

Strategic Planning Capacities in a Time of Platformisation

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Abstract

The influx of digital platforms into the mobility sector has created a myriad of new forms of mobility services in urban transport. The proliferation of digital platforms raises questions regarding public actors' strategic planning capacities in times of platformisation. In this paper, focus is directed towards Mobility-as-a-Service (MaaS) as an example of platformisation taking place in a setting where public actors have (in theory) had an opportunity to influence platform developments in relation to urban and mobility planning. Based on qualitative research into a pilot project for MaaS in the Stockholm region, the aim of this paper is to provide insights into the relationship between platformisation and strategic planning. More specifically, we discuss how local and regional organisations with responsibilities for urban transport and land-use planning navigate and respond to the ongoing platformisation of urban mobility, from a strategic planning perspective. The analysis shows that local and regional planning actors generally frame the MaaS platform as beyond their sphere of responsibility. Consequently, there is a risk that public actors do not respond to the central governance and planning dilemmas that platformisation poses. Our findings also suggest that working with platforms through the lens of a pilot project forefronts practical questions of implementation over long-term strategic planning questions.

Keywords

strategic planning, mobility-as-a-service, platformisation, urban mobility

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Introduction

The influx of digital platforms in the mobility sector has created a myriad of new forms of mobility services in urban environments (van Dijck et al., 2018; van der Graaf & Ballon, 2019). On the one hand, this development has raised hopes that a wider use of platform technology and related concepts for so-called 'smart' mobility may create more efficient and sustainable transport systems (Sochor et al., 2016; Audouin & Finger, 2018). On the other hand, there are risks that this might also lead to growing mobility demand and governance challenges related to an increased fragmentation of services and actors with different roles, interests, and scopes of influence over future transport developments (Marsden & Reardon

(eds), 2018; Pangbourne et al., 2020). Contemporary research stresses the importance of “governing with intent”, i.e., with clear objectives and an understanding of the anticipated impacts of new (platform-based) mobility services (Moscholidou, 2022, p. 188), and to ensure public value in a time of transformation to an increased element of digital platforms in urban environments. The question is, however, what does this require of public actors?

On a technical level, a digital platform is a combination of code, a supporting infrastructure of ICT technologies, and a downloadable application accessed through mobile phones. However, platforms can also be understood as broader sociological phenomena. Scholarly research describes the proliferation of platforms in urban contexts as platform urbanism, which refers to “an emergent phenomenon where technological platforms are rapidly taking centre stage in shaping new visions, discourses, practices and materialities of the urban future” (Caprotti et al., 2022, p. 1). Within this literature, as well as adjacent strands of research from media studies and sociology, the spread of platforms has been discussed as a process of platformisation, which describes “the penetration of the infrastructures, economic processes and government frameworks of platforms in different economic sectors and spheres of life” (Poell et al., 2019, p. 5).

Urban mobility is one of many social domains affected by platformisation. Over the last 10–15 years, various platform-based services have emerged as significant features of the urban environment, changing the so-called ecosystems of actors and services shaping urban mobility, i.e., infrastructure owners and providers, vehicle and mobility service producers, platform developers, connectors, and users. Some of the most well-known examples from the transport sector are ride-hailing services like Uber and Lyft (van Dijck et al., 2018). More recently there has been a rapid proliferation of various forms of micro-mobility, such as e-scooters, in cities over the world (Fearnley, 2020). Platforms can also be used to connect a range of available mobility services, such as regular public transport and other forms of shared mobility. An example is the concept of Mobility-as-a-service (MaaS). Though definitions vary, MaaS represents an ambition to integrate various forms of mobility through one digital platform (Pangbourne et al., 2020; Smith, 2020). In this paper we will discuss MaaS as part of the broader ongoing discussion on platformisation.

Different platforms in the transport sector have been launched in ways that offer different opportunities to plan and govern the changes brought by platformisation. Platforms like Uber and e-scooter services like Lime, Bolt, Voi, Tier could be described as what Borghys et al. (2020, p. 1) call a “platform force majeure”, meaning the sudden and often disruptive launch of a new mobility service/business. The authors observe that this only offers “post factum” opportunities for public steering. As a contrast, MaaS is an example of a platform concept which has been thoroughly discussed and analysed, and various constellations of public and private actors have been invited to define the terms of what MaaS should or could be, or have been involved in public-private pilot projects to test the concept. In this paper, we are interested in MaaS as an example of platformisation taking place in a setting where public actors have (in theory) had an opportunity to influence the platform development in relation to urban and mobility planning.

