Master Thesis

The Use of Participatory Decision-Making in Creating the City's Transport Policy and Using More Sustainable Modes of Transport

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Muhamad Diandra

Supervisors:

Dr. F.H.J.M. Coenen

Dr. M.J. Arentsen

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ABSTRACT

Achieving environmentally sustainable transport is a major challenge faced by countries around the world, in particular, European countries that have to address transport-related environmental problems stemming from the rapid economic growth. CO2 emissions and air pollution from transport are the major environmental concerns related to transport activity. In fact, Europe's cities are by far from weaning themselves off car dependency. The successful implementation of global energy transition does not only depend on the development of new energy technologies, but also requires major changes in the patterns of individual energy-related choices and behaviors. Civil society engagement is key to achieving sustainable development and environmental goals. Governments cannot achieve environmental protection goals alone. Governments obviously need support and guidance from the public. Public participation helps build a more involved citizen, increases the legitimacy of decisions, and helps ensure that policy-makers have valuable local knowledge. Drawing on best practice from cities across the Western and Southern Europe, this research aims to better understand how and why public participation is used in city transport policy and using more sustainable modes of transport in general and in a number of cases. To reach it, the analysis of the participatory method on low-emission mobility transition policy in the cities will be used as a theoretical framework. The primary data of this research are derived from in-depth interviews with transport professional. The secondary data will be used to support the primary data are derived from preliminary research on city's transportation policy and planning. The mixed methods with exploratory strategy will be applied to analyze the data and information. The discussion and conclusion will be conducted directly from each aspect of the process and effect of public participation.

Keywords: energy transition, public participation, sustainable transportation, consumer behavior

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List of Abbreviations

BMS	Behavioral, Management and Social sciences
CAC	Citizen Advisory Committee
CO2	Carbon dioxide
EC	European Commission
EST	Environmentally Sustainable Transport
EU	European Union
EV	Electric Vehicle
GIS	Geographic Information System
GLA	Greater London Authority
IMF	International Monetary Fund
IRENA	International Renewable Energy Agency
MTS	Mayor's Transport Strategy
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
OGP	Open Government Partnership
PB	Participatory Budgeting
SDGs	Sustainable Development Goals
SPI	Structured Public Involvement
SUMP	Sustainable Urban Mobility Plan
SWOT	Strength, Weakness, Opportunities, and Threats
TfL	Transport for London

CHAPTER 1. INTRODUCTION

1.1. Background

Achieving environmentally sustainable transport is a major challenge faced by countries around the world, in particular, European countries that have to cope with transport-related environmental problems stemming from the rapid economic growth. European countries have developed diverse and unique transportation systems to address the increasing demand for travel for more than a century. With more than 70% of the European Union (EU) citizens living in urban areas, urban mobility has become a major factor affecting quality of life (European Commission, 2019). But traffic jams, poor air quality, using a lot of energy and inefficient transportation systems survive throughout the continent. Transport infrastructure impact hugely on the environment, health, social equality and economic development. City residents, commuters, business trip, freight traffic and tourists are all consumers of the transport system. This transport system can be more or less sustainable depending on the mode of transport.

Today, transport accounts for around a quarter of the EU's greenhouse gas emission, with road transport alone responsible for 22% (IRENA, 2018). Further emission reductions from road transport are therefore indispensable to achieve the EU's commitments under the Paris Agreement and the EU's climate and energy framework to reduce CO2 emissions by at least 40% in 2030 (European Commission, 2018). The successful implementation of this global energy transition does not only depend on the development of new energy technologies, but also requires major changes in the patterns of individual energy-related choices and behaviors. Support of the general public for changes in the system, which at the end are all consumers of the system, is necessary because it affects day-to-day life.

When it comes to public transport, the cities of the EU are mainly viewed as success stories. In larger union cities, an average of 49 percent of residents use transit to get to and from work (Citylab, 2017). However, recent figure published by Eurostat reveal that passenger numbers vary greatly from city to city – and the same goes for people who drive, cycle, and walk to work.

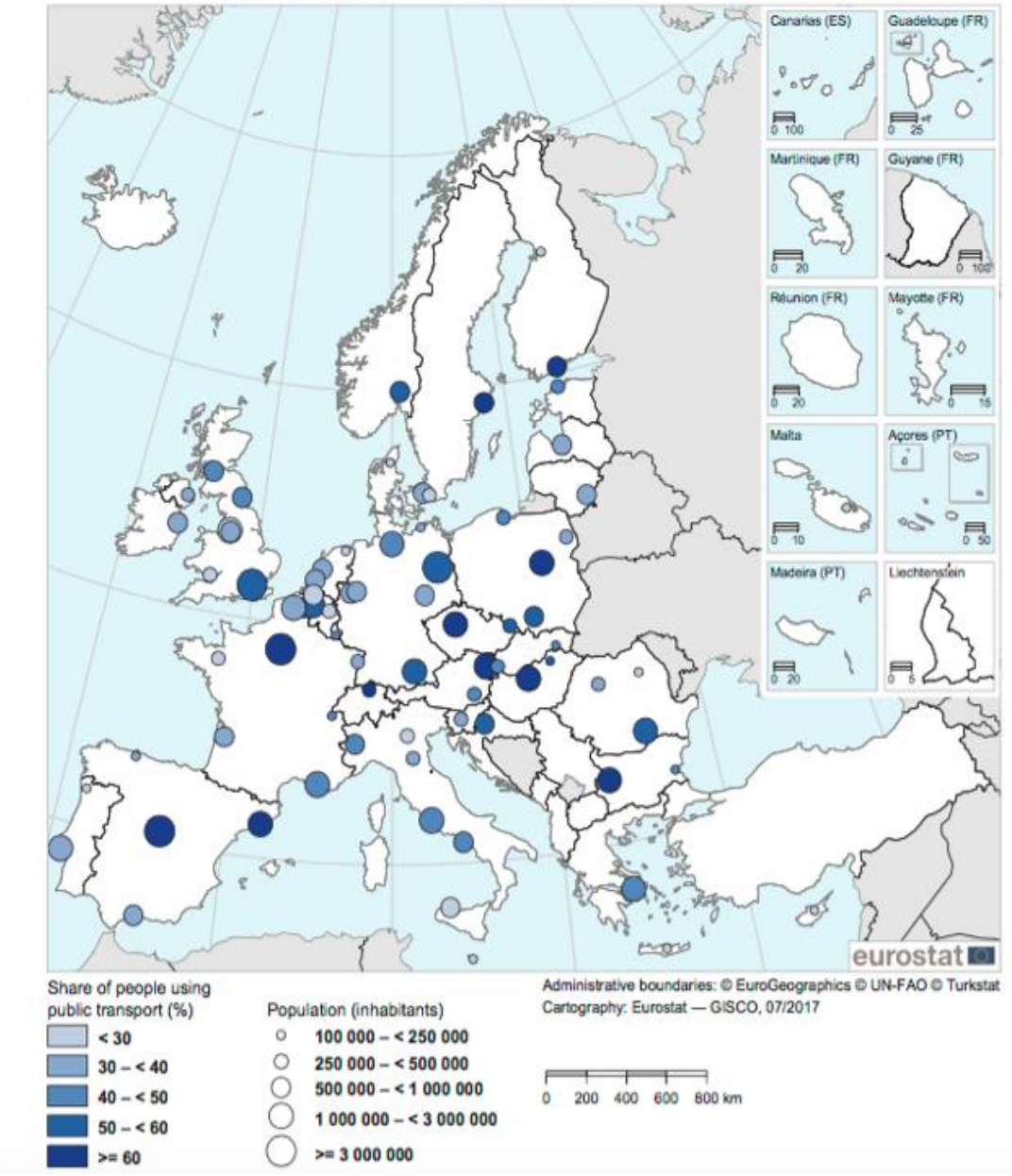


Figure 1 Share of people using public transport (Eurostat – GISCO, 2017)

Based on Figure 1 above, the levels of public transport commuting are higher in capital cities than in regional cities. This map shows that the levels of public transit commuting are higher in Paris and Madrid than Munich and Milan. This might seem very clear phenomenon since generally less dense second-tier cities seems lack of roads that propel passengers towards public transport. Furthermore, some capitals show relatively poor numbers, with less than 30

percent of commuters using public transport in Lisbon, Dublin, Vilnius, and Riga. Island cities such as Levkosia, Cyprus; Reykjavik, Iceland; and Valletta, Malta have the worst public transit rates and the highest rates of car use. These three cities have less than a quarter commute by public transport and more than 75 percent drive their own car. Beside the infrastructures and geographical factors, many EU city residents are still not aware about their transport ecological footprints and the consequences of the use of urban transport systems. Although The Environment Ministers of OECD (Organization for Economic Cooperation and Development) member countries endorsed the Guidelines for moving towards Environmentally Sustainable Transport (EST) at their meeting on May 2001 in order to a provide solution to making transport policy more sustainable, but most European citizens are still vague of the policy in the first place. As such, it seemed that there is a problem with implementation of the existing environmental sustainable transport policy. In the light of this, this research aims to discuss the process of the public participation in the cities and its effect towards the local policy and the citizens.

1.2. Problem Statement

The EU is the second largest economy in the world in nominal terms (after the United States) and according to purchasing power parity or PPP (after China) (IMF, 2018). The EU's GDP growth increased 2.4% in 2017 (Eurostat, 2017). This growth will not be sustainable unless issues of transport-related air pollution and use of fossil fuels are addressed. In 2015, at least 33% of the final energy consumption and 24% of greenhouse gas emissions (23% more greenhouse gas emissions than in 1990) in the EU stemmed from transport (European Commission, 2017). It is expected that the cost of air pollution from road transport will remain high, due to congestion and an expected growing demand for transport. Thus, the current transport system might not be sustainable. CO2 emissions and air pollution from transport are the major environmental concerns related to transport activity. The levels of CO2 emissions are difficult to attribute to specific countries. But clearly Europe's cities are by far from weaning themselves off car dependency. There is still gap between the residents' perception and city authorities expectation regarding EST policy. Residents' opinions are often a powerful influence on city authorities. Transportation is frequently an emotional issue for residents. When there are

problems, they cite it as being among their biggest pain points, and when improvements are made or proposed, residents can become strong proponents who really appreciate the changes.

Overall, residents' perceptions reflect the factual development of transport systems comparatively well—in general, city authorities can expect higher satisfaction in response to positive changes. However, the trend is not linear. In cities with a lower initial base one could expect significant long-term growth of satisfaction in response to positive developments. However, when transport systems reach a minimum of development, satisfaction growth slows down as it becomes more difficult to impress people. It indicates the presence of problem that governments cannot reach environmental protection goals alone. To promote better policy, an approach that bridges the current gap between residents and the city authorities, is needed. Governments need support and guidance from public to achieve sustainable development and environmental goals. There is thus a need to analyze the current political practices and the engagement between policy-makers and civil society in the cities in order to help to shape better strategy and at the same time influence the residents to alter their urban transport behavior.

1.3. Research Objective

The objective of this research is to analyze the theoretical and practical issues, for both policy development and consumer involvement, implied by the use of wider participatory mechanisms related to citizens consumption patterns in mobility of using public transport. Themes that are often discussed lately regarding environmental issues are the need to engage the public more intense. The main technique to increase awareness is usually through the dissemination of information. However, more involvement also means active participation from consumers/citizens in the process of public decision-making as one of several "stakeholders" or "partners". The purpose of this research is to better understand how and why public participation is used in city transport policy and in using more sustainable modes of transport in general and in a number of cases.

1.4. Research Question

The Main Research Question:

How and why is public participation being used in the city transport policy?

Sub-Research Questions:

1. How does city transport policy making look like, in general and in a number of cases?

2. How, why and through which participatory mechanism is the public involved in city's transport policies?

3. In how far does public participation influence transport policies in cities?

4. In how far does their participation in transport making policies influence residents urban transport behavior?

1.5. Defining Concept

For the purpose of this research, the following key concepts are defined:

Public Participation: Involvement of other individuals, organization, or government entities in decision-making or organization process.

Sustainable Development: Economic development that is conducted without depletion of natural resources.

Sustainable Development Goals: The blueprint to achieve a better and more sustainable future for all.

Environmental Awareness: The success of an integral part of the social movement regarding concerns for environmental protection and improvement of the health of the environment.

CHAPTER 2. LITERATURE REVIEW

2.1. Recent Urban Transportation Trends

Urban travel demand has been continuously increasing in European countries. General population growth and rising urbanization have led to the rapid growth of big cities, which are broken by the sudden increase in travel demand. From the supply and demand side, the supply of transport infrastructure and services has lagged far behind demand (Narayanaswami, 2016). City travel demand needs to be realized from the context of differentiated city growth. Rather, the increasing of capacity is possible by small adjustments with little or no investments such as coordinate the signal lights, make transit cheaper for those who need it, and widening of roads. But every city has its own characteristics. In most cases, what works in one city might not work for another, although some valuable lessons can be learned. Despite the fact there are investments in road infrastructure, land use and transportation planning and development, some cities face issues of road safety, traffic congestion, air quality and noise pollution (Narayanaswami, 2016).

2.1.1 Cities' Transport Policy

The cities' transport policy of the 21st century, particularly in the European countries have to address the challenges the sector is facing. It should propose better solutions that minimize the negative effects (i.e. accidents, greenhouse gas emissions, air pollution, noise and environmental effects), while unleashing the potential for transport to further develop its contribution to economic growth and promotes jobs in the cities of European countries. As one of the first general policy fields of today's EU, it was considered important for achieving three of the four freedoms of a common market as stated in the Treaty of Rome in 1957, including the free movement of individuals, services, and goods. The European Commission has currently taken several policy actions which target at helping the EU transport sector to grow into future-proof, more sustainable, innovative, and stay competitive in a rapidly changing global environment (European Commission, 2018).

The shift towards low-emission mobility has already been a goal of the Transport White Paper of 2011 and has been supported by numerous initiatives. Many European countries have

implemented a strategy for low-emission mobility and apply various policy initiatives that focus on:

- An effective framework for low emission alternative energy;
- Roll-out infrastructure for alternative fuels;
- Fair and efficient pricing in transport;
- Digital mobility solutions;
- Promotion of multi-modality;
- Improvement in vehicle testing;
- Interoperability and standardisation for electromobility;
- A post-2020 strategy for all means of road transport, supported by research efforts and investment (COM, 2016).

Cities and local authorities are important to deliver this strategy. They have implemented incentives for low-emission alternative energies and vehicles, encouraged the shift of modal to active trips (cycling and walking), public transport and/or shared mobility schemes, such as bike, car-sharing, and car-pooling in order to lower pollution and make less congestion.

2.1.2 Transportation Planning in the Cities

Urban transportation planning is difficult because actions that are often disliked seem to need to be done keeping the city clean, calm, accessible, endurable and after all sustainable. General public support for changes in the system, which ultimately are all consumers of the system, is needed since it affects everyday life.

Currently, European countries have to cope with transport-related environmental problems coming from the rapid economic growth. European countries have developed unique and diverse transportation planning and management to handle increasing urban travel demands for over a century. For the last decades, city and traffic planners strongly focused on bringing alternatives to driving a car. Most cities have joined the “car-free” movement that aims to decrease air pollution and improve safety among residents. In addition, a number of major cities that are starting to ban cars are located in Europe, though a few others, such as New York, are making considerable strides (Business Insider, 2019). Moreover to applying outhright bans, cities

have perform measures through public participation to encourage cycling and make public spaces more pedestrian-friendly.

2.2. Participatory Method

The trend in the use of participatory method for sustainability policy is seen as a system of democracy. Public participation in sustainability and environmental conservation is very important. This can be seen in the 2030 Agenda for Sustainable Development, which was designed using unprecedented public involvement to the decision-making process. United Nation was making worldwide online survey on the 2030 Agenda involving more than 7.5 million citizens from over 190 countries (Fox and Stoett 2016). Furthermore, the urgency for adequate and more comprehensive democratic participation is also reflected in the Sustainable Development Goals (SDGs) themselves with particular reference to Goal 16. It specifically aims to "Ensure responsive, inclusive, participatory and representative decision-making at all levels" (United Nation General Assembly 2015). Public participation will be a main topic in the so called the High-Level Political Forum 2019. It is a central platform created by United Nation for follow-up and review of the 2030 Agenda for Sustainable Development and the SDGs that supports for the fuller and more effective participation of all States Members.

2.2.1. Different Types of Participatory Method

Participatory method can be viewed as a formal decision process where outcomes are dependent on the acts of more than an individual. Extensive categorization of participatory method can be classified either in terms of the types of decision-making processes or in terms of various levels or degrees of participation (Woltjer et al., 2001). For example according to:

a. *The institutionalization of participatory in legislation*. There is a difference in which participatory processes are institutionalized in legislation. Participation literature distinguishes between traditional public consultation and more modern interactive policy making (Woltjer, 2000). Traditional community consultations are often obtained on a legal basis. This is the purpose of more formal consultation procedures with rules of interaction for both government and society. For policies related to sustainable consumption is only a very limited level of institutionalization in legislation.

b. *The timing of participatory processes or tools in the policy process*. The level of institutionalization has much to do with the timing of participatory processes or tools in the policy process. In a simple policy or planning stages model, all stages can be coupled with meaningful public participation activities. Relevant stages could be (WHO, 1999): (1) assessing needs and assets, (2) agreeing on a vision, (3) generating ideas and plans for action, (4) enabling action, and (5) monitoring and evaluating. All these stages are relevant for policies aimed at sustainable consumption. Some of the techniques and approaches we describe hereafter are particularly suitable for a certain stage.

c. *The methods, approaches or techniques used*. It is possible to define public participation by referring to a certain number of methods, approaches or techniques which are deemed 'participatory'. Table 1 lists several participation methods used and some of their characteristics (Coenen, 2009). One way to structure the decision methods is according to the number and nature of participants involved in a certain approach.

d. The function or purpose of the participation. Different participatory processes or methods have been designed to match the diverse purposes of public participation. In Table 2 the researcher has distinguished some function or purpose of the participation and appropriate methods (Coenen, 2009).

Table 1 Type of participation methods and their characteristics (Coenen, 2009)

Type of participation	**Who can participate and why?**	**What is the mechanism for processing the public's input?**
Focus group	Small group (5-12) - representative of the public	Open discussion on the general topic with little direction from the facilitator. Used to assess opinions and attitudes
Citizen advisory committees	Small group - selected by the sponsor	Usually conducted by local governments and certain major industries consist of representation of major organized interest. Aim to measure community acceptance by sounding boards.
Citizen's juries/Citizens review panels	12-20 member of public – selected by stakeholder	Citizen's juries as representative of the community at large consisting of randomly selected group of citizens to discuss a certain issue.
Public hearings	Interested citizens	Freely structured open forums where all members of the public can listen to proposals and respond.
Public surveys	Large samples representative of the population	Questionnaire for acquiring a representative portrait of public opinion.

