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VanHoose, K.; Bertolini, L.

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The role of municipalities and their impact on the transitional capacity of city street experiments: Lessons from Ghent

Katherine VanHoose^{*}, Luca Bertolini

Department of Geography, Planning and International Development Studies, University of Amsterdam, Netherlands

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ABSTRACT

City street experiments have proven to possess a transitional capacity to achieve system change in urban mobility. Because they challenge the status quo, such experiments often face institutional barriers that can limit their transitional capacity. This paper explores how the role adopted by municipalities—as the formal actor behind institutional arrangements and a key player in urban experimentation—can affect the transitional capacity of street experiments. Using a theoretical framework combining three ideal-typical roles (promoter, enabler and partner) and transitional capacity, we analyze the relationship between the municipality and the Living Streets program in Ghent, Belgium. Our findings reveal that the municipal leadership and subsequent legitimacy accompanied by the promoter and enabler roles can benefit the transitional capacity of experiments in nascent stages, especially when they are radical and potentially contentious. Additionally, the provision of financial, material and human resources, are necessary regardless of role. Lastly, we highlight two dilemmas related to city street experiments and urban mobility: First, should city street experiments be temporarily employed and disbanded once their transitional capacity decreases? And second, can the low-risk nature of experimenting with streets be reconciled with the commitments of long-term policy development required for urban mobility?

1. Introduction

Experimenting with city streets has become a popular tool used by planners, policymakers, and citizens exploring ways to reduce road space for cars and increase space for playing, socializing, and greenery. So-called ‘city street experiments’ are “intentional and temporary changes of the street use, regulation and or form, featuring a shift from motorized to non-motorized dominance and aimed at exploring systemic change in urban mobility, away from “streets for traffic” and towards “streets for people” (Bertolini, 2020, p. 735). Examples include the temporary closure of streets to motorized traffic for use as full-fledged public spaces (e.g. Ciclovías or Open Streets), the flexible closure during certain times of the day, for instance to allow children to play (e.g. School Streets or Play Streets), the repurposing of parking spaces as mini parks (e.g. Parklets) or the re-marking of streets to slow down traffic and create opportunities for social interaction (e.g. Intersection Repairs).

Street experiments have proven to possess a transitional capacity, or ‘ability to address fundamental social and environmental problems and achieve system change’ (VanHoose et al., 2022). Transitional capacity can be promoted or limited by the experiment itself (e.g. lack of

promotion, loss of ambition, experiment design) or by the institutional context (e.g. rules, regulations) (VanHoose et al., 2022). While many empirical and conceptual studies place the ‘blame’ of experiment failure on their own performance and choices (Markard & Truffer, 2008), this paper turns outward, focusing on the institutional context, and more specifically, on the role of municipalities. Through city-wide policies and the design, use and maintenance of roads, municipalities have the capacity to reproduce and influence the institutional context in which city street experiments take place. As the formal body that determines and reproduces institutional arrangements, municipalities are key actors in urban experiments (Kronsell & Mukhtar-Landgren, 2018). The potential impact of experimental projects is therefore strongly influenced by the support or opposition of policy officers throughout the municipality (Roorda et al., 2014).

Taking this into account, we pose the question: How does the role that municipalities adopt towards street experiments enable and/or hinder their transitional capacity? We draw upon literature from political science and transition studies to develop an analytical framework relating governance modes with street experimentation, focusing on the role of municipalities and how this affects the transitional capacity of

^{*} Corresponding author at: University of Amsterdam, Nieuwe Achtergracht 166, 1018 WV Amsterdam, Netherlands.
E-mail address: k.a.vanhoose@uva.nl (K. VanHoose).

experiments. We apply this framework to Ghent, Belgium—a medium-sized city with a progressive local government actively working to reduce car use for the past decades (Boussauw, 2014). Here, the Living Streets program, featuring the closure of roadways for several months, was first introduced by the municipality as an experimental way to explore solutions for urban mobility and livability. Our focus is therefore not on an isolated experiment or street, but rather a longitudinal study of this experiment program. As a well-known example of a city street experiment, replicated in cities across Europe (Van Wymeersch et al., 2019), the Living Streets program represents an invaluable case in which the relationship between the role of the municipality and the transitional capacity can be explored.

This paper is structured as follows. First, we give an overview of the transitional capacity of city street experiments, followed by an outline of three ideal-typical roles for experimental governance. Next, we explain our case study choice and research methods in the methodology section. We then reconstruct the role of the municipality throughout the ten-year existence of the Living Streets in Ghent. Next, we analyze the empirical findings, highlighting any relation between the roles and the transitional capacity of the experiment program. We then reflect on the specific implications of this study for experimental governance and pose two dilemmas related to experiments and urban mobility. Lastly, we offer more generalizable conclusions related to the enabling and hindering of street experiments in the context of the transition towards sustainability.

2. Theoretical considerations

2.1. Transitional capacity of city street experiments

In this paper, we consider street experiments as transition experiments, that is: “short-term actions through which alternative structures, cultures, and practices are explored” (Roorda et al., 2014, p. 32). As transition experiments, city street experiments can possess an ability to cause system change in urban mobility (VanHoose et al., 2022). This ‘transitional capacity’ (VanHoose et al., 2022) can be described using five characteristics: *radical*, *challenge-driven*, *feasible*, *strategic*, and *communicative* (Bertolini, 2020, following Roorda et al., 2014).

City street experiments are particularly *radical*, or “fundamentally different from dominant practices” (Bertolini, 2020, p. 746) because they aim to transform roads into places for people instead of vehicles. The degree to which an experiment is considered radical depends on the context, however generally speaking the removal of cars from streets continues to be understood as such (Mattioli et al., 2020). City street experiments can also be *challenge-driven* by “making a step toward a potentially long-term change pathway to address a societal challenge” (Bertolini, 2020, p. 747), combining multiple challenges (e.g. mobility, public space, social cohesion) and modeling themselves after other successful examples (VanHoose et al., 2022). For instance, the Pavement to Plaza program in New York City was embedded in a city-wide strategy to structurally transform streetways into other uses, while deploying new bike-sharing programs and improved public transportation services (Sadik-Khan & Solomonow, 2017). Because they are temporary, city street experiments are also highly *feasible*, or “easy to be realized in the short-term and with readily available resources” (Bertolini, 2020, p. 747). They can also be *strategic*, or “capable of generating lessons for reaching envisioned fundamental changes” (Bertolini, 2020). *Strategic* experiments employ monitoring to assess impacts during the process, after its completion and they reflect on the lessons learned. Lastly, city street experiments can be considered *communicative*, “reaching and possibly mobilizing the broader public” (Bertolini, 2020, p. 748) because they target a physical redesign of public space and are highly collaborative in nature. The *communicative* aspect works in two directions - experiments and their organizers can actively promote themselves and create awareness, or experiments can garner media attention from the outside-in (VanHoose et al., 2022).

