

AALBORG UNIVERSITY

BARTOSZ PLATEK

09 October 2020



MASTER THESIS UPM

DIGITAL PARTICIPATION IN THE CITY OF GHENT

Case study of MUV – Mobility Urban Value R&I

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Abstract

This thesis argues that in Ghent participation is already well established not only as indispensable element of transport policy, but also increasingly as a socially accepted norm. In this setting in order to shed the light on the pathways enabling further strengthening the idea of participation in the city, and take full advantage of new forms of digital participation, it is beneficial to utilize the socio-technical context of the transition, with respect to the resilience of socially sanctioned phenomenon of participation.

Keywords: digital participation, mobility, transition, MLP, MUV, Ghent

1 Introduction

The possibilities to provide sufficient access for participation in decision-making for the citizens in West and North European cities are becoming increasingly refined due to the advancement of social theory and changing public attitudes towards governance. Process of improving sustainability of the urban context is especially well visible in the space of urban mobility. Disruption to the regime of automobility are having wide spreading consequences not only in physical artifacts of transport regime (F. W. Geels, 2002), but also in soft technologies. The digitalization of daily practices provides people with potentially game-changing access to information and means to connect, perceive and co-create their surroundings. Institutional engagement in refinement of the platforms for accommodation of technological solutions, manifests itself in development of open-data mechanisms.

The use of open-data can potentially facilitate and promote the participation within the process of improving urban mobility (Foued Melakessou, 2013). Open data refers to making the data generated by citizens and private entities available to share and re-use, within the cycle of exchange between them and the government in two-way stream (Soriano et al., 2018). Increased volume and quality of participation is considered in well-functioning governmental structures, in terms of perpetual impacts upon public policies, through its effect on the sustainability of decision-making process (Giering, 2011). European legislation considers the open-data as a priority sanctioned in the ‘Open Data Directive’ (2019), the mobility is categorized under one of the six ‘high-value’ thematic categories. The directive however focuses mainly on economic aspects of the data re-use, and not on citizen accessibility. Considering the parental status of the document in the hierarchy of European legislative system, it indicates that even though major steps towards standardization of data use for the sake of sustainable mobility have been made already, the full institutional integration is yet to arrive. However, the notion of open-data has been fruitfully integrated into largely successful global trend of Smart Cities. The open data in context of Smart Cities is considered by European Commission in terms of *basic fundamental principle of democracy* (EC, 2013). Even though it will take some time and ambition to design and implement unified open-data framework Europe-wide, cities which are actively engaged in the notion of making the mobility more sustainable through open-data, have at their disposal number of initiatives co-

financed from European funds. One such program is Civitas which constitutes a network of cities *dedicated to cleaner, better transport in Europe and beyond* (Foued Melakessou, 2013). The next section introduces a good example of such project.

1.1 Ghent inclined for participation

Mobility Urban Values (MUV) Is a research and innovation project which entails the use of open-data in sustainable mobility transition in six European cities, including the Belgian city of Ghent. The project is unfolding in the harbor neighborhood Muide/Meulestede with the objective to determine whether playing a game could make the travel in this urban neighborhood more sustainable? It involves citizens, local business and service providers. The game is accessible via smartphones and offers incentives provided by involved partners in order to promote co-design of mobility and foster ownership of the neighborhood (Filippi, 2020). From the pilot until the final stage, the project had intended to invite citizens into co-creation, testing and evaluation of the process. MUV is present in six cities, and all of them actively support participatory and innovative agenda within their institutional structures, but what makes Ghent interesting is the fact that unlike most of the other cities (Amsterdam, Barcelona, Helsinki, Palermo) it is not a cosmopolitan city, more a financial power house, yet in spite of that it has achieved over last few decades the status of the leading sustainable center of Europe (Sustain Europe, 2018). Also, the University of Ghent gets frequently awarded for amongst others, innovation and multicultural allure (Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, 2017), what suggest the strong innovative infrastructure and proactiveness of the local environment (Julie de la Kethulle de Ryhove, 2019). Another reason why MUV in Ghent is particularly interesting while considering approaching the aspect of open-data throughout unfolding of the *action*, is that it took the somewhat divergent approach from its European counterparts, by enticing the participants to get involved by from the get-go, emphasizing the role of personal contribution of each citizen in co-creation, whereas other cities went 'game and incentives first' (Robson et al., 2015). This alone suggest a maturity of the local participation attitudes of trust into its community and proactivity.