Citizen initiatives	Potentially all members of national or local population	Citizens place issues on the ballot for voter approval.

Table 2 Purpose of participation and appropriate methods (Coenen, 2009)

Purpose	**Appropriate methods**
Additional source of ideas and information	Citizens' jury Consensus conferencing Focus groups Deliberate opinion poll Citizens' panel Referendum Teledemocracy
Monitoring and appraisal by citizens	Community needs analysis Priority search Public scrutiny Village appraisal Parish mapping Community indicators
Broadening of public support and reducing the level of conflict by bringing stakeholders (including government) together	Public meetings Planning for real mediation Consensus-building Future search Community visioning Round tables

Sherry Arnstein, writing in 1969 about public participation in planning processes in the United States, described a "ladder of citizen participation" that showed participation ranging from high to low. The ladder is a guide to seeing who has power when important decisions are being made. The well-known example shown in Table 3 is the 'ladder of participation' that distinguished by degrees or levels participations (Arnstein, 1969: 217).

Table 3 Arnstein's ladder of participation (Arnstein, 1969: 217)

8	Citizen control	Degrees of citizen power
7	Delegated power	
6	Partnership	
5	Placation	Degrees of tokenism
4	Consultation	
3	Informing	
2	Therapy	Non-participation
1	Manipulation	

Participation process will be constituted or regulated by such rules. Since participation in decision-making processes is likely to be structured by formal and informal rules that will largely determine how much participation is actually possible, an institutional perspective is a useful way of describing the participation factor. For example, Elinor Ostrom (Ostrom, Schroeder and Wynne, 1993; Ostrom, 1990; Ostrom, 1986; Kiser and Ostrom, 1982) defines:

- *Authority rules*: i.e. who has the authority to put forward proposals, what is the decision-making process about and at which government level is the decision to be made?
- *Information rules*: i.e. the degree to which citizens are offered free access to the information that is necessary to make the decision.
- *Boundary rules*: i.e. who can participate? These range from rules that totally exclude or prohibit participation of ordinary people to rules allowing anybody in.
- *Aggregation rules*: that prescribe which mechanism is used to determine that a valid decision has been reached.

Further details of an institutional perspective to describe the participation variable depicted in Table 4.

Table 4 An alternative ladder of participation, considering institutional factors (OECD, 2002: 16)

Rule type	**← Non participatory**	- - - - - - - - - - - - - -	**Highly Participatory →**
Authority	• Citizens do not have the authority to put forward proposals • Citizens cannot decide on details and cannot decide on policy • The decision is made at the central level	• Citizens and other parties have the authority to put forward proposals • Citizens can decide on details but not on policy • The decision is made at the local level with intervening from central level	• Citizens are the only ones who can put forward proposals • Citizens can decide on details and can decide on policy • The decision is made at the local level
Information	• Citizens receive no information and receive no support in collecting it • Scientific information is the only information relevant to the decision	• Citizens receive information from the authorities and/or private sector but are not supported in processing it • Scientific and local information is relevant to the decision	• Citizens receive information and are supported in collecting their own information • Local information is the only information relevant to the decision

Boundary	• Ordinary citizens have no access to the decision-making process	• Affected ordinary citizens have access to the decision-making process	• All citizens have access to the decision-making process
Aggregation	• The decision is to based on hudgements of the greatest good for the greatest number bu expert-consensus	• The decision must be based on deals between market parties and/or their representatives who make judgements of the various interest involved	• The decision is to be based on consensus resulting from dialogue in the community

2.2.2. Theory of Participatory Method

Participatory method can be influential for policies addressed at sustainable consumption. For instance, actors of participation such as industry, environmental organizations, or consumers lead to the quality of decision-making. Participation has a role to provide government with useful and necessary data for decision-making and to build systematic problems identification and their root cause and to consider and assess alternative solutions. Taking into account the associations of participatory, neither practitioners nor theorist determine full clarity on what successful participation means. The most appropriate are including the level of understanding and directness of participation, relevant question, and also the level of scale participation.

There are main practical barriers to expand public participation opportunities (Coenen, 2009; Kasymova and Gaynor, 2014). Participation is biased against those with more privilege and more resource and no participation process is independent of its social context (Coenen, 2009; Newig, 2007; Woltjer, 2000). Keeping up meaningful participation requires money and time.

2.3. Public Participation in Transportation Planning

Public participation plays very important role in such of transportation-related activities, including planning, creating formal policy, program and service design, monitoring and evaluation. Public participation includes stakeholders in creating and implementing public policies and programs for government institutions, political leaders, or non-profit organizations. This has become a fundamental feature of governance in a variety of public problems. Public

participation can be designed in various ways, guided by several key questions about its objectives, stakeholders, and evaluation steps.

Public participation in transportation planning takes various forms, including just giving information stakeholders of decisions that are being made, asking and using their input on strategy or policies under careful consideration, or collaborating with them to identify and overcome problems. Transport policy stakeholders are those who own a stake in the decision, which might include the general public and/or groups with specific interests, because of their geographical location, transportation needs, or related problems.

There is no common formula to create a good form of public participation. Similar with transportation infrastructure or services, public participation needs to be designed for its specific context. Policy makers have to consider several important factors in creating successful public participation, for example clarifying what parts of the decision are able to change and open for discussion, ensuring public trust in the process, working with professional or expertise, and being easy to access to all stakeholders.

Although public participation requires time, money and skill, it also has a lot of advantages. Resident participants contribute new and necessary information, different point of views to see a problem, and motivation to overcome issues. In addition, public participation can also produce a fairer distribution of limited public resources. The public tends to have a higher level of interest and more informed engagement when given the opportunity to decide priorities, forming decision-making parameters, or influence policy outcomes.

Participatory method produces better buy-in, and can limit delays, errors and lawsuits during project and policy implementation. Stakeholders tend to accept decisions achieved in a participatory manner, even when they do not prefer the outcome, because they believe it was created in a fair manner. In fact, public participation can build trust, knowledge of and interest in transportation problems, and increased relationship and communication between parties who are resources for policy implementation and for solving problems (Quick, 2014).

2.3.1. Existing Public Participation in Transportation

There are many ways to involve the residents in creating transportation policy. Globally, transportation agencies have conducted public participation in a number of methods (Quick, 2014):

Advisory boards. Advisory boards consist of a group of stakeholders recruited to give guidance on a policy project. Commissions, elected officials or project managers, may select participants. Their role is to represent the public at large in order to provide a specific perspective. However, they do not have policy-making authority.

Focus groups and workshops. Focus groups and workshops help policy-makers to get necessary information on an issue through consultation with members of the general public or interested stakeholders. The consultation can be designed for improving policy, evaluating performance, or gaining information about current issues through given a set of questions.

Project review teams. Project review teams help transport professionals to determine transportation projects and provide alternative options. They can review, comments, and rank projects from a pool of proposal.

Deliberative polls. This is the common method for answering the questions that the general public would have regarding policy issues if they become more aware and discuss it in with people with different points of view. Participants are randomly selected by organizers and invited to discuss the issue within small groups. These polls are able to lead to better final strategies about transportation policies.

Structured public involvement. Structured public involvement (SPI) is one of recommended method for engaging the public in design decisions. It consists of several phases such as addressing the nature of the transportation issue and classifying the policy to setting goals together. Public involves in each decision phase and they can give ideas and suggest options to transport professionals. Transport professionals must assist non-expert participants understand the technical aspects of the policies and be responsive to various kinds of perspectives.

Planning charrettes. A method that allows stakeholders to directly experience and simulation design components through collaborative exercise. Planning charrettes help the public to understand transportation options and communicate their questions and recommendations to planners and decision-makers. It usually uses many types of media, for instance photography and 3-D models.

Geographic analysis of public comments. It aims to identify needs for transportation decisions based on geographic information system (GIS). By doing so, the patterns of input about the projects can be identified geographically.

Participatory action research. It involves researchers collaborating with interested parties to conduct research driven by their concerns and questions. Activities include gathering and analyzing data, problem identification, monitoring and evaluating policies.

2.3.2. Challenges from Current Public Participation in Transportation

Key challenges usually come up when designing and managing public participation in transportation policymaking, such as the legitimacy of and trust in the engagement process, engaging expert and other perspectives in technically sophisticated transportation decisions, and engaging diverse stakeholders (Quick S. and Zhao Z.J., 2011).

Trust and legitimacy issues in engagement. One complaint commonly raised by the community about the process of participation is that their involvement does not seem to affect the decisions. This cause hatred when stakeholders are invited to participate, yet there is a little bit that can be changed in existing policies that have already been decided. Sometimes conflicts occur when the organizers have not communicated the purpose of participation, and participants come with different expectations. Transport planners and policy makers must also communicate what can and cannot be decided through the process of involvement. Many transportation parameters are mandated by the federal or state laws, which can limit the power of local or public actors to influence the result of a project. Since transportation initiatives take place in a multi-jurisdictional environment, it might be difficult for participants to understand which agencies are responsible for which action.

Involving expert and other perspectives. One of the challenges in transportation planning is how to involve both everyday stakeholders and experts in technically sophisticated decisions. Organizers may worry that providing the public influence over decisions are left to those who have engineering background or other special skills and expertise will be produced choices that do not consider security, equality, efficiency, environmental protection, and political feasibility. They might also be worried about limiting their managerial freedom to act firmly when needs arise, or about the resistance that well-organized groups can increase when they are having more complete information about the projects. Making problems and options understandable to the public is another challenge. Good public engagement practice can help overcome these challenges and provide meaningful input.

Engaging diverse stakeholders. The "public" concept is very complex because it consists of different interests, preferences, and diverse socioeconomic status. Generally, residents with higher socioeconomic status are more likely to have time, money, citizenship involvement skills, or Internet access to participate, and those who have larger community and collective social capital are more involved or manage more influence. As a result, the residents or organizations those who participate in public participation may not represent opinions and knowledge of the public at large.

2.3.3. Why Use the Method of Public Participation?

Based on an overview of several public participation theoretical approaches, current practices and challenges as mentioned above, the researcher would like to argue the question that still often arises. Why are residents important when designing a city? Why they should be involved in policy making? Public participation is a process of information exchange to inform the citizens fully and continually about plans for and activities in the planning process. Comments questions and criticisms are solicited from the citizens and considered as part of the planning activity.

There are some arguments from the literature why public participation is important. First, one of the keys to successful public participation process is feedback where in planning staff responds to citizens indicating how all-specific citizen comments questions and criticisms were considered. Moreover, the process includes well-organized and publicized community meetings,

considerable media participation and a continuous flow of information (Shunk, 1992). Second, Coenen (2009) explained that public participation in terms of decision-making from an instrumental perspective would improve:

1. The information available for the decision (e.g. a broader range of alternatives, or a view from the public on the consequences)
2. The assessment of the alternatives (additional monitoring, appraisal, and judgement by the participants)
3. The potential for action and implementation (through support building and conflict reduction)

On the positive side, public participation process in instrumental terms has focused on efficiency and effectiveness. In other words public participation may offer, at least, half of the solution for problems in non-public participation processes. For example, problems occurred when policymakers inadequately considering public values and preferences, not explore innovative solutions, and the public distrust of government policy on implementation.

From the government side, complaints against public participation can cause time delays. In addition, the arguments used over decades against public participation processes are that participants are not prepared, that professionals and experts are needed to make the decisions for them. On the contrary, there are normative objections from the public side, such as the non-representative input to decision-making, but also very instrumental objections, for instance the costs of participating and the difficulty in protecting one's own interests (Coenen, 2009).

However, why a city does public participation in transport policy is their choice. Of course the cities can agree or disagree with arguments from the literature as explained above, but that are not normative statements. It does not mean that a city has to do public participation, but we have to ask the cities why they think they should do it. In the end, why public participation is important is something that we have to ask the cities. Further explanation about why cities are doing public participation will be found in the case studies.

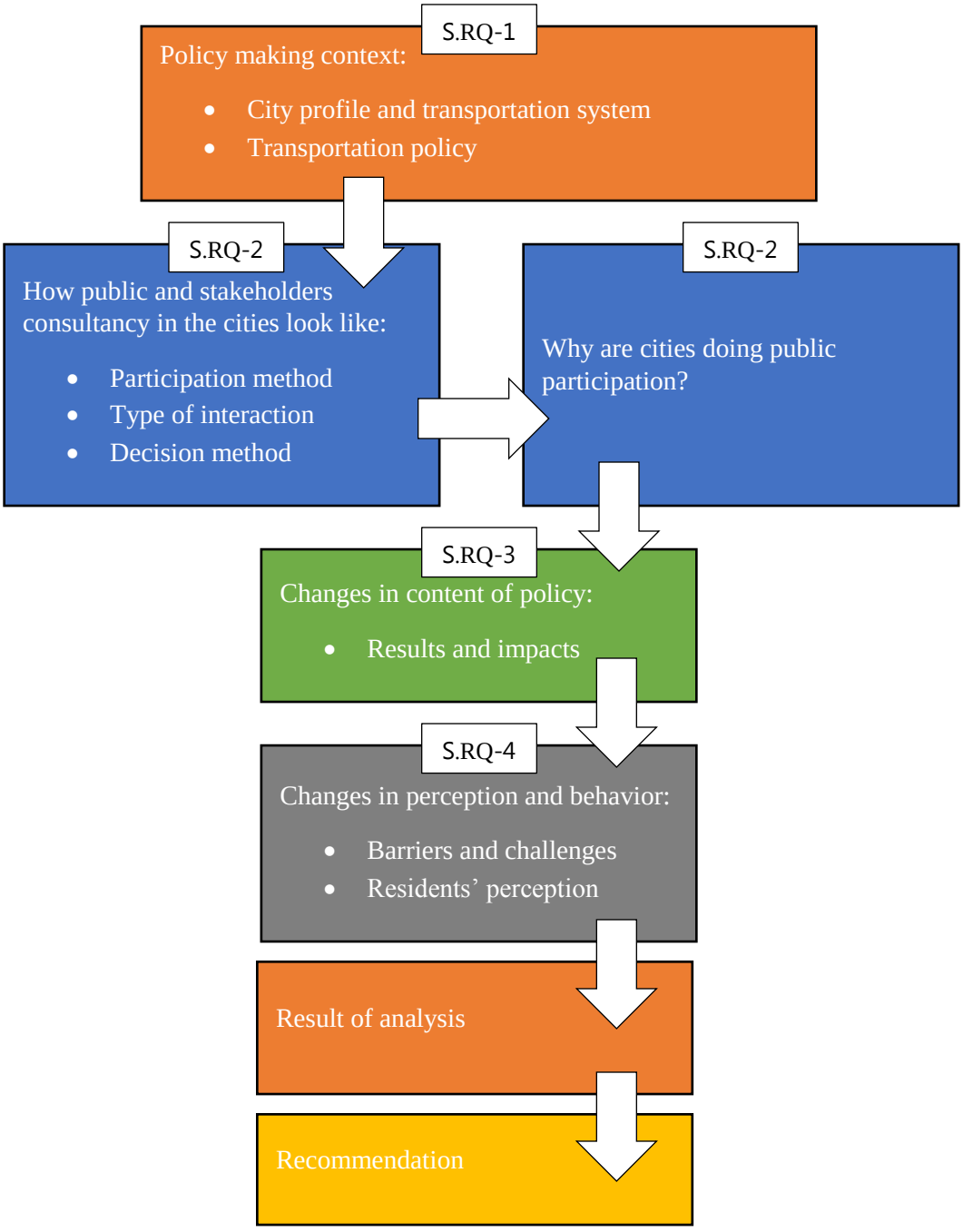
In general, the capacity of decisions adopted by political representatives to achieve set goals compared to decisions made through citizen collaboration can be measured. Therefore the

researcher chooses for public participation approaches and develops the research design and analytical framework as explained in more detail in the next chapter.

2.3.4. Analytical Framework

A schematic representation of analytical framework is shown in Figure 2:

Figure 2 A schematic representation of analytical framework



The data analysis will be conducted with the following sequences:

a. First step of data analysis is the researcher outline the process by which the city's transport policy was produced. This step will answer sub-research question 1.
b. Second step of analysis is the researcher explains how public and stakeholders consultancy in the cities look like and why cities are doing public participation that will answer sub-research question 2.
c. Third step of analysis is the researcher shares any evidence or research, which indicates what actions the authority can take, what kind of information channels do the participants have to influence the decision and how the public information is processed. These will answer sub-research question 3.
d. Fourth step of analysis is the researcher shares any evidence or research, which indicates a better understanding of evaluation both residents' overall level of satisfaction, and residents' sense of whether the policy or the system they used was changing for the better. In addition, the researcher presents the statistical data that describes how many people who are starting to and have changed their transport behavior from private vehicle to alternative modes of transport. These will answer sub-research question 4.
e. Result of analysis step will bring out the findings of each aspect of the process and effect of public participation.
f. The last step of analysis will answer the main research question and the potential outcomes of this research can be used to better understand how and why public participation is used in city transport policy and using more sustainable modes of transport in general and in a number of cases.

CHAPTER 3. RESEARCH DESIGN

3.1. Research Strategy

The research uses the multi case study approach as its strategy. It means the research will examine more than one case study and compare with each other. An in-depth study is applied by using various methods for generating data.

3.1.1. Research Unit

The research unit of this research is the EU cities; consists of 4 cities.

3.1.2. Selection of Research Unit

The researcher would like to relate to current theory where participation could provide useful data and more information in the formulation of city's transport policy and influence the public's general attitudes to the environment. The reason why the researcher is using big cities as research unit is because of big cities requires large processes. Large processes of participatory decision-making involve large numbers of consumers. In this context, the consumer equals the citizen. Consumers could influence on policies through consumer power in the market and politics. Consumer power implies that large numbers of consumers can influence environmental choices and the interrelation with the political system (Woltjer, J., Huitema, D., Coenen, F., 2001). Another reason the researcher looks bigger cities is to learn much more from bigger cities as they have a big urban transport system and they have more choices of sustainable modes of transport. Furthermore, in big cities, public transportation is as reliable as driving, more efficient, less stressful and cheaper, where it is more interesting to analyze.