Following these characteristics, street experiments can therefore be

designed in a way that maximizes their capacity to cause system change. However, because experiments do not occur in a vacuum, it is important to consider the fact that the transitional capacity of city street experiments may also be influenced by factors related to the context in which they exist. Urban experiments “occur in historically-configured places with... established institutional arrangements, incumbent actor networks, regional-specific resources, power relations, cultural preferences, urban discourses and material infrastructures (Raven et al., 2017, p. 260)”. These include both informal and formal obstacles. For example, a preference for private mobility from car owners may informally halt street experiments in the form of resistance (VanHoose et al., 2022). More formal barriers exist in the form of regulations, permit processes and legal frameworks that disfavor radical experiments which are “at odds” with the established transport planning context (Dijk et al., 2018, p. 4). Such institutional arrangements are maintained by a top-down, expert-led way of thinking which prohibits radical change in urban mobility (Banister et al., 2011).

To maximize the transitional capacity of experiments, it is therefore crucial to look beyond the design and organization of experiments and understand the influence of the institutional context in which they take place. As the formal body which determines and reproduces institutional arrangements, municipalities represent an important actor upon which to focus. Empirical studies reveal the involvement of municipalities as crucial, “making the difference between good performance and poor performance” (van der Heijden, 2015, p. 304). In one study, municipalities were “by far the most prominent actors in experiments and innovations across most sectors” (Bulkeley & Castán Broto, 2013, p. 372). Municipalities can intentionally choose not to experiment, or experiments can be indirectly inhibited by way of “administrative routines and other institutional obstacles” that “render processes ‘sticky’ and thus create obstacles to innovations” (Kronsell & Mukhtar-Landgren, 2018, p. 992).

It is important to note that urban experiments can take on many forms—some not initiated or even sanctioned by municipalities. While some critics argue that those initiated and/or sanctioned by municipalities are not those with the greatest transitional capacity (see Savini and Bertolini (2019) and Meyer (2023)), we believe an analysis of experiments in which the municipality plays a key role is a valuable exercise, as local governments increasingly employ experimentation as a policy tool for improving urban mobility and livability. In the next section, we outline three ideal-typical roles to describe municipal involvement in experiments.

2.2. Three ideal-typical roles for municipalities in governing experiments

Kronsell and Mukhtar-Landgren (2018) identify three ideal-typical roles that can be employed to conceptualize the role that municipalities can adopt towards experiments (see Table 1). While not exhaustive, these roles embody the multi-actor collaborations, informal elements,

Table 1
Ideal-typical roles for municipalities in governing experiments (adapted from Kronsell & Mukhtar-Landgren, 2018).

Promoter	Enabler	Partner
i. Initiation, calling upon other actors to participate	v. Opens up acting space for other actors	ix. Participating in partnership on fairly equal terms
ii. Allocation of economic resources/taking active participation in raising funding	vi. Opens up opportunities for collaboration	x. Shared leadership
iii. Municipal leadership	vii. Municipalities participate but do not have an explicit leading role	xi. The importance of collaboration is emphasized
iv. Relates efforts to perceived urban affairs or commitments (e.g. urban planning, education)	viii. Support via indirect provision of e.g. buildings	xii. Municipality has a specific and explicit function that is unique for municipalities
		xiii. One among different partners named

and public–private interactions that underlie experimental governance. Their framework is grounded in collaborative governance, which “brings multiple stakeholders together in common forums with public agencies to engage in consensus-oriented decision making” (Ansell & Gash, 2008, p. 543). The concept of collaboration is especially relevant in the context of sustainability transitions as it involves different actors contributing in “multiple ways to develop synergistic solutions that cannot be achieved by a single actor” (Eneqvist & Karvonen, 2021).

The first role is *promoter*. It is top-down, featuring municipal actors who initiate, finance, and implement experimentation on their own. The role of *promoter* resembles state-centered or meta-governance processes where policies are entirely or partially ‘initiated’ by the municipality, yet still encompass ‘governing mechanisms [that do] not rest solely on the authority and sanctions of government’ (Milward & Provan, 2000, p. 360; cf. Qvist, 2012, p. 30 in Kronsell & Mukhtar-Landgren, 2018). It therefore involves municipal (i) ‘initiation and calling upon other actors to participate’. Furthermore, in the role of *promoter*, the municipality (ii) ‘allocates economic resources’ and if necessary, actively participates in fundraising. The *promoter* role features a certain degree of (iii) ‘municipal leadership’ and in this role (iv) ‘the municipality relates its efforts to perceived urban affairs or commitments’. It is important to mention that because the role of *promoter* features the municipality in the lead, it could also directly inhibit innovation processes (e.g. as a result of political priorities) or indirectly impede them by way of “administrative routine” (Kronsell & Mukhtar-Landgren, 2018, p. 992). Interestingly, in their study of Urban Living Labs, the *promoter* role was rarely employed (Kronsell and Mukhtar-Landgren (2018).

The second role, *enabler*, features the local government in a facilitating and coordinating role, “encouraging action through partnership with private- and voluntary-sector agencies, and to various forms of community engagement” (Bulkeley & Kern, 2006, p. 2242). The *enabler* role entails a degree of municipal autonomy, however, is less active than the *promoter* role when it comes to leadership and implementation. Rather than choosing to implement strategies themselves (as *promoters* do), enablers (v) ‘open up space for other actors’. This may include measures such as providing arenas for voluntary organizations or providing financial incentives for private actors to provide services (cf. Bulkeley & Kern, 2006, p. 2242; Frantzeskaki et al., 2014, p. 414). Enabling also refers to (vi) ‘opening up opportunities for collaboration’ wherein collaboration is viewed as a strategy to attain “goals beyond the capabilities of organizations acting alone” (Vangen et al., 2015, p. 1240). Unlike the *promoter* role, the *enabler* features the municipality as (vii) ‘participating but does not have an explicit leading role’. This role may be “reduced to simply initiating the overall process, for example by formulating long-term visions” (cf. Sundström and Pierre (2009) in Kronsell & Mukhtar-Landgren, 2018, p. 993). As *enabler*, municipalities offer (viii) ‘support via indirect provision’. This characteristic is akin to the ‘organization of resources’, or how various resources are set in motion to manage, nurture or suppress an experiment (Savini & Bertolini, 2019) and can include provisions such as a meeting place, a digital platform, or a framework for implementation (Kronsell & Mukhtar-Landgren, 2018).

