



# Integrative climate leadership in multi-level policy packages for urban mobility - A study of governance systems in two Nordic urban regions

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## ABSTRACT

This paper involves a comparative study of policymaking related to urban transport in the Gothenburg and Oslo regions. It sets out to show how strong climate leadership relates to the integration of policy measures and governance systems. Methodologically, we apply document analysis and qualitative interviews with key informants. Our clearest finding is the importance of the city's contextual governance framework for integrative climate leadership. The strong components of the leadership in Oslo—involving both horizontal and upward coordination—rely on a well-developed governance framework with operationalised goals, strategies and steering tools. This enables them to utilise multiple types of climate leadership. This contrasts with the lower degree of integration and defensiveness in Gothenburg, in terms of willingness to use effective but politically sensitive policy measures.

## 1. Introduction

Cities have long been identified as important arenas for greenhouse-gas reductions. While urban transport is among the highlighted policy fields, it has proven difficult to change. The challenge is evident in greenhouse-gas emissions from transport, which are expected to increase by 120% in 2000–2050 (ITDP, 2015). While a shift away from extensive car use is central to reducing emissions, providing inhabitants with non-car solutions across metropolitan areas is a complex issue. Part of the challenge relates to the numerous policy actors interested in and influencing how land use and transport systems are developed. The unruly and wicked character of climate-change policy calls for stronger urban leadership and governance. To address this, we empirically consider two Nordic policy packages, both relating to urban mobility, as the point of departure for this study. Here, policy packages are understood as ‘the combination of individual policies and measures to achieve a certain goal’ (Filipe and Macário, 2013: 150). The policy packages in this study involve multi-level governance and cooperation across municipal borders. We analyse these metropolitan structures, with a focus on Gothenburg and Oslo as the urban cores. The following question guides this research: *What are the important components of integrative*

### *climate leadership in multi-level policy packages for urban mobility?*

Given the complexity of transport and the difficulty of reducing emissions, an integrative-governance approach is relevant. We define this as ‘the theories and practices that focus on the relationships between governance instruments and/or governance systems’ (Visseren-Hamakers 2018a: 1391). This perspective does not address individual governance instruments but instead considers the interplay between instruments and systems. Accordingly, we understand leadership as ‘the attempt to achieve a particular set of goals by influencing the behavior of and interaction between different actors’ (Torfing et al., 2019: 22), an approach that also emphasises multiplicity and interaction. Consequently, we define *integrative climate leadership* as the act of integrating governance systems and instruments to conduct mitigation policy.

The leadership setting in the current paper is one of metropolitan governance involving the three levels of government. The cases provide variance in the impetus for collaboration, actor involvement, strategies and challenges. By analysing and comparing them, we aim to show the connections between strong climate leadership and the governance system framing policy action. Hence, we highlight the relevance of understanding the characteristics of governance measures and systems to comprehend policy action.

This paper contributes to the research literature in several ways.

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### Abbreviations

OP3	Oslo Package 3
WSA	West Swedish Agreement
UGA	Urban Growth Agreement

First, it responds to a call for research on how leadership is conditioned by the design of policymaking platforms and arenas (Sørensen and Torfing, 2019). Second, it responds to a knowledge gap concerning research on the *combined* use of multiple instruments and how integrative governance works at different governance levels (Visseren-Hamakers, 2018b). In this paper, the multi-level character of policy packages is a key feature. This includes attention to how integration at the local level influences multi-level cooperation. Third, with some exceptions (e.g. Vedeld et al., 2021), mitigation policy has not been central in the integrative governance approach, which has more dealt with issues like the management of water, food and nature. Hence, the current paper expands studies of integrative governance to climate policy. Last, a contribution of the paper is bridging the policy-package and integrative-governance research strands. Together, they provide a solid base for studying urban climate leadership.

## 2. Theoretical background

### 2.1. Integrative governance and leadership as an analytical framework

The complexity and fragmentation of urban climate governance are widely recognised (e.g. Jordan et al., 2018). This paper takes departure in Visseren-Hamakers' (2015, 2018a, 2018b) integrative-governance approach, highlighting the relationships between governance instruments and systems. Here, governance instruments include public, private and hybrid policies and rules, whereas governance systems comprise 'the total of instruments on a certain issue at a specific level of governance' (Visseren-Hamakers, 2018a: 1392).

Many scholars have described governance instruments, interlinkages and synergies. Schneider and Ingram's (1990) well-known scheme includes the following instrument types<sup>1</sup>: a) *authority tools*, through which government authorities grant permission, prohibit or require action under designed circumstances; b) *incentive tools*, which are market-related positive payoffs and charges; and c) *capacity tools*, which assume barriers stem from lack of information, skills and other resources.

Policy instruments can also be studied by highlighting the benefits of policy packages in public interventions (e.g. Givoni et al., 2013; Tønnesen, 2015; Tønnesen et al., 2019), increasing both the effectiveness and likelihood of implementation. Banister (2008) describes the necessary balance between the desired and publicly accepted schemes. In his view, policy packages can be changed and expanded because 'implementation of a scheme could be seen as the first step in a process where incremental changes are then added to the basic scheme' (77). This is in line with the concept of *chronological packaging*, in which the least coercive measures and most wanted projects are implemented first (Bemelmans-Vidéc, 1998).