The proliferation of digital platforms in the mobility sector raises questions regarding public actors’ strategic planning capacities in times of platformisation. The aim of this paper is therefore to provide insights into the relationship between platformisation and strategic planning. More specifically, we discuss how local and regional organisations with responsibilities for urban transport and land-use planning navigate and respond to the ongoing platformisation of urban mobility, from a strategic planning perspective. Empirically, we base our research on a single qualitative case-study of the introduction of MaaS by means of

a pilot project in Stockholm, Sweden. We specifically develop empirically grounded knowledge about:

- Which aspects of strategic planning capacities emerge in the implementation of digital platform technology in urban public transport? And with a specific focus on how different actors (public and private):
- Respond to change
- Imagine the entity in question
- Link digital platforms to existing roles and responsibilities

Analytical framework: platformisation and strategic planning

Platforms intersect with important aspects of planning, such as the use of public space, power relations between actors at various scales, and how the provision of public services are conceptualized (Hodson & McMeekin, 2021; Moscholidou, 2022). The proliferation of platforms in urban transport and mobility can be described as a new kind of infrastructure which changes and reconfigures urban services and in how they are planned (van der Graff & Ballon, 2019; Lee et al., 2020). Lee et al. (2020, p. 116) note that, to anticipate platform dynamics, urban planners need to “not only become familiar with urban platforms, but understand their underlying dynamics, imaginaries and practices”.

Responses to platformisation which take shape within public governance and planning are crucial aspects that, in turn, shape public actor capacities to further understand and plan for a society increasingly enmeshed with platforms. Caprotti et al.’s (2022) typology of platform urbanism is helpful for understanding different dimensions of the relationships between platformisation and public governance and planning. The framework outlines hybrid agency, the spatiality of platforms, and materiality and infrastructure as key aspects of platform urbanism, and thus key aspects to consider in the development of governance and planning approaches. Hybrid agency draws attention to the spectrum of agency and rationales that characterise platform urbanism. Caprotti et al. (2022) note that platforms are often characterised by heterogeneous networks of public, corporate, or public-corporate actors. The spectrum of agency emphasises that platforms are assembled in ways which foreground different actor interests, and highlights the often dynamic nature of platforms, “involving constellations of actors that change across space and time” (ibid., p. 11). The spatiality of platforms, as well as their materiality and infrastructural implications, underscores that while platforms may exist more ephemerally (or invisibly) as digital infrastructures which “exist across boundaries and in very different urban, national, political and economic-regulatory contexts” (ibid.), they are deployed on the ground in cities, neighbourhoods, and streets, and are thus “grounded in specific urban realities” (ibid.). Platforms are therefore co-constituted by the places they are deployed and the existing physical infrastructure networks of roads, pavements, and tele-communication systems (Stehlin et al., 2020).

Altogether, Caprotti et al.’s framework makes it clear that platforms greatly influence – but are also influenced by – public governance. In what ways, and to what extent, depends to some degree on the mix of corporate and/or public logics characterizing the platform(s) in question. When it comes to the spatial and material dimensions of platforms, these are issues that have traditionally been in the domain of the public to manage and plan. For this reason, it is reasonable to turn to the planning literature and previous insights on strategic planning capacity, as further theoretical inspiration for the study.

Strategic planning

The term strategic planning has been a central discussion in the planning literature for more than two decades. The discussion was initially motivated by the complex societal challenges related to the environment, social segregation, needs for investments and regeneration of housing, and other urban infrastructures that many cities and urban regions were facing in the 1990s, and which led to discussions regarding the need for planning institutions to work across sectors and coordinate long-term spatial logics, issues of resource protection and sustainability, while integrating multiple levels of governance (Healey, 2003; Albrechts, 2006). This, in turn, sparked theoretical discussions related to the meaning of strategic planning in increasingly complex and uncertain planning situations with changed governance conditions and new power relations at play (Healey, 2007).

In essence, the term *strategic* refers to the existence of a specific aim or direction, and the ability of planning organisations to be action oriented and able to respond to change (Healey, 2009; Trygg & Wenander, 2022). In a planning context, a strategic process is thus a process which has the potential to mould and transform existing roles, relations, and planning outcomes, and explore new possibilities for deliberatively shaping future development trajectories (Albrechts, 2006; c.f. Healey, 2009). As a contrast to more traditional views of planning characterised by rigid procedures and tools, strategic planning “is believed to be a more proactive response, which calls for a more transformative practice” (Trygg & Wenander, 2022, p. 1985).

The contemporary discussion about strategic planning thus clearly deviates from rationalistic understandings of planning and policy making, and acknowledges complexity, and the need to adapt to changing conditions (Albrechts, 2015). It reflects a politically aware understanding of planning, which includes “an emphasis on context, stakeholders, politics, alternative future scenarios, decision making, and implementation” (Bryson et al., 2018, p. 321).

Strategic planning is therefore not an absolute property or entity, but something which is negotiated in relation to existing roles and responsibilities, and represents the capacity of individuals, communities, organisations, and governments to effectively pursue longer term goals and agendas (Ivey et al., 2006). It has been stated that it requires a selective approach and a focus on “issues that really matter” (Healey, 2009, p. 440), as well as the capability to envision possible and desirable future developments of places (Tewdwr-Jones et al., 2010). A key intellectual challenge is therefore to “imagine the ‘entity’ in question /.../ its connectivities and the relation between its parts (people and groups, places and neighbourhoods) and the ‘whole’ [...] and the relations with wider systems” (Healey, 2009, p. 440). While Healey is referring to cities or an urban region as the entity in question, we will instead relate to digital platforms as the entity under consideration.