The third role, *partner*, is more removed, characterized by municipalities (ix) ‘participating in partnership on fairly equal terms’. This (x) ‘shared leadership’ recalls more network-centered definitions of governance in which actors are parallel to each other (Qvist (2012) in Kronsell & Mukhtar-Landgren, 2018). In the role of *partner*, (xi) ‘the importance of collaboration is emphasized’ and considered necessary for success. Under the flag of collaboration, the municipality has its own (xii) ‘specific and explicit function that is unique for municipalities’ as the democratically elected, responsible party for public services, facilities and space. Contrary to the role of *promoter* and *enabler*, the municipality as *partner* is just that, (xiii) ‘one named partner in a collaboration’. In terms of influence, the *partner* role can be very weak, and unlike the other two roles, does not explicitly mention municipal support in the form of financing or provision of resources.

While we refer to the term ‘municipality’ as a unitary actor, we are aware that municipalities are composed of different departments and individuals with—at times—“diverging interests, resources and priorities” (Eneqvist & Karvonen, 2021; Kronsell & Mukhtar-Landgren, 2018). The fact that “different municipal departments can act as promoters, while others take on the role as inhibitors” (Kronsell & Mukhtar-Landgren 2018, p. 999) may be especially relevant for city street experiments that involve the interdisciplinary transformation of the public domain. Experimental *ciclovías* in South and Latin America for instance encountered challenges because of discontinuity in political and financial support (Sarmiento et al., 2017). City street experiments already activate different interests, and the added plurality of interests within the municipality can further inhibit the process, “as it may lead to time-consuming debates, including negotiations over municipal priorities” (Kronsell & Mukhtar-Landgren, 2018 p. 999). It is also important to note that the municipality can change roles throughout the process as a response to the progress of the experiment itself (Kronsell & Mukhtar-Landgren, 2018).

3. Methodology

The five components of transitional capacity and the three ideal-typical roles for municipalities are combined in a theoretical framework (see Fig. 1). We employ this framework to determine how the role adopted by a municipality—as a reproducer of formal institutions and regulations—either furthers or hinders experimental transformations. In doing so, we build on, deepen, and expand the descriptive analysis offered by Kronsell and Mukhtar-Landgren by analyzing how different roles are employed in practice, discovering which dynamics underlie their emergence or abandonment, and investigating the correlation between these roles and their impact on the transitional capacity of experiments.

The type of experiment program to be used as a case study in which to explore this relationship was determined following three criteria: 1) the experiment program should feature “intentional and temporary changes of the street use, regulation and or form, featuring a shift from motorized to non-motorized dominance and aimed at exploring systemic change in urban mobility, away from “streets for traffic” and towards “streets for people” (Bertolini, 2020, p. 735); 2) the municipality should have some role in the experiment program; and 3) the experiment program should exist for at least five years (i.e. not just a one-off initiative).

The choice fell to the Living Streets of Ghent, a medium-sized city in the Flanders region of Belgium. A Living Street involves the closure of a residential street to traffic and parking for several months, usually in the summer. During this time, the roadway is repurposed as a place for testing alternative mobility strategies such as bicycle sharing, collective parking, alternative routing and, importantly, for use as public space (De Blust et al., 2019). Between 2012 and 2017, 51 individual Living Streets were implemented across the city. Following this period there were 10–17 every year until 2019. Since 2020, the number of Living Streets has grown each year (2020 = 19; 2021 = 33; 2022 = 35).

The transition arena and the concept of the Living Streets reflect the forward-thinking mindset of the city, which has been taking steps to transform urban mobility and livability since the late 1980s. In 1987, the first circulation plan was introduced, implementing underground parking garages, pedestrianizing zones in the city center and improving conditions for cyclists (Oosterlynck & Debruyne, 2010). In 1997, a new mobility plan was introduced, enlarging the pedestrian zone, the bicycle network and implementing a new parking policy in the center. After more than a decade of incrementally testing and adapting the formal mobility policy of 2003, the Social Democrat and Green council proposed a new mobility plan to be implemented in 2017 (Stad Gent, 2022b). In Ghent, various initiatives in the field of mobility have already emerged in recent years (Vélodroom, Gemekkergerm, GURBS to name a few) (Stad Gent, 2022b) and citizen activism is strong as illustrated by

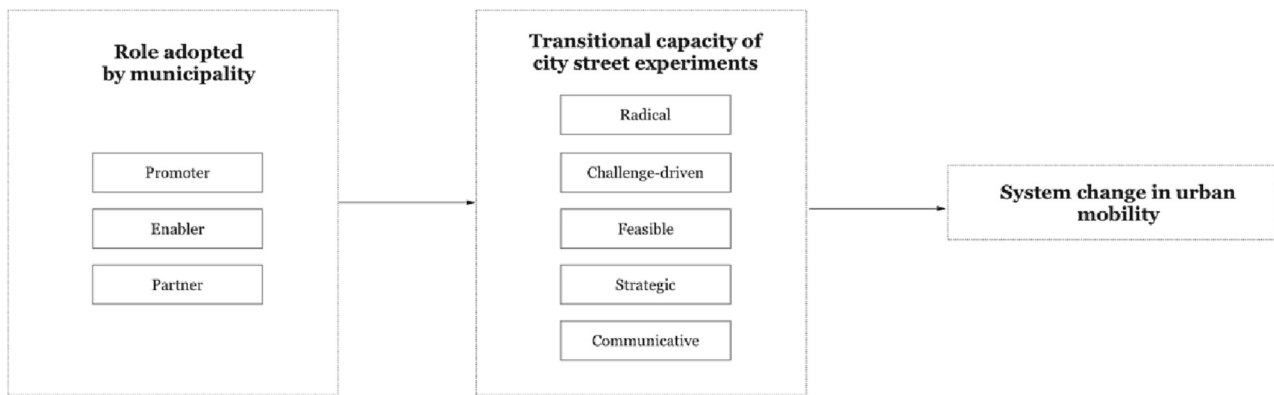


Fig. 1. Theoretical framework combining the ideal-typical roles for municipalities and the transitional capacity of city street experiments.

initiatives such as the Living Streets and a citizen's cabinet comprised of 150 residents which was created to advise the Alderman of Mobility (Rutter, 2016).