Like integrative governance, the policy-package perspective emphasises the interlinkages and synergies between measures where synergistic relationships between policy measures may be strategically released in policy packages (Givoni et al., 2013). This perspective emphasises the need to identify and avoid contradicting measures. Here, the central building blocks are primary and ancillary measures (Givoni

et al., 2013): Primary measures are concerned with obtaining an overall goal and responding directly to a given policy objective. Ancillary measures are more supportive, intended to strengthen the effect/implementation of the primary measure or avoid collateral effects.

Climate leadership can be conducted at the local, regional and national levels via different governance instruments. To conceptualise such steering, we incorporate Gjaltema et al.'s (2019) understanding of meta-governance as a 'practice by (mainly) public authorities that entails the coordination of one or more governance modes by using different instruments, methods and strategies to overcome governance failures' (12).

Adapting Visseren-Hamakers' (2018a) model for analysing integrative governance to this paper, we apply the four following analytical categories:

- *Composition of the urban mobility packages* to respond to policy challenges. This involves detailing governance system components, including the goals, financing platforms and policy instruments applied (Visseren-Hamakers, 2018a).
- *Horizontal coordination* between neighbouring municipalities by establishing arenas, joint strategies and routines (Bulkeley, 2013; Vedeld et al., 2021).
- *Upward and downward coordination*, where the former aligns the measures controlled by regional authorities and state agencies with the municipal goals and the latter aligns local-level activity with national goals. Bulkeley (2013) describes upward coordination as 'governance through enabling', referring to urban leadership by stimulating collaboration to coordinate the measures of multiple actors.
- *The city's contextual governance framework*, in which the policy package is embedded. This ensures internal coordination of different measures in the city administration. An appropriate steering framework can strengthen the city's position in the cooperation arenas, for instance, when other partners' policies contradict local goals and strategies.

## 3. Methods and contextual descriptions

### 3.1. Approach and data selection

The paper is based on in-depth case studies conducted in Gothenburg and Oslo. The urban metropolitan regions constitute the cases, but the empirical points of departure are the two transport policy packages—Oslo Package 3 (OP3) in the Oslo region and the West Swedish Agreement (WSA) in the Gothenburg region. The two urban regions are similar in some dimensions and different in others. In line with the *relational approach* to case studies (Ward, 2010), the logic of comparison is based on interesting questions the cases pose to each other. The two urban regions are both part of a Nordic context, sharing features that include the following:

- Strong autonomy of the municipal level, with delegated power, for example, for parking management and land-use policy;
- A high degree of trust between the governed and the governors.

At the local level, both Gothenburg and Oslo have ambitious climate goals and large policy structures for transport-system development. In both urban regions, the urban transport packages involve multi-level cooperation and funding mainly based on a combination of toll-road payment and state grants. However, there are distinct differences in how this governance cooperation works. With policy processes studied comparatively, an improved understanding of public choices in the given settings can be obtained (Young, 2006). Moreover, while it is important to be aware of how the policy and governance practices described here are tied to specific contexts, the practices are still seen as describing more overall tendencies that are also relevant in other settings. Hence, the aim of the paper is to provide lessons for policymakers

<sup>1</sup> Schneider and Ingram (1990) apply three additional categories—symbolic and hortatory tools, learning tools, and policy process and policy tools.

and researchers engaged in multi-level policy packages for transport-system development in other settings.

The methods employed are based on a combination of document analysis and qualitative interviews. Documents analysed include policy documents at all three levels of government, cooperation agreements, municipal plans and public transport action plans. In the study of the contextual governance framework of the two cities (see 4.2 and 4.4), there was a need for demarcation in terms of what policy structures and documents to include in the analysis. Hence, while sector-specific strategies and regional plans are described, a choice was made to focus on more overall structures within the city governance of Gothenburg and Oslo, where some structures involve monitoring of goal achievement.

The interviews were semi-structured, following an interview guide. They were conducted between September 2018 and December 2019. Fifteen interviews related to the Gothenburg case were carried out, with one involving two informants. For the Oslo case, 16 interviews were conducted; one involved two informants. The setup for the interviews was 1 h with two researchers participating, although some had longer durations and more researchers joining as observers.

A purposive sampling strategy was applied, with an emphasis on covering similar types of informants in both regions. At the municipal level, the interviewees included local politicians and public officers. The latter group involved people working in environmental agencies or with city planning and mobility. They were either working directly with the governance structures focused on here or believed to have insight into climate-friendly transport more generally. The same selection criterion was applied for interviewees representing the regional and national levels. The interviews were recorded, transcribed and coded using the NVivo qualitative analysis software.

### 3.2. Gothenburg and Oslo

**Gothenburg** is located on the west coast of Sweden. With a population of 564 000, it is Sweden's second-largest city. There are 20 municipalities in the functional working and living regions. Politically, the Social Democratic Party) was in power for 24 years, governing in an alliance with the Environmental Party and the Left Party until 2018. Following the 2018 elections, a right-wing alliance with the Moderate, Liberal and Christian Democrat parties took over. This election was also characterised by good results for a new party called the Democrats: Launched in 2017, its political base is resistance to congestion charges and the West-Link project (see 4.1). Securing 17.5% of the votes, this new party made a strong entrance onto the political scene.

Gothenburg has a presidency model, involving a city council and 17 political committees (including the Environment and Climate, Transportation and Building committees). The City council sets the climate goals and approves the environmental programmes. On behalf of the Committee for Environment and Climate, the Environment Administration coordinates and follows up on the city's climate and environment work.