No two cities are the same, but some are more similar than others. To make a reasonably comparable sample, the researcher narrowed down the EU cities based on size, level of economic development, transportation system characteristics, and availability of data. On that basis, the researcher selected 4 cities, namely Paris, London, Madrid, and Milan, whose transportation systems are being in the top ten cities: overarching urban mobility ranking (Knupfer et al., 2018). The urban mobility ranking is useful to assess the mobility maturity and performance in the cities. The urban mobility ranking has also reviewed policy initiatives undertaken by cities to

improve the performance of urban mobility systems. The filters for the city selection process are depicted in Figure 3 below:

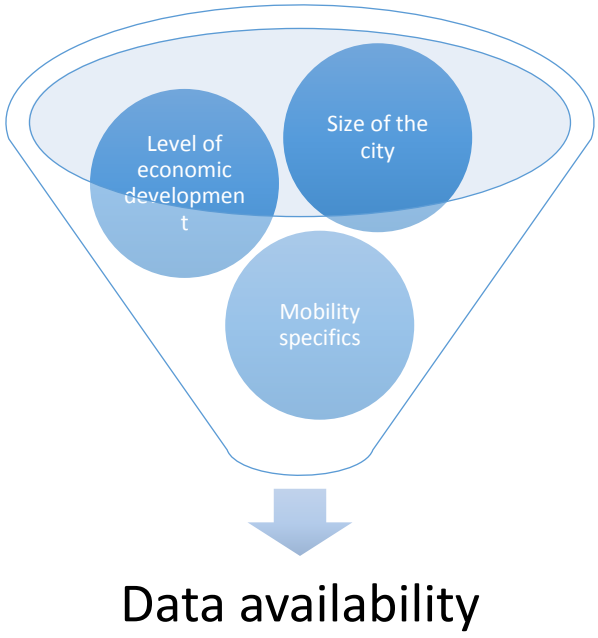


Figure 3 The city selection process: selected cities are located in 4 European countries

Filters applied as follows:

1. Size of the city:
    a. Population of urban agglomeration: at least 5 million people.
    b. Significance: Among the top three cities in the coutries.
2. Level of economic develoment: at least $10,000 GRP per capita.
3. Mobility specifics: motorization more than 150 cars per thousand people
4. Data availability:
    a. Quality of data: more than 50% of data is available from international sources.
    b. Expert assessment: leading positions in at least two of the analyzed urban mobility rankings given a population of more than 3 million people.
    c. Number of size of public participation: 400 people in each of 4 cities participated.

3.1.3. Research Boundary

Research boundary is used to decide the limitation of the study and its consistency. Thus, the goal of study can be achieved within the specific amount of time.

This research has potential limitations. First, researcher used the same characteristics of the city that defined as capital cities to get the outcome of public participation. Although Milan is not defined as capital city, the researcher assumes that it has similar characteristic as a capital city. This might lead bias to the results of overall analysis and subgroup analysis toward the number of influence of people. Second, the researcher was unable to assess the island cities such as Levkosia, Reykjavik, and Valletta that have different characteristic with capital cities, because data on island cities were not available in this research. Third, the researcher might have faced the problem of having limited access to survey certain people or organizations as respondents as well as time constraints. Due to limited access and time constraints, the researcher need to design the research using secondary data combined with primary data which involved at least one expert assessment and/or NGO to assure the research finding is still reliable and validate.

3.2. Research Material and Accessing Method

The researcher will gather data and information by using various methods, such as document and media analysis, observation, and in-depth interview in order to answer the research question. The document analysis will be conducted with the public participation report within European cities, literature about public participation, and website of the European statistics. The observation will be held within the sustainable mobility index and city policy. In depth interview will be held with mobility expert in urban transportation.

The data and information required and its accessing method in this research are identified through the set of sub-research question, as displayed in the following Table 5.

This research is subject to ethical considerations concerning purpose, source of funding, methods to be deployed and wider value and impact. It is important that risks in carrying out this research are clearly articulated and weighed against the potential value of it so that all those involved proceed with informed consent. Based on the application procedure with the BMS Research Ethics Committee, the researcher will seek informed consent and respect the

confidentiality and anonymity of research respondents in purpose of ensuring the quality and integrity of this research. This research is independent and impartial therefore the researcher will ensure that the participants will participate in this study voluntarily. The informed consent form for individual interviews will be attached in the Appendix.

Table 5 Data and Information Required for the Research and Accessing Method

Research Question	Data/Information Required to Answer the Question	Sources of Data	Accessing Data
How does city transport policy making look like, in general and in a number of cases?	i. Outline process in the creation of the city's transport policy; ii. How does the City Council manage the transportation plan and exercise transport policy?	**Secondary Data:** i. Documents (indicators calculated based on geospatial data); ii. Media: website of the European statistics; iii. Literature.	Content Analysis and Search Method
How, why and through which participatory mechanism is the public involved in city's transport policies?	i. The function of public participation; ii. People support for transport policy.	**Secondary Data:** i. Documents (city's transport strategy, city's public consultation report); ii. Media: website of the European statistics; iii. Literature.	Content Analysis and Search Method
In how far does public participation influence transport policies in cities?	i. Number of size of public participation; ii. Number of influence of government aims to improve the policy; iii. Who is involved in the public participation? iv. What is the outcome of public participation?	**Primary Data:** Individual people (Transport professional of public government body) **Secondary Data:** i. Individual people ii. Documents (statistical indicators collected from official reports, databases, and external publications)	Questioning: Face-to-face individual interview Observation and content analysis
In how far does their participation in transport making policies influence residents urban transport behavior?	Public perception in terms of satisfaction and perception of changes: i. Percentage of respondents who are satisfied with specific aspects of the current public transportation; ii. Percentage of respondents who are satisfied with changes in public transport (past three to five years); iii. Percentage of respondents who are starting to adjust their behavior in using more sustainable modes of transport.	**Primary Data:** Individual people (Expert assessment and/or NGO) **Secondary Data:** Documents (residents' satisfaction indicators based on survey, amount of attention, level of perception)	Questioning: Face-to-face individual interview Content Analysis

3.3. Data Analysis

This chapter is about the process of evaluating data using analytical and logical reasoning to examine each part of the data provided. Data from different sources is gathered, reviewed, and then analyzed to form some sort of finding or conclusion.

3.3.1. Method of Data Analysis

The researcher will use several specific data analysis methods as described in Table 6, some of which include analyzing quantitative data and qualitative data. Quantitative data are taken from several cross-country comparative surveys. The qualitative data concentrate on the experiences in the number of cities of European countries where the effects on the field of public participation processes are becoming visible.

Table 6 Data and Method of Data Analysis

Data/Information Required to Answer the Question	Method of Analysis
How does city transport policy making look like, in general and in a number of cases?	Qualitative: Content analysis is used to outline the process by which the city's transport policy was produced.
How, why and through which participatory mechanism is the public involved in city's transport policies?	Qualitative: As input for analyzing the correlation of how public and stakeholders consultancy in the cities look like and why are cities doing public participation.
In how far does public participation influence transport policies in cities?	Quantitative: Descriptive statistics is used to help the researcher summarize the data and find the patterns.
In how far does their participation in transport making policies influence residents urban transport behavior?	Quantitative: A percentage is used to express the perception of urban residents. The philosophy behind this approach is that the specifics of how city transportation systems function is important, as is the satisfaction their users have with them.

3.3.2. Validation of Data Analysis

This research provides a comprehensive view of transportation systems in four major European cities. The researcher will analyze different indicators (e.g. what is the participation process about; who can participate and why; do the participants have the authority to put forward proposals; what kind of information channels do the participants have to influence the decision and under what conditions are they open or closed) collected from official reports, databases, and external publications then compare the result of analysis with survey residents and tap into the expertise of transport experts to present an authoritative picture of urban transport policy and

behavior. The research relies on a mix of extensive quantitative analysis, experts' opinion, and urban residents' perception. The philosophy behind this approach is that the specifics of how the process by which the city's transport policy was produced is important, as is the effect of public participation in perceptions and behavior of urban residents.

CHAPTER 4. CASE STUDY

4.1. Case Description in Paris

The city of Paris has defined its "2020 and beyond" strategic framework for a smart and sustainable city. This strategy includes their ambition for open government and citizens' involvement. Yet the city is coordinating a community of stakeholders and facilitating the creation of new public services and systems devoted to a better city management and an optimized quality of public services in the urban transportation system.

4.1.1. Policy Making Context

City Profile and Transportation System

Paris has so many populations reaching around 7 million inhabitants. It is not only the home of French politics and the cultural capital of France, but also the main financial and business center. Paris contributes to nearly one third of the France gross domestic product. There are approximately 24 million people who travel every day in the city. This is because Paris has a large number of commuters, economic interdependencies, and discrepancies in the areas between working and residential areas within the city. In fact, more than 350 million tons of freights are taken from or to Paris every year. This centralization of activities and citizens on the territorial of 12,000 km^2 leads to the battle occupation of space and cause great challenges on the transport's policy and regulation. Another key point, Paris is the only city where the majority of its citizens walking to and from their workplace. The average distance walk people walk to work or home is 0.74 km and around 24% walk more than 1 km to reach their destination (moovitinsights, 2019). The population is quite dense so that it is easier for citizens to walk. In addition, the city has an amazing number of people commute using public transport. The percentage of public transport users who transfer lines at least once in Paris is 75%. Meanwhile the average amount of time people spend using public transport is 64 minutes (moovit insights, 2019). However, it still has car-congested roads and away from the perfect bike lane network that discourages cycling.

Paris has so many subway systems and has a strong transportation network. The public transportation has been modernized and expanded since the early 1970s. Paris has five transport types, including: Lightrail, Metro, Train, Bus & RER. The underground rail network is now

considered as being among the best of the world's major cities (Britannica, 2019). Established in 1900, trains as the main lines of the metro subway system are very fast and frequent. Over decades, networks have been extended into the suburbs, and the first fully automatic line was opened in 1998 to serve the city center. Réseau Express Régional (RER), a high-speed express subway system consisting of cross-Paris routes, extends far to the outskirts of the city, and at some point the routes have been integrated with the main line rail network. The hub of the system is Chatelet-Les-Halles, known as the largest and busiest underground station in the world. Moreover, the city transportation system has an extensive bus services and tram lines.

Transportation Policy

Paris has commitment to sustainability and has a longstanding of policy promoting public transportation as well as to actively develop cycling infrastructure and make the city more pedestrian-friendly. Urban Transport Plan as one example of transportation policy is mandatory in France since 1996 for urban areas of more than 100,000 inhabitants. The first one for Ile-de-France Region (including Paris) come into force in 2000 and was evaluated in 2006. Based on the final assessment of the first plan, Paris-Ile de France began the review process for the development of a second plan in 2008. The Urban Transportation Plan means to consider various different interests and needs and to ensure the coherence and sustainability of regional development in the long run. The city forecasts an increasing trend in travels up to 2020 (+7%) and concerns a transportation modal report such as increase of 20% travels in public transportation, increase of 10% travels in active transportation (walk and cycle), decrease of 2% the use of car and both wheels for travel (Urban Sustainability Exchange, 2019).

Important to realize, Paris was one of the first cities in the world to have a bike-sharing program and to convert a highway to a place for walking and exercise. The city has invested heavily in self-service public transportation. In 2007, Paris' Vélib' scheme was launched and it became the largest bike sharing initiative. However, despite the scale and ambition of these schemes, Parisians remain highly reliant upon their cars. Although the first Urban Transport Plan showed a good example of integrated urban governance at the metropolitan level, there is now policy changes that aims to overcome implementation weaknesses of a former plan and to take into account development trends until 2020. The policy goal is to optimize distribution between

each method of transport, reduce the number of cars, and encourage public and sustainable transport methods (e.g. bus, cycle, walk). In 2011, the launch of Autolib', the city's all EV sharing service, reinforced Paris as a green transport trendsetter. The scheme includes a fleet of around 4,000 EVs, used by over 126,000 subscribers, offering a future solution to Parisians' dependence on private, polluting cars (Cebr, 2017). In 2016, the Cityscoot project extended Parisians' options further with a moped-sharing scheme, introducing a fleet of electric scooters that emit no noise or fumes. As a result, relatively high levels of shared transport development characterize Paris. Furthermore, the city is planning to create more car-free zones and making passenger safety the main priority of public transport network.

Paris plans to continue with its commitments to mobility. At the heart of this commitment is the major investment in the Grand Paris Express rapid metro, a system of four new state-of-the-art lines that will extend the dense and highly interconnected network in the urban region. When completed, it is expected to carry two million people a day and will transform the lives of many Parisians. Grand Paris Express are planned to open in stages through 2030 (STIF, 2014). Additionally, it is expected that Grand Paris Express project will be instrumental in reducing the time Parisians spend getting to and from work every day. Other major projects include the extension of the tramline that surrounds Paris and new rapid bus services in dedicated lanes. The city is also undertaking measures to resolve the persistent problem of air quality in the city center and to limit surface parking. Taken together, these developments suggest a mobility model in Paris that is increasingly diverse, accessible and inclusive, economically durable and environmentally sustainable.

4.1.2. Public Engagement and Participation Process

Participation Method

The Urban Transport Plan for Paris (Plan de Déplacements de Paris) entered into force in 2001 and covered the 2001-2005 period. It based its analysis and recommended actions on the 1994 Schéma Directeur de la Région Ile-de-France (SDRIF) and set three main objectives (STIF, 2000):

1. A 3% reduction in car traffic for the overall Paris region;
2. A 2% increase in the use of public transport, namely for commuter and school trips;
3. A 10% increase in the use of walking and cycling as main transport modes for short distances.

The participatory process has started in 2005 in order to evaluate the Urban Transport Plan for Paris the 2001-2005 periods. The researcher defines this period as *the 1st phase*. Public participation and consultation of strategies aiming to find a better balance between transportation and environmental issues were organized. The main objective of public participation is to solve potential and existing conflict interest in the "use" of the city, between different modes of transportation, transportation purpose (e.g. business, leisure activities), and to limit negative impacts due to transportation (air and noise pollution). The main outcomes predicted by the plan are regulation, spatial planning, and allocated total budget for city projects.

In *the 1st phase*, the city of Paris used the citizen's juries and community analysis as a tool for engaging citizens on a transport issues. It involved extensive public involvement, with residents, different district associations, police departments, families and students' councils, chambers of commerce and trades councils were asked to express their views on the proposed plan. Citizen juries are involved in creating a "jury" a representative sample of citizens (who is chosen in a random manner). All issues linked with transportation (e.g. economic development, environmental issues) are considered to be one of the effects of the community and where a representative and democratic decision-making process is required. The "jury" is a range of possible alternatives. Citizen jurors consider the alternatives and make the most attractive alternative for the community. They have a decision as they would in legal terms, often in the form of a report. The report may include recommendations for future actions or directions.

In 2007, the result of *the 1st phase* found that only half of the planned measures had actually started and the objectives had not been globally achieved, even though results were different when looking at the effects of the measures within or outside Paris. This was also due to the limited time frame for implementation of the Plan (five years). Actions from the plan (e.g. adapting spatial planning for public transport, cycling and walking; giving priority to walking;

increasing attractiveness of public transport; improving the accessibility of transport modes for all, etc.) have been implemented but not much direct effect derived from it. This confirmed the decision to revise the plan, which was approved at the beginning of 2007 after a participatory process that had already started in 2005.

The new Urban Transport Plan for Paris for the period 2014-2020 was conducted in two main terms as follows:

1. From 2008 until June 2009: examine definition of challenges and first strategic direction,
2. From September 2009 until the end of 2010: objectives accuracy and action's definition.

The responsible institution for the plan's development was the Ile-de-France Region. The process was coordinated by the STIF, the public authority responsible for transport development in Ile-de-France. Consultation of local institutional authorities was organized by: communes, public bodies for inter-municipal cooperation, and departments. Then, the environmental authority presented its opinion on the plan's draft. Finally, the French State gave its opinion on the plan. The fact that the region was identified as the leading institution allowed a better understanding between supra- and intra-national interests. Moreover, the inclusion of others institutions in the draft process was organized in a bottom-up approach with the smaller entities first enquired (the communes) and the state only on the latest stage, so that the plan could develop from the beginning a precise approach of challenges on the local level.

Why are cities doing public participation?

In France as elsewhere, the economic crisis has turned into a social and political crisis through the weakening of social cohesion and democratic consensus. A great number of citizens doubt that elected representatives can understand their aspirations and create a framework that will fulfill them. This impression has resulted in an increase of voter abstention and a loss of faith in democratic institutions. The city of Paris aims to break this cycle urgently as it endangers its democracy.

Such a break requires the opening of public action — previously the preserve of local government — to citizens, letting residents involve themselves in every discussion and decision that concerns them. The Paris city council saw the public participation as a means of responding to the crisis of confidence that has arisen between citizens and politicians. Its evolution since then has been a great experiment in the democratization of public action.

This means giving citizens the ability to develop proposals for their city, to communicate with the administration and municipal service experts, and to decide how to use a significant part of the public budget by voting for their favorite projects. The city council was seeking informed views of residents and allowing residents to monitor and assess the projects.

The city council thought that such measures must be conceived and developed in a participatory way, and not just imposed from the top down. This is the only way to guarantee more openness, more transparency, more collaboration and more trust between the citizens, their institutions and their elected representatives.

Type of Interaction

Parisians and civil servants were invited to take part in a public consultation dedicated to the improvement of urban transport systems. The number of participants was around 40,000 people and the targeted participants were lay public, elected public officials, and appointed public servant. The outline of participation process was open to all Parisians and random selection was applied. Public hearings/meetings, new media (e.g. internet, texting) and public report were used as communication of insights and publicity participation process. Public surveys were also conducted at the major access points to public transport in the city, so as to secure the broadest coverage in terms of users.

The public participation processes are at the core of city's Open Government Partnership (OGP) strategy. In practice, participation includes 122 neighborhood councils, youth council, and local council of non-EU citizens (OGP, 2015). The citizens were classified into several groups such as collective projects group, neighborhoods councils group, web-registered group, randomly selected Parisians group, a representative of the Parisians Youth Council and a representative of the council of students from Paris group. The function of the mixed citizen advisory boards are to learn each other and gather some necessary information related in various

transportation projects and issues. The Citizens Advisory Committee (CAC) actively participates in helping examine traffic solutions, providing input to STIF's transportation studies and communicating with their constituencies. In summary, CAC as a method of public participation leads to provide a specific perspective. On the whole the public participation in Paris involves discussions, dialogues, deliberations, informal social activities and express opinions for the purpose of promoting citizen involvement in urban transport policies and process.

Decision method

Citizens' juries are one of many ways of consulting the community and inviting to participate in decision-making. Participation processes like citizens' juries are a way of providing a transparent process for involving and bringing together experts, ordinary citizens, service providers, interest groups and the decision makers. Moreover, citizens' juries emphasize deliberation and interaction. These attributes encourage learning both amongst participants and between participants and officials.