3.1. Data collection and analysis

We perform a longitudinal case study analysis, reconstructing the role of the City of Ghent in the Living Streets program over the past ten years (2012–2022) and exploring any effect these roles had on the transitional capacity of the program.

We recognize that the role of municipalities is not the only factor that can influence the transitional capacity of such experiments, especially those with longer trajectories. There exists a crucial difference between the governance of street experiments and the design and organization of them. While the municipality can certainly play a role in the latter, this analysis focuses on the governance aspect. In our analysis we treat the municipality as one of many actors in an experimental collaboration (Wittmayer et al., 2014), however we remain open to the fact that the municipality is a complex organ composed of different departments and actors (Mukhtar-Landgren et al., 2019). The fact that actors reproduce and manifest the ideal-typical roles led us to choose qualitative, in-depth interviews as the primary source of data. Two considerations were crucial while selecting interview respondents (see Table 3 in Appendix A for an overview). First, acknowledging the breadth of actors involved in the Living Streets over its 10-year existence, we targeted actors who were directly involved in the *initiation* and *organization* of the experiments and could therefore comment on the role of the municipality and provide firsthand insight into the transitional capacity of the project. This included policy-makers from different departments within the municipality who were directly involved in the program, representatives from the NGO Trojan Lab who worked directly with the municipality, and residents who initiated or organized a Living Street and therefore also directly worked with the municipality. In doing so, actors who solely participated in the Living Streets (i.e. residents) were not targeted.

Second, because of the longitudinal nature of this study, we chose interview respondents who were involved at different moments during the trajectory of the Living Streets program. This was achieved with preliminary desktop research by first targeting interview respondents who currently work on the Living Streets and employing snowball sampling to find actors who were involved in the past. This process was supported by reviewing relevant policy documents and mapping actors named during the interviews.

In total, ten in-depth, semi-structured interviews averaging 1.5 h were conducted between March 2022 and May 2022. Interviews were divided into two parts. First, respondents were asked to describe the Living Street program at the time of their involvement to the best of their recollection. Second, they were asked specific questions concerning the role of the municipality, what that role entailed and why a specific role was chosen. All interviews followed the same protocol to ensure

reliability. Additionally, we employed news articles, policy documents and previous academic studies on Living Streets to triangulate and cross-check the interview respondents' recollections of the program. Data saturation was reached when no new information was reported by the interviewees or found during the desk research.

Using Atlas.ti, the interview data was first inductively coded using the indicators associated with each ideal-typical role (Kronsell & Mukhtar-Landgren, 2018, see Table 1). After the roles were determined, these were divided into phases, as a clear timeline emerged. We then coded the interviews based on the presence or absence of the components of transitional capacity (adapted from VanHoose et al., 2022, see Table 2) during each phase. Any components of transitional capacity deemed non-applicable based on the empirical material were marked 'NA'.

4. Findings

4.1. 2011–2014: promoter phase

Between 2011 and 2014 the role of the municipality in the Living Streets program could be best described as *promoter*. At the end of 2011, the Environmental Department of the City of Ghent organized a 'transition arena' to collect ideas for achieving the city's climate goals as part of the Ghent Climate Deal (Nevens & Roorda, 2014; G3). This policy was signed in 2009 and set the ambition for the city to reduce its CO₂ emissions by 20 % by 2020 and reach climate neutrality by 2050 (Stad Gent, 2011).

A new position within this department was created for a coordinator of the transition arena. Together with a policy maker from the Mobility Department, 25 'key figures' were called upon to participate (i) in the 'M Club', a think tank to explore solutions to challenges related to urban mobility (G1). In light of the administration's new climate goals and the fact that almost 55 % of trips were being made with private automobiles at the time (Stad Gent, 2017; G9), mobility was an especially important theme to tackle.

Following a series of meetings, the group drew up an agenda entitled The Trojan Bicycle (*De Fiets van Troje* in Dutch), containing a series of experimental ideas, one of which was the Living Streets. "In 2050 children will play in the streets again and it's nice to sit in front of your door. The Living Streets form a car-light network around central (play) squares and open spaces. A strong shared mobility, the bicycle, user-friendly car sharing systems ensure a strong reduction in cars" (Stad Gent, 2012, p. 18, see Fig. 2). The team was inspired by Barcelona's Super Blocks and was particularly interested in combining mobility and social goals (G2). Participants in the transition arena however "struggled with limited recognition from the city administration during and directly after the arena meetings" (Roorda et al., 2014, p. 18) According to interview respondents, the completed Trojan Bicycle agenda was the end of the project. Implementing the concepts was never the intention of

Table 2

Relationship between the governance phases and the components of transitional capacity in the Living Streets project over its ten-year existence. The transitional capacity of the experimental program is assessed per governance phase. ✓ present; X absent; NA non-applicable.

Transitional capacity components		Governance phase		
		'Promoter' (2011–2014)	'Enabler' (2014–2016)	'Promoting Partner' (2018–2022)
Radical: the experiment program fundamentally differs from dominant practices	C1.1 The experiment program is the first of its kind in its urban context	✓	NA ^a	NA ^a
	C1.2 The experiment program activates the use of the streetscape as more than a channel for traffic (e.g. socializing, playing, exercising)	✓	✓	X
	C1.3 The experiment program includes a shift from motorized to non-motorized mobility	✓	✓	X
Challenge-driven: the experiment program makes a step towards a potentially long-term change pathway to address a societal challenge	C2.1 The experiment program aims to trigger a transition towards a post-car city	✓	✓	X
	C2.2 The experiment program is connected to existing policies or programs within the same city	X	X	✓
	C2.3 The experiment program has the intention to become permanent	✓	✓	X
	C2.4 The experiment program has the ambition to scale up or be repeated (e.g. in other locations, or in more locations)	✓	✓	✓
	C2.5 The experiment program is interdisciplinary in its ambition, combining objectives and goals (e.g. mobility, public space, social)	✓	✓	X
Feasible: the experiment program can be realized in the short-term and with readily available resources	C3.1 Preparations for the experiment program take no longer than six months	✓	✓	✓
	C3.2 Necessary resources for implementing the experiment are made available	✓	✓	✓
	C3.3 The experiment program is well organized and coordinated	✓	✓	✓
	C3.4 The experiment program garners support of residents, local businesses, and other stakeholders	✓	✓	✓
	C3.5 The experiment program arranges alternative transport and parking options	✓	✓	X
Strategic: the experiment program generates lessons for reaching envisioned fundamental changes	C4.1 The experiment program recognizes drivers and barriers in the transition towards a post-car city	✓	✓	X
	C4.2 The experiment program is monitored, assessed and/or evaluated	✓	✓	✓
	C4.3 The evaluation of the experiment program is used as input for long-term policy development	X	X	✓
Communicative: the experiment program reaches and mobilizes the broader public	C5.1 The experiment program garners attention from the outside-in (e.g. news coverage, social media)	✓	✓	✓
	C5.2 The experiment program garners momentum by promoting itself and creating awareness (e.g. outreach programs, promotion, flyers, social media)	✓	✓	✓
	C5.3 The experiment program includes a diverse group of stakeholders in its organization (e.g. residents, street users, policy-makers, experts)	✓	✓	✓
	C5.4 The experiment program creates opportunities for increased interactions between stakeholders	✓	✓	✓
	C5.5 The physical aspects of the experiment program draw visible attention	✓	✓	✓