**Oslo**, the capital of Norway, is located in the south-eastern part of the country. With its 697 000 inhabitants, Oslo's size is similar to that of Gothenburg; its functional working and living region consists of 20 municipalities. However, the wider Oslo region is more populated. Politically, it has been led by a coalition consisting of the Norwegian Labour Party (social democrats), the Green Party and the Socialist Party since 2015. Oslo has a parliamentary system involving a city government with up to eight members. Each member heads a department, like in a national parliamentary model. In addition, there are eight political committees (including Finance, Urban development, and Environment and Transport). Administratively, the Climate Agency has a leadership role in the execution of climate policy.

## 4. Interactions between governance instruments and systems

### 4.1. The West Swedish Agreement

The WSA, involving a multi-level cooperation platform for transport-infrastructure development, was signed in 2009. The partners are the national roads authority (which leads the package), a regional public-transport company, Gothenburg Municipality and three regional organisations. Other than Gothenburg, regional municipalities are not formal members; rather, they are represented by regional organisations. The cooperation agreement outlines the following main goals for the WSA ([Cooperation Agreement Gothenburg, 2017](#)):

1. A larger working region
2. An attractive city core and development along the main arteries
3. Competitive public transport
4. Good living conditions
5. Improvements in conditions for freight transport to increase international competitiveness

The WSA has no overall goal of reducing transport volumes or greenhouse-gas emissions. However, it includes several initiatives that are considered integral parts of climate-friendly transport, such as developing the city core and along the main arteries and strengthening public transport. In particular, the railway project (see paragraph below) aims to increase train use for regional travel. However, the WSA agreement does not indicate how the numerous projects may serve the five wide and potentially conflicting goals. Mostly, it clarifies financing and partners' rights and requirements in realising transport infrastructure projects.

The WSA consists of three main projects, two related to roads and one to railway infrastructure. This last is the so-called West-Link project (Västlänken), which accounts for 60% of the WSA budget. It is a large-scale railway project that enables trains to pass through the city. The current central station is a dead-end bottleneck and Gothenburg's only station. The project includes the building of a 6-km tunnel, the reconstruction of the central station and the development of two underground stations in the city centre. When finished, the railway capacity will increase, facilitating regional commuting by train.

WSA has an overall budget of €3.15 billion. Toll-road payments in Gothenburg finance 50% of the project, state financing provides 41% and local and regional partners are responsible for the remaining 9%. Gothenburg's first toll-road scheme was introduced in 2013 as a congestion-charge scheme. In addition to being simple for motorists to use, the formal objectives of the toll were to improve air quality and reduce congestion ([Hysing and Isaksson, 2015](#)).

### 4.2. Other governance instruments and systems in the gothenburg region

**The climate programme** for Gothenburg Municipality was passed in 2014, providing an overarching framework for the city's climate-mitigation work and setting goals to reduce the city's climate footprint (Gothenburg [Municipality, 2014](#)). Its main goal is to reach a sustainable and just level of greenhouse-gas emissions by 2050. Four intermediate objectives and nine strategic objectives, with attached strategies, establish an ambitious frame for action. It has a strategic objective of cutting 80% of CO<sub>2</sub> emissions from road transport by 2030.<sup>2</sup> A 25% reduction in car traffic is set as a prerequisite for this, emphasising increasing regional public-transport travelling. However, the status of this goal in the goal hierarchy is unclear. Gothenburg's Environment Administration holds overall responsibility for the climate programme. However, the programme document clarifies that goal achievement depends on all municipal units implementing related

<sup>2</sup> Compared with 2010 levels.

measures and assigns responsible municipal boards and committees in charge of implementing the strategies. Transport-related strategies also include regional actors as collaborating partners.

The environmental programme was passed in 2013 and revised in 2018 (Gothenburg Municipality, 2018a). It is thematically wider than the climate programme, but the two are tightly interconnected. The environmental programme is structured around 12 goals with attached sub-goals. The main goal of reducing the city's climate footprint and its four sub-goals correspond to the climate programme's goal structure, indicating coherence. The 2018 action plan consists of 189 measures (Gothenburg Municipality, 2018b). As in the climate programme, the Environment Administration has the overall responsibility for following up on the environmental programme. A system has been established through which the programme's objectives are monitored as 'indicators' in annual reports.

#### 4.3. Oslo Package 3

For years, OP3 has been the main policy package for transport infrastructure development in the Oslo area. It is a multi-level governance cooperation involving the municipal, regional and state levels. Twenty-three municipalities are involved, but Oslo is the only participating partner; the others are represented by the county authorities. Two main goals frame OP3—the goal to 'develop an effective, environmental, secure and accessible transport system in [the Oslo region]' (Cooperation Agreement Oslo, 2018: 4) and the so-called national zero-growth goal stating that growth in passenger traffic in the larger urban areas shall be covered by public transport, walking and cycling (Ministry of Transport, 2017). Hence, the total person-car driving length in these urban regions cannot increase despite population growth. Importantly, the goal applies throughout the urban region; this poses a greater challenge to the more sprawling and car-based outskirts compared with the core city.

OP3 is in operation for 2008–2032. Measures involve all main modes of transport. A new metro line from the city centre to the neighbouring municipality of Bærum—Fornebu metro—is planned, followed by a new metro tunnel across the city centre. The overall budget for OP3 in 2021–2024 is €2.42 billion, with 49% financed by toll roads and the state serving as the other main contributor. Sixty per cent of the budget is to be used for projects in Oslo Municipality and the remaining 40% for the surrounding municipalities. Until recently, road-building projects had long been a small part of the OP3 portfolio, but this changed with the decision to rebuild a motorway section towards the west of the city (see 6.3).