The process usually begins with a decision-maker deciding to convene citizens' juries in the first place. The authority that convenes the jury must be independent. Therefore, an expert practitioner organization is seeking to organize and deliver the jury. The core of the citizens' juries' method is deliberation. During the deliberation phase, jurors will conduct in-depth discussion regarding the evidence they have heard and work towards developing a set of recommendations or making a collective decision, depending on their remit. Moreover, it might be necessary to narrow the number of recommendations or issues under consideration. This may be done through a process of consensus, or by voting.

A Jury will produce a final report detailing their recommendations. After the Citizen jurors provide the alternatives for the community, the Advisory Committees give provide guidance on a policy project. They offer recommendations for future actions or directions. Paris has used the public meetings to inform the public about the proposal. In the final stage, Paris used consensus conferences to build a small group together for in-depth discussion and interaction with experts. After that, jurors presented the final draft to decision makers for consideration. Next phase includes an evaluation that is filled out by the jurors. The jurors are asked to evaluate the process itself, the staff, and if they believed the process was biased or not.

This evaluation is added into the final report that is made available to the public. In conclusion, the final decision methods in Paris' participatory process are made collectively through consensus.

4.1.3. Affect Changes to Policy Content

Results and Impacts

Public participation quality relies mainly on citizens' idea, involvement, and proposals. The appropriation of the process by residents' themselves affect changes to the rapid expansion of participation and of proposed projects in all aspects of urban policy. Public participation in Paris has changed government management methods at the city-levels. First, city council responds and applies transportation programs much faster compared to the conventional ones. Second, they consider public responses over the last three years when drafting policies content (Cabannes, 2017).

In practice, Paris city council requires the participation of more than one directorate and therefore internal collaboration between two or more teams. A growing administration aims to improve democracy and dedicate to citizenship engagement. Another extraordinary aspect is how public participation in Paris has involved a huge and hierarchical administration engaging around 50,000 civil servants. The Mayor of Paris designed the system horizontally and vertically. Horizontal system means that a steering committee of public participation consists of personnel from different directorates meets every day and conduct internal meetings. In addition, the cross-directorate has to decide the eligible projects in the selection phases. Vertical system means that the permanent public participation team of nine people keeps contacts with civil servants in the 20 districts and monitors the various participation channels or groups.

Paris is characterized by a high-level of complexity; the plan is composed as a tool helping to define a prevalent transportation policy and relate it with spatial planning. The document complies with previous planning documents detailed at the regional level (spatial and environmental planning) and constrains future local planning documents within its spatial area to

be compatible with its recommendations. This far, the plan tends to coordinate planning policies at all spatial and institutional levels and to affirm common planning aims and principles.

The following aspects are input from the participatory process that has been considered to change the policy content of the Urban Transportation Plan for Paris (Plan de Déplacements de Paris, 2007):

1. Increasing urban modal share in favour of public transport, taxis, cycling and walking,
2. Improving public transport,
3. Reducing car traffic,
4. Air quality,
5. Safety.

The elaboration phase of the plan registered a high rate of mobilization on the side of the responsible authorities (around 300 communal notification were received). It shows the interest for the plan and the eagerness to have influence on it. It is not yet possible to conclude on the future implementation grade of the plan, but the participation aspect can be seen as a potential success factor for its development and effective appropriation by authorities. As shown above, a long duration of public participation (more than 1 year), which enabled the city council to set a broad participation process, allowed time to examine the results of the former plan and to develop a better transportation strategy.

4.1.4. Behavioral Change of Urban Transport

Barriers and Challenges

The two major challenges indicated are the existence of different interests between stakeholders and the operational implementation of the plan.

Possible conflicts in transportation policy are so many because the interest of each stakeholder (private/public; individual/collective) is not always the same as the public interest. Through participation practices stakeholders could express their own interest and vision for transportation organization. Eventually, the plenary meeting of Ile-de-France, which is the

competent legal institution for transportation organization, voted for the plan's final version and thus could adopt a document conciliating interests.

The evaluation of the previous plan revealed its absence of the operational character. The new plan is aimed toward concrete and realizable actions. Therefore, each action is associated with estimated realization cost, a supervising actor and potential financing of the action.

Advisory committees have been expected in order to follow, evaluate and if necessary reorient priorities and actions of the plan. Purpose of this evaluation in real time is to guarantee the effective implementation of the plan and its coherence with current challenges in a changing environment.

Residents' Perception

Paris has a distinctive and passenger-friendly transport system that emphasizes public transportation and non-motorized transport modes. The Mayor of Paris has purposely initiated a shift from cars to pedestrian and bicycle friendliness (O'Sullivan, 2017). In addition, the road infrastructure is continuously being developed in order to improve the city's transport system. A number of streets and districts have been already turned car-free and the city council does not plan to stop. It turned out that the initiatives of a sustainable transport policy affect the changes in residents' urban transport behavior. Paris holds position as second best ranking for "preparing for future" and at the fourth position of "condition for change" in the urban mobility index compared to many other European cities (Cebr, 2017). Although private cars are the main mode of transport, the statistic of the high reliance on private vehicles starting to decrease. Moreover, citizens are more aware of energy efficiency and they want to keep pollution levels low (Cebr, 2017).

Regarding the residents' perceptions, Parisians welcome about transport sustainability, particularly about the eco-centric initiatives that Paris has roundly applied in a couple years. One of the most distinctive is opening up the first fully electric bus lines, and plans to complete two other lines to test alternative battery mechanisms. The city plans to have a 100 percent "green bus" fleet by 2025. Public transport is also mostly appreciated. Residents delight how efficient it is now and how improved the rail infrastructure is. From the study and collected opinions regarding the aspects of transport systems from two sources (experts and survey of residents), it

can be showed that Parisians satisfied with overall situation in public transport are 68%, and Parisians satisfied with recent changes in public transport over the past three to five years are 67% (Knupfer, S. et al, 2018). Furthermore, the study carried out by the mobility observatory of the UTP (Union des Transports Publics et Ferroviaires) in Paris revealed French people regularly use public transport is 70% in 2018 (Union des transports publics et ferroviaires, 2018). It increased 3% compared to 2015. Paris' remarkable shift did not occur on its own, and it did not happen overnight. The city's recent leaders have gone above and beyond their predecessors in pedestrianizing the city, but earlier mayors laid key foundations for their work (Héran, F, 2011). In conclusion, a vision of the city's leaders to promote citizen involvement in urban transport planning and policies was a good start to be able to increase knowledge and interest in transportation problems. By understanding the consequences of transport to residents' health and the environment, there is a possibility that citizens are willing to change their behavior to leave their private vehicle and start using public transport in the future.

4.2. Case Description in London

The second case study deals with the way city residents can review the content of the draft city's policy direction and give suggestions over the policy. A massive population growth in London keeps increasing the pressure on the city's transport system. There were remarkable changes how the city's residents travelled recently, but the statistic of car use is still too high. People still rely on their cars because street conditions are not designed to encourage walking and cycling, because undependable services or overcrowded public transport, or because alternative choices other than car use in some parts of London are still few. For all of these reasons, the Mayor of London makes new draft transport strategy aims to change the way people choose to travel and prioritize public transportation, cycling, and walking by setting up the target to increase their share of usage to 80 percent by 2041.

4.2.1. Policy Making Context

City Profile and Transportation System

When we talked about London, it is very easy to see why London is a hub for everything, namely art, amusement, commerce and various kinds of cultures. There are many reasons why

everyone wants to stay, study, work and holiday in London. For example, the city has some world-class universities, namely Imperial College London and University College London. Second, it has 300 different languages are spoken (The Boston Consulting Group, 2014). Additionally, London is a city where 40% of the world's foreign equities are traded which is comparatively greater than that of New York. Outstandingly, London Fashion Week generates over £100m of orders and over 32,000 hours of digital content watched in the United Kingdom from more than 100 countries (Greater London Authority, 2019).

Greater London is the most urbanized area in the United Kingdom, and the most densely populated city in the European continent. It has more than 8 million inhabitants. Around 15% of the country's inhabitant is centered there, comparable in national significance to the urban agglomerations on Paris. Compared to the country's other urban areas, London's overall population density is considerably higher. It is comparable to that of Greater Paris, which consists of a large urban sprawl around the city proper. There are so many people commute in London and approximately more than 350,000 people flock to London City every day.

London was the first city in the world to have an underground railway, also called the 'Tube', manages up to 5 million passenger journeys per day and now has more than 1.34 billion annual passengers. Additionally, London is a center for transportation with more than 100,000 flights a month going to and from destinations from around the world. The local bus network in London is one of the largest and most comprehensive in the world. Over 8000 (London Data Store, 2016) scheduled buses operate on over 700 different routes (London Buses, 2007). Over the year this network carries over 1.8 billion-passenger journeys. Not to mention the fact that over 83% of 808 passenger kilometers in 2017 were by car, van, or taxi, which is the highest volume ever recorded (Department for Transport, 2018). Based on personal travel behavior data from the National Travel Survey (NTS, 2017), around 49% of taxi or Private Hire Vehicle (PHV) were taken for leisure purposes and 51% for other purposes (e.g. shopping, personal business and commuting).

Transportation Policy

Sadiq Khan, who is currently serving as the Mayor of London, sets the policy direction to enhance the transport network and to manage it more efficient and passenger-friendly by creating

the draft Mayor's Transport Strategy (MTS). Along with this, policies aimed at cutting emissions have worked – residents generally rely on public transport, rather than private, and Londoners are some of the most energy efficient urban dwellers in the world. As part of an outline process in the policy making of the city's transport policy, the Mayor of London is necessary to exercise his role and responsibilities for the planning, monitoring and development of transport. Refer to Greater London Authority Act 1999 (GLA Act), the Mayor is obliged to make and publish a transport policy and to maintain that policy under review. Therefore, a public and stakeholder consultation has been conducted on the draft of MTS.

The existing MTS has been applied since 2010 and it has contributed great improvements in the transportation system. However, a decision-making to revise the existing MTS has been decided by the Mayor in order to align with the recent strategic direction and current climate issue. The first step in policy-making context is to involve residents in a public participation process and the second step is to make a number of changes to the MTS' draft based on responses and the results of the participation process. The third step is to approve the suggestions of the revised version and final text in order to legalize it. After having approval, the revised MTS will replace the 2010 MTS.

A various aspects of concerns and opportunities for improvement were created across the policy changes of the MTS. Notable issues included a vision in achieving the *Healthy Streets and Healthy people* that lead to better mode shift in outer London, allowing growth in low emission vehicles, and managing a clearer freight strategy (including rail and river). Another issue is about reaching *A good public transport experience*, in particular development in accessibility and affordability of public transport as well as good customer service. In addition, extensions on rail capacity (e.g. tram, tube) are equally important. Third issue is regarding the *New homes and jobs* that point out on the future of river crossings and accessibility of South London to Heathrow. Fourth issue is about the Delivering the vision, which concerns the future new technology and funding opportunities specifically related to the devolution of Vehicle Customs.

4.2.2. Public Engagement and Participation Process

Participation Method

In the British capital City of London, an open planning process of urban transport was undertaken from 21 June to 2 October 2017. Several studies have documented this process (Tfl, 2018, Jacobs, 2017). One of the motives for the city to conduct public and stakeholder consultation process was the outcome of a survey on the Mayor's vision to create a better transport system. The survey consisted of two separate questionnaires. One was aimed at the public and asked a mixture of closed and open questions about the challenges, overall vision and aims, the challenges, and the 'Healthy Streets and healthy people', 'A good public transport experience' and 'New homes and jobs' chapters. The other was aimed at businesses and stakeholders/stakeholder organizations and asked a mixture of closed and open questions for each element of the whole strategy. It appeared that many citizens support the vision, the healthy streets approach, and the 80 percent mode share target because of their general satisfaction with London transport policy. To summarize all closed survey questions (public), 46% of public respondents said they strongly agreed, and a further 22% said they partially agreed, with the overarching vision and central aim of the strategy - that by 2041, 80 per cent of Londoners' trips would be on foot, by cycle or using public transport (MTS Consultation Report 4, 2018). Despite there were doubts about whether the level of behavior change requisite would be accomplished. Fearing that a current policy would outdate, the city decided to update the transport policy with broad participation of the population.

London used Structured Public Involvement (SPI) as a public participation method. SPI features a strongly theoretical approach to citizen involvement that links decision theory, facilitation and group process expertise, as well as advanced technologies such as electronic polling, into a collaborative decision-making system. On the positive side, SPI offers an analytic framework that allows public values to become more understandable by professionals and at the same time allows professionals to produce solutions relevant to the community in question. To apply SPI to a transportation problem, the team sets up an expert coalition with selected transport professionals, for example transportation engineers, under the direction of project sponsor such as a State Department of Transportation. The team works with the professionals and sponsors to establish the framework within which public involvement should be conducted, and to exclude

illegal, infeasible or unfundable transport specification from public opinion. The next step, the team then plans an SPI protocol to obtain useful information from the public.

A three-phase SPI process

The participation process was divided into three phases undertook by Transport for London (TfL), on behalf of the Mayor of London. The first phase (January to April 2017) was the investigation of problems and solutions. To gain insight into transport policy problems, one to one meetings, briefings, workshops and panel discussions with over 250 stakeholder organizations were undertaken in this pre-consultation participation.

The second phase (June to October 2017) was the elaboration of policy directions. Online questionnaire, emails to public and stakeholders, press and media activity, on-site advertising, social media, digital advertising, four deliberative workshops with an invited sample of 77 Londoners across four locations (16-18 participants per workshop), six workshops with 6 different stakeholder groups were held in order to present the results of the surveys and initial conclusions on the main problems. All residents of London were invited to the consultations. Tfl received 6,964 responses to the consultation. 6 working groups, with a total number of 172 participants, worked out the analyses of the problems and possible solutions. Participants from the working groups formed these workshops together with transport professionals and representatives of pressure groups. In every workshop different interests were represented and the workshops led to four policy directions: 1) Healthy streets and healthy people, 2) A good public transport experience, 3) New homes and jobs, 4) Delivering the vision. Experts on the effects on mobility, spatial planning, economic development, the environment, technical feasibility and costs assessed these four areas of concern and opportunities for improvement. The calculated policy directions formed the basis for the Mayor draft-vision on transport policy.

The third phase (October 2017 to February 2018) was the decision-making phase. Final decisions had to be taken by the Mayor but residents were still actively involved in this phase. Residents had the opportunity to react to the ideas in a concept-vision of the Mayor by writing a written reaction.

The decision-making process resulted in a plan with proposals for expanding network rail, improving air quality, and encouraging the walking and cycling. The important policy

conclusions from the public participation were that particularly the commuters to the city required using more sustainable travel patterns. They are expected to use public transport or bikes to go to their work. From economic perspective, it is important for traffic (freight and business traffic) gets full space and even people who want to shop by car.

Why are cities doing public participation?

The 1990s saw successive UK government place renewed emphasis on public participation in planning and local government. Furthermore, the United Kingdom has in the past decade seen a tremendous amount of government-sponsored activity to increase the participation of people in decisions, policies and services in public life. For a number of reasons UK government, at all levels, have committed publicly to increasing the involvement and empowerment of ordinary citizens.

London in particular, is using public participation in the transport planning process to raise the trust and legitimacy decisions taken. In addition, the city council thought that public participation is one of an effective method to provide the possibility of interpreting the perceptions and interests for all residents and stakeholders.

Today the principle that the public has a right to be consulted on issues that will affect them is established to a degree that was not the case ten years ago. New generations of civil servants tend to be more open to the idea of citizen empowerment, which means that they are likely to see further developments in this direction. In practice, the participation process gave the government necessary information for decision-making, especially problem identification (e.g. they want to know what the people that are using public transport think because it is important to make a better policy) and in shaping alternative solutions (e.g. the congestion charge). At the same time, the city council expected an outcome of the public participation process was that the participants learned more about the environmental transport problems that the city faces.

Type of Interaction

Typically SPI conduct a series of open public meetings and deliberative workshops at which valuations are gathered, or for design cases, feedback on existing policy or design options is acquired through real-time electronic polling. This information is then analyzed using our

unique decision support systems, such as the thematic analysis methods, and the public evaluation is converted into planning or design guidance that can be interpreted by the relevant professionals. Iterative public feedback is then sought on detail designs and plans generated by this process. In London case, an Integrated Impact Assessment (IIA) was carried out in regard of the draft strategy.

London public participation involves around 35,000 numbers of participants and aiming at city's borough, freight and business, communities, environment, industry, health and road users as targeted participants. Website (online consultation portal), social media and digital advertising are used to communicate public participation insights and publicity. To summarize, SPI involves meetings, briefings, stakeholder workshops, deliberation and panel discussion and it has become a unique form of participation since it provides evaluations through anonymous real-time electronic polling at open public meetings.

Decision method

SPI protocols demonstrate uniquely and consistently high levels of public satisfaction with the process (Bailey, 2009). These evaluations are high because SPI is efficient in its use of participants and experts' time and generates useful output with a minimum of conflict. It offers participants a real experience of involvement as they literally see the design team responding to their input and incorporating their values into the policy as a product.

SPI positions professionals, sponsors and the public in alliance on a design problem and helps produce truly context-sensitive solutions. SPI does not turn over control to the public, sell the public on a particular design, nor does it manipulate them into accepting options unsuitable for their communities. Therefore SPI does strengthen appreciation of democratic mechanism for planning and strategy that leads to increase public satisfaction with the process and outcome. The outcome of the SPI in London case were: 1) careful consideration of the public participation responses on the Mayor's decision to proceed with the policies and proposals as set out in the draft MTS and publish the strategy and 2) careful consideration of the public participation responses on the Mayor amendment of the policies and proposals and publishes an updated strategy. In conclusion, the public participation gives input to the most changes to the policy and

the decision of representative democracy is able to ‘aggregate’ the differing demands of people into a more coherent and accountable policy.

4.2.3. Affect Changes to Policy Content

Results and Impacts

Tfl involved a large number of sizes of public participation and asked participants through many different channels, including 5,745 online response methods and 365 letter/email/paper/survey/phone response methods (in total 6,110 public responses), 476 stakeholders and business responses, and 43,550 discrete comments. The majority of public respondents completed the consultation via online reaching more than 90 percent and remains responded to the closed consultation questions.