^a Because the experiment can only be the first of its kind once, this component is only relevant to the first phase.



Fig. 2. The Living Street organized in the Wasstraat in 2014 represents a classical version of the experimental concept. Cars are replaced with green mats, pink picnic benches, and plants to transform the street into a place for socializing and playing (Source: Dries Gysels).

the team:

“The Environmental Department thought we would end up with a nice book of ideas and that would be it. They came to us and said: ‘you had a nice time, now it’s time to do other things.’” (G2)

Despite a lack of formal support, several members of the M Club, including two civil servants lobbied the idea within the municipality (G2; G1). Because the concept of Living Streets did not fit into the established set of regulations for governing streets (Varna & Vigar, 2019), their efforts were met with resistance from many municipal departments. However, and crucially, the project received support from the newly elected Alderman of Mobility, Public Space and Urban Planning from the progressive Green party, who strategically backed the Living Streets to jumpstart his new term (G8):

“There were other departments, like the police and the fire department that said ‘no, we don’t want that – blocking off streets, what if something happens?’ They had a lot of reasons for blocking the project. Our plans looked very interesting to the new Alderman of Mobility. He wanted to use

the Living Streets as his first project and show people that he was serious. So, he told us to go ahead.” (G2)

The civil servants were therefore allowed to develop the concept further under a ‘Mayor’s Agreement’ (*Burgermeesters Akkoord* in Dutch). One requirement included gathering the approval of all the residents living in any street that would be transformed (Varna & Vigar, 2019). This would continue to be a prerequisite of Living Streets throughout the project’s existence (Van Wymeersch et al., 2019).

Six months after the presentation of the idea for Living Streets, two pilot Living Streets were launched in May of 2013 and in 2014 under municipal leadership (iii). With the backing of the Alderman, the Mayor’s Agreement, and the dedication of the civil servants from the Mobility and Environmental Departments, the Living Street program was linked to the urban agenda by the municipality (iv), another aspect of the *promoter* role. Although the City of Ghent offered “a legal framework for a kind of free(er) public space within which experiments may be carried out” (Lab van Troje, 2018, p. 4), it remained questionable whether the framework could exist amidst confrontation between innovative alternatives and the status quo (Denham, 2015).

While the role of the municipality can best be described as *promoter* during this phase, the Living Streets were a result of co-production between residents and the municipality (Roorda et al., 2014). As a result, inclusive decision-making became a key aspect of the process¹ (Van Wymeersch et al., 2019). Although not a financial resource, the process required a great deal of time and effort from the civil servants involved (ii). Concerns for the removal of parking spaces and vehicle access (Varna & Vigar, 2019) were combated by civil servants who visited the experiment locations regularly to deliberate with residents (Gysels, 2020). These efforts, combined with the continued support of the Alderman of Mobility (iii), gave the municipality the upper hand in discussions, helping the project to continue (Lab van Troje, 2018).

4.2. 2014–2016: enabler phase

Following the first two pilots, plans were made to conduct a new edition of the Living Streets (G1), which would include different types of streets and increase the number of experiments to 10–15 per year (G1). As the quantity and complexity of the experiments increased, the civil servants responsible for the program noted an inability to ‘move quickly’, constrained by bureaucratic processes (G2), as well as a missed opportunity in the form of funding and sponsorship from companies, which the municipality was legally not allowed to accept (G1). As a result, the civil servants decided to formally split from the municipality in 2014, setting up the non-profit ‘Trojan Lab’ (Lab van Troje in Dutch). Trojan Lab took the lead in organizing and managing the experiments, which included negotiating permits with the municipality, managing sponsorship from businesses and acting as a mediator when conflict arose (Van Wymeersch et al., 2019). One of the two civil servants quit their job at the municipality, while the other began working for the NGO alongside their full-time job as a policy-maker (G2). This decision moved the municipality into the role of *enabler*, participating but not taking on an explicit leading role (vii). Despite the split from the municipality, the experiments continued to demand close collaboration between Trojan Lab and the municipality:

“There were a hundred other things that had to be taken care of by the municipality. For instance, there was an internal group created to think about how to deal with garbage collection during the experiments and how to simplify the permit processes. The City of Ghent took care of these

things, while we took on the task of supervising all the participants. That was the only way to gain speed and grow.” (G1)

The NGO continued to receive financial support from the municipality in the form of subsidy money (ii) a characteristic of the *promoter* role. They also provided signage, bicycle sheds, supplied trees, plants, and play equipment (viii). They were further dependent on in-kind funding, via a huge network of volunteers, prize money from the regional government of Flanders and crowdfunding (G1). The partner companies and organizations helped to arrange alternatives to parking, bicycles, and shared cars. In their role as *enabler*, the municipality provided opportunities to collaborate (vi) in the form of a newly formed position within the municipality in which the person would act as the link between residents, the NGO and the city (G4).