1.2 Problem statement

It was established in the first two sections that the open-data agenda is yet to realize its real potential across the European continent, until then it is the domain of engaged local and regional governments, along with proactive non-governmental actors to facilitate it. These proactive networks of actors are engaging in development of strategies and directions for the implementation of the tool. Martijn Hartog (et al., 2014) argues that for the approach to be effective it requires to be adopted by *widest possible range of users*, and that actors responsible for its success are characterized as advocates of open data and are spreading the word about its potential for the improvement of democracy, in the widest possible spectrum of application. Beside the studies of smart cities, the notion of open-data is also described by the literature describing value of Information and Communication technologies (ICT) on sustainable urban mobility (Galit Cohen-Blankshtain & Rotem-Mindali, 2016). Cohen-Blankshtain and Rotem-Mindali are reflecting upon the necessity to consider the long-term perspective when examining the effectiveness of ICT implementation, due to the incremental nature of urban change.

It is at this point implicit that in the dynamics of early stages of adopting the innovation, motivation of engaged actors plays an important role as they advocate for the success of the novelty (Galit Cohen-Blankshtain & Rotem-Mindali, 2016). However, if such figures are absent from the local context and the institutional readiness is yet to occur, the global expectations raised by planning community might leave the vacuum which instead of progressing the sustainable agenda would stifle the system within status quo. Normative perspective on the disconnection between expectations and trends within the literature, is rarely addressed. One such account is presented by Heather Campbell (et al., 2014), who investigates alternative possibilities for conduct of redevelopment project in the ‘typical’ British city. Campbell assumes that market forces, demand to *fill the void* left by unfulfilled expectations derived from planners framing priorities, and it would happen in fashion typical for the neoliberal policy agenda (Cohen-Blankshtain, Rotem-Mindali, 2016). Furthermore, this act of exploitation, in effect could squander the opportunity for the betterment of democratic feature of the decision-making process and reproduce the ‘business as usual’ scenario (Campbell et. al. 2014). In order to prevent the disconnection between the dominant visions and actual capacity for social betterment, the stories about planning increasingly

call for a policy embedded within and ensuring persistence of context dependency (Healey, 1997). David Banister (2008) put forth two parallel conditions for sustainable mobility, which could potentially limit the severity of the disconnection, he suggests to pay attention to high quality implementation of the innovative schemes and emphasize the need to receive the public acceptability of the project (Banister, 2008). Both of the latter imply the need to pay constant attention to the unfolding transition, that is including the monitoring and incorporation of citizens participation.

1.3 Research question

Previous sections illuminated the features which are crucial for ensuing making the most of the opportunity to improve social and democratic condition of the community through process of delivering the innovation (Banister, 2008). However, the risk of disconnecting from the contextual opportunities is looming above the engaged actors in spite of clear vision drawn by relevant institutional dynamics, or maybe because of them, they might lose sight of the ground struck by the vision, effectively not even beginning to truly facilitate open data. Planners or engaged actors must stay sharp and know how to conceptualize the change they embark on and their awareness should not be limited to the position they occupy, neither by the latest conceptualization of local visions. It is certain that MUV has prepared an in-depth theoretical understanding of its position in unfolding sustainable urban transition, however it is argued that proponents of such project, in order to protect their *Action*, against neoliberal ‘trap’ (Cohen-Blankshtain, Rotem-Mindali, 2016), ought to go beyond the latter and grasp a more holistic overview of local dynamics including the narratives they derive from. Hence the research question of this thesis is:

How does the open data and innovative methods of participation fit into the decades of sustainable mobility transition in Ghent?

In order to properly inform the results of the research, two sub-questions were posed in addition to the main research question. Figure 1 depicts the overall structure of the thesis, including the main research question and its two sub-questions. *Chapter 2* presents the research design and methodology. *Chapter 3* outlines the theoretical framework. Subsequent *Chapter 4* includes the results, where both, main research question and sub-questions are answered and concluded, each one in a separate corresponding section. *Chapter 5* consist of the discussion which allows for broadening of the researched context.