Based upon previous theoretical framings of strategic capacity, we focus our analysis around three main aspects of strategic capacity: 1) how the actors involved have *responded to changes* related to the entry of digital platforms in the public transport sector, 2) how they have *imagined the ‘entity in question’* (e.g., what platforms and MaaS might mean and may lead to for public transport), and 3) the ways in which they have *related a MaaS platform to their existing roles and responsibilities*.

Methods and material

We have carried out the research project by means of an in-depth, qualitative analysis of a pilot project for MaaS in the Swedish context. This pilot project was carried out in the area Barkarby, in Järfälla municipality in north-western Stockholm, between September

2018–spring 2021 as part of a larger project which also involved the launch of small, automated buses and the development of a bus rapid transit (BRT) line in the same area (Oldbury & Isaksson, 2021).

The data collection was carried out with an emphasis on qualitative interviews and participant observation, supplemented by content analysis of strategic documents from Stockholm's regional public transport authority (RPTA) and the municipality. Altogether, we carried out 15 semi-structured interviews with 12 representatives from the five main organisations involved in the pilot: the RPTA, the municipality, the municipality's innovation company, the public transport operator, and the operators' innovation company (also the MaaS platform provider) (see Table 1). Each interview lasted for around 60–90 minutes and was documented by means of a sound recording and full or partial transcription (main parts) after each interview. The interviews were carried out in the very beginning of the preparations for the pilot project in September 2018, around 12 months into the process around launch of the platform, and in spring 2021, to capture developments over time.

Table 1. List of interviewees

Interviewee	Organisation	Date
R1	RPTA	Oct 2018, Sept 2019
R2	RPTA	Aug 2018
R3	RPTA	June 2021
R4	Bus operator	Oct 2018
R5	Bus Innovation company	Dec 2018
R6	Bus Innovation company	Sept 2018, Nov 2019
R7	Bus operator	June 2021
R8	Municipal innovation company	Oct 2018, Sept 2019
R9	Municipal civil servant	Dec 2018
R10	Municipal civil servant	Dec 2018
R11	Municipal civil servant	Sept 2019
R12	Municipal civil servant	May 2021

Participant observation was carried during the process of preparing the pilot project, a period of 12 months altogether. The main author of the paper was invited to take part in a specific working group for MaaS, and in the project management group meetings where updates on MaaS were one point on the standing agenda. In total this came to 35 (30-minute) meetings for the project group between October 2018–December 2019, and 5 (1-hour) monthly meetings for the MaaS group between January–June 2019. After participating in two longer initial in-person meetings, the main author continued to participate in weekly digital meetings, taking notes as a 'participant listener'. Meetings were used as a methodological point of departure, tool (Sandler & Thedvall, 2017), and vantage point (Brown et al., 2017). Other kinds of field notes were also collected on numerous visits to Barkarby for events organised by the municipality concerning the urban development taking place in the neighbourhood, as well as to document the launch of MaaS pilot in Barkarby. Additionally, both authors participated in larger project events in November 2019 and 2020 to present insights from ongoing research and listen to updates from others and participate in discussions.

Altogether, the triangulation of different types of empirical material has given us a rich and robust empirical set of data for the purpose of the study. The material was drafted into a narrative, where interviews and field note material from meetings and other events were combined to create a detailed account of the process, paying attention to overlaps and differences in how different actors told this story (Kvale, 2011; Brorström, 2017). This material was then analysed and re-structured based around the key dimensions of strategic planning as outlined in Section 2.

We are aware of limitations to the empirical work; for example, our study is based on one pilot project, which can be seen as a shortcoming. On the other hand, we have been able to make a full empirical collection about this particular case, and have been able to follow the process closely to see how the MaaS pilot developed over time.

Background to the study

Smart mobility and platformisation in the wider Swedish policy context

During the 2010s, transport policy in Sweden was characterised by a growing awareness for changes needed to increase the share of sustainable travel, specifically public transport and other forms of shared and active mobility. The decade was also characterised by an increased focus on so-called ‘smart’ mobility¹ and, as part of this, the role of digital platforms (Marsden & Reardon (eds), 2018; Audouin & Finger, 2018; Pangbourne et al., 2020).