4.3. 2016–2017: year of discussions

On the last day of 2017, the NGO was disbanded as earlier planned (Lab van Troje, 2018). This was a strategic choice made by the civil servants, who, influenced by transition management theory, intended to “test all possible solutions to mobility challenges and learn from them” (G2) and “hand these lessons over to the City of Ghent” (G1). The municipality had already stated the intent to take over the Living Streets program, however it was unclear in what capacity or by which department (G4, G1). During this year, discussions between the different departments of the municipality and Trojan Lab took place. The NGO was adamant that the new phase of the Living Streets project should not be a copy of what had already been done, but rather an evolution of the concept (G1). While the Living Streets were a valuable lesson in testing new mobility options, evaluations of the experiment program revealed that the users primarily benefited from the social cohesion (Stad Gent, 2017). The mobility aspects primarily made the experiments more complex and led to more resistance (G4; G1). Additionally, the simultaneous development of the Traffic Circulation Plan, which featured a major overhaul of the flow of traffic in the city center, was the top priority of the Mobility Department at the time. These factors eventually explained the decision for the Social Department (*Dienst Ontmoeten en Verbinden* in Dutch) to take over the project and use the Living Streets to further their community building agenda (G2).

4.4. 2018–2022: promoting partner phase

The role of the municipality since 2018 can best be described as *promoting partner*, combining two of the three ideal-typical roles. The current website for Living Streets emphasizes the importance of collaboration (xi), describing the initiative as “an open collaboration of residents, neighborhood organizations, city services and everyone involved in the street” (Stad Gent, 2022a, 2022b, 2022c). Those wishing to participate in a Living Street should consult the City of Ghent who “guides and supports the entire process” (G6), indicating a position of shared leadership (x). Partners are not named (xiii), signaling the absence of this indicator of the role of *partner*. The Living Streets are now managed by a small team that primarily supports citizens and facilitates the process.

Some aspects of the *promoter* role were also identified during this phase. In neighborhoods where resident involvement is low, the City of Ghent takes on the role of *promoter*, actively initiating and inviting participants to get involved (i). The municipality in this role further continues to act as a mediator when conflicts arise (G4). Additionally, during the Coronavirus pandemic, the municipality initiated (i) ‘Living Squares’ to provide citizens with more outdoor public space. While the City of Ghent act as the democratically elected party responsible for public services (xii), they continue to provide picnic tables, green mats, and a modest amount of money for residents to organize (G4), an aspect of the *promoter* role (ii). In 2021, the Social Department related their efforts to perceived urban affairs (iv), another aspect of the *promoter*

¹ Although not always successful, as Van Wymeersch et al. (2019) and Goossens et al. (2020) point out, it was at least the intention of the City of Ghent (and later the Trojan Lab) to take the standpoint and wishes of all residents into consideration when implementing a Living Street.

role, by setting policy goals: 40 Living Streets each year (G8; [Stad Gent, 2021](#)). To help meet this goal, a new piece of legislation was formally agreed upon in March 2022 that optimizes the Living Streets program, primarily with respect to arranging permits and logistics. There is now a period of 4–5 days in which all Living Streets can start and five moments to end with a maximum duration of six months ([Stad Gent, 2022c](#)).

Since the Social Department took over the Living Streets and the focus shifted to social cohesion, the Living Streets are significantly different as compared to the original model. The “polarizing” topic of mobility (G4) is deliberately “avoided if it does not support social cohesion” (G6):

“While some residents want to experience living in a quiet street without cars and parking spaces, others are strongly against this, generating a lot of dissatisfaction. For some, the Living Streets have a negative image because they aim to close the street to traffic and the Social Department is the victim of that.” (G4)

As a result, there is a tendency to organize them in squares, parks, and sidewalks and curiously, less in streets (see [Fig. 3](#)). Moreover, and perhaps most importantly, the creation of a formal policy dictating the organization the Living Streets shows that they are no longer implemented to temporarily test solutions for future visions, no matter the topic (G6). The word ‘experiment’ is not mentioned in the new piece of legislature, signaling the end of the Living Streets as a method for testing alternative scenarios and its beginning as a fully institutionalized project at the municipality.

5. Analysis

In this paper we pose the question: *How does the role of the municipality enable and/or hinder the transitional capacity of city street experiments?* Our findings revealed the presence of all three ideal-typical roles which we divide into governance phases. We now elaborate on any relation between these three governance phases and the transitional capacity of the Living Streets program (as summarized in [Table 2](#)).

5.1. Transitional capacity during promoter phase (2011–2014)

During the *promoter* phase, the Living Street program revealed the presence of almost all transitional capacity components. In terms of radicality, the experiment was the first of its kind in the urban context (C1.1) featured an alteration of the streetscape for socializing, playing, and exercising (C1.2) and included a shift from motorized to non-motorized mobility (C1.3). While it is difficult to determine whether the radicality of the experiment was directly related to the role of the municipality as *promoter*, the City of Ghent played a crucial role in

initiating and inviting key players (i), who when brought together, imagined the radical concept. Without the creation of the transition arena, organized by the City of Ghent, the concept of Living Streets would never have been born.

The experiment program during the *promoter* phase revealed the presence of the characteristic challenge-driven as a result of the municipality's role. The experiment program's ambition to scale up or be repeated (C2.4) and efforts to trigger a transition towards a post-car city (C2.1) were aided by the municipality relating their efforts - at least informally - to perceived urban affairs (iv). The Living Streets were also interdisciplinary in nature (C2.5), which was aided by the invitation by the City of Ghent for others to participate (i).

During the *promoter* phase, the Living Streets were also feasible, which could be directly contributed to the municipality's role. Although the program required a great deal of resources, including time and energy from those involved, these were made readily available (C3.2) by the municipality's provision and allocation (ii). Arrangements for alternative parking and for permits were also made easier (C3.5) by way of shorter lines of communication via municipal leadership (iii).

The Living Streets during the *promoter* phase were also strategic, addressing drivers and barriers to long-term change in urban mobility (C4.1), monitoring and evaluating experiments (C4.2) and having the ambition to scale up and repeat (C4.4). This could be attributed to the municipal leadership (iii) and efforts made by the civil servants directly involved. However, while the experiments were intended to provide lessons to the City of Ghent regarding mobility and livability challenges, they were not officially linked to long-term policy development (C4.3) despite the *promoter* role.

Lastly, the experiment program revealed the presence of the characteristic communicative. It garnered attention from the outside-in (C5.1) by way of media coverage and promoted itself (C5.2) thanks to the allocation of resources (ii) and municipal leadership (iii). The Living Streets further included a diverse group of stakeholders in its organization (C5.3) and the experiment program created opportunities for increased interactions between stakeholders (C5.4), which could be attributed to the municipality's initiation (i). While the design of the experiments ensured visible attention and helped in their promotion (C5.5), it was partially also due to the allocation of resources (ii) by the City of Ghent.