From deliberative workshops and panel discussion, Tfl received 361 responses from individual stakeholders/stakeholder organizations and 115 responses from businesses. They categorized stakeholder responses into types and the number of responses in order to run proper analysis. As a result, summaries of responses were divided into national or local government bodies, regional politicians and campaign, academics, health, environment, charities, and business groups. Besides from the stakeholders and businesses' responses, a great number of influences (383 emails) came from five major led campaigns such as Alliance of British Drivers, ZipCar, Mums for Lungs, Stop Killing Cyclists and Transport for All. These five led campaigns actively responded to the draft MTS. Some of them wish to object the draft MTS proposals and some of them suggest a lot of specific points in the strategies. Despite the consultative events highlighted issues and concerns regarding the transport strategy, they also performed fair support and enthusiasm for the Mayor’s strategies.

Throughout comments from public, businesses, stakeholders and led campaigns, it appeared that the outcome of public participation influence a number of changes to policy contents. In fact, some of comments and recommended revisions were made to the current transport system and not about the proposals within the MTS itself. Taking into account all the comments and suggestions, Tfl on behalf of the Mayor has considered changing several aspects on the draft MTS such as population forecasts, accessibility, risk and opportunity of new technology, modal shift, level of details, more ambitious target, displacement of traffic, walking

and cycling infrastructure, and efficient use of the street network in order to improve the policy contents. As a result, on February 2018, the Mayor of London approved the final recommended version of the MTS considering TfL's Report to the Mayor on the consultation of the draft MTS. In summary, London's public participation can be considered as success indicator and effective administration by the city authorities since they can get well informed, meaningful, and constructive responses from SPI to help to shape the better policy and identify any potential areas and issues that were missing.

4.2.4. Behavioral Change of Urban Transport

Barriers and Challenges

The volume of travel in London has grown substantially over the last two decades or so, over the earlier part of the current decade at a notably faster rate than previously anticipated, albeit historically matched by a consistent shift in mode share away from the private car towards walking, cycling and public transport.

In the period 2000 to 2016, total travel demand in London grew by 18.6 per cent, largely reflecting population growth, and at the same time there was a 10.6 percentage point shift in mode share towards active, efficient and sustainable modes, broadly reflecting investment in these modes. These long-established demand trends formed part of the evidence base for the Mayor's Transport Strategy.

At the same time London's population was forecast to continue to grow strongly into the future, and policies contained in the transport strategy had the broad aim of effectively accommodating and providing for London's further anticipated growth in an efficient and sustainable way and continuing and accelerating the positive mode share trends.

Over the last two years however, confirmed by most recent data for 2017, the rate of growth in both population and travel in London has slowed significantly. Because of the way that this has played out between the different modes, progress towards active, efficient and sustainable modes has also slowed, increasing the effort required to meet the Mayor's aim of an 80 per cent share for active, efficient and sustainable modes by 2041.

Residents' Perception

The residents and most of the stakeholders welcomed the Mayor's proposals. There was a wide range and positive support for the vision, improving infrastructure service and network, environment-friendly modes, and the 80 percent mode share target, though still concerns regarding the level behavior change goal would be reached. The result of public consultations showed residents were satisfied with almost all aspects of the transportation plan, although qualitative feedback indicates there were a few opportunities for improvement. Residents were also pleased with the recent changes, nevertheless, to a lesser extent than their overall perceptions of the policy. From the study and collected opinions regarding the aspects of transport systems from two sources (experts and survey of residents), it can be seen that Londoners satisfied with overall situation in public transport are 85%, and Londoners satisfied with recent changes in public transport over the past three to five years are 79% (Knupfer, S. et al, 2018).

From the current policy, Londoners appreciated the recent changes in public transport fares, since the Mayor was aiming to provide public transport more affordable. The Mayor expected to save up to US$ 280 for an average household over the four-year period and committed to freezing public transport fares at the 2016 level until 2020 (Tfl, 2017). As a result, rail demand and underground demand grew 2% in 2016. Based on the study performed by the Department for Transport, London transport statistics 2018 modal comparisons showed that Londoners travelled 62% by car, 26% walk, 9% by public transport, 3% cycle (Department for Transport, 2018). The changes are not significant if it compares to the previous year.

Regarding the draft MTS proposals, in the final analysis residents still saw areas for improvement there and was a little conservative about the recent changes in ecological sustainable system aspect. In addition, residents were also skeptical about the need to better recognize the challenge of creating behavior change from the car to active travel choices, recognizing both mental (personal preference or free choice) and physical barriers (lack of infrastructure or maintenance and cleanliness or safety and security or the cost of public transport).

4.3. Case Description in Madrid

In 2015, Madrid City Council undertook broad engagement to understand the views of people from across the city about the ideas for creating city's environment more hospitable and inclusive. The so-called *Decide Madrid*, which is an online platform for public participation in decision-making, was launched. *Decide Madrid* was focused on four functions, namely for proposals and votes for new city laws, debates, participatory budgeting (PB), and consultations. The platform allows Madrileños to propose and vote on projects and policies for the city and set the city's budget allocation.

4.3.1. Policy Making Context

City Profile and Transportation System

As the capital city of the country, the population in Madrid is not as much as Paris and London. Madrid population is only around 3.2 million inhabitants. However, it is the third-largest city in the EU, smaller than only London and Berlin. The flow of migration to Madrid, especially attracted by industrial belt that developed in the city in the 1950s and '60s, has created representatives of modern populations of the entire Spanish country. Madrid is known as Spain's transportation hub, one of Europe's busiest stock market, the center of government, business and tourism.

Madrid has five transport types, such as light rail, metro, train, bus and cable car and is served by highly developed infrastructure. The road and rail systems both converge on the capital from all corners of the country. A subway system, the Metro, serves Madrid with various lines that extend throughout the city. There are numerous bus routes operated by municipal and private authorities, serving both the city's residents and those commuting from the metropolitan municipalities. Suburban trains also serve commuters.

There are so many people in the city to get around every day with public transport and it turns out around 750,000 people commute into the city to work. The average amounts of time people spend commuting with public transit in Madrid, for example to and from work, on a weekday is 62 min. In fact, 13% of public transit users ride for more than 2 hours every day. The percentage of public transport users who transfer lines at least once is 68%. The average distance people usually ride in a single trip with public transit is 9.5 km, meanwhile 25% travel for over

12 km in a single direction. The average distance people walk to work or home is 0.59 km and around 14% walk more than 1 km to reach their destination (Global Public Transit Index by Moovit, 2019). Public transport was used for 69.1% of journeys within the central area. Metro accounted for 40% of journeys by public transport, bus 30%, interurban buses 10%, and Cercanías 10% (Estructura Economica de le Ciudad de Madrid, 2018).

Madrid has not escaped the problems common to so many modern cities. Pollution can be intense and severe traffic congestion is common. Personal safety is not as certain as it once was in the days of the *serenos* (the night manager to watch the streets and regulate street lighting). However, the city has preserved an important aspect of modern Spain, namely the charm, character, and liveliness. Although there were a number of urban development plans, Madrid did not spread into the open spaces around it, not even crossing the Manzanares River until 1948. Instead, the city as a whole has some extensive parks, with more open space overall than Paris.

Transportation Policy

With the return of democracy to Spain in the late 1970s and the development of autonomous regional governments, more emphasis has been placed on local consultation and issues such as the future of the environment. In 1982, Madrid conducted a massive public opinion survey to determine what citizens really wanted at the neighborhood level. The resulting General Ordinance Plan (Plan General de Ordenación) attempted to establish a long-term, full-scale scheme for future directed growth, aiming not only to modernize the infrastructure of essential services but also to improve the quality of life in the city. Local administration is under the direction of a mayor and city council, elected every four years.

Madrid has built up an excellent public transport system, the fruit of long-term policies supporting the extension of the metro and Cercanías networks, the improvement of bus networks, the construction of 28 transport interchanges, and subsidies to public transport. Almost half the journeys by mechanical means in the metropolitan area are made on public transport, a very high proportion compared with most European cities. The urban transport government concept has transformed in the last few years. Technology and information have played a vital role in terms of connecting residents with city councils. Madrid is one of the cities around the world that are promoting resident participation and part of city's budget is being handled based on policies put

forward by residents themselves. Madrid City Council has a vision to provide transparency and participation.

One of its members, Pablo Soto Bravo created *Decide Madrid*. The outline process in the creation of the Madrid's transport policy is through *Decide Madrid*. *Decide Madrid* is a form of policy changes in this city. As an illustration, the citizens have a direct channel to get involved in municipal policy, which did not exist prior to 2015. Most compelling evidence, it is participation portal that can be used by residents to propose, deliberate, and vote on policies for the city and assure open government and transparency of all government actions within the municipality. The portal utilize the free software CONSUL as many other administrations are now doing, enables Madrileños to influence the City's planning and policy-making through poll, discussion, and consultations with the purpose of empowering residents, promoting transparency, and fostering democratic government practices.

This portal consists of four different features to achieve all of city council's vision. Of these features, two processes emerge as having the biggest potential impact for direct resident influence: 1) a proposal part where residents could propose new laws and vote on them afterwards, 2) a participatory budget part where residents decide the city's budget allocation among various projects. The remaining two features contain a consultation process in which residents are requested to propose, and vote on, concerns about the city matters and lastly a debate process that does not directly motivate action but rather involves consideration for the city to obtain public opinion. In practice, this tool is important to the city council in order to manage the transportation plan and exercise the on going transport policy.

4.3.2. Public Engagement and Participation Process

Participation Method

As previously explained, like in many other large metropolitan areas, air quality is a major environmental issue in Madrid. In fact, road traffic contributes 53% to the most significant air pollutants causing health impacts to the population of the city. This situation forced the city council to activate `high pollution protocols´, by enforcing tighter speed limits, parking restrictions, and restrictions on vehicles according to license plate number (e.g. odd and even) in Madrid's city center. Under those circumstances, in 2017 Madrid has implemented a transport

policy that called ‘Plan A’, aimed to improving air quality, reducing GHG emissions, and developing climate change strategy. For example, some of the most relevant measures set out in ‘Plan A’ are central zero emissions zone, redesign of the main access roads to the city center, priority for pedestrians and improvement the cyclist networks, speed limit restrictions, development and enhancement of public transport infrastructure, incentives for cleaner vehicles, and car-sharing promotion (Vassallo and Bueno, 2019).

Furthermore, in 2018, Madrid takes its restrictions of vehicle to the next level. The city council confirmed that, starting in November, all non-resident vehicles would be barred from a zone that covers the entirety of Madrid’s center. The only vehicles that will be allowed in this zone are cars that belong to residents who live there, zero-emissions delivery vehicles, taxis, and public transit (O’Sullivan, 2018).

The city council realized that public participation could be an important pillar for improving their ‘Plan A’ transport policy. Madrid used citizens’ initiative as a public participation method aimed at increasing direct democracy. Citizens placed issues on the ballot for voter approval through an online platform. Today, *Decide Madrid* became Madrid’s largest public involvements with more than 20,000 proposals have been submitted since the launch of this platform in 2015. The involvement that the public had in the creation of Madrid’s transport policy are divided into four functions, as follows:

Proposal-making and voting on those proposals. First, the platform allows the residents of Madrid to create various law proposals and vote on them. This function was created in order to involve the residents to directly determine on what they want in their city, both in terms of laws and/or projects. The process of the proposal function is very straightforward. Any resident registered on the platform can submit a proposal, which then enter the first voting stage. If the proposal receives the support of around 1% of the population of Madrid over the age of 16 then it advances to the decision phase. After that, the residents have 45 days to deliberate and discuss upon the proposal along with other most votes’ proposals. After this period ends at the final voting stage, where each registered Madrileños over sixteen years old and verified in the municipality can vote either for or against the proposal. It must be noted that even if the proposal given reaches the threshold of voting, it will not be automatically executed due to a binding

referendum banning in the Spanish constitution. The Madrid City Council assesses the feasibility, legality, and cost of successful proposals in the following months. In the end, a comprehensive report is published on the platform and a decision is made according to the result of the municipal examination into the proposal.

Participatory budgeting. The second important function is PB. Although Madrid is not the first city in Europe that applied this tool for political decision-making, its application of information communication technologies in the processes makes its case unique and unprecedented. This function enables residents to decide the allocation of a certain amount of the public budget. In Madrid, the PB process is done through six steps. The first step is the project proposal step, in 2017 there were made 3300 project ideas (Samir, R., 2018). Thereafter, the proposals are filtered by two criteria, whether the municipality is adequate to implement, and whether they are feasible to finish within one year. The next step of PB is ranking the proposals based on their importance and prioritizes the ones they care about the most. The municipality then analyzes each of the proposals in the fourth step. Next, the technical feasibility and legality are being reviewed, along with the available resources for the implementation of this proposal. The last step is economic evaluation.

Debates and consultations. The third and fourth functions are online deliberation and residents' consultations. Residents could exchange their opinions, knowledge, and ideas of the city's problem. These online debates foster a more direct connection between the local government and the citizenry by providing the government access into the public's opinion on a variety of topics. In addition, this way the citizens can educate themselves on the on-going projects and how others perceive them. The consultation process starts with bring up a questionnaire to ask residents on specific topics. Next, this information is used as the basis for decision-making.

From the 2018 results, there are a lot of interesting proposals initiated by the Madrid's citizens to encourage the using more sustainable transport (Portal de participación ciudadana de Madrid, 2019) such as:

1. Encourage the use of bicycles (Number of votes: 4105; Total Price € 60,000)

2. Install bicycle parkings at subway stops (Number of votes: 3683; Total Price € 157,500)
3. By the "Y" cyclist, is a bike lane properly separated from motorized traffic, direct, comfortable, safe and accessible to the entire population (Number of votes: 3680; Total Price € 18,000)

In short, citizens' initiative combined with deliberative poll is a unique form of public consultation that mixes the techniques of public opinion research and public deliberation to make hypothetical representations of particular issues. This participatory method seeks to account for the preferences and opinions of citizens, both before and after they have had an opportunity to arrive at considered judgments based on information and exposure to the views of fellow citizens.

Why are cities doing public participation?

The Madrid city council realized that public participation could be an important pillar for improving their transport policy. First, Madrid is using public participation to increase direct democracy. The Madrid city council thinks that public participation can create a sense of ownership among the public with regard to the policy, translating to a unity of purpose and action. The city council showed that the concept of governance referred to as digital government can change drastically by using a new way communication technology in public participation in policy making. Public participation was designed as a way to allow citizens to utilize the full power of direct democracy and shape government actions.

Second, the city using public participation is to increase the legitimacy of the rule and reducing the level of conflict. The city wants to encourage all Madrid citizens to participate and expect the result of the decision-making process would be socially accepted. Furthermore, the city council thinks that engaging citizens in policy-making allows them to tap new sources of ideas, information and resources when making decisions. In the end, the decision was taken by means of representative democracy. In practice, representative democracy gave in to direct democracy because of an enormous opposition against the proposed rule.

Third, the city performs public participation to restore trust in government. With trust in government having declined over twenty percentage points since 2007 (OECD, 2017), the city council aims to improve citizen/government interaction becomes more open, transparent, and efficient. Notably, they want to encourage more people than usual to participate, making city's policy more open and more transparent the government ever performed.

Type of Interaction

Madrid public participation involves 45,522 numbers of participants and aiming at lay public and elected public officials as targeted participants. It is clearly shown that Madrid has the biggest number of sizes of public participation compared to Paris and London. Website (online consultation portal), social media and digital advertising are used to communicate public participation insights and publicity.

All citizens of Madrid are allowed to participate on the site. However one must verify their account in order to full participate. Registered users who provide only a username, email address, and password can participate in discussions, create proposals, and create expenditure projects. Users who provide the previous information and verify their residence and provide a mobile phone number can participate in discussions, create proposals, create expenditure projects, vote for proposals, and vote for expenditure projects in the support phase. If the user provides the previous information and also fully verifies their account in person at a Citizen Assistance Office or via mail, then the user can do all of the previously mentioned things along with vote for proposals in the final decision phase (Dejohn, 2017).

To summarize, Madrid's citizen's initiative involves discussion, dialogue, deliberation, express opinions/preferences only, and listen/watch as a spectator. It has become a peculiar form of participation since it provides e-participation and open government by allowing citizens to participate online in the legislative process.

Decision method

As mentioned before, the public interaction is done through different users commenting online on the ordinance and on other users' comments. People who are interested can participate by becoming a member of the website and joining in on the discussion of any of the open

ordinances or policies. Users also have the ability to up vote or down vote another user's comment. Participants' discussions and votes are available for the public to see when anyone visits the website. Professionals and peer facilitators were not involved in the actual deliberation process.

The participants were asked to give input on policy ideas. The opinions of the commenters will be considered by the City Council. The comments are considered by the different government sectors for the final drafting of the ordinances. Madrid's government makes the final decisions.

In conclusion, citizens' initiative participatory method could help to give input on the policy content and could lead to preferential voting at the end of the participation process. In the final analysis, it enables the representative democracy to assess public opinions and attitudes before making the final decision.

4.3.3. Affect Changes to Policy Content

Results and Impacts

All residents are invited to participate in *Decide Madrid*. By far, there is no reluctance in any form by the government administration regarding this type of betterment. According to Pablo Soto Bravo as the founder, there are hundreds of influences used by the government to improve the policy. There are specific cases in which the municipality has spent decades trying to solve issues and these have been solved due to public participation. For example, a plot of land that was mire and which had been stagnant for 30 years has now been resolved (Martinez, M., 2019).

As it involved a large number of sizes of public participation, approximately 27,000 residents, government would like to ensure that the outcome of public participation is fully supported. Over the last three years, 26,961 proposals have been submitted however for them to be successful and be put to the resident vote, they must be supported by at least 1% of those who are entitled to vote e.g. 27,662 people. Those who submit proposals have one year to secure the support they need. In fact, two proposals have been successful. These two proposals have given input to the government in changing the policy content. One of them is "Madrid, 100%

sustainable" that is a set of environmental gauges related to energy efficiency and sustainable mobility, among other things. The other one is a proposal that Madrid's public transport have a single ticket (valid for bus, train and metro). Residents that took part in the Citizen Voting in 2017 approved both proposals. "Madrid 100% sustainable" is in the process of being implemented and the "Single Ticket", since public transport is not managed solely by the City Council, has been passed on to the relevant institutions for implementation.

Even so, recent study found that there is no evidence concerning the effect that this public participation process has had on participants' attitudes about public issues, trust in the government, or sense of community identity (Pinkston, 2019). There has been no formal evaluation of the commenting process on this specific ordinance, but there has been an overall evaluation of the website. DeJohn's (2017) conclusions on the website were that there was no proof that the website leads to improved decisions/decision-making and that not enough people were taking advantage of the website. On the website, the City of Madrid claims to consider the comments of citizens in its drafting of ordinances, but there has not been an analysis or any proof of that claim.