Public policy during these years was marked by a pronounced optimism that digital platforms and automation would contribute to more sustainable and accessible transport systems (Henriksson et al., 2019). Efforts to test and implement new concepts were also rolled out at local levels, often in major cities (Sochor et al., 2016; Smith et al., 2018). How to approach a future with new technology was also explored at a national level; for example, a development project (White Paper) took place in 2016 and was run by the public transport branch organisation Samtrafiken AB². The project aimed to explore new possibilities for combined travel and to “bring the industry and Samtrafiken into the travel of the future” (Samtrafiken 2017, p. 4). The project painted a bright picture of the combined travel of the future, something it assumed would increasingly be offered via digital platforms, and anticipated changed roles and new approaches to the provision of public transport (Samtrafiken, 2017). Similar networks in Sweden include the publicly funded KOMPIS network, founded 2017, which aimed to support the development of MaaS in Sweden. For several RPTAs, including Stockholm, these activities sparked an interest in learning more about MaaS, for instance by initiating and participating in pilot projects, i.e., “relatively small projects, as well as larger, targeted sets of projects and policies that set out to explicitly create new socio-technical realities within a demarcated site” (Ryghaug & Skjølsvold, 2020, p. 4; cf. Berglund-Snodgrass & Mukhtar-Landgren, 2020), such as the example explored in this paper.

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1. ‘Smart’ mobility is a label for changes related to intelligent transportation networks, electrification, shifts from ownership to usership, the growth of ride-hailing services, automated vehicles, and the proliferation of platform applications (see Marsden & Reardon (eds.), 2018)
 2. A national development company consisting of 50 public and private public transport organisations, and described as “hybrid forum for transportation stakeholders including rail and bus operators, car sharing platforms and local transport authorities” (Smith et al., 2020, in Fenton et al., 2020, p. 2561)

Urban developments in region Stockholm

Regarding planning responsibilities in Sweden, the municipal government level is legally responsible for local land-use planning and has a task to control and govern urban and transport planning within their territory. Public transport is planned on a regional level, and in Stockholm the RPTA is responsible for services across the region's 26 municipalities. The RPTA has the executive responsibility for carrying out strategic transport planning and managing public transport service provision. This takes place predominantly through procurement processes where various public transport services (bus, metro, commuter train and tram networks) are contracted out to operators. Services are planned in dialogue with municipalities, and municipalities are responsible for planning urban developments in relation to public transport (Hrelja, 2015).

In the case explored in this article, the overlap between regional responsibilities for public transport planning and municipal responsibilities for urban developments is illustrated by the ongoing work to create new urban cores across the region (Stockholm County Council, 2018a). One site which is both a regional urban core, and the location for housing and public transport development, is the Barkarby district in north-west Stockholm, 16 km from central Stockholm (see Figure 1). This large development initiative is a result from the Stockholm negotiation, which included an agreement between state, the region, and the municipality of Järfälla (where Barkarby is located) to extend the Stockholm metro's blue line from Akalla to Barkarby. As part of the deal, the municipality undertook the construction of 18,000 new homes for up to 30,000 new inhabitants. Parallel to the national-level discussions on new mobility services, these factors made Barkarby an interesting context to pilot new mobility services in relation to public transport at a regional-municipal level.

Plans for Barkarby show clear ambitions for a new district characterized by sustainable travel. This was, however, a challenge as it would take around a decade before the subway was in place, and the area was initially characterized by high car use. Therefore, a need was identified to quickly introduce other measures for sustainable travel. The bus operator Nobina, which already had a contract for providing the procured bus transport in the area, had ideas about new concepts for public transport and combined mobility. Nobina's contract also specified that the bus operator would need to take the large-scale infrastructural and urban development changes into account during the contract period. These various factors, together with the developments described in Section 4.1, led to the formation of a large collaborative project in summer 2018, which included a sub-pilot project on MaaS. The project went under the name Modern Mobility in Barkarby (MMiB) and included also trials with driverless shuttles (Oldbury & Isaksson, 2021) as well as the development of an electrified BRT line. The project was implemented in collaboration between Järfälla municipality, Stockholm's RPTA, and the bus operator Nobina (*ibid*). Additional organisations involved included the municipal innovation company and Nobina's innovation company.