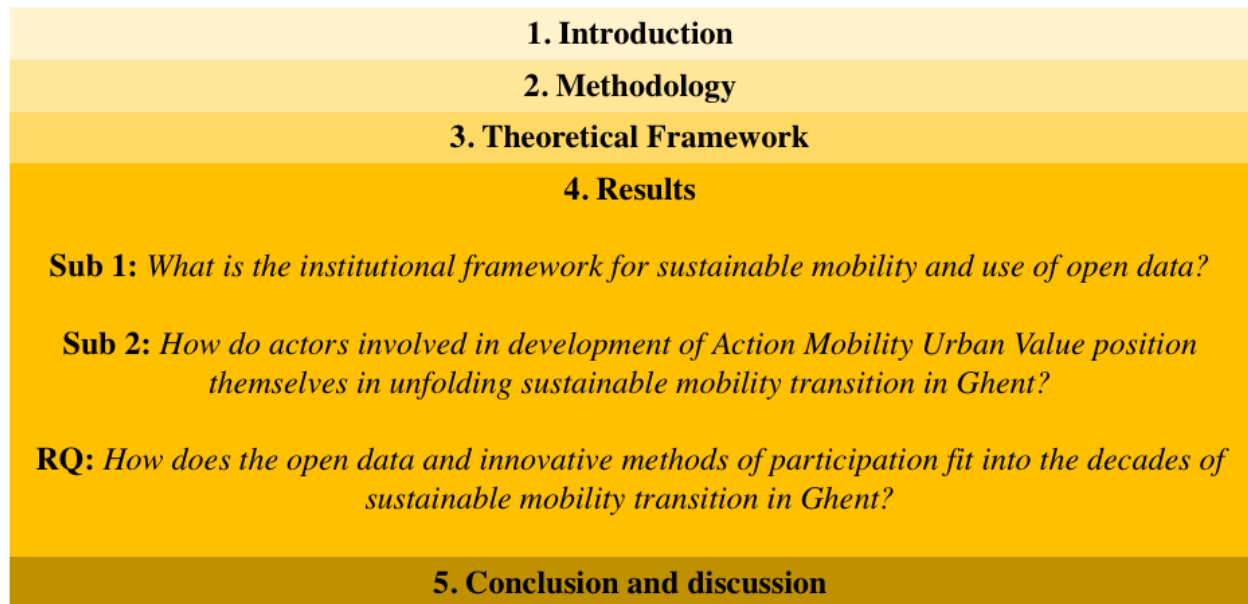


Figure 1: Structure of the thesis

1.4 Previous Research

There is abundance of research related to open data, and the theory chapter shed the light on most relevant once. Therefore, this section presents only the latest and rare findings related to the discursive methods and normative dimension. However, when it comes to rarity and as one of the main themes of this thesis is learning from the longstanding narrative, it is interesting to mention Safarov (2020), who describes the open data emerging in transition countries. It provides an insight into the ‘beginning of the road’ which in rich developed counters is well behind us. However, the research in the domain of socio-ecological sustainability, recognizes to the great extend the disconnection between different types of actors, Dryzek (2012) points out the necessity to tighten the mechanisms of coordination between different levels as each represents different narratives, and a lack of communication leads to misrepresentations, he coins the notion of *administrative rationalism* which entails that the function of decision in socio-economic space is disconnected from the public, that citizen should passively pass responsibility to the government’ (Dryzek, 2013). (Frank W Geels, 2014) introduces politics and power into the framework of multilevel-perspective, he distinguishes discursive and institutional forms of power and seeds doubts about overly optimistic actors who blindly believe in success of any green innovation, as if those were inherently leading towards sustainability. The research of the disconnection seems to be lacking in the sphere of digital innovation, however lately a publication related to smart mobilities has

been released, where normative perspective on sustainable mobility was described in the context of smart mobility experiments in Sweden. Tested smart solutions were analyzed and discussed in relation to citizens / users' values and public values in general (Paulsson & Hedegaard Sørensen, 2020). The studies of dominating narrative per se on the other hand are plentiful. In 2020 a group of researchers, Holden et al. (2019) among the others, have collected a set of nine dominant globally narratives, each related to different aspect of sustainable mobility transition, unfortunately though the digital methods of participation were overlooked again. In order to offer greater clarity of the theoretical location of this thesis, further research is revealed in the theory chapter (3) the advancement of an equally new and rare field is presented, namely the utility of multi-level perspective (MLP) on transition of digital and soft technologies.