4.3.4. Behavioral Change of Urban Transport

Barriers and Challenges

One of the challenges of Madrid transport is efficiency, which is how it is being able to constantly improve. The city managed to create a well-balanced transport system by applying the transport policy that focused on the bus service enhancement, renewing the bus fleet, adding the workforce of drivers, and expanding the bus lines. As a result the Municipal Transport Company of Madrid has recently extended bus service and decreased average waiting time by improving maintenance and operations management, comprising the low-emissions bus fleet, increasing the workforce of drivers, and extending the bus lines. Regarding private transport efficiency, Madrid is a unique case as it manages to ensure highly efficient private transport without introducing significant costs and restrictions to limit cars.

Another key point, transport policies for improving air quality is become a major challenges. The 'Plan A' is set under two horizons, a short-term horizon (2020) for the implementation of structural and technological measures resulting in significant reductions in

emissions; and a longer-term horizon (2030) for the necessary urban regeneration, energy transition, renewal of the vehicle fleet and consolidation of a low emission city model. However, some of measures comprised in 'Plan A' are recently under discussion because of a high social controversy (Vassallo and Bueno, 2019). Moreover, the Madrid's plan for improving air quality is still mostly a list of good intentions, and need more work on the details, with few exceptions such as the *Gran Vía* transformation case where sidewalks have been extended into the roadway. Additionally, it is worth to mention the ban on gasoline cars registered before 2000 and diesel cars registered before 2006 in the city center of Madrid, which came into force since November 2018.

As can be seen, these challenges have made the city to think seriously to face environmental challenges by elaborating a comprehensive transport policy.

Residents' Perception

The main changes that residents value most are in shared schemes, safety, and environmental impact. Madrid is focusing on enhancement of shared transport and is multiplying the number of shared bikes to 4,000 and adding up the docking stations. Although the ratio between average journey times by public transport versus car is still low (Here Urban Mobility Index, 2018), it showed continuously increasing number of residents who were starting to adjust their behavior in using public transport. In addition, residents enjoy more well-developed rail infrastructure and travel comfort.

From the study and collected opinions regarding the aspects of transport systems from two sources (experts and survey of residents), it can be seen that Madrileños satisfied with overall situation in public transport are 76%, and Madrileños satisfied with recent changes in public transport over the past three to five years are 79% (Knupfer, S. et al, 2018). Based on the study performed by the European Commission Directorate-General for Regional and Urban Policy via Eurostat and developed by the National Statistics Institutes of the Member States, Madrid's modal shares presented that in 2017, Madrileños travelled 38% by car, 24% walk, 69% by public transport, 2% cycle (Eurostat, 2017) —note that respondents were allowed to choose more than one mode, so people who walked a distance, then took a metro, might count twice.

With this in mind, the shares of public transport increased 35% and the car use decreased 8% compared to ten years ago.

Madrid is planning to promote non-motorized transport such as broadening sidewalks for pedestrians and making segregated cycling lanes in order to make transport more environment-friendly. Moreover, the city has created zero-emission areas in the city center in 2018. However, residents tend to be concerned about convenience aspects such as ticketing, electronic services, and the ability to transfer between transit types (intermodality), both their current state and the changes to the system. This might become as an alert that an area for improvement exists there.

In conclusion, from residents' perceptions, Madrileños are highly satisfied with the current transport system and appreciate the recent changes in some aspects of the transport policy.

4.4. Case Description in Milan

In the fourth example, researcher brought up one of the most advanced Italian public participation that called "I count, I participate, I decide". City of Milan established "I count, I participate, I decide" in 2015, which inspired by the Brazilian Porto Alegre (Smith and Fletcher, 2016). This participatory process aligned with Milan's Sustainability Urban Mobility Plan (SUMP) that aiming to reduce traffic and use of polluting vehicles and provides safe public spaces to promote active mobility (e.g. walking and cycling). In addition, it showed some aspects of local democracy and of regional classification influenced by Paris' PB.

4.4.1. Policy Making Context

City Profile and Transportation System

Milan is the capital of Lombardy, which located in northern Italy. More than 3 million inhabitants live in the Milan metropolitan area so that it has become the second-most populous city in Italy after Rome. The population density currently sits at approximately 7,551 residents per square kilometer. Milan has become renowned around the world as a global city that leads the world in sectors including tourism, fashion, manufacturing, education and the arts. Additionally, the city has become the center of the Italian stock exchange movement. In

accordance with GDP, Milan has the third-largest economy among European cities after Paris and London, but the fastest in growth among the three, and is the wealthiest among European non-capital cities (Global city GDP, 2015).

Milan and Lombardy has 7 transport type(s), including: Light rail, Metro, Train, Bus, Ferry, Cable Car & Funicular. Aside from being a center of production and exchange, Milan is a national focus of transportation. Azienda Trasporti Milanesi (ATM) is the statutory corporation responsible for the transport network in Milan; it operates 4 metro lines (Milan Metro), 18 tram lines, 67 urban bus lines, 4 trolleybus lines, and 52 interurban bus lines, carrying over 734 million passengers in 2010 (Carta della Mobilità, 2011). Overall the network covers nearly 1,500 km reaching 46 municipalities (Azienda Trasporti Milanesi, 2017). Besides public transport, ATM manages the interchange parking lots and other transportation services including bike sharing and car sharing systems (Carta della Mobilità, 2011). An extensive network of road and rail communications spreads toward the outlying areas, in particular toward the north, and several airports serve the city. Some of the busiest lines of the national railway system, Ferrovie dello Stato (FS; State Railways), pass through Milan. Mainline connections and transalpine tunnels link the city with the rest of Italy and all parts of Europe, and there are many nonstop trains to and from major cities. The railroad stations are integrated within the city landscape by means of a carefully designed and executed plan. The largest railway-loading site within the city is the Central Station (Stazione Centrale).

In fact, there are around 850,000 commuters each day in the city. Milan metro has a daily ridership of 1.15 million (la Repubblica, 2013), one of the largest in Europe. Milan has also taxi services operated by private companies and licensed by the City council of Milan. Based on the study conducted by Moovit Global Public Transit Index, in 2019, the percentage of public transport users who transfer lines at least once in Milan and Lombardy is 72%. Over 65% of those users spend more than 2 hours on public transport every day. The average distance residents walk to work or home is 0.74 km and around 23% walk more than 1 km to reach their destination.

Transportation Policy

The city of Milan has implemented its Sustainable Urban Mobility Plan (SUMP) in 2017 after 3.5 years of preparation. The objectives are to reshaping Milan's overall mobility over the next 10 years, redefining the boundaries of the metropolitan city and serving large suburban areas. The process of Milan's SUMP, started in 2013, and it involved citizens' participation through several open debates under the supervision of a scientific steering committee (Berrini, 2016). The process was designed to be widely participatory and with high political engagement. In 2015, the Milan Participatory Budgeting (PB) project as known as "I count, I participate, I decide" was initiated by the left-wing administration and the practice was then performed by the new left-wing administration elected in 2016.

The problems of Milan's mobility and transport system are the increase in private transport demand due to the functional separation between the city center and the suburbs, the lack of planning of goods transport and logistics activities, road congestion, and inefficient allocation of public space. Milan's SUMP represents an important change to the city's mobility and transport policy. It is aimed at enhancing public transport, giving value to urban space and shifting the urban mobility focus from private car ownership to a model based on shared mobility services (such as car- and scooter-sharing) across the whole metropolitan area.

The SUMP was developed with citizens, local authorities, stakeholders and a scientific committee in an open discussion on relevant thematic areas. By combining urban development, innovation and sustainability, putting the policy focus on environment and life quality, adopting an integrated approach to urban mobility management and defining priorities, tools and resources, the SUMP aims to make the city more liveable, safe and accessible, and will ensure social equity and sustainable mobility.

4.4.2. Public Engagement and Participation Process

Participation Method

The city of Milan used an expert working group and deliberative opinion poll as public participation method in purpose of providing a policy framework for urban transport plans. The task of the expert working group on Milan's SUMP has been to provide input to the debate over

such a framework in the context of the thematic strategy on the urban environment. Through its several workshop discussions, the group has progressively established a common understanding of what "SUMP" actually means and how it should relate to current practice. Equally important, deliberative opinion poll in "I count, I participate, I decide" is a way to determine what citizens think about transportation issues and for measuring public preferences to allocate total city's budget in a range of plans across the following policy areas (Smart City Baseline Report Milan, 2019) namely sustainable mobility, energy efficiency, smart cities, the sharing economy, and urban mobility.

Citizen participation, information and stakeholder consultation have to be built into the SUMP from the start, ensuring maximum transparency throughout the process. The Milan SUMP arose from the decision of the City Council Committee to update the Milan's Urban Mobility Plan (PUM) and implement a Strategic Environmental Evaluation (VAS). In addition to the consultation process envisaged by the VAS, the SUMP has been developed through a participation process which has involved public authorities (the municipality, the mobility agency, public transport operators), stakeholders (professional associations, local associations, companies, residents' associations) and citizens, who contributed to the identification of agreed strategies and actions of the plan.

The participation process consisted of an information campaign (to inform the public on the process for the development of the plan and its main themes), thematic meetings with authorities, stakeholders and citizens, and the publication on the municipality's and mobility agency's website of the presentations held during the meetings and their minutes and reports.

From in-depth analysis of the current situation and trends as well as the consultation process, four mobility strategies were identified (The urban mobility observatory, 2015):

a. a shared mobility governance with co-ordinated strategies and tools;
b. urban accessibility using public transport;
c. urban space as common good;
d. passenger and freight mobility demand management.

The outline process in the creation of Milan's transport policy has focused on local districts and small geopolitical scope. The city council manages the transportation plan by developing public decision-making in a way to allocate total budget 9 million euros for projects, involving residents of the nine districts of the city. This PB project was considered by the Milan government as an 'opportunity to strengthen a method of wide, democratic and active consultation that characterizes the city of Milan' (Milano Particepa, 2015). Expanding project accessible to almost all members of the community is very important to understand its purpose.

Why are cities doing public participation?

The initiative of the Milan city council performing public participation is first to strengthen a method of wide and democratic that characterizes the city. They want to connect the formal to the informal spheres of participation. That means linking street protests to elections and parties, and social media debates to civil society initiatives. Current situation the city of Milan developed a number of initiatives on transparency and participation in the last few years, including the updated SUMP, new forms of citizens' initiative that can be activated online, new guidelines on participatory transport planning and a pilot project on participatory budgeting.

Second, public participation in Milan seeks to create and let emerge projects of social innovation and shared social networks related to social groupings, and a more accessible and attentive city to the needs of persons with disabilities, to the elderly and the families.

Other reason was and continues to be the enhancement of public decision-making, underpinned by a formal structure of institutionalized public participation and deliberation, and bolstered by an active civil society including informal forms of participation. With a new plethora of participation options, public can increase active consultation and they will become more selective about how and when they participate, for example participating only in initiatives with political impact.

Lastly, the city council means to create support from the citizens for the allocation of public finances particularly in the urban transport future.

Type of Interaction

The working group comprised the following 10-15 members in order to ensure a representative mix of stakeholders and expertise:

• Chair: Independent expert in urban transport plans. He/she is responsible for leading the working group, organizing and coordinating the contributions of the different members of the working group (as well as contributing him/herself) to ensure that the mandate is fulfilled, that all of the questions and other relevant issues are adequately addressed, and that the final report is of high quality and correctly reflects the collective and individual positions of the working group.

• Members: Representatives of towns and cities and their networks, regions, Institutes, NGOs, Member States and Accession States, Commission, businesses, car users.

• Consultant: A consultant with appropriate experience to support the working group, in particular preparing the meetings (agenda, invitations, distribution of documents, minutes), and drafting the inception, interim and final reports, coordinating and synthesizing the inputs of the members of the group. The consultant will also carry out some appropriate desk research as required by the working group.

"I count, I participate, I decide" involved 32,377 number of participants. The duration of participatory process was approximately 945 days. The targeted participants were lay public, experts, and elected public officials. The communication of insights and publicity of this public participation was carried out by public report, public hearings/meetings, and new media (e.g. internet, texting). The expected outcomes were new regulation, spatial planning, and allocated total budget for city projects.

Both of expert working group and deliberative opinion poll involved discussion, dialogue, deliberation, express opinions/preferences only, and listen/watch as spectator in the type of interaction. The working group will meet 4 times (one day per meeting), although the number of meetings can be adapted as necessary. It is clear that work will need to be undertaken between meetings to deliver the objectives. Meetings are likely to take place in May, June, September and October. An interim report is expected from the group at end June after the

second meeting and the final report in November after the final meeting. In brief, the principle task of the working group (Polis Network EU, 2004) is to outline the elements for sustainable urban transport plans, establishing which are essential elements and which would be welcome additions. Meanwhile the principle of task of deliberative opinion poll is to provide an indication to decision makers of what the views of the wider population might be, where they were provided with a similar chance to deliberate.

Decision method

The participatory budget is implemented as a part of the broader development plan for the peripheries, for promotion of policies of accessibility and enhancement of administrative decentralization. The new version of the process was approved after a public consultation process involving the political and technical bodies of the City of Milan (9 districts included). The initiative addresses the whole population living in the city and anyone who has a continuous relationship with the city territory for study, work or residents (the so-called city users), starting from the age of 16 and of any nationality. Participation process was divided into four phases:

1st Phase – Listening: public meetings for the gathering of needs. It started from May until September 2015. The city council set a series of meetings and the engagement to these public hearings was open to all residents. There is a minimum age requirements, which is above 14 years old. Total of 1442 participants prepared to follow 45 meetings. Moreover, 350 youth participants aged 14 to 25 had 9 meetings (one for each area) with expert facilitators and each group made proposals.

2nd Phase – Co-design: workshops to design interventions. A number of proposals from the first phase will be brought into the second phase. In the second phase, participants were randomly selected from the total residents who joined to the first phase. As a result, 210 participants represented of 9 districts to deliberate in the meeting. There are two experts to help technical advices over the feasibility of projects and of the actual planned cost. The outcome of the meetings in the second phase was of 40 complete projects to be advanced to the voting phase (3rd phase).

3rd Phase – Voting: choosing the projects to be carried out. All proposed projects from the previous meetings were put online and accessible to all residents. The voting process held

from 12 – 29 November 2015. However, the total of voters represented approximately only 3% of the total population of the city and included also people generally not entitled to vote (14-18 years old).

4th Phase – Outcomes: projects updates and accountability. The results of the voting process were published online with a detailed description of all projects and number of votes associated with each one of them. Furthermore, a document listing the winning projects and their description was published on the official web site. All residents can access it and monitor district by district how far projects have developed. However, it seems many projects that won during the voting process seem not to be feasible and have therefore been abandoned already, which would suggest a failure of the administration in completing the process and positioning the project among the most interesting Italian PB projects realized so far (Gaiba, 2017).

In conclusion, the political decision on whether there should be an obligation at the city level is outside the scope of the working group's mandate. However, the working group should highlight the positive consequences as well as outline any technical or practical issues they foresee with the proposal of making the adoption and implementation of such plans an obligation for urban agglomerations, which leads to preferential voting in the end.

4.4.3. Affect Changes to Policy Content

Results and Impacts

The practice of PB, a democratic tool where residents can participate in the decision-making process on allocation of public finances, has been considered one of the most successful participatory instruments of the last decades. The city council is very ambitious since they attempt to draw the participation of all the social groups in a city of over 1 million residents. The objective of the project was to improve decision-making policy, supported by a robust and institutionalized citizens' participation and deliberation.

The scope was not only to get to the common public, but also to the young generation from 14 to 25 years of age and to the numerous minorities that a metropolitan city likes Milan inevitably has. The final approval of the projects to be obtained on a three-year basis and equally split among districts, proved the efficiency of the PB in terms of procedural structure.

Thus far, most of the projects voted on during the 2015-2016 PB pilot have been completed or are in progress. While there were some projects dropped to unforeseen technical/budgetary complications, public officials held a public meeting in November 2016 to explain the apparent failure to respect their promises to implement the winning proposals (Paolospada, 2019). The pilot was ultimately deemed successful and Milan began a second cycle of PB in 2017 with the final vote being held in March 2018. The winning projects are currently under final review.

This model of participatory governance based on coordination, co-creation facilitation, and shared decision process, indicates the exclusivity of Milan's technique to the sustainable city. In this case, Milan has decided to manage 9 million euros of its budget through a participatory approach. Within the four months following the launching of the project in July 2015, more than 50 meetings were arranged throughout the city to gather suggestions and proposals from residents. These suggestions were then processed by nine working groups, which received the support of the municipality's technical staff to decide on the policy contents and have been attended by more than 200 citizens.

Taking into account all the suggestions and proposals, the city of Milan increased its bike lane network from 128 km in 2011 to 200 km in 2015, the Sustainable Urban Mobility Plan foresees a total of 453 km by 2024 (The Urban Mobility Observatory, 2018). Another project conceived by the city of Milan to ensure stability to the whole shared mobility system is the developing and implementation of the so-called Mobility As A Service project (MaaS). MaaS Project objectives include socially inclusive and affordable access to mobility, fostering environmentally friendly mobility, supporting local transport offerings and introducing on-demand first/last mile services.

In summary, Milan's participatory method can be used by the city council to explore public views on a particular issue and get an indication of what the views of the citizens might be. Recommendations from the participants could be useful to identify a number of important gaps that should be addressed by the city council in the near future.

4.4.4. Behavioral Change of Urban Transport

Barriers and Challenge

Milan is recently among the most motorized European cities, welcoming around 850,000 commuters daily, which is a significant amount, considering the relatively small city population (Knupfer, 2018). These are big challenges for the transport system. Nevertheless, the city aiming to reshape its transportation network toward more sustainable transport modes, and has already achieved significant progress there.

The main challenge Milan took on by developing its SUMP is to achieve the optimal balance between efficient mobility demand, quality of life, and environment and health protection. This required an integrated approach to mobility in order to:

a. Decouple mobility needs and the use of private cars;
b. Improve the quality of public space by reducing the share allocated to infrastructure;
c. Ensure proper safety levels for pedestrians, cyclists and vehicles;
d. Encourage, integrate and innovate low-impact transport services and modes;
e. Encourage to share virtuous choices and behavior;
f. Develop practices of sustainable mobility and efficient use of energetic resources;
g. Use public resources efficiently.

Taking into account the things mentioned above, the participation process helped to better understand mobility needs and increase the acceptance of the measures (Eltis, 2015).

Residents' Perception

From the study and collected opinions regarding the aspects of transport systems from two sources (experts and survey of residents), it can be seen that Milanese satisfied with overall situation in public transport are 70%, and Milanese satisfied with recent changes in public transport over the past three to five years are 77% (Knupfer, S. et al, 2018). For what concerns trips within the perimeter of the city of Milan, the modal split favors public transport: according to 2013 data, public transport is chosen for 57% of trips, followed by cars (30%). Motorcycle and bike trips have similar modal shares, 7% and 6% respectively (Comune di Milano, 2016).