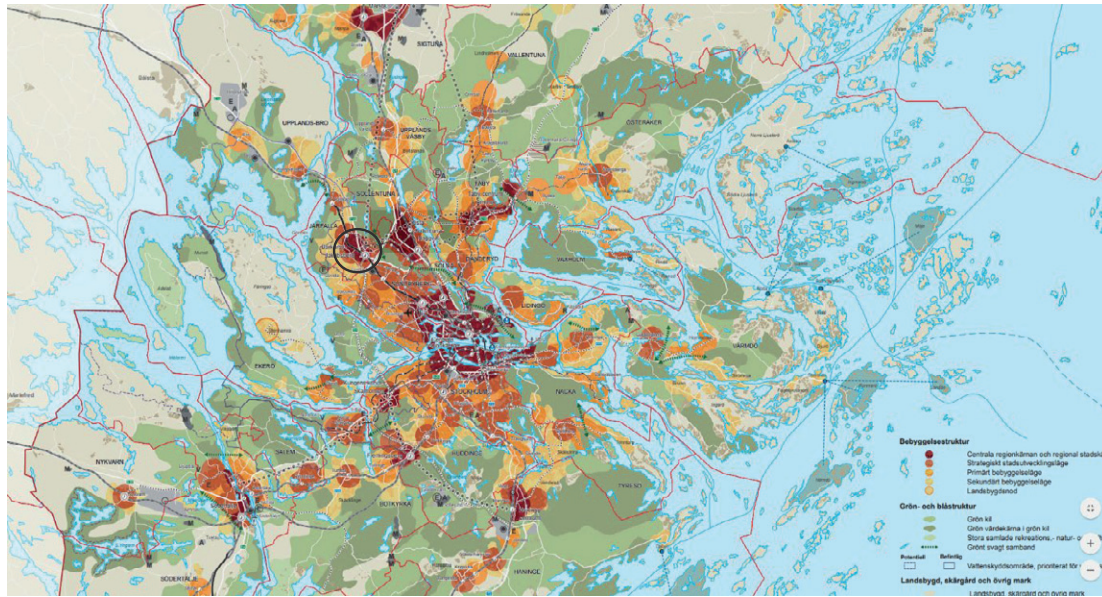


Figure 1

Map from the regional development plan for the Stockholm Region. The dark red areas show the central regional core (central Stockholm) as well as eight planned regional cores, with Barkarby-Jakobsberg circled to the upper left of central Stockholm (Stockholm County Council, 2018b).

The MaaS pilot in Barkarby

The MaaS pilot in Barkarby was publicly launched in October 2019. In this case the platform, named 'Travis', was owned and developed by the bus operator Nobina. The services included in the platform consisted of public transport provided by Stockholm's RPTA, a car-pool and bicycles from OurGreenCar, electric scooters from Voi, and a number of taxi companies via the taxi network Cabonline. As part of the efforts to realise the pilot project, the RPTA worked with Nobina to integrate the sale of single public transport tickets within the Travis platform. Users were required to book and purchase other services by downloading the applications for these separately. A month after the launch, an additional carpool was also accessible via Travis for both Barkarby and in the Stockholm region.

Five months after the MaaS pilot started, the Covid-19 pandemic led to a drastic reduction in public transport use, and the e-scooter company withdrew from the area. Prior to the pandemic however, the usage of e-scooters in Barkarby had been almost as high as in central Stockholm (Sjöström et al., 2020). As of May 2021, only the shared carpool remained in Barkarby as a service which would maintain itself economically. In the Swedish context, the MaaS pilot in Barkarby is a significant case of platformisation in the transport sector. For instance, it was the first pilot project that enabled a commercial company (Nobina) to resell the RPTA's tickets.

Searching for the strategic in platformisation

Responding to change

One of the questions we set out to explore to get a clearer idea of strategic planning capacity, was how different actors have responded to changes related to the introduction of digital platforms in urban transport. In relation to this, we note that the creation of the pilot project was in itself a response to changes notable for Swedish public transport operators in the

years 2015–2016, referred to in Section 4.1. Interviewees from Stockholm’s RPTA described the recurring discussions about new mobility concepts and business models in the wider policy landscape, together with their engagement in the White Paper process, as influential in prompting the initiation of an internal development work in 2016 regarding public transport’s role in a future with an increased element of digital platforms and MaaS (R1, 2018; R2). Overall, the RPTA’s work was guided by the assumed potential of MaaS to attract new customers to public transport, and thereby contribute to reduced car dependency while expanding the market share for public transport, cycling and walking (R1, 2018, R2).

In early 2017, the Stockholm region’s transport committee outlined its position to MaaS, based upon the internal development process that had been carried out in 2016. The committee declared that the RPTA should enable the development of MaaS by taking a role as a ‘producer’ of public transport and providing tickets to be sold by third parties in pilot projects. The decision also clarified an ambition to initiate pilot projects together with selected partners as a way to gain “knowledge about customer needs/benefits, target groups, packaging, [and] business models” (Stockholm County Council, 2016, p. 2). At this stage the region did not plan any extensive idea generation work themselves; instead, they invited external partners to come up with suggestions for pilot projects.

Nobina was also involved in the White Paper process, and during the same year (2016) it created its own innovation company, Nobina Technology, which allowed them to work dedicatedly with questions connected to the future of public transport. A representative from Nobina explained that it put considerable energy into analysing the changing public transport landscape and (re)considering its own position (R5). As a result, Nobina decided on a ‘mobility broker’ role in a MaaS system. The broker role has been defined as a “conduit for connecting” potential users of a transport service and suppliers of various transport services by facilitating the delivery of physical transportation (Hensher et al., 2020, p. 3). Nobina saw this as an interesting business case and potentially a way to attract more travellers (R5). Nobina also decided to provide a platform-based multimodal journey planner, where public transport would be presented alongside an integrated range of other mobility services in the Travis application. It was this suggestion that they submitted (via their innovation company) to the RPTA’s call for pilots in 2017.