2. Methodology

This chapter is dedicated to the research strategy, which is explained beginning with a description of the methods which were used in the research. The research is entirely build upon qualitative methodology.

2.1 Case study

The methodology used in this thesis is qualitative case study, the object of the study is open data in unfolding sustainable mobility transition. The study is expected to outline the complexity of a single case. The particularity of given complexity within the case study allows to pick at important elements of studied circumstances (Stake, 1995). The focus is put on areas presented by an interviewed actor.

2.2 Literature review

2.3 Expert interviews

3. Theoretical framework

In this chapter the theories of participation in policy settings, analytical basis of different digital innovation and theories of resilience are located in the framework of socio-technical transitions which combined allows to conceptualize the complexity of infrastructural frameworks (*cf. sub 1*).

3.1 Sustainable urban mobility

Sustainable urban mobility does not allow itself to be easily defined, nonetheless, Banister (2008) provides somewhat clear transition benchmarks:

- reduction of the need to travel (fewer trips)
- encouragement in a modal shift
- the reduction of trip lengths thanks to the spatial layout of cities
- reduces in the travel needs of inhabitants, and encourage greater energy efficiency in the transport system (Brůhová Foltýnová et al., 2020)

He also suggests the tools for improved sustainability of urban mobility:

- strategies of sustainable mobility,
- support of public and non-motorized transport,
- integration of land-use and transport planning,
- building of cities at short distances,
- technological innovations
- discussions and citizen participation (Brůhová Foltýnová et al., 2020)

Studies of conditions necessary to foster wider and more insightful engagement of the public within the transport planning, suggest the necessity for extensive use of various methods, that is among others. including stakeholder management (Fennell & Dowling, 2003) and individual marketing (Brög et al., 2009). The citizen engagement is concluded as an indispensable precondition for any action which intend to alleviate impact of cultural bias and social exclusion in the transport transformation process (Lindenau & Böhler-Baedeker, 2014) in order to secure the latter, public approval must be procured, and to describe such approval Banister uses the term *acceptability* which he considered to be essential for the success of implementing a sustainable change (Banister 2008).

3.2 Participation

Public participation plays a key role in ensuring the acceptability of any measures outlined above. The next section shows the relation of participation and current sustainable policies.

3.2.1 Participation in political setting

The role of citizen participation within the process of improving urban mobility has been greatly recognized in recent years (Banister, 2008; Khisty, 2000; Lindenau & Böhler-Baedeker, 2014). The participation between citizen and government is considered to be the one, most important building block, essential for creating public trust to the decision-making process (Janowski, 2015). The role of public involvement in decision-making is considered not merely advisory but holds a purpose of having a tangible influence on the choices that are being made (O’Faircheallaigh, 2010). It is increasingly relevant to support, by any means possible, the transition towards a more sustainable future within not only the regime of mobility but system-wide, as present conditions which will be outlined in the next paragraph, call for well-integrated response. Fortunately, citizens of the European Union are generally acquiescent to their own responsibility towards a more sustainable future, even when it relates to personal costs. Therefore, considering the later along with the institutional push accommodated by the EU, the conditions are conducive for further development of means for the people to include themselves within the transition. For that to happen it is necessary not only to create opportunities but to adequately reach the individuals, promote the participation and foster acceptability of different projects (Banister 2008).