One of the successful outcomes of Milan's PB is the shared transport proposal. Shared mobility is one of the pillars of Milan's sustainability plan and it has grown outstandingly over the past few years. As a result, the number of alternatives to private cars has increased. The city recently supply 3,000 shared cars, of which 30 percent are electric, about 4,650 dock-sharing bikes, of which 1,000 are electric, around 12,000 free-floating shared bicycles, and even 100 fully electric scooters (The Urban Mobility Observatory, 2018). Development of shared transport has already pointed results which were around 12 percent of respondents have already decided to give up a private car and about 8 percent are likely to do so in the future (Knupfer, S. et al, 2018).

Sustainability is also an aspect in which people favor the recent changes, implemented under the city's SUMP. Its cornerstones are popularization of shared transport and enhancement of pedestrian and cycling infrastructure, for example the city has added more than 70 kilometers of cycling lanes since 2011 and plans to add 250 more by 2024. Moreover, Milan is currently expanding its metro rail network with Line 4, which is planned to open in 2022. The line would be 15 kilometers long with 21 stations, and all the trains would be automatic. This would provide more frequent service and increase capacity up to 24,000 passengers per hour.

Another key point, recent study (Cornago et al., 2019) finds that congestion-pricing policy that applied in the city center increases daily bike-sharing use by 5% to 5.8% in the short term, depending on the model specification. Extending the schedule of the congestion charge in the early evening increases bike-sharing use in the affected time window by 12%. Congestion pricing increases the cost of using private motor vehicles, which leads a modal shift away from car use and towards more sustainable transport options. The scheme lowered traffic by 33 percent, which is approximately 40,000 cars daily, in the first month. The long-term effect was also significant, and led to lowering the number of cars by approximately 28 percent (Knupfer, S. et al, 2018). The scheme also bans the entrance of vehicles that do not meet required emission standards. This, in turn, reduces road traffic congestion, contributing to a safer and more pleasant environment for cycling. This "congestion" effect is estimated to be more important in inducing additional bike-sharing use than the "price" effect, e.g. the increase of the relative cost of car use.

In conclusion, residents are satisfied with both the current state and the changes in rail infrastructure, efficiency, shared transport, and environmental impact.

CHAPTER 5. CASE COMPARATIVE AND DISCUSSION

5.1. Cross-case Comparative Analysis

This chapter further elaborates on characteristics of public participation in each case study to standardize all four case descriptions and ensure all data or information required (Table 5) to answer the sub-research questions and the main question is similarly covered. The reason why some elements are on the table 7 below is to identify what the participation process is all about and why public participation is used in the city transport policy. For example, the topic, purpose, outline process and potential outcome elements listed in the table are to identify the directions and scope of inclusion of the public participation in the concept of city's sustainable transport and urban mobility. Other elements such as function, methods, and targeted participants are to explain who can participate and why. In addition, the researcher analyzes whether the participants have the authority to put forward proposals or not by putting element of decision method in cross-case comparative table. To emphasize, the element of communication of insights and publicity and type of interaction elements are useful to determine what kind of information channels do the participants have to influence the decision. Lastly, the number of influence to change policy content and the percentage of residents' satisfaction elements are important from the point of view of a city's evolution toward becoming a sustainable city.

Table 7 Cross-case comparative based on characteristics of public participation

Characteristics	Paris	London	Madrid	Milan
Topic	Find a better balance between transportation and environmental issues	Promote 'Healthy Streets and healthy people' and 'A good public transport experience'	Transparency of all government proceedings within the municipality	Municipal Sustainability Urban Mobility Plan and Participatory Budgeting

Characteristics	Paris	London	Madrid	Milan
Why cities are doing public participation	To seek informed view of residents; to increase trust of residents in the legitimacy politicians and officials; and to increase public awareness and responsibility	To raise the trust and legitimacy decisions taken; to provide the possibility of interpreting the perceptions and interests for participants; to identify problem and shape alternative solutions	To utilize the full power of direct democracy and shape government actions; to increase legitimacy of the rule and reducing the level of conflict; to restore trust in government (more open, transparent, and efficient)	To strengthen democracy and transparency; to increase active consultation; to create support from the residents for the allocation of public finances particularly in the urban transport future
Purpose	To promote citizen involvement in urban transport planning policies and process	To fulfill the Mayor's statutory requirements under the GLA Act and to seek public opinion	Enable citizens to propose, deliberate and vote on policies for the city	Make public decision (e.g. exert direct authority)
Outline process	Open to all, random selection, professional facilitators, consultation process	Pre-consultation engagement, consultation process	Proposal-making and voting, participatory budgeting, debates and consultations	Open to all, random selection, consultation process
Function	Citizen's juries, community needs analysis	Deliberative workshops, public meetings	Idea generation, Deliberative polls	Public meetings, Expert Working Group, poll

Characteristics	Paris	London	Madrid	Milan
Potential Outcomes	Regulation, spatial planning, and allocated total budget for city projects	Proceed with or amend the draft policies and proposals, published the strategy.	Allocated total budget for city projects, new legislation, access to public opinion	Regulation, spatial planning, and allocated total budget for city projects
Duration (days)	> 365	103	Indefinite duration	945
Methods	Citizen's advisory committees	Structured Public Involvement (SPI)	Citizen initiatives	Expert Working Group and Deliberative opinion poll
Communication of insights and Publicity	Public hearings/meetings, New Media (e.g. internet, texting), Public Report	Website (online consultation portal), Social Media, Digital Advertising	Website (online consultation portal)	Public Report, Public Hearings/Meetings, New Media (e.g. internet, texting)
City Population (millions)	7	8.4	3.2	3.2
Number of Participants	40,000	35,000	45,522	32,377
Number of Influence to Change Policy Content	300 communal notification were received, 5,000 proposals from citizens	6,110 public responses, 476 stakeholders and business responses, 43,550 discrete comments	26,961 proposals from citizens	50 meetings of gathering suggestions and proposals
Targeted Participants	Lay Public, Elected Public Officials, Appointed Public Servants	City's borough, Freight and business, Communities, health and road users, Industry	Lay Public, Elected Public Officials	Lay Public, Experts, Elected Public Officials

Characteristics	Paris	London	Madrid	Milan
Type of Interaction	Discussion, Dialogue, Deliberation, Informal social activities, Express opinions/preferences only	Meetings, Briefings, Stakeholder workshops, Deliberation, Panel discussion.	Discussion, Dialogue, Deliberation, Express opinions/preferences only, Listen/watch as spectator	Discussion, Dialogue, Deliberation, Express opinions/preferences only, Listen/watch as spectator
Decision Method(s)	Consensus conferences	The decision of representative democracy	The decision of representative democracy	Preferential Voting (e.g. ranking preferences)
% of people satisfied with overall situation in public transport	68% satisfied (Knupfer, S. et al, 2018)	85% satisfied (Knupfer, S. et al, 2018)	76% satisfied (Knupfer, S. et al, 2018)	70% satisfied (Knupfer, S. et al, 2018)
% of people satisfied with changes in public transport (past 3-5 years)	67% satisfied (Knupfer, S. et al, 2018)	79% satisfied (Knupfer, S. et al, 2018)	79% satisfied (Knupfer, S. et al, 2018)	77% satisfied (Knupfer, S. et al, 2018)
% of people who are starting to and have changed their transport behavior from private vehicle to public transport	70% (Union des transports publics et ferroviaires, 2018)	38% (Department for Transport London, 2018)	83% (Eurostat, 2017)	63% (Comune di Milano, 2016)

Table 7 indicated that public participation in terms of decision-making from instrumental perspective has offer broader range of alternatives, which means the information are more available for the decision. All four cities showed that there are a huge number of public responses and proposals from citizens. In other words, public participation creates a sense of ownership among the citizen with regard to the policy, translating to a unity of purpose and action. Since public policies have a direct impact on the citizens, it is rational to facilitate their participation.

In this chapter, the researcher discussed more in depth why the cities think they should do public participation. After we ask the four cities, we can draw four categories of the cities' arguments why public participation is important:

1. Participation will increase the trust of citizens in the legitimacy of the decision taken and reduce the level of conflict. Participation in the city's development is functional for both the policies and for the citizen involved as a participant. It gives the chance to articulate the interests of different stakeholders. With participation decisions taken will be seen as legitimate because they shall reflect the will and values of the people.
2. Participation contributes to the quality of decision-making since it provides government information necessary for decision-making and contributes to identify problems systematically and shapes alternative strategic options.
3. Participaton will strengthen democracy and provide transparency.
4. Through participation, citizens will do a more active consultation since they are more aware and more responsible (e.g. for environmental problems). As a result, citizens will learn about the environmental problems that cities face.

Furthermore, comparative analysis (Table 7) explained that although most city councils in four analyzed cities have positive attitudes towards public participation, differences between cities could be observed. Positive attitudes in this context mean from awareness to action. From Table 7, we can see that the city councils are aware about a person's opinion and they have implemented the public participation, which part of their action to promote open government and citizen involvement in the city's planning, policies and processes. In other words, they are interested in participatory democracy.

Most of them agree that residents should have the opportunity to make their views known before elected representatives make important local decisions. However, city councils consider that elected representatives should decide on policy in spite of residents themselves. This shows that the level of participatory decision-making could be significantly improved. In all the cases of analyzed cities, voting is the most preferred decision method for public participation before arriving at the decision of representative democracy. In addition, Table 7 has provided evidence that city council gives opportunities for residents to interact. In this interaction, the most important question is not how many residents have participated in the consultation process, but whether the residents' opinion is represented. Furthermore, all four cities showed that public participation has improved the information available for the decisions, for example a broader range of alternatives and a view from the public on the consequences.

A better understanding of the characteristics and factors that influence resident's travel behavior can disclose changes in preferences and attitudes, provide insights to existing travel patterns, enhance transport planning, prepare for future infrastructure needs and services, and help better design and implement sustainable and inclusive transport policies that will meet emissions reductions goals. Transport attributes, such as travel cost and trip distance, external factors such as urban form and land use (Cervero, 2002; Giuliano, 2003; Handy et al., 2005) and socio-demographic characteristics are all critical determinants of transport mode choice. From London case, adjustment in travel cost public transport policy has been shown to reduce private car use. In the Milan case, the city manages to have efficient private transportation, however, at an expense of its affordability. In 2012 Milan introduced "Area C," a congestion charge applied in the city center. The scheme lowered traffic by 33 percent, which is approximately 40,000 cars daily, in the first month. The long-term effect was also significant, and led to lowering the number of cars by approximately 28 percent. Policies with the objective of switching to more sustainable modes of transport would first need to address the different characteristics and preferences of transport users (e.g. gender, availability, affordability, efficiency, convenience, sustainability, public perception). For example, without understanding how women's travel behavior varies from men's, it will be challenging to design and implement efficient and equitable transport policies.

5.2. Discussion

In the previous chapter, for each case study, researcher described briefly how does city transport policy making look like; how, why and through which participatory mechanism is the public involved in city's transport policies; in how far does public participation influence transport policies in cities; and in how far does their participation in transport making policies influence residents urban transport behavior in order to answer sub-research question 1, 2, 3 and 4. Therefore, this chapter explores four examples of how and why is public participation being used in the city transport policy to answer the main research question.

The thesis examines some variables that are crucial to describe how and why public participation is being used in the city transport policy.

The researcher can characterize the four case studies as follow.

Paris Case

In the first example, participation aims to contribute to the quality of decision-making based on community-based and articulating the interests of the diverse stakeholder groups (Oels, 2001). Paris city council was seeking informed views of residents and allowing residents to monitor and assess the projects. In the decision-making process, each group of the mixed council gave positive impact as they represented of all significant interests. OGP made improvement of public confidence in government yet increased trust of residents in the legitimacy politicians and officials. One of the goals of public participation is an enlargement of the public awareness and responsibility. In OGP all residents of a community can participate but the decision in the end was taken by means of representative democracy.

Through the participation process residents could monitor policies, communication strategies, dashboard, timelines and learned about the consequences of the different choices of their own behavior. OGP means to create support from transport-users for the transport infrastructure strategy and the transport measures in the futures. Some information was provided to the participants about the alternatives and consequences. The prepared future urban transport strategy was demonstrated as a decision based on consensus resulting from co-design policies with citizens.

In essence, decisions become more creative through using ideas and knowledge from the public, as well as more responsive and more appropriate to the needs and wishes of the public.

An important lesson learned from this case is the active approach of the community. Aside from conventional methods of participation, OGP went to the daily social environment and activities of people (streets, shopping malls, schools, and refugee centers) to actively involve people. Even held capacity building and training for elderly and retired residents.

London Case

In the second example, the purpose of public participation in London transport planning process was to raise the trust and legitimacy decisions taken. The SPI is one of an effective method for engaging the public in design decisions. It provided the possibility of interpreting the perceptions and interests for all residents and stakeholders. In practice, the participation process offered these purposes, in which it gave the government necessary information for decision-making, especially in problem identification and in shaping alternative solutions. Another outcome of the process was that the participants learned more about the environmental transport problems that the city faces. In the London case, residents could put forward the proposals, but they did not have the authority to decide on policy. The scope of the participation process was the promotion sustainable modes and important aspects of transport policy problems. In the end, the decisions were made by means of the Mayor as of representative democracy. Throughout all participation phase's residents were involved, in notably huge numbers. The TfL received more than 6000 public responses and nearly 500 responses from stakeholders and businesses that created approximately 43,000 variant comments. Moreover, the residents that were not directly engaged were well informed regarding the process through the broadcast email, press media, social media and Tfl website.

Given the fact that the public participation process on the draft MTS a success, yet there is one note of criticism on the process researcher could raise. It is about the impacts of participation. Proposals want to assure that London's transport policy is resilient to the impacts of climate change and could influence residents to alter their urban behavior, however there are no short-term concrete plans to address the problem. Although a great amount of attention from the survey showed residents were extremely satisfied with almost all aspects of the transport

policy, but there is no objective indicator to measure the level of resident's perception whether they want to change their behavior or not.

Madrid Case

The third example described about the input of consumers in city policy making. It showed that the concept of governance referred to as digital government can change drastically by using a new way communication technology in public participation in policy making. The proposals feature was designed as a way to allow citizens to utilize the full power of direct democracy and shape government actions. This feature has the biggest potential of having a considerable impact on the politics of the city (Soto, P., Catania, M., 2018). This new digital government concept has made a breakthrough compared to traditional governments that relied on focus groups, citizen advisory committees or on public hearings (Table 1).

Participation in this context is by increasing the legitimacy of the rule and reducing the level of conflict. The decision-making process is about the acceptance of a concept rule. All Madrid residents could participate. Formally the decision in the end was carried out by means of representative democracy. In practice, representative democracy gave in to direct democracy because of an enormous opposition against the proposed rule.

The City Council is progressively exporting new technologies to improve citizen/government interaction in the hope that through means like the Internet this interaction becomes more open, transparent, and efficient. Efficiency lies on sophisticated systems for collecting and analyzing resident input. In this case all comments were monitored, putted in a database and made accessible on the Internet through a portal. This digital system eliminated the need to make paper documents of each comment. According to the founder of *Decide Madrid,* another advantage over traditional participation methods is the ease of submitting comments, which encouraged more people than usual to participate, making city's policy more open and more transparent the government ever performed.

Although Decide Madrid is considered as the most desired of open government, the implementation not as expected, except the PB function, there is no proof that the platform could improve decision-making. Some questions can be raised about the link between media coverage, incentives, and stakeholder analysis, but it appeared that *Decide Madrid* has not yet reached its

main objectives, as its founder admit. With only two proposals have been successful, it is obvious that neither residents, nor city's government is taking benefit of this innovative system and it has yet to achieve a significant impact on governance in Madrid.

Milan Case

In the last example, participation described here as a means to create support from the residents for the allocation of public finances particularly in the urban transport future. Even though "I count, I participate, I decide" aimed at comprise every social group including minorities, there is not much evidence about their active participation in the project. Firstly, it was not clarified by any document on the website how the Municipality reached out to the 60 members of minorities who participated to Phase 1. Secondly, it is not clear whether if the proposals from the minorities were treated as equally as the others in reaching Phase 2.

Since this PB process was designed to have a final voting process and a limited budget, it was inevitable the presence of losing projects not reaching the minimum number of votes in order to be executed.

The analysis of this case have showed us how in the city of Milan the participation is assumed to be just a political goal, in the rhetoric language of democracy, and not as a policy instrument useful to orienting the relationship between political and civil society.

Another criticism addressed to the city's administration included the suggestion to continue the meetings at a local level, as it was during the first phase. This meeting did not manage to address in detail all of the updates about the projects district by district, but only gave a general comment on each of them. In addition, the 4th phase could be argued to be missing a structure. Decentralization should have played a major role in the realizations of Phases 1 to 3, promising to reach even more people and get residents to participate more actively at a district level.

However, it is still too early for a final evaluation since most projects are developed following a 3-year plan and should thus be completed in 2018. By then, it will possible to understand whether if this type of PB in Italy and more specifically in vast multicultural

geographical areas like Milan could become part of a regular participatory practice embedded in the political structure.

5.3. Description of What the Roles of the Participation Are Actually Place

If we review the policies, plans, programs and sustainability objectives, we see that the cities normally used these types of means:

- Influencing the content of the city's transport policies and proposals by reference to relevant related strategies and their respective goals;
- Increasing awareness of residents about alternatives more sustainable modes of transport;
- Providing a context of the varied ways (and issues emerging) in which transport policies and proposals impact upon sustainable economic, environmental and social development; and
- Identifying issues and outcomes which the city's transport policies should explicitly seek to address and deliver.

There are a number of important points, which have a bearing on the city development process. These include:

- *Amount of attention*: The amount of attention could be used as one of indicators to measure how far public participation influences the government in creating city's transport policy and gauge how far the involvement of the public in creating the city's transport policy influences residents to change their urban transport behavior. For example, media impressions. One of the methods of assessing the city's public participation and understanding engagement process is by calculating the number of media impressions for a given period. In Madrid case, the press/media has published 500 items of public information and has set up a compulsory register of lobbies where all lobby groups have to be included, be they companies, individuals or groups that want to influence decisions made at municipal level. In addition, 95 institutions in 18 countries are now using the software developed by the Madrid City Council that runs Decide Madrid.