For the municipality, MaaS had not been an issue in focus before the MMiB project started in 2018. However, on an overarching level their approach to transport and mobility questions was guided by the municipal comprehensive plan, which prioritises walking, cycling and public transport (Järfälla municipality, 2014a). Other key municipal planning documents include policies for cycling, walking, and parking (Järfälla municipality, 2014b; 2017; 2018a). In plans for the new urban area of Barkarby, mobility measures were often included in plans for housing development, as well as in early stages of land allocation and land development agreements with developers.

Overall, both the region and the operator were actively involved in responding to the changes that digital platform technology and concepts like MaaS were anticipated to bring. Nobina had developed the most far-reaching approach by defining their role as a mobility broker. The RPTA chose to maintain their existing role as a producer of public transport, at least as a first step, and they aimed to build knowledge through pilots before adjusting this position. The municipality’s approach was less clearly stated. It had a pronounced desire to foster sustainable mobility in a general sense, but had not outlined any specific approach to MaaS or digital platforms. Therefore, the creation of the pilot project can itself be understood as a response to changes and part of an attempt to adapt to changing conditions increasingly shaped by platformisation.

Imagining the platform as the entity in question

How the actors imagined the entity in question relates to Caprotti et al.'s (2022) reasoning that platforms are framed differently according to the varying scales of public transport and urban planning systems. From interviews and document analyses we note that the RPTA's stance would not imply anything radically different from existing public transport planning, other than that digital platforms were assumed to make public transport more modern, attractive, and more seamlessly integrated with other modes. Part of imagining the entity in question was done by defining their role in relation to it, namely by specifying that they would act as a 'producer' of public transport in a MaaS service, as mentioned above. This role was thus delimited to operational issues. This contrasts with the RPTA's overall task in public transport planning, which includes long-term strategic work to plan the provision of public transport at the regional level (Swedish Government, 2010).

By choosing to act as a producer, the RPTA made it clear it had no intention to lead the development of a MaaS service. Interviews with representatives from the RPTA give a clear picture that MaaS was imagined as a market service, not suited for public responsibility:

We could have procured the services ... But it is quite likely that we would have marketed ourselves and developed the service the same way we have always done. [...] So based on that I think it is a good decision to give others ... the responsibility for recruiting and attracting customers, marketing themselves, and building these apps, to see if it can be different and they can attract customer groups that we haven't managed to attract (R1, 2018).

Another aspect of imagining the entity was related to formal rules and legislative matters. In interviews, representatives from the RPTA recalled that there were many internal discussions about the risk of making formal regulatory mistakes. For instance, questions regarding price at which third-party actors would have the opportunity to buy and sell public transport tickets, which was complicated both fiscally and in relation to the current definition of public transport as well as public transports funding base of tax subsidies. Testing and learning in pilot projects became a solution to difficult legal and fundamental questions, or as one interviewee put it: "During a pilot, you are allowed" (R2).

The bus operator had a different way of imagining and approaching the entity in question. Representatives from Nobina generally framed MaaS as a step towards an almost completely new mobility landscape consisting of a mixture of private services (carpools, e-scooters, etc.) in combination with public transport. Public transport was however described a key foundation of a MaaS service and, as one representative from the bus operator's innovation company explained, without public transport the idea of a MaaS platform such as Travis would be redundant (R6). As noted in platform urbanism literature (Stehlin et al., 2020; Caprotti et al.; 2022) the existing large-scale infrastructure network of public transport in this case was key in co-constituting the digital platform in question. By taking the role as a 'mobility broker', Nobina was the actor responsible for creating and launching the platform. As platform owner, Nobina had the primary role in defining the business model, and how other actors connected to the platform, as well as access to user data and new opportunities to analyse this data (R6, 2019). Overall, the bus operator therefore had the clearest grasp of the contours of the platform as an entity.

In parallel, the municipality was heavily occupied with the intense urban development plans and could therefore not focus specifically on platforms and platformisation. However, in 2018, the municipality co-founded an innovation company, Barkarby Science, to facilitate the use of Barkarby as a testbed during urban development, and the MaaS project was one

of the first projects Barkarby Science engaged with. In conjunction with this, the municipality's position on the future of transport started to become more precise, and platforms are mentioned in the municipal program for sustainable travel from 2018. The pilot, and involvement in the MMiB project, was thus a vehicle for the municipality to start to understand platforms in a concrete pilot project context.

Altogether, the organisations had quite different ways to imagine digital platforms and MaaS. The public actors did not imagine anything radical, at least not for themselves. Their position was to stick to the safe side, using pilot projects to learn more, but without developing any visionary approach for their own part. In contrast, Nobina's decision to become a 'broker' was motivated by the vision of digital platforms as key components of a whole new mobility landscape, which they expected would open a whole range of new market opportunities. Drawing on Caprotti et al.'s concept of a spectrum of agency, this case suggests that the interests of the bus operator are foreground in this case due to its overall ownership of the platform, and as an actor unhindered by the jurisdictional boundaries of scale influencing the RPTA and municipality.