5.2. Transitional capacity during enabler phase (2014–2016)

During the *enabler* phase, the Living Street program revealed a similar presence of the transitional capacity components. While less involved, the project remained challenge-driven (although still not connected to formal policy), strategic and communicative despite the shift from *promoter* to *enabler*. Perhaps most interestingly, radicality and



Fig. 3. In 2022, so-called green zones also fall under the name ‘Living Street’ (Source: Stad Gent).

feasibility increased during the *enabler* phase. As the experiment gained momentum, the deliberate decision was made by the civil servants responsible for the Living Streets to split from the City of Ghent and create the NGO Trojan Lab. With the municipality in a participating but not leading role (vii), the NGO could move quicker, working outside the bureaucracy of the municipal organization which was slowing the experimental process down. By doing so, the NGO could test more radical versions of the Living Streets in more locations. Additionally, the shift was deemed necessary to be able to accept sponsorships from companies, which in turn increased the feasibility. Although not the primary responsible party, the municipality remained close to the NGO by way of the organizers who were the same (former) civil servants with knowledge of the municipal processes. Moreover, they continued to receive aid from the municipality in their role as *enabler*, through the arranging of permits which led to a well-organized experiment and by way of support via provisions (viii).

5.3. Transitional capacity during promoting partner phase (2018–2022)

During the *promoting partner* phase, the transitional capacity of the Living Streets changed considerably, however this was primarily due to the shift in focus of the program and not directly related to the role of the municipality. Especially the Living Streets since the introduction of the formal legislation in 2022 cannot be analyzed based on their transitional capacity as they were no longer viewed as experiments.

As a result of the shift in focus, most of the experiments did not repurpose the streetscape as more than a channel for traffic (C1.2), nor did they feature a shift from motorized to non-motorized traffic (C1.3), decreasing the radicality.

During the *promoting partner* phase, the Living Streets were challenge-driven in that the municipality still had the ambition to scale up or be repeated (C2.4) and the experiment program was connected to existing policies or programs within the same city (C2.2). However, efforts to trigger a transition towards a post-car city (C2.1) and the interdisciplinary nature (C2.5), were no longer present because of the focus on social cohesion and community building rather than mobility.

The component feasibility remained present during the *promoting partner* phase as necessary resources were made available (C3.2) and the process of implementing Living Streets was optimized, thanks to the allocation of resources (ii) another aspect of the *promoter* role that the municipality continued to employ and the arrangement of permits (C3.3) through their specific function unique to municipalities (xii).

During this phase, the Living Streets became more strategic, albeit for a different purpose (i.e. community building instead of mobility). While the experiment program no longer recognized drivers and barriers in the transition towards a post-car city (C4.1), they continued to be assessed (C4.2) and evaluations are used as input for long-term policy development (C4.3) for the Social Department.

The shift in focus and institutionalization of the project has also affected the capacity component communicative. The current Living Streets, which increasingly occur less in the street and make more use of underused parks, squares, and sidewalks, garner less media and physical attention (C5.1; C5.5) as compared to the original versions. The Living Streets program does continue to promote itself (C5.2), creates opportunities for increased interactions between stakeholders (C5.4) and includes a diverse group of stakeholders in its organization (C5.3).

6. Reflection

The story of the Living Streets holds important lessons for the governance of experiments, and more specifically, for cities interested in experimenting with their streets to trigger system change in urban mobility. We introduced a framework combining three ideal-typical roles and the transitional capacity of city street experiments. The roles employed by the City of Ghent throughout the Living Streets project suggests a strong logic in succession: the initial role of *promoter* and shift

to *enabler* proved the ideal combination for the strong transitional capacity of the experiment at the start. The municipal leadership and subsequent legitimacy that accompanies these two roles can benefit the transitional capacity of experiments in nascent stages. As the process unfolds, the flexibility to shift from one role to another proves important. Indeed, municipalities in the role of *promoter* can inhibit experiments after the take-off phase by way of capturing them within “administrative routine” (Kronsell & Mukhtar-Landgren, 2018). This awareness prompted the shift to *enabler* role in Ghent. The *enabler* role seems therefore suitable for the continuous support of experiments already semi-established and requiring more autonomy as it develops.

As acceptance for the Living Streets grew, the role of *partner* became a possible, or even logical, next step. Crucially, this governance phase was accompanied by a change in departments responsible for the project, a shift in focus, and the institutionalization of the project which signaled the de facto end of its status as an experiment. The transitional capacity of the Living Streets during this phase seemed more affected by these circumstances than by the role of the municipality. Still, mobilization of key resources akin to a *promoter* role remained essential to guarantee the project's feasibility.

Our findings revealed that the roles employed by the City of Ghent were not done so arbitrarily, but rather strategically, chosen in sync with and for the benefit of the development of the Living Streets and the city's goals. Furthermore, it appears that roles are not absolute, but rather dominant as ‘borrowing’ of characteristics occurs between roles (i.e. *promoting partner*). We also confirm the notion that different departments and actors can take on different roles (Kronsell & Mukhtar-Landgren, 2018), as the Mobility and Environmental Departments proved to be the ones truly *promoting* the Living Streets in its first few years, while other municipal departments resisted. Additionally, we found that, while a relationship between the governance phases and the transitional capacity existed, other circumstances like the shift in focus also explained the presence or absence of transitional capacity. There are thus other factors that can potentially affect the transitional capacity of experiments.

Our analysis revealed important considerations for experimental governance and two dilemmas related to street experiments and urban mobility.

6.1. Two considerations for experimental governance

Firstly, the *promoter* role seems especially useful to kick-start and legitimize radically new, and possibly controversial experiments. The Living Streets – especially those that removed cars and parking – remained controversial throughout their existence. Because of their contentiousness, residents' concerns about gentrification (Goossens et al., 2020), a loss of identity (Goossens et al., 2020) and worries related to the City's vision on cars and traffic demanded mediation and serious collaboration from the experiment organizers and the municipality (Van Wymeersch et al., 2019). The time, energy and human capacity to take all users' opinions into account is an important part of (more contentious) experiments not accounted for in any of the ideal-typical roles presented in Mukhtar-Landgren's framework.