- *Behavioral change due to participation*: A high level of allowed participation does not necessarily mean that participants actually participate and they change their transport behavior right away. Citizens tend to not to engage in participatory processes if they do not feel a responsibility or an acute threat. Defining why and what element of public participation in the cities' comparisons may be relevant in describing the participation process, but is not sufficient to link the implementation of public participation by citizens behavioral change. Societal challenges in areas like energy, environment and mobility are so complicated that government, industry, and residents have to cooperate in order to solve them. The researcher offers recommendations for further research to test of major theoretical assumptions about behavior change by examining the processes and outcomes participatory methods of different city's transport policy strategies.
- *Climate discussion*: Another method of measuring the residents' awareness is how active the city actions against climate change. Paris is a good example. The city was a pioneer in the fight against global warming by actively conducting climate discussion and adopting its first climate plan in 2017 and its revised version in 2012. Furthermore, the city implemented 10 years of actions to meet the challenges of the climate transition.
- *Level of perception of residents*: Residents' opinions are often a powerful influence on city authorities. Transportation is regularly an emotional issue for residents. When there are problems, they cite it as being among their biggest pain points, and when improvements are made or proposed, residents can become strong proponents who really appreciate the changes. Enhancement of shared transport in Milan has already shown results, in which 12 percent of citizens have already decided to give up a private car and about 8 percent are likely to do so in the future.

Participatory approaches clearly have something valuable to offer. However, we should also face problems that often arise with participation, such as:

Problems with participation materials:

- Problems with website/links/pdfs do not work
- Lack of justification for proposals/no cost or benefit analysis provided
- Poor proposal/poor quality graphics/maps
- Consultation materials not clear/could have been better presented
- Consultation not well publicised/accessible/relevant to all
- Too long/time consuming/complicated/technical
- Too little information/details too vague
- Should have provided a summary of the key items/items referred to in the questions
- Leading questions/proposal is biased/a sham

Problems with participation process:

- More public input needed
- Waste of money/time
- Sceptical about consultation
- Consultation biased/decision has already been made

CHAPTER 6. CONCLUSIONS AND RECOMMENDATIONS

This concluding chapter summarizes the final answers to the sub-research questions and main research question. In addition, this chapter makes five recommendations for city councils that aim to seek informed, meaningful and constructive responses from public to help to shape the better policy.

Sub-Research Question:

1. ***How does city transport policy making look like, in general and in a number of cases?***

   In general, decisions on city transport policy are embedded in a world of various and competing interests and have to address multiple needs. Solutions to these complex and important questions are not easy to achieve. In the future, as the complexity of modern life continues to grow, transportation issues will multiply, the range of technical solutions will increase, and public resources will decrease. As a result, the demands of the public and the various stakeholder groups to become involved in decision-making will become ever more insistent. Public participation in decision-making is increasingly accepted as 'living democracy'. There is also general implications for the way in which transport policy making is approached, for example there is a growing belief that communities would support transport schemes more readily if they were more actively involved in designing them. They would better understand the need for the project and perhaps be more willing to accept compromises, and they would be able to suggest ways in which the proposals could be better adapted to meet their local needs. In short, they would 'own' the scheme, instead of regarding it as having been 'imposed' on them from above.

   In a number of cases, there is currently a lot of practical experience in developing and implementing city's sustainable transport policy and the process of decision-making and implementation sometimes succeed, due to the following:

   1) City councils may be willing to support a project, because they do not have doubts concerning the problems, the impacts and sustainability of solutions or the acceptance by citizens or stakeholders. For example the Madrid case, the city councils provide the participation portal that can be used by residents to propose, deliberate, and vote

on policies for the city and assure open government and transparency of all government actions within the municipality. The portal enables citizens to influence the city's planning and policy-making through poll, discussion, and consultations with the purpose of empowering residents, promoting transparency, and fostering democratic government practices.

2) City councils are necessary to exercise their role and responsibilities for the planning, monitoring, and development of transport policy. In the London case, the Mayor is required to prepare and publish a transport strategy and to keep that strategy under review. In making city transport policy, the Mayor must have regard to the effect the proposed or revised strategy would have on the health of persons in London and the achievement of sustainable development in the UK and include those policies and proposals which are best calculated to promote improvements in health and contribute to the achievement of sustainable development. Therefore, a public and stakeholder participation has been conducted on the draft of MTS.
3) Citizens and stakeholders are support the selected concept, the decision process itself or the outcome. In the Paris case, the city transport policy making is based on community-based and articulating the interest of the diverse stakeholder groups. In the decision-making process, each stakeholder group gave positive impacts as they represented of all significant interests. Moreover, the public responsibility and awareness has enlarged since the city council were applying the concept more democracy, openness, and transparency.

2. How, why and through which participatory mechanism is the public involved in city's transport policies?

How is the public involved in city's transport policies? The scope of the public invloved is very crucial for the outcome of the process. For instance, in the case of London, the outcome relied on whether participants were decide about transport policy as a whole or just the choice between more or less sustainable modes of transport. This means that before forming a public participation the process of good consideration of the scope is very important. In the Paris case, the outline process in the making city's transport policy

is open to all and apply random selection. The city used professional facilitator to draw out knowledge and insight from other group members.

Second, the inclusion of everyone in the participatory processes is one of the key important factors so that all voices and wills form a part of them and no one is left out. The city of Madrid create an online platform that allows citizens to influence the city's planning and policy-making through voting, discourse, and consultations with the goal of empowering citizens, promoting transparency, and fostering open government practices. This platform enables citizens to create and directly support ideas for new legislation. In the Milan case, it stressed to the young population from 14 to 25 years of age and the minorities groups. Meanwhile in Paris case, there is no age limit to participate. The equality criteria of a larger group are very important when shaping participation in the creation of the city's transport policy.

Third, we can answer the question by analyzing how is the information generated in the participation process and who has access to this information. For instance, in the London and Madrid cases, although the participants have the authority to put forward the proposals, but in the end, the decisions taken by the representative of democracy. In the Milan case, the participants are offered free access to the information that is necessary to make the decision and allowed them to make preferential voting.

Why is the public involved in city's transport policies? Why a city does public participation in transport policy is their choice. It is not normative. It does not mean that a city has to do public participation, but clearly a city has their own reason why they think they should do it.

First, all the four cities have arguments that participation will increase the trust of citizens in the legitimacy of the decision taken and reduce the level of conflict. Participation in the city's development is functional for both the policies and for the citizen involved as a participant. It gives the chance to articulate the interests of different stakeholders. With participation decisions taken will be seen as legitimate because they shall reflect the will and values of the people.

Second, all the four cities believe that participation contributes to the quality of decision-making since it provides government information necessary for decision-making and contributes to identify problems systematically and shapes alternative strategic options.

Third, Paris, Madrid and Milan think participation will strengthen democracy and provide transparency. Through the process of participation, citizens can participate and assess projects directly.

Lastly, Milan argue that citizens will do a more active consultation through participation. Meanwhile, Paris believes that citizens will learn about the environmental problems that cities face by carrying out public participation.

Through which participatory mechanism is the public involved in city's transport policies? The four examples are all mixes from different participatory mechanism namely citizen's advisory committees, structured public involvement, citizen initiatives, expert working group and deliberative opinion poll. This illustrates that the success of the participation processes does not depend on the use of formal participation methods but through well-documented methods. By doing so, policy makers could be more aware and could avoid the potential negative aspects of public participation. For example, in the Milan case, one could have known beforehand that certain participants would drop out in the next phase of the process given the requirements of the chosen participation criteria. Another interesting example is deliberative polling in Decide Madrid case. Building on the opinion poll by incorporating elements of deliberation can provide useful insight into public opinion and meaningful input into public decision-making processes. In the London case, public participation offers participants a real experience of involvement as they literally see the design team responding to their input and incorporating their values into the policy as a product.

3. *In how far does public participation influence transport policies in cities?*

Enlarging public debate and engagement in policy development related to urban mobility behavior through public participation methods can not only contribute to commonly increasing residents' awareness, but also help improve policies (by providing stakeholders and the public input on needs and priorities) and commitment to environmental issues. In the Madrid example, it was mentioned that there was a highlight of a project that has come about thanks to public participation. In fact, there are hundreds of projects carried out in the city, many of them are residents' proposals implemented by the city council. It is clear that public participation influence the government in making

the city's transport policy. In the London case, it appeared that the outcome of public participation influence a number of changes to policy contents throughout comments from public, businesses, stakeholders and led campaigns. Moreover, some of comments and recommended revisions were made to the current transport system and not about the proposals within the MTS itself. Meanwhile, Paris claimed that the following aspects such as increasing the use of more sustainable modes of transport, improving public transport, reducing car traffic, improving air quality, and safety are input from the participatory process that has been considered to change the content of the city's transport policy.

4. ***In how far does their participation in transport making policies influence residents urban transport behavior?***

For the time being at least, both academics and practitioners cannot give absolute clarity on what successful participation means. Yet the effectiveness of participatory decision-making depends on the intended type of effect (e.g. the improvement of decision outputs, resident empowerment in their own right) or on the interpretation taken towards environmental quality and its ethics. The analysis of all four cases showed that the main factors affecting the preference of residents (as commuters) toward passenger car are affordability, convenience, efficiency, and sustainability. All these factors influence residents to alter their urban transport behavior.

In the London case, an increasing number of public transport users happened because of freezing public transport fares by the mayor, not because of the public participation process itself. Therefore, the researcher assumes that people make rational decisions that are motivated by the need to keep costs as low as possible instead of influenced by the participation process. Nevertheless, people's decision-making behaviour appears to be considerably more complicated. By investigating the factors that play a role in changing citizens' behavior, it is easier to predict which plans or measures will have an effect. When it becomes clear what motivates citizens to opt for more sustainable modes of transports, the government can adjust policy accordingly.

In the Paris example, residents are more aware of energy efficiency and they want to keep pollution levels low. A simple habit changes and the use of bicycle and become a

pedestrian have led to large pollution reduction. Although private cars are still the main mode of transport, the statistic of the high reliance on private vehicles starting to decrease. In the Milan case, shared transport as the most successful outcomes of Milan's public participation has already pointed results that residents have already decided not to use a private car instead become a shared car passenger, a shared bike cyclist and a pedestrian.

The Main Research Question:

How and why is public participation being used in the city transport policy?

All four case examples explain in different ways the probabilities to correlate how and why public participation is being used in the city transport policy. Public participation in the city transport policy takes various forms such as just giving information stakeholders of decisions that are being made, asking and using their input on strategy or policies under careful consideration, or collaborating with them to identify and overcome problems. City's transport policy stakeholders are those who own a stake in the decision, which might include the general public and/or groups with specific interests, because of their geographical location, transportation needs, or related problems. Public participation needs to be designed for its specific context. Policy makers have to consider several important factors before creating a public participation process, for instance clarifying what parts of the decision are able to change and open for discussion, ensuring public trust in the process, working with professional or expertise, and being easy to access to all stakeholders.

There are many ways to involve the citizens in creating transportation policy. In practice, cities have conducted public participation in a number of methods:

a. Paris used the citizen's juries and community analysis as a tool for engaging citizens on a transport problems. It involved extensive public involvement, with residents, different district associations, police departments, families and students' councils, chambers of commerce and trades councils were asked to express their views on the proposed plan. Citizen juries are involved in creating a "jury" a

representative sample of citizens (who is chosen in a random manner). The "jury" is a range of possible alternatives. Citizen jurors consider the alternatives and make the most attractive alternative for the community. They have a decision as they would in legal terms, often in the form of a report. The report may include recommendations for future actions or directions.

b. London used *Structured Public Involvement (SPI)* for engaging the public in design decisions (they want to know what the people that are using public transport think because it is important to make a better policy) and classifying the policy to setting goals together. Public involves in each decision phase and they can give ideas and suggest options to transport professionals.
c. Madrid performed citizen initiatives through online platform that allows the citizens to have a direct channel to get involved in municipal policy. The platform enables citiznes to influence the city's planning and policy-making through poll, discussion, and consultations with the purpose of empowering residents, promoting transparency, and fostering democratic government practices.
d. Milan used deliberative polls method for answering the questions that the general public would have regarding policy issues and for creating support from the citizens regarding the allocation of public finances. The city's transport policy has been developed through a participation process that has involved public authorities (the municipality, the mobility agency, public transport operators), stakeholders (professional associations, local associations, companies, residents' associations) and citizens, who contributed to the identification of agreed strategies and actions of the plan. In the participation process, participants are randomly selected by organizers and invited to discuss the issue within small groups.

How public participation is being used in the city transport policy also gives the impacts on policy and decision-making. For instance, expanding public debate and participation in the city's transport policy development through participatory mechanisms can not only help improve policies by providing citizen input on needs and priorities, but also contribute to generally increasing citizen awareness and commitment to environmental problems. In Paris case, a survey

of the participants afterwards showed that they had more understanding of environmental transport consequences and their solutions and showed more support. In Madrid example, the market research showed an increase in the understanding of the problems and their solutions.

Important to realize, who has what authority and process (e.g. timing and resources) of the public participation process are crucial for the final outcome. Likewise, the type of information and feedback offered to and by participants also influences the outcome. This means that before shaping a participatory process it is important to be clear about what kind of information or exchange is needed. For example, lay knowledge, local information, opinions and support and what emphasis will be given to the input of different participants. In the London case, there is pre-public participation phase. During this phase, the city council led a series of engagement activities with a wide range of stakeholders, the outcome of which were considered in the revision of the draft city's transportation policy.

Participatory method can be influential for policies addressed at sustainable city's consumption. Enlarging the scope of public discourse and empowering the stakeholders through an interactive and participatory process to commit themselves to the sustainable mobility goal. The open and active involvement of all parties would be far more effective than the conventional passive means of persuasion. Thus, broad coalitions should be formed to include specialists, researchers, academics, practitioners, policy makers and activists in the related areas of transport, environment, public health, infrastructure, green modes and public transport. It is only when such coalitions form that a real debate about sustainable mobility can take place. There must be a willingness to change and an acceptance of collective responsibility. Most visible is the reduction of the use of private cars in the Milan example. In the Paris case, it is expected that the continuing discussion on climate issues will raise the market share of the use of sustainable modes of transport.

Another key point, the researcher concludes there are arguments why a city does public participation in the creating the transport policy:

a. Participation will increase the trust of citizens in the legitimacy of the decision taken and reduce the level of conflict. Participation in the city's development is functional for both the policies and for the citizen involved as a participant. It

gives the chance to articulate the interests of different stakeholders. With participation decisions taken will be seen as legitimate because they shall reflect the will and values of the people.

b. Participation contributes to the quality of decision-making since it provides government information necessary for decision-making and contributes to identify problems systematically and shapes alternative strategic options. Participation provides useful data and more information in the formulation of city's plans and developments.
c. Participaton will strengthen democracy and provide transparency. Through the process of participation, citizens can participate and assess projects directly.
d. Through participation, citizens will do a more active consultation since they are more aware and more responsible (e.g. for environmental problems). As a result, citizens will learn about the environmental problems that cities face.

In the final analysis, the use of public participation in creating the city's transport policy and using more sustainable modes of transport goes beyond the actual measures and attempts to understand the reasons behind effective implementation. Effective implementation of sustainable mobility requires the public participation, so that they can understand the reasoning behind different policy initiatives and support their introduction. In summary, sustainable mobility has a central role to play in the future of sustainable cities, but it is only through the understanding and acceptance by the people that it will succeed.

Recommendations:

1. *Public participation in transport planning and implementation contributes to a higher quality of urban mobility*

   Public participation brings the knowledge on the problems and needs in the planning phase, it raises awareness on behavioural modes, it enables the participants' feedback on acceptability and usefulness of implemented mobility measures, it increases community cohesion in and ownership of the action.

2. *Different types of mobility measures require different levels and different timing of public participation*

   The degree of public participation depends on the character of the mobility measure and its objectives, it can vary from informing citizens, consultation with them, involvement of citizens in decisions-making process, or even acting together with citizens in implementation of measures; For the success of engagement it is crucial to involve citizens in the early stage and throughout the whole process in order to build the trust for future actions.

3. *The consultation process should be inclusive, transparent, interactive and on-going*

   Open and well-facilitated discussions, based on clear objectives, and using appropriate consultation forums and techniques (designed for specific target groups) will enable effective participation process with citizens.

4. *Taking due account of citizens' comments and proposals when making decisions raises the commitment and trust*

   Taking due account of the comments of participants of the participation process is crucial. If these comments and proposals are ignored and without the feedback on their impact on decisions taken, it raises the feeling of manipulation and causes mistrust and conflicts.

5. *Provide adequate resources, professional facilitators and success metrics*

   A public participation process requires adequate time and resources. Successful outcomes may be damaged where these are lacking. Another key point, professional facilitators would help to achieve a positive and productive discussion during the participation processes by letting the participants address the many issues they had experienced while living in the city. Equally important, success metrics could be very useful to monitor public participation initiatives.

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Appendices:

Appendix 1. Questions for City Council (Paris, London, Madrid and Milan)

1. What is the public participation mechanism that City Council has set up to serve the citizens? What does it include?
2. Why is a city doing public participation?
3. What is the topic of the public participation?
4. What is the intended purpose?
5. When is the start date and end date of the public participation?
6. How many total participants have been involved?
7. Based on demographics and public roles, who is the targeted participants?
8. What is the method of recruitment have been conducted?
9. Can anybody put forward a proposal that will be put to citizen vote?
10. How many citizens proposals have been submitted?
11. Have any of them been successful?
12. What questions has the City Council put to citizens in recent years?
13. What is the decision method(s) have been performed?
14. With regard to the participatory budgets, what has the outcome of this process been over the last three years?
15. Please can you share any evidence or research which indicates the extent to which the involvement of the public in creating the city's policy influences the government to change the policy content?
16. Please can you share any evidence or research which indicates the extent to which the involvement of the public in creating the city's policy influences citizens to alter their urban transport behavior?

Appendix 2. Informed Consent Form

Informed consent form for individual interviews for thesis studies in MSc MEEM

"The Use of Participatory Decision-Making in Creating the City's Transport Policy and Using More Sustainable Modes of Transport"

I declare to be informed about the nature, method and purpose of the investigation. I voluntarily agree to take part in this study. I keep the right to terminate my participation in this study without giving a reason at any time.

My responses may be used solely for the purposes of this study. In its publications, they may *(please tick one of the options):*

O be cited with my name or function revealed
O be cited anonymously, thus without identifying context
O only used as information source

During the course of the interview I keep the right to restrict the use of (some of) my answers further than indicated above.

Name participant:
…..……
…..

Date: ……..…… Signature participant:
…...……

I declare to fully adhere to the above.

Name researcher:
……..……
…..

Date: ……..…… Signature researcher:
……...…….