Linking to existing roles and responsibilities

Throughout the analysis of this case, we have seen that public actor engagement with issues related to platformisation has been limited to issues necessary for the pilot's immediate realization. For RPTA this concerned making public transport tickets available for sale digitally within a third-party app and to open APIs³. The development of the systems needed for the resale of digital tickets, which took place throughout the spring 2019, was described as the main thing they were directly involved in regarding the MaaS platform (R1, 2019). In other words, ticketing became the primary interface that linked the MaaS platform to existing RPTA responsibilities, and the RPTA did not link the pilot project to their long-term planning work and other strategic discussions about the development of public transport or regional developments. The work with the MMiB project was also kept within a relatively limited group at the RPTA, who otherwise worked with issues related to business development. Other parts of the organisation working with spatial planning, public transport planning, traffic supply programs, or infrastructure development, were not directly involved, partly for reasons related to budget and staffing. A representative working with spatial planning referred to this as a self-evident division of work, since their own role mainly concerns long-term planning, while the MaaS pilot was viewed as a short-term question to be dealt with elsewhere in the RPTA organisation (R3). In terms of connecting MaaS to a digital platform that the RPTA does own, the RPTA provides a digital platform for journey planning and ticket sales; however, there were no stated plans to use the RPTA's journey platform for the integration of multiple mobility services neither in the pilot project, nor later.

Like the RPTA, the municipality also primarily focused on solving practical issues required to realize the pilot. Unlike the RPTA, the municipality did not have a specific service to be integrated into the platform. Instead, its focus was how the private mobility services included in the platform were allowed access to public space, which reflects the spatiality-dimension of Caprotti et al.'s (2022) framework for platform urbanism. Another key aspect that shaped how the municipality approached the platform was related to agency and the assumed division of roles between commercial and public actors. The municipality clearly

3. API (Application Programming Interface) is a system that allows for communication between two programs regarding, in this case, the authorisation of the sale of single public transport tickets.

understood platforms as related to a commercial service that the bus operator would (in time) make a profit on. Altogether, we note that the municipality positioned itself in relation to its existing responsibilities as a land and infrastructure owner, while imagining that the commercial actors were the ones who should develop their roles and become platform owners and brokers. However, through the MMiB project, the municipality came to work with platform-based services that it would have been unlikely to encounter but for the pilot, something that also informed the development of a strategy for transport planning intended for the whole municipality (Järfälla municipality, 2019).

For the bus operator, the situation was quite different compared to the public actors. Since the MaaS pilot became a pure development project where they did not have to deal with any existing commitments, except to continue to deliver public transport according to the procurement contract, they could take a freer role. They used this opportunity to develop their approach to a MaaS platform as a potentially interesting business case that they could explore further in a pilot. This implied a new role for them, being more actively involved in broader attempts to shape and change how people chose to travel via digital platforms.

In line with this, the operator took the concept beyond the pilot and launched the Travis platform as a new commercial subsidiary; 'Nobina Travis AB'. A representative stated that this had always been the intention of the bus company as they had invested heavily in the development of the platform (R7). While the operator had negotiated the integration of other services as part of the pilot in Barkarby, after a year only the car-sharing services remained in the urban area (R12). However, the integration of e-scooter services continued on a broader spatial scale in April and October 2021 as Voi and Tier became bookable through 'Travis' in any Swedish city these services were operating in. The shifting spatiality of platforms (Caprotti et al., 2022) is therefore also illustrated in this case, as there was a clear change from the initial regional-local approach for the pilot, to national ambitions once the platform was launched.

To summarise, the connections made to existing roles and responsibilities illustrates two key aspects of strategic planning capacities to govern digital platforms in relation to the scale of local and regional governance responsibilities. Firstly, the RPTA's approach to the platform was largely influenced by existing responsibilities for ticket sales, and secondly, the municipality's role mainly concerned how to manage how private mobility services accessed public space. Despite the RPTA's initial ambition to learn from pilots more generally, the attention to ticket sales in this specific pilot suggests that a more abstract level of strategic learning receded from focus when the implementation of Nobina's platform concept became the dominant agenda. The role of public actors at the regional and local level in this case is thus similar to what Stehlin et al. (2020, p. 1258) describe as the deployment of public resources to foster the "take-off" conditions for private firms", where the bus operator has been supported in launching new part of their business in addition to their established operator role providing services procured by RPTAs.