#### 4.4. Other governance instruments and systems in the Oslo region

The Urban Growth Agreement (UGA) is a policy package for transport infrastructure launched by the national authorities in 2013. Formally, OP3 and the UGA are fully integrated, but in terms of steering, they are to be separated until otherwise agreed (Cooperation Agreement Oslo, 2018). They are both based on the same toll-road scheme and involved in the planning and realisation of the new metro tunnel and the Fornebu metro line. It could be claimed that the UGA represents a side agreement with OP3 to obtain state funding for the Fornebu metro. Using Banister's (2008), Oslo exemplifies *chronological policy packaging*, with the UGA building on the basis of OP3.

The UGA is open to nine larger urban regions in Norway, and currently, four have signed. In 2017, a forerunner of the current agreement was signed for the Oslo region. After renegotiations, the current version was signed in 2019 as a 10-year agreement by Oslo, three surrounding municipalities, county authorities and the state (Cooperation Agreement Oslo, 2019a).

Given that certain goal-achievement criteria are reached, the state may cover 66% of the Fornebu-metro cost with the remainder covered by local and regional authorities. As this is beyond their ordinary

budget, toll-road financing is required.

As for OP3, the overall goal of the UGA is zero growth regarding car travel. The UGA was launched as a main tool for the state to reach its zero-growth goal. To monitor goal achievement, an extensive indicator set has been established, including yearly travel-behaviour surveys. The UGA may be terminated and funding held back if one party fails to fulfil its commitment. The shared commitment of the municipal, regional and state levels to conduct policy in line with the zero-growth goal is a core component of the agreement.

A final characteristic is the UGA's integration of land use and transport. Each government level is to conduct land-use policy in line with the zero-growth goal, which covers the wider urban region. This is a demanding situation because both the prerequisites and enthusiasm for climate-friendly transport are typically lower in the urban outskirts compared with the core city (Tønnesen et al., 2019).

The climate budget is operated jointly by the Climate Agency and the Department of Finance. The former was established in 2016 as a unit of the Oslo municipal administration. Its goal is to ensure key competences and to be a driving force for Oslo to reach a 95% emission reduction by 2030. A climate and energy strategy was passed in 2016, highlighting 16 prioritised fields (Oslo Municipality, 2016). The promotion of walking, cycling and public transport and reducing the need for car use are highlighted to obtain a 33% car-traffic reduction by 2030. In 2019, a new climate strategy was passed (Oslo Municipality, 2019a). Like the 2016 strategy, this highlights 16 prioritised fields, but the revised scheme is structured differently.

The Climate Agency has a mandate to mobilise and coordinate wide-ranging actors and agencies, including municipal units, citizens and the business sector. The climate budget, a CO<sub>2</sub> budget integrated into the financial budget, represents an important governance instrument. Established in 2017, it involves a streamlining of climate efforts. It works to assemble and align internal departments and entities across sectors, ensuring that each entity adopts decentred CO<sub>2</sub>-reduction activities (Hofstad and Vedeld, 2020). A monitoring system has been established, with each entity reporting three times per year.

## 5. Performance and leadership strategies in Gothenburg

### 5.1. Composing the WSA as an urban mobility package

The WSA can be differentiated from previous Gothenburg transport policy packages in several ways. Most notably, it involves the building of a massive railway infrastructure, where former transport packages were mostly about road infrastructure. It is also the first structure in Gothenburg involving toll-road tax payments. Hysing and Isaksson (2015) relate the introduction of the tax in 2013 to a cross-party desire for infrastructure investments co-financed by the state. Political leaders saw infrastructure improvements as necessary for regional competitiveness.

The informants pointed to how the broad coalition was countenanced by the composition of projects in the policy package. With measures for both climate-friendly transport and road-structure improvements, many political actors felt that they 'received something'. As one of the informants involved in the WSA explained:

[I] think that with the compromise that even road infrastructure was to be included (...) broad political support for this [the WSA] as a priority was obtained. Then, parties on the right and left could accept it, given the investments for both cars and public transport.

While the various types of transport projects secured political support, this potentially weakened the WSA's role in Gothenburg's climate governance. As a representative of the regional authorities explained, 'That's the difficulty (...). If one has such large investments in roads, there will be difficulties relating to car-traffic volumes [increasing]'. This connects to the competitive relationship between the modes of transport (cf. Strand et al., 2009). Thus, an important question is what type of transport will benefit most from the WSA portfolio of projects in the longer term.

While a cross-party alliance was established in Gothenburg and the congestion charge was supported by two regional entities, the process seems to have been rather top-down. No formal public consultation was conducted (Hysing and Isaksson, 2015). Following a petition, local authorities arranged a referendum in 2014. Here, 57% of the citizens voted for termination of the scheme. However, local authorities dismissed the result, claiming that the referendum only had an advisory status. From this point, the WSA and particularly the West-Link railway project have been highly contested, as evident in the rising support for the Democrats as a political party (see 3.2).

A municipal officer pointed to Gothenburg citizens' dissatisfaction with having to pay tolls for a railway project that would mostly benefit outskirts dwellers: 'Far more trains will pass through and serve the city, but [the public] does not believe this. Hence, there is a failure in communication (...) [relating to] effect and utility'. In addition to the congestion charge, building additional stations in the city has sparked citizen resistance, particularly around the station in Haga, where there has been a concern that underground construction will lead to destabilisation of buildings.

