an in-depth examination of the current knowledge base of the field. By doing so, this dissertation strives to support the planning practitioners with a detailed summary of how different factors can occur in their processes with certain possible outcomes to expect. This way, it may be possible to design the planning processes to alleviate potential challenges proactively.

Finally, this doctoral research contributes to the development of Finnish integrated land use and transport planning processes, by documenting the process of the first ever strategic land use, housing and transport plan in the Helsinki Metropolitan Region, specifically designed to integrate land use planning and transport planning processes. This also means that there has not been a large amount of previous research studying metropolitan-level, integrated land use and transport integration processes in Finland from which this study could have taken the learnings further, which led to the study having to start from the

\[27\] Previous research on MAL Agreements and planning, and metropolitan / city-regional land use and transport planning have focussed mainly on issues relating to the non-statutory nature of the procedure and the soft spaces literature (see, e.g., Bäcklund et al., 2018; Mattila & Heinilä, 2022) or issues of lack of transparency and citizen engagement possibilities (see, e.g., Häkli et al., 2020. The process of MAL 2019 plan was studied only from the perspective of the scenario planning exercise and the impact assessment procedure (Mäntysalo et al., 2023) and from the perspective of the role of visualisations in the process (Ryöti, 2021).
essentials of the MAL 2019 planning process, looking into its history as well as its current state. Nevertheless, as the document analysis results clearly show, planning processes do not appear out of thin air. They are always based on previous processes, stakeholder constellations, ideas, priorities, methods, and challenges and successes. Therefore, regardless of whether the process will continue every four years as planned, or whether it will be replaced by a new planning process, the MAL 2019 planning process will be the legacy upon which upcoming integrated planning processes will be built. Therefore, trying to understand the process from at least one perspective and report the findings is an important contribution to the Finnish planning practice.

In conclusion, this research has hopefully contributed to the understanding of integrated land use and transport planning processes within their own contexts. It strived to provide theoretical insights, methodological frameworks, and practical recommendations that support the integrated land use and transport planning practice. By shedding light on the factors and their relationships that shape these processes, this research aimed to help enhance governance capacity, respond to the climate crisis, and allocate resources effectively. Through its contributions, this research aims to bridge the gap between research-based knowledge and planning practice, ultimately facilitating more informed and effective decision-making in integrated land use and transport planning.

7.4 Implications for Integrated Land Use and Transport Planning Practice in Finland

The implications of this doctoral research for the integrated land use and transport planning practice in the Helsinki Metropolitan Region are inspired by a remark made by one of the interviewed planning actors when they were asked how they would define integrated planning as a concept in general:

“Integrated planning? I think it sounds like the Finnish way of doing things. We want to cooperate, and we value that.” - (99) Municipal land use and housing expert

7.4.1 Significance of recognising the limits of integration within a land use and transport planning process

The significance of recognising the limits of integration within a land use and transport planning process is crucial for achieving effective outcomes through such integrated processes. As argued by Stead and de Jong (2006, p. 4), “perfect policy integration is not possible but it can nevertheless be improved”. Complexities involved in the planning process can enable or restrict improvements in integrated planning processes. These factors may have historical roots, such as long-standing planning traditions that influence the use of certain planning instruments. Therefore, changing these factors overnight is challenging, leading to limitations in the level of integration achievable, despite the intentions of planning actors. It is essential to acknowledge that the planning context plays a
significant role in determining the feasibility and extent of integration possible in a given context. While there have been calls for increased integration in research and practice, it is important to note that pushing for more integration does not guarantee better solutions for the policy domains involved. Previous studies have highlighted the limitations and complexities associated with policy integration. A democratic political system inherently carries a level of incoherence, as different actors receive their mandates from diverse sources and operate within distinct institutional capacities (Meijers & Stead, 2004). Instead of seeking complete integration, managing incoherence strategically and practically may be a more feasible option. This requires understanding the threshold level of integration beyond which further investments may not yield significant benefits (Holden, 2012).

7.4.2 Manageable and feasible integrated land use and transport planning processes

The practice of integrated land use and transport planning can be strengthened by focusing on setting up manageable and feasible processes that align with the realities of the planning context. It is essential to match what is realistically achievable with the desired goals of integration. In this dissertation, complexity maps and analysis of factors that create bottlenecks in the process provide insights into the limitations that need to be addressed.