3.2.2 Participation and social innovation

For some time now, more than a half of the World’s population have been living in cities (Dirks et al., 2010). The systemic problems related to this urban expansion are far from addressed, while contemporary cities are facing major challenges, both climate crisis and increasing urban population are causing unprecedented constraints upon the urban environment (Chourabi et al., 2012). Urban systems struggle to adequately quickly adapt to these emerging conditions, there is a new scale of need for development of long-term sustainable response (Næss, 2001). The effects of these drastic changes are amongst other things visible in the context of urban transportation and mobility (Banister 2008). The expanded demand for transportation, within the context of rural-urban migration and climate crisis, brought increased demand for technological innovation, in

order to prevent detrimental effects which such revolution could cause to cultural and economic sustenance of entire regions or even countries (Allam, 2020). The progression of social response has been developing in parallel to the technological one, therefore the scale of social innovation which is currently unfolding across Europe is equally immense. The European Commission constitutes a strong institutional driver for the integrated push towards an improved ability of local actors to deliver innovation across the wide spectrum of public concerns (INEA, 2020). The lack of concern for such an integrated approach could cause technologies to develop in isolation from the entirety of social tissue of the city. Fortunately, contemporary scholars work side by side with policy makers to engage in alternative viewpoints which would allow to integrate the technology into a historical and cultural urban fabric (Allam, 2020). To meet the social dimension of sustainability it is required to add social value through innovation. In order to do that, the European Commission puts strong emphasis on alleviating barriers of participation for individual citizens. The innovations from under the scope of social realm have the inherent ability to target social needs, however in environment of multiple agendas some locally important features might get diffused within wider high societal values (Diepenmaat 2020). The transition towards sustainable mobility in particular, demands changes in the way the individuals make decisions regarding their travels, often radical once. It is only natural for people to be reluctant when it comes to modifying their habits, so the pathways towards positive change should be presented to them, with inclusion of positive effects of their changing behavior (Banister 2008).

3.3. Socio-technical transitions

The transition of planning principles from the “for people” approach into “with people” (Sanders 2006) has been gradual. The idea to involve the public into the planning and designing process arises first as a means to alleviate negative outcomes brought by inherent biases of any given profession (Cross 1972). Such ambiguity about properties of individual professionals, locked within their own professional realities, came about alongside more system wide erosion of conviction about adequacy of rational model, which did not give a justice to the relationship between values represented by the individuals and facts of the matter at hand. (Alexander 1986) At this point both citizens and planning professional are keen to embark on development of novel strategies and innovate.

Transition within itself can be understood as transformation, which is unfolding gradually, throughout the number of societal domains, often of vary divergent categories such as mobility

and civic engagement (Banister 2008), where each component is changing and enters into reaction with another (F. W. Geels, 2002). The transition takes place within the socio-technical systems, which are described as such, due to the interrelated nature between various elements. The system of mobility includes elements such as: practices, technologies that including mobile applications, policies and distinctive cultural meanings (cf. Figure 2) (F. Geels, 2005).