The political sensitivity raised by the project seems to have led to avoidance and unclear communication regarding the congestion charge and the project's benefits. As a representative of regional authorities commented.

Politically, there was caution and some fear in discussing the congestion charge. And on the administrative side, we saw this as a political task. Hence, it somewhat became a walkover [i.e. protesters winning], and I was already discontent with that back then.

## 5.2. Horizontal coordination

The WSA is a regional arrangement, but Gothenburg's surrounding municipalities are represented only through regional organisations. Two of the five WSA goals—to create larger working regions and to develop an attractive core in Gothenburg and development along the main routes—have a clear regional character (Cooperation Agreement Gothenburg, 2017). The large West-Link project aims to facilitate regional train commuting. However, the WSA contract neglects to explicitly mention the regional transport plan (Regional Plan Gothenburg, 2008). It neither highlights the connections between land use and transport nor details what such synchronisation might entail. Still, the WSA has ignited a regional platform for cooperation and infrastructure development. As one informant stated, 'the geographical mandate is important—that measures are included that are not limited to the municipality (...). [The WSA] really contributes to obtaining a larger geographical area that one has a mandate to work with'.

## 5.3. Upward and downward coordination

The WSA is a product of local and regional authorities wanting to involve the state in infrastructure development. Before the agreement, local alarm bells had rung when the draft version of the national transport plan had few infrastructure projects in line with the Gothenburg region. However, state investments require some form of local and regional co-financing. This paved the way for a broad coalition voting for toll-road payments as part of the WSA. An informant involved in the WSA stated: 'One could say that the congestion charge in the [WSA] is a return [for receiving state funding]'. Hence, the introduced toll resulted from national authorities' meta-governance efforts using an incentive instrument.

Considering strategic goals and vision setting, the character of the WSA agreement document is interesting. More than being a strategic document describing policy pathways, it has a contractual character, clarifying the parties' responsibilities in relation to tasks, financing and time schedule. This rather *management-oriented approach* was confirmed in the interviews. One respondent emphasised how the WSA's steering could have taken a broader perspective: '[T]he steering group should

have been able to discuss important questions beyond only the West Swedish Agreement. They could have discussed the growth of Western Sweden and put it in a broader context'. This context is one of massive growth, with 5 000 000 m<sup>2</sup> being developed in central parts of the city, involving 25 000 dwellings and 45 000 workplaces.

## 5.4. Gothenburg's contextual climate governance framework

A striking feature of the Gothenburg case is the lack of connections between the WSA and the city's environmental and climate programmes. While the latter two are clearly interlinked, they make no mention of the WSA. The climate programme does acknowledge that the transport sector causes about one-third of Gothenburg's CO<sub>2</sub> emissions. The climate programme states that a reduction in road traffic of 25% is necessary to reach the climate target of 80% lower greenhouse-gas emissions from road traffic. To achieve this reduction, public transport is slated to take a greater role in regional travel (Gothenburg Municipality, 2014). The environmental programme's action plan describes the role of congestion charges in environmental action (Gothenburg Municipality, 2018b). Here, only two of the 189 measures presented involve congestion charges and there is no explicit mention of the WSA. Similarly, there is no mention of the climate and environmental programmes in the WSA document. Integration between governance systems could have emerged in these programmes by explicitly describing the pitfalls and opportunities for emission reductions created by the WSA.

The overall impression is that there is a lack of integration in Gothenburg's governance systems; this was emphasised by several informants, including a politician: '[C]hallenges relate to there being so many programmes, which at times counteract each other. I would prefer to have a clearer strategy, asking, "What are we, as a city, to focus on?" and then all actors aiming towards that goal'.

Both the WSA and Gothenburg's climate policy are characterised by compromises. The environmental and climate programmes state ambitious goals but are not accordingly backed by strong policy instruments. A municipal officer described the measures as follows: '[T]here were more carrots than sticks. That's how you get politics passed'. The exception is the congestion charge, a premise for the state to co-fund the WSA. Increased parking cost is also described as an important tool to regulate traffic volumes (Gothenburg Municipality, 2014). The municipality made clear that it would continue to develop parking regulations, including reducing parking spots inside the city; however, in the environmental programme's action plan, there is little mention of parking, indicating a lack of integration. While parking is being removed as part of the massive construction in the central city, this is not related to an explicit car-use reduction policy. The extent to which the removed parking lots will be replaced after the construction phase is unclear.

The lack of integration between programmes reflects the fragmentation of climate governance in Gothenburg and the environmental agency's limited power over the implementation of climate-related strategies, as highlighted by Hofstad and Vedeld (2020). Gothenburg's environmental agency has also concluded that the city is facing substantial challenges in implementing the climate-programme objectives and that it is unlikely it will reach its goals (Gothenburg Municipality, 2018c). The agency mostly seems to have informative capacity tools when seeking to steer other municipal agencies towards climate action.

Asked about the ambitious municipal goal of reducing 80% of emissions from road traffic, a municipal officer described how the main share of this cut would involve car-technical improvements. For the overall goal of reducing greenhouse-gas emissions from non-trading sectors by at least 40% by 2020 (Gothenburg Municipality, 2018c), a rather limited process was described by a municipal officer: '[W]hen Al Gore showed up everywhere, [cities] started to compete as if it were an auction: "We are going to have 30%". "Yes, but we will have 35%". "We will have 40%". One did not say, "And how will we manage to do that?"' When asked whether consequences were applied when the monitoring

system detected a lack of goal achievement, one municipal officer made clear that there were none.