Collaborative work, while valuable, introduces complexities and potential pitfalls in integrated land use and transport planning processes. The costs and challenges associated with resource allocation make it crucial to carefully consider the desirability and feasibility of policy integration within the specific legal-administrative, social, and professional contexts (Candel, 2019). Rather than viewing policy integration as a normative end state, planning organisations should aim for the degree of integration that they can manage effectively.

A hierarchical concept of policy integration, encompassing cooperation, coordination, and integration, provides a framework for understanding different degrees of integrative qualities. Planning authorities should explore whether they need cooperation, coordination, or integration based on their specific needs and contextual realities. Fischer et al. (2013, p. 22) argue that “less integration was sometimes ‘more’ in terms of the pursuit of policies, plans, programmes and projects that effectively supported one another”. Similarly, Candel (2019) indicates that, even though policy integration seems indisputably advantageous in tackling cross-cutting policy issues, the actual implementation of policy integration is strongly linked to the availability of resources that can be allocated to policy integration which challenges the notion of universal desirability of the concept. Therefore, the allocation of resources and the abilities of municipalities should be taken into account when understanding their process choices. It is important to recognise that the most effective planning processes are the ones that fit into the abilities and goals of the stakeholders of the planning process. While it may seem counterintuitive, a policy framework of contradictory and incoherent nature may yield the most favourable outcomes in terms of horizontal, vertical or inter-territorial integration, as van Geet (2021) suggests. This
recognition challenges the notion of integration as an ideal and normative end state, emphasising the importance of context-specific approaches that embrace the progressive and fluid nature of policy-making processes.

Maintaining a selective and strategic perspective in integrated land use and transport planning, where key aspects requiring intervention are prioritised, enables upholding the engagement and dedication of relevant planning actors. It is crucial to focus on selecting and prioritising issues that truly matter and can lead to acceptable results within the available means. This strategic approach ensures that the integrated land use and transport planning process remains focused, actionable, and aligned with the expectations and capacities of stakeholders.

As the case of MAL 2019 planning process shows, manageability and feasibility of an integrated land use and transport planning process is highly correlated to the presence of positive interpersonal relationships between planning actors. This shows that the benefits of investing in developing interpersonal relationships and collaborative working skills might outweigh investing in development of, for example, methods used within the planning process. Hrelja et al. (2017) simply explain that informal institutions help “oil the wheels” of policy-making and policy-implementation through formal structures which generated fragmented policy responses to begin with. Hrelja et al. (2020, p. 192) indicate that most of the informal working practices that produced some level of success had the common denominator of making “it possible for the actors to go beyond their familiar roles and positions, and allowed them to bypass the statutory planning process that cause problems, concerns and dissatisfactions that must be dealt with in some way”.

7.4.3 Need for a flexible interpretation of integration

The practice of integrated land use and transport planning would benefit from adopting a flexible interpretation of policy integration. Candel and Biesbroek (2016) argue for a processual shift from a “desired outcome approach” toward a “differentiated processual understanding of integration” that would raise questions such as “when integration is fully realised, what elements constitute integration processes and how these may develop over time” (Candel & Biesbroek, 2016, p.213). Complexity maps and empirical evidence in this doctoral research suggest that the success of planning processes is closely linked to trust-building and learning among planning actors, rather than the attainment of a fully integrated plan whose definition is essentially unclear. Instead of striving for an elusive state of "perfect integration," the focus should shift towards fostering organisational learning and building governance capacities over time. In this perspective, the success of integration should be correlated to the development of governance capacities to address complex societal issues over time.

Considering the substantial time lag between setting up an integrated land use and transport planning process and implementation of measures developed through the process, organisational learning becomes crucial. Planning organisations need to develop the mindset and skills that enable them to consistently
adapt policies to the evolving needs of their contexts. This iterative organisational learning process should serve as an explanation of what integration is in a land use and transport planning process. What characterises integrated land use and transport planning, as understood in this dissertation, is that such integration does not only look at the resulting, integrated whole, but acknowledges the interconnectedness and interdependence of different aspects of the policy problem to be solved as key components of the process (Stead & Meijers, 2009). Therefore, the understanding of what integration is should be based on the level of achieved acknowledgement of interconnectedness and interdependence of different aspects of the urban policy problem at hand.

By adopting a flexible interpretation of integration and embracing the principles of trust-building and organisational learning (Pettersson & Hrelja, 2018), the practice of integrated land use and transport planning can become more adaptive, responsive, and successful in addressing complex societal challenges. This approach encourages continuous improvement, innovation, and the development of tailored strategies that meet the specific needs of each planning context.