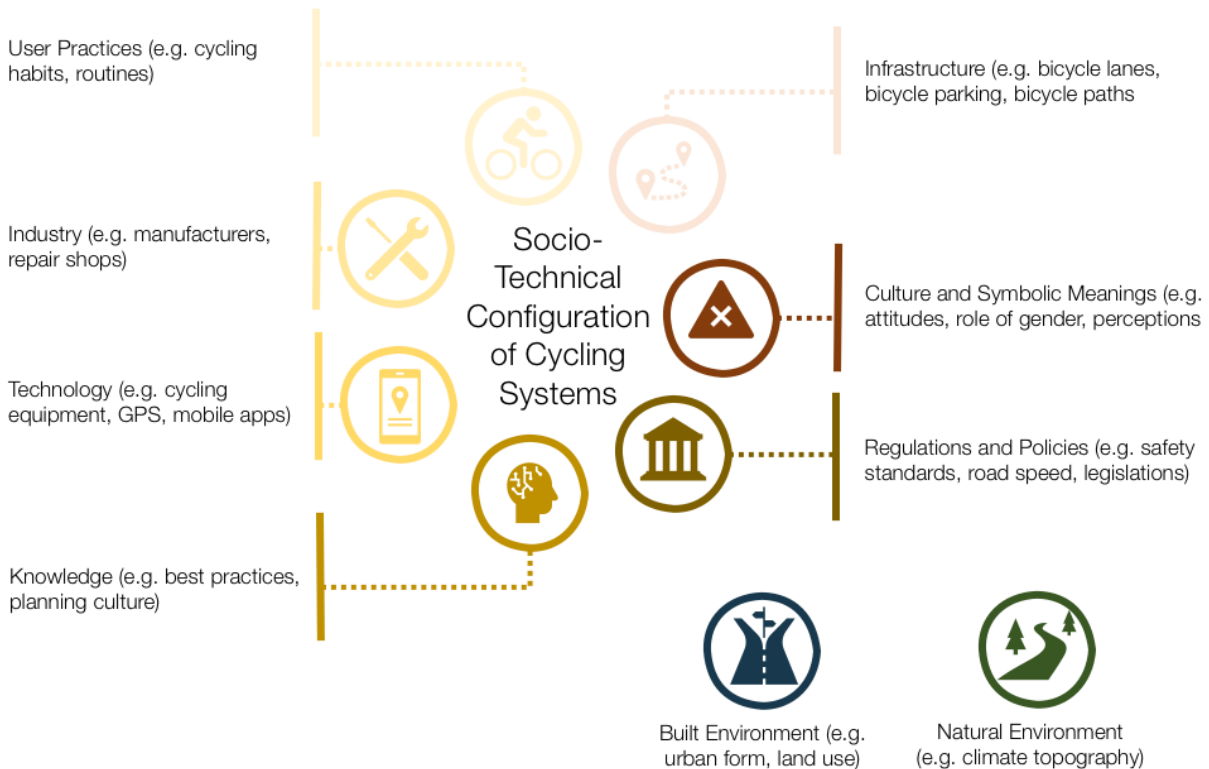


Figure 2: Socio-technical configuration of Cycling Systems (own figure after (F. W. Geels, 2002))

Transformation which occurs simultaneously on different conceptual levels of analysis, causes disruption to the established system (Blalock, 1979; F. W. Geels, 2002). The impact of such innovation causes ripple effect of disruption to the existing social system. The innovation, which by design is not yet integrated is being gradually accommodated (Rosenberg, 1976). Effectively the process results in the creation of new dynamic equilibrium (Smith et al., 2005). Understanding the dynamics of transition has been for some time now an important task throughout social studies, which to be realized ought to take account for the complexity of the system in which the transition takes place. Such complexity relates to numbers of societal functions within different levels of analysis (Geels 2002). Theoretical frameworks are constructed in order to harness the complexity

of transforming socio-technological systems, of which arguably the most prominent is the multi-level perspective (MLP). The allure of MLP lies at its ability to draw connections between different, often seemingly disconnected systems in which innovation occurs (Smith et al., 2010). The MLP is been often used to analyze transitions within the regime of transportation (Geels 2008).