## 6. Performance and leadership strategies in oslo

### 6.1. Composing OP3 and the UGA as urban-mobility packages

When the first version was signed in 2017, the UGA made a difference in climate governance, representing a new type of governance system. The UGA combined a major public-transport project, the Fornebu metro, with strong integration of the zero-growth goal. Compared with OP3, the UGA is more limited, dealing with fewer infrastructure projects and a smaller budget; however, it is also broader, integrating transport and land use. It could be argued that OP3 is wider in terms of projects being realised and less coherent. As stated by an informant connected to OP3.

[I]t is a question of which type of goal achievement is sought [when considering whether to prioritise a project within the OP3 structure]. Is it climate or urban environment? You can use a slightly different entrance on different projects.

Like in Gothenburg, state financing and toll-road income are the main financial sources for the agreements in Oslo. However, in contrast to Gothenburg, the ruling parties in Oslo have publicly embraced toll-road payments. When 52 new toll-road points were set to open in 2019, Oslo's minister of environment and transport declared, 'I love the toll road'.<sup>3</sup> Moreover, when a wave of toll-road discontent ran across Norway, Oslo's governing mayor declared, 'The toll-road income has been fantastic for Oslo. I'd rather lose the election [than reduce the tax]'.<sup>4</sup> This contradicts a statement given one year earlier by an informant involved in OP3: '[I]n terms of tolls, there are no politicians who want to [publicly] back them here'. Seemingly, with the rising attention to toll roads in 2019, the Oslo politicians decided to promote them as an instrument to reduce emissions and improve urban qualities. The integration between governance systems—through OP3, the UGA and the climate budget—facilitated promoting toll roads as a central component of strategic goals and vision setting.

### 6.2. Horizontal coordination

In terms of climate commitments, the UGA poses a challenge for municipalities surrounding Oslo, where the climate goals are less ambitious. Oslo informants found the UGA to be useful for pushing neighbouring municipalities to strengthen their climate policy. It is in Oslo's interest to curb traffic growth caused by commuters travelling from neighbouring municipalities, and Oslo has used the UGA for horizontal coordination. Further, several informants were frustrated that the national zero-growth goal was less ambitious than Oslo's goals (e.g. 33% car-traffic reduction by 2030). Hence, the city council has called for the zero-growth goal to be tightened (Oslo Municipality, 2019a), making it more effective in coordinating municipalities' car-reduction strategies throughout the metropolitan area.

To obtain strong densification policies in the whole region and not primarily in the core city, the clear UGA expectation of densification around public-transport hubs is important. A public officer from a municipality near Oslo emphasised how the UGA strengthened the densification policy at the new metro stops: 'The Urban Growth Agreement is the most important financing source for the Fornebu metro line (...). We have an obligation in terms of land use densification at Fornebu, and this is expressed through the [UGA]'.

<sup>3</sup> Web article in national newspaper *Dagsavisen* 30.12.2019: <https://www.dagsavisen.no/nyheter/innenriks/oslo-vil-ikke-ha-regjeringens-bompengevtale-den-henger-ikke-pa-greip-1.1639483>.

<sup>4</sup> Web article in *Motor* 13.08.2019: <https://www.motor.no/artikler/2019/08/ap-raymond-bompengene-er-fantastiske/>.

### 6.3. Upward and downward coordination

A strong motivating factor for local and regional authorities to join the UGA was clearly the opportunity for the state co-financing of the Fornebu metro. As a municipal officer in one of the municipalities near Oslo stated, 'We talked about many things besides the Fornebu metro [in the negotiation], but it was always clear that it was because of the Fornebu metro we were doing this'. The UGA attaches policy expectations to state investments more clearly than OP3 does, as evident in the state expectations of compact land use described above.

The Oslo case is also characterised by tensions over the planned restructuring and expansion of the motorway system (see 4.3). After the political shift in 2015, Oslo's leaders have tried to remove this project from the OP3 portfolio. Here, we see the multi-level tensions between the governmental layers, where the city has tried upward coordination to hinder road expansion. As stated in the political platform of the ruling coalition, 'The city government thinks that the Oslo Package 3 projects must contribute to reduce greenhouse-gas emissions and car traffic, and that large road projects not contributing to this (...) cannot be realised' (Cooperation Agreement Oslo, 2019b: 17). Without entering a complex discussion of the traffic effects of motorway projects, this exemplifies how Oslo's political leadership addresses what they see as a mismatch between two governance systems—the broad goals and project portfolio of OP3 and the narrower UGA. Eventually the Oslo leaders lost the motorway battle, with the project currently being realised.

There is also tension between Oslo and national authorities in relation to the level of toll-road tax. In 2019, a governmental agreement was passed just days before the municipal election, following massive attention and political tension over toll roads nationally. The agreement clarified that toll-road payment was to be reduced in Norway, resulting in an open discussion between the local (Oslo) and national levels. Oslo's mayor emphasised the role of toll roads in traffic management: 'We wonder what the government really means by the zero-growth goal if they think it is compatible with lower toll rates in Oslo. Furthermore, we are wondering what all this means for the [UGA]'.