### 7.5 Future Research Directions

This doctoral research primarily recommends that future research on integrated land use and transport planning processes should focus on further developing new research methods that are able to recognise the contextual complexity of integrated planning processes (see, e.g., Eräranta & Mladenović, 2021), and are able to draw lessons from various cases to support integrated planning process development. This research exemplified only one way of doing so, and hopefully, showed that there is still so much to understand and learn. The findings of the research emphasise contextual uniqueness of each integrated land use and transport planning process, and research methods to understand and explore this uniqueness are needed to tailor integrated solutions into their operational environment.

In connection to the abovementioned point, another critical future research path can concentrate on finding ways to support planning actors in understanding what is needed, feasible and manageable for their own integrated planning context. Enabling the development of a strategic and selective approach towards integrated land use and transport planning across different governance contexts may mitigate many implementation challenges. Nevertheless, building such practice-research collaborations require further trust-building and openness from both sides, bringing the idea of alternative action-oriented, mixed research methods into the discussion (Mladenović & Eräranta, 2020).

Another recommendation of this doctoral research is that future research should be designed in a way that the procedural approach of this kind of research is evaluated together with the outcomes of the integrated planning processes. This doctoral research solely focussed on procedural aspects of MAL 2019 planning process. By doing so, the discussion on bottlenecks and success factors remains on a hypothetical level that might have overlooked bottlenecks.
and success factors which are not mainly procedural, but are related to the outcomes of plans themselves. Therefore, it is highly needed for the development of integrated planning processes to connect procedural research with the measures developed and implemented as a part of the planning process.

Future research can also focus on connecting organisational learning studies with fostering positive interpersonal relationships to achieve long term governance capacity. Since this research shows the criticality of the presence of positive relationships among planning actors, it is crucial to better understand how such relationships can be fostered and maintained in the long term.

Finally, land use and transport integration studies are mostly done in relatively dense cities or city-regions where there is a certain level of public transport patronage. Given that this doctoral research clearly explains the importance of physical context, more sparsely populated areas should also be studied, and measures suited to be implemented in the planning processes concerning those contexts should be developed.
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# Appendix 1: List of Documents Included in the Document Analysis

Table 10. List of documents included in the document analysis outlined in Section 3.2.2.

<table>
<thead>
<tr>
<th>Title of the document*</th>
<th>Author/Publisher of the Document</th>
<th>Publication Year</th>
<th>Document Type</th>
<th>Document Use</th>
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<td>2019</td>
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*These titles are translated from their original language, i.e., Finnish, to English by the author unless the document was published in English. Some of these translations are not verbatim translations of the original Finnish titles, in cases where titles do not refer to the content of the document in a clearly understandable manner. In such cases, titles are translated in a way that they are descriptive of the document’s content.
Appendix 2: Complexity Maps
Figure 16. Detailed complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process [Spread into four pages].

- Interpersonal communications
- Legislation
- Planning process organisation
- Organisational structures and identities
- Methods in use
- Availability of resources
- Physical and historical context
- Politics
- Educational backgrounds and professional identities

Key:
- HSL's legal responsibility to do environmental impact assessment of transport system plan
- Wide use of transport system planning tools for MAL pl. process
- HSL as coordinator for land use, housing and transport system planning work
- Positive environment to find win-win solutions
- Possibility to find common ground
- HSL actors' appreciation of involvement of municipal actors
- High satisfaction with MAL pl. process
- Increased number of materials & reports in MAL pl. process
- A good overview of MAL pl. process
- HSL actors' possibility to lead MAL pl. process
Figure 17. Detailed complexity map showing an overview of the interplay of factors affecting the MAL 2019 planning process, categorised according to the clusters of highly connected factors.
Inability to respond to the global crises due to hierarchical and sectoral fragmentation creates new demands for the practices of land use planning and transport planning. An integrated land use and transport planning approach bringing together diverse forms of sectoral expertise, different planning levels and separate administrative units has been proposed to address issues contributing to the global crises. However, regardless of how widely recognised the need for land use and transport planning integration is, effective processes of such integration have proven difficult.

In order to move beyond this implementation gap, this research provides insights into the convoluted nature of conditions influencing the integration of land use and transport planning processes, and elucidates the conditions for their effective implementation from a perspective acknowledging the multi-faceted and situated nature of integrated planning processes. This knowledge allows for targeted and context-specific recommendations to improve integrated planning processes, enabling planning organisations to enhance their governance capacity.