Second, the apparent importance of collaboration between the different stakeholders involved reveals consequences for the role municipalities choose. The ‘closeness’ of the *promoter* and *enabler* roles shortens communication lines between formal institutions and experiment organizers. During the Living Streets, this resulted in access to knowledge of institutional processes, which proved invaluable to the development of the project. It can be assumed that in the role of *partner*, municipalities could be too detached for initiatives just taking off. Access to knowledge of institutional processes indirectly provided by the *promoter* and *enabler* roles will therefore be less available to the other stakeholders. This could result in a potential disadvantage or even exclusion for those with weak ties or alternative views to those of the city administration, a form of exclusion in the Living Streets already

highlighted by [Goossens et al. \(2020\)](#).

6.2. Two dilemmas related to street experiments and urban mobility

The first dilemma is related to the incorporation of established experiments into formal institutional arrangements. In the case of the Living Streets, this included a start and end date, and improving logistics, like the use of a crane to place the picnic tables. However, while these measures help to optimize the process, certainly for the municipality, basic elements of the project that give it value are eliminated:

“The way of working was much more collaborative, also between different departments, while the Social Department now has the primary responsibility. Now we have a crane that drops the grass mats and the picnic benches in the street. The grass mats are heavy, but if you do that with everyone it can be quite fun. The residents have started to have this attitude of ‘okay, we’ll just wait for the city to implement the Living Street and then we’ll use it.’ The whole idea has diminished. The city wanted to help citizens and make it easier to initiate Living Streets, but that is a totally different way of approaching it, compared to citizens deciding to do something creative and coming to us.” (G4)

As a result, the Living Streets became an exercise in copying and pasting of a sort. At the same time, the Living Streets organically evolved into an entirely different project all together, in which the transitional capacity, as it relates to system change in urban mobility, is essentially non-existent, and in any case, weaker and indirect. These developments highlight a possible challenge for the upscaling of experiments: is the institutionalization of experiments wise? Or should experiments be ended once their transitional capacity decreases? This question prods at the very definition of an experiment, its learning value, and the dilemma of reconciling experimental practices with more established institutional arrangements.

A further reflection stems from the evolution of the Living Streets as a disruptive experiment aimed at changing urban mobility towards an institutionalized project for cultivating social cohesion. While the latter is certainly a legitimate goal, it does raise the question of *why* this shift occurred and questions whether street experiments are truly capable of combatting the controversial, polarizing, and obdurate nature of urban mobility. Time constraints disallowed us to explore this subsequent question, however our results hint at a possible explanation. While the Living Streets during the *promoter* and *enabler* phases revealed the presence of transitional capacity, they were never formally connected to existing city-wide, longer-term policies or programs. The 2017 Traffic Circulation Plan was developed during this period, but the Living Streets were not explicitly incorporated in the policy. The formal connection with policy only occurred later, when the project solely focused on community building and dropped the mobility aspects. This highlights a second fundamental dilemma for street experiments: how can the low-risk, short-term nature of experimenting with streets (i.e. testing what works and what doesn't before translating it into policy) be reconciled with the commitments of long-term policy development required for urban mobility? Can experiments lacking a formal link with policy still lead to system change? This last proposition represents a particularly interesting strand for future research to explore.

7. Conclusions

Our study examined the effect of the role of the municipality on the transitional capacity of street experiments. It is important to note that we do not intend to suggest that these roles and their influence are absolute (e.g. experiments wherein the municipality takes on the role of *partner*, cannot be radical). The transitional capacity of experiments is affected by many factors, the role of the municipality being one of them. It could be that if other roles had been adopted at different times during the process, very different outcomes in Ghent would have occurred. This

is one limitation of our single case study design. While further studies should therefore be done to test these findings in different contexts, this longitudinal analysis of the Living Streets of Ghent nevertheless reveals important conclusions for the governance of experiments, especially in locales where experimentation with streets is being employed as a tool to achieve system change in urban mobility. It is also useful as a guide to policy-makers in locales interested in experimenting, offering an in-depth perspective on a well-known example of city street experiment and highlighting the effect municipal roles have on its transitional capacity.

In terms of enabling transformative initiatives, the combination of *promoter* and shifting towards *enabler* seems an especially effective position to help jumpstart and consolidate such innovative concepts. In the case of the Living Streets, the top-down and singular role of *promoter*, legitimized the radical concept that was at times resisted by other departments and citizens, securing it financially and giving it legitimacy. While the *promoter* role is rarely employed for other transformative experiments, such as urban living labs ([Kronsell & Mukhtar-Landgren, 2018](#)), the alteration of city streets becomes a battleground for clashing interests. Here a strong, top-down approach may be helpful to support initiatives and mediate between different stakeholders. On this point, the necessity of deliberation within more contentious experiments represents an important role to be filled - or at the very least addressed by - the city administration.

In terms of hindrances, once experiments gain momentum and increase in complexity, the role of *promoter* can act as a barrier. Instead, the municipality in the role of *enabler* provides enough auxiliary support while allowing experiments to maximize their transitional capacity by accepting funding from outside sources and working outside institutional processes. The role of *enabler* is however only productive if there is another party (like the NGO in Ghent) carrying the bulk of the responsibility. As experiments mature and their acceptance grows, the role of *partner* becomes a logical next step for municipalities wanting to embrace initiatives and fit them into their way of working. In doing so, however, losing the very essence of experiments – their transitional capacity and the need to collaborate – becomes a possibility.

The case further reveals an important dilemma: reconciling experimentation with the commitments of long-term mobility policy development. As discussed in the reflection, this challenge raises intriguing questions concerning the conditions under which street experiments can impact system change, providing an evident focus for future research. Such research could compare approaches and trajectories in different contexts, and in doing so, add to the results of this single, albeit defining, case study.

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CRedit authorship contribution statement

Katherine VanHoose: Conceptualization, Methodology, Investigation, Formal analysis, Writing – review & editing. **Luca Bertolini:** Conceptualization, Methodology, Investigation, Formal analysis, Writing – review & editing, Supervision.

Declaration of competing interest

No potential conflict of interest was reported by the author(s).

Data availability

Data will be made available on request.

Appendix A

Table 3
Overview of interviews.

G1	Head of NGO Trojan Lab
G2	Former policy maker for the Mobility Department, City of Ghent
G3	Former director of the Environmental Department, City of Ghent
G4	Current project leader for Living Streets, City of Ghent
G5	Current project leader for Living Streets, City of Ghent
G6	Team leader for current Living Streets project, City of Ghent
G7	Living Street initiator
G8	Current head of policy for Alderman of the Green Party Rotterdam: DRIFT, Erasmus University Rotterdam.
G9	Expert with knowledge of Ghent mobility context, UGent
G10	Expert with knowledge of Ghent mobility context, UGent

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