Hence, compared to the rather *management oriented* WSA, the Oslo UGA is more *policy oriented*, with both the local and national levels of government actively referring to it when seeking to obtain own policy goals.

### 6.4. Oslo's contextual climate-governance framework

In contrast to Gothenburg, Oslo's ruling parties have publicly embraced the role of toll-road payment, as described above. During the toll-road discontent in 2019, political support was sought by Oslo leaders emphasising toll roads' role in improving urban qualities, as well as in the financing and governance of urban mobility. Thus, one of the city's main instruments was contextualised and linked to broader goal structures.

Oslo's policy measures for car-use reduction are explicit and restrictive. To reach the traffic-reduction goal, the city government emphasises the need for removing parking lots, increasing parking costs, implementing careful land-use policy, establishing car-free streets, using toll-road payment and strengthening public transport, walking and cycling (Oslo Municipality, 2016).

A relevant question relates to these measures' inclusion in the climate budget. An Oslo municipal officer described how the climate-budgeting process had been a game changer. The officer described the abandonment of previous discussions about reaching climate goals by buying quotas from other countries:

That's not how we talk about climate in Oslo now. We say, 'We are soon going to be a zero-emission city', and specifically, 'What are our emissions? How do we decrease them?' It is a huge mobilisation that [the employees at the climate agency] have helped to strengthen.

Among the 15 measures quantified in the climate budget, the toll road is considered the second most important. It is expected to

contribute to 16% of the total CO<sub>2</sub> reduction in the budget (Oslo Municipality, 2019b). As for integrated climate governance, this toll-road scheme has a binding function for the three systems highlighted for Oslo in this paper—OP3, the UGA and the climate budget. This consistency frames Oslo's climate governance, enabling integrative climate leadership.

## 7. Discussion: comparing urban climate leaderships

Starting with the **policy-package composition**, the processes of establishing both the WSA and OP3 have been rather top-down, with little public consultation. The packages have resulted from broad coalitions involving the top-level politicians and bureaucrats at the three levels of government. While this provides political anchorage, it has also resulted in many compromises in the packages' interventions. Hence, they contain a portfolio of measures, with some set to support urban car use and others seeking to reduce it, exemplifying conflicting measures within one policy package (Givoni et al., 2013). Such ambivalence concerning whether to facilitate or restrict car use is not unique to Gothenburg and Oslo; rather, it is common in transport policy packages (e.g. Richardson et al., 2010; Tønnesen, 2015).

Financially, both the WSA and OP3 mainly rely on state and toll-road income. However, a striking difference is that while toll-road payment has been in operation in Oslo for years, it was only implemented in Gothenburg in 2013. It was abruptly introduced in the shape of congestion charging, a type of toll scheme often considered radical and controversial (Vonk Noordegraaf et al., 2014). It is reasonable to conclude that the massive, top-down, rapid changes caused by the WSA are at the heart of the public discontent.

In terms of **vertical and horizontal coordination**, there are clear differences between Gothenburg and Oslo, especially in how they assume leadership in multi-level governance settings. Oslo has exhibited a clear shift towards more radical climate leadership since 2015, resting on the integration of strong climate goals and strategies and followed up by governance instruments and systems. For example, there is a striking difference in parking regulations and toll-road payments in Gothenburg and Oslo. Reduced parking access and increased costs for driving are clearer parts of the strategy for car-use reduction in Oslo. Hence, in line with our understanding of integrative governance, Oslo leadership expresses clear goals and vision setting, as well as a willingness to use authority measures. Across the levels of government, Oslo has used the UGA to confront national authorities with what they see as inconsistencies in state transport policy, undermining their shared goal of obtaining zero growth. Beyond their municipal border, Oslo has used the UGA as a horizontal tool to address the land-use policy of neighbouring municipalities. Similar horizontal or vertical tensions were not found in Gothenburg.

While the WSA and OP3 have many similarities, policy practices are dissimilar in the two cities. We relate these to **the cities' contextual governance framework** for integrative climate leadership. The strong components of leadership in Oslo rely on a well-developed governance framework with strong goals, strategies and steering tools. This enables the city administration to utilise the other components of climate leadership. Thus, supported by the established governance framework, Oslo's leaders can openly back effective measures, such as toll-road payment and strict parking regulations; this forms part of an overall integrative governance system where climate budgeting has an essential function. The UGA is a central part of Oslo's governance framework in several ways. It has a clear integration of land-use policy, a clear policy goal of curbing transport growth and instruments to monitor goal achievement. In contrast, both the WSA and Gothenburg's climate policy are more characterised by compromises and weaker policy instruments. The environmental and climate programmes here state ambitious goals, but they are not backed by strong policy instruments or governance systems to make their realisation feasible. And in contrast to Norway, where the zero-growth goal is operationalised on how to curb

car-traffic growth, Sweden does not have such a national goal to which the multiple actors could align their policy and measures.

## 8. Conclusion

This paper set out to identify the important components of integrative climate leadership in multi-level policy packages for urban mobility by analysing the policy packages of the Gothenburg and Oslo regions. We studied the role and importance of different governance instruments and systems in ensuring integrative climate leadership in such settings.