Discussion

The aim of this paper was to provide insights into the relationship between platformisation and strategic planning, with a specific focus on how local and regional planning organisations navigate and respond to the ongoing platformisation of urban mobility. Overall, we have seen that strategic planning did not appear as a strong feature of how the public actors in this case approached and responded to platformisation. Instead, both the RPTA and the municipality stuck to quite limited ways of conceptualising and engaging in the ongoing

platform-based changes in the urban mobility landscape, focusing almost solely on practical and technical issues related to the pilot project, and most notably the issues that were easy to connect to their existing roles and mandates. The public organisations did not make any more extensive attempts – apart from the White Paper process and an internal investigation within RPTA in 2016 – to systematically oversee the ongoing developments in a more strategic sense, for example by reflecting on changes of actor and power relations, shifting roles and responsibilities, and the new spectrum of agency that followed in the wake of the introduction of digital platforms. Throughout the analysis, we have not seen any clear signs of proactive and critical reflections regarding how these ongoing changes might affect the public organisations' long-term capability to carry out their overall tasks related to sustainable land-use and transport planning and to safeguard public values. Neither the RPTA nor the municipality initiated any systematic work to identify and respond to the kind of risks or possible unanticipated consequences which have been discussed in the MaaS literature (Pangbourne et al., 2020). Altogether, we see a clear indication of the need to establish stronger links between platformisation and strategic planning, and more specifically to strengthen the strategic capacity of public actors in relation to the ongoing platformisation of urban transport. This would include a more comprehensive strategic analysis and orientation regarding ongoing changes in the landscape of actors and services that shape urban mobility, including reflections on interests and power dynamics at play.

Reconciling scales of governance with the scalar dimensions of platformisation?

In our work, we have identified one specific aspect that particularly challenges the strategic planning capabilities of existing planning actors, namely how digital platforms exceed the existing scales at which public actors at regional and local levels currently govern urban transport developments. Despite mobility platforms being co-constituted by existing infrastructures, and always partially spatial and material phenomenon due to their deployment on street at the local level (Caprotti et al., 2022; Stehlin et al., 2020), we have seen that local and regional planning actors frame the platform in question as beyond their mandate, competence and sphere of responsibility. Consequently, there is a risk that public actors do not respond to the central governance and planning dilemmas that platformisation poses, and developments are instead defined by market actor agendas. To include public actors more actively we conclude that, in times of platformisation, strategic planning needs to contain a clear attempt to recognise competing and contradictory dimensions of scale in these processes. This has already been reflected in previous studies on platform urbanism, where authors have discussed issues related to organisational scales and how different levels of government are equipped to address issues of platformisation (van Dijck et al., 2018), but also the scalar dimensions of platforms themselves as semi-invisible infrastructures which exist across different boundaries (Caprotti et al., 2022). The results from our study thus reflect what Barns (2019) has noted regarding the discord between the scales at which governance actors can influence platform technologies and the business strategies of the company owning said platform.

Overall, this case confirms that the spatial-governance scale at which public actors operate has informed how they frame platformisation and their role in these processes (Caprotti et al., 2022). Ultimately, we argue that public actor strategic planning capacity to navigate and steer developments of platform-based mobility services will be truncated if their involvement stops at their existing roles and responsibilities. Strategic planning requires proactive responses and a capability to keep a focus on issues that matter to ensure overall societal goals. This requires an ability to also reflect on necessary, or possible, changes of existing

assignments and mandates. If public actors are not able to adjust and relate to the new scales of mobility produced by platformisation, there is a limited space to steer over platformisation long-term (Stehlin et al., 2020; Moscholidou, 2022).

Pilot projects – a limited arena for strategic planning?

In our specific analysis of strategic planning capacities and platformisation in the case of Barkarby, actors working with MaaS turned to the pilot project as a temporary organisational tool to test and explore new socio-technical futures at an achievable scale in a real-life setting (Karvonen & van Heur, 2014). But this case has also highlighted that the local spatial scale is not necessarily in focus in the business interests of the operator of a digital platform. Based on these insights, we suggest that working with platforms through the lens of a pilot project forefronts practical questions of implementation over long-term strategic planning questions related to the role of platforms in public transport and urban planning. While pilot projects may provide a forum to develop concrete experiences with platformisation, they do not necessarily automatically contribute to strategic learning more generally (Fred et al., 2022). The ‘result’ of the launch of a platform within a pilot also has uneven implications for the actors involved, and risks foregrounding the interests of the private actor while public resources are deployed in facilitating the deployment of a corporate platform (Caprotti et al., 2022; Stehlin et al., 2020). A general conclusion of this is that if public actors apply pilot projects to learn about platformisation, it is important to also have an idea about what one wants to learn something about, how the learning should take place, and how the lessons can be used to strengthen strategic planning capacity (Fred et al., 2022).

To conclude, van Dijck et al. (2018) discuss the profound implications that platformisation will have for many sectors, such as education, healthcare, news, and urban transport. We have focused on one example of what is happening when platforms are introduced ‘on the ground’ in urban transport. If activities at local and regional scales are to lead the approaches to the governance of platforms, more attention needs to be paid to what has been described as the downscaling of responsibilities and its effects (Traill & Cumbers, 2023). If platforms are to be predominantly governed by regional and local actors (sometimes via pilot projects as a point of departure), there is potential for new collaborations or inter-organisational bodies which can guide and strengthen strategic sector-specific approaches to platformisation and which combine local and regional perspectives.

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