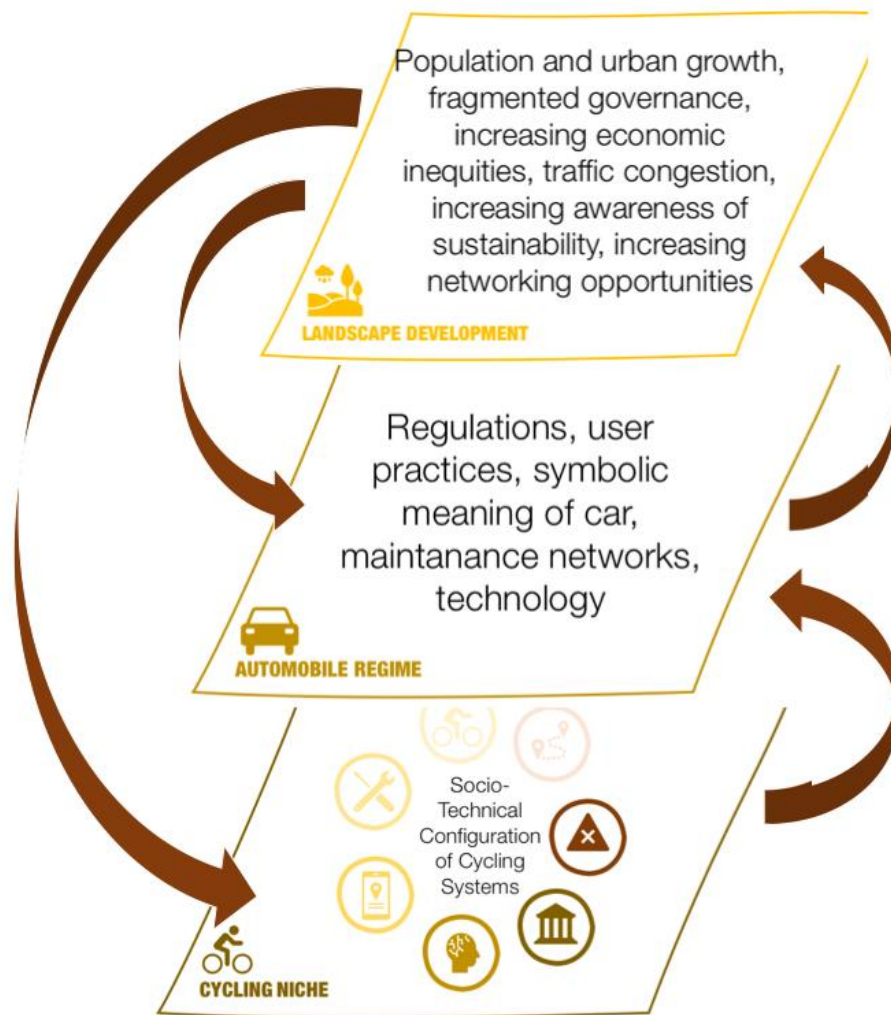


Figure 3: MLP of transport mobility (own figure after (F. W. Geels, 2002))

Transition is not a uniform nor steady process, but consists of periods of fast and slow developments (Rotmans et al., 2001). However, when it comes to disruptive innovations and so it happens that nowadays mobility is undergoing several explosive transformations, notably the electrification (Kane & Whitehead, 2017) and shared mobility (McKenzie, 2020). Considering how disruptive these innovations might be, it is an imperative to try and control not only the roll out of the core technologies, but also the pace of the process which accompanies them, and to do

so under the conditions of sustainable transition (Banister 2008). It is important to keep the pace of transitions in check as the instantaneous 180-degree shift could cause near maximal opposition from the actors involved, and therefore squander an opportunity for socially sustainable change, and therefore top-down implementation of radical change has been practically disproven as socially unsustainable practice (Rotmans et al., 2001). Instead the more incremental approach is advised, as to ward off the possible negative consequences of radical changes. However, considering the pressing environmental issues, when current business as usual approach in virtually any given aspect of human activity, seem to be detrimental to the environment, there is arguably no more time to be 'waisted' on lengthy, transformations (Gills & Morgan, 2020; Ng et al., 2016). This paradox is being addressed by introducing change as fast as possible, but in small steps. Arguably the later conundrum makes a single most compelling reason for emergence of transition theory (Lachman, 2013) Spickermann et al., 2014).It is increasingly often for the proponents of particular mobility innovations, to validate the pacing of proposed solutions, by incorporating public opinion, encourage participation and by doing so securing the public acceptability (Banister, 2008; Eriksson et al., 2008). The means of validation is just one of many

4. Results

4.1 Sub-question 1

What is the institutional framework for sustainable mobility and use of open data?

Institutional framework allows citizen to have a dialog...

“I don't think they feel they have more voice in this, because the city of Ghent is already putting a lot of effort in participation with citizens, so they know they can participate, they can discuss, they are informed, but they don't see results. They don't see because there is too much time in between an action and a change in infrastructure, or in rules or so on, so that's the difficulty that it is taking too long. All you can do is make promises, what you can do is to start a discussion but for us in the MUV project the result is a data of the app that was collected with/from the citizens. It was a starting point to get into the discussion with the policy makers, and to get some answers.” (Karen Soens, personal communication, January 20, 2020)

4.2 Sub-question 2

How do actors involved in development of Action Mobility Urban Value position themselves in unfolding sustainable mobility transition in Ghent?

5. Conclusion and discussion

The understanding of political aspects of sustainable transition, carry overdue need to deal with how it defines societal interest. Latter task implies the need for reconsideration of political engagement in reforming coalitions, erode unethical groups of interest and provide compensation for those affiliated. Such change requires engaged political establishment in close cooperation with the proponents of new technologies and social movement, to establish new centers of power. Considering the longitude of such process, the change arrives in co-creational cycles, where all actors can get familiar with ‘rules of the game’ and realize tangible, institutional and personal linkages within.

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