Empirically, the points of departure were two urban mobility policy packages—the WSA in the Gothenburg region and the OP3 in the Oslo region. For Oslo, much attention was also given to the UGA, which was a side agreement of the OP3. Based on the integrative governance approach (Visseren-Hamakers 2018a), we analysed the components of climate leadership along the following dimensions:

1. The composition of the urban-mobility packages
2. Horizontal coordination
3. Upward and downward coordination
4. The city's contextual governance framework

### 8.1. Understanding local policy through the lens of integrative governance

This paper responds to a call for research on how leadership is conditioned by the design of policymaking platforms and arenas (Sørensen and Torfing, 2019) and how the integration of policy measures and systems worked within and across levels of government (Visseren-Hamakers, 2018b). It is the detailed study of the linkages between governance structures and climate policy that is the main contribution of this paper. The analysis and comparison of the two urban regions illustrates how strong climate leadership relies on a comprehensive governance framework involving ambitious goals, strong strategies, cooperation platforms and operationalised steering tools. The four examples below delineate how strong climate leadership is related to integrated governance.

**Institutional mandate and steering tools:** Important aspects of urban governance involve the authority given to municipal climate agencies and the characteristics of monitoring systems. Clear differences were revealed between the two cases. A stronger mandate was exhibited for the Oslo Climate Agency compared with the Environmental Agency in Gothenburg. In addition, the structures being activated if goal achievement fails seem to be stronger in Oslo. Hence, it is important to highlight both the formal powers of municipal units and their equipment of steering tools.

**The integration of land use and transport:** Highlighted as central for urban-transport change in the research literature, there are numerous challenges hindering integration of land use and transport in practice. The comparison of governance systems in this study reveals a clearer connection between land-use and transport in the Oslo case. Particularly in relation to one of the multi-level structures here (the UGA), the three levels of government are mutually obliged to conduct land-use policy in line with car-use reduction principles. The combination of state funding for public-transport infrastructure (a new metro line) with requirements for compact land use around nodes is also interesting. It exemplifies the use of an ancillary measure (land use) to ensure the effect of a primary measure (the metro), a strength of policy packaging (Givoni et al., 2013).

**Handling of contested measures:** In Oslo, the basis in handling of contested measures helped political leaders in their backing of these issues, such as increased parking restrictions, increased toll-road payment and resistance to motorway expansion. The leaders have faced these issues on all levels, locally (towards own citizens), regionally (towards neighbouring municipalities) and nationally (towards the state). In contrast, the implementation of congestion charging in

Gothenburg was highly contested because of the measure's suddenness and low level of integration with the other governance measures and systems studied in this paper. In Gothenburg, local ownership of the toll-road scheme seems low, leaving the impression that it was mostly implemented in return for receiving state funding for transport-system development.

**Multi-level cooperation:** A striking difference between the two cases is how Oslo uses a national climate goal (the zero-growth goal) and a national governance structure for transport change (the UGA) to address perceived inconsistencies in state climate policy. The high degree of clarity and operationalisation in the national goal and the governance structure are what enable Oslo leaders to do this. This illustrates the relevance of studying not only the integration of measures and systems within each governance level but also across them. In the Oslo multi-level structures for cooperation, there is not only a mutual commitment relating to the realisation of transport projects but also very pronounced expectations of the parties to comply with the national zero-growth goal for transport. The governance-system integration and operationalisation of the national transport goal enable an *internal accountability of the governance network* (see Rhodes, 2006), meaning that the parties have leeway in terms of confronting each other's policy actions. While Sweden has an emission-reduction goal for transport, the country does not have an operationalised goal for car-use reduction. Integrative climate governance in Norway is facilitated by having such a national goal.

## 8.2. Implications for policy

Three main policy lessons were drawn from this study. **First**, the paper shows how city leaders seeking to implement politically difficult measures can be supported by an integrated governance system. Gothenburg illustrates toll-road payment as a political 'no-fly zone', seemingly only loosely related to climate- or urban-environment goals. In contrast, Oslo has lifted the tolls into the discussion of how to finance and manage the transport system to the benefit of citizens. As described above, this position is facilitated by the integration of governance systems. **Second**, and relating to the classic concept of *chronological packaging* (Bemelmans-Videc, 1998), the study shows the importance of careful implementation in the early stages and how policy schemes can be made more ambitious later on. In Gothenburg, the most unpopular measure—the congestion charge for cars—was implemented first, and it largely financed a rail project whose benefits the public did not fully comprehend. Public protests in Gothenburg must be understood in this light. Further, the addition of the UGA on top of the larger OP3 in the Oslo region is also an example of chronological packaging. The smaller and more climate-oriented UGA was actively used by ambitious Oslo leaders to address perceived climate inconsistencies in state policy. **Third**, policy lessons can be drawn from the paper's distinction between a *management-oriented* involvement of leaders in urban transport packages and the more *policy-oriented* approach. While the former is characterised by mainly targeting the realisation of projects within stipulated economic and temporal frames, the latter more explicitly addresses the realisation of policy goals. In this study, the Swedish WSA is considered the most management oriented and the Norwegian UGA the most policy oriented. City regions should avoid applying only management-oriented networks and cooperation agreements to address climate-gas reduction and transport change. Instead, these should be supplemented with more policy-oriented approaches.

## CRedit authorship contribution statement

**Anders Tønnesen:** Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Lead writer original draft and revised manuscript. **Gro Sandkjær Hanssen:** Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Co-writer original draft and revised manuscript. **Karsten Bruun Hansen:** Conceptualization,

Formal analysis, Input on original draft and revised manuscript. **Sandra C. Valencia:** Methodology, Investigation, Data curation, Formal analysis, Input on original draft and revised manuscript.

## Declaration of competing interest

None.

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