

Master thesis

## **The life journey of an idea – Car Free City in Oslo**

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## Abstract

In 2015 the municipality of Oslo announced the intention to ban the private cars from the ring 1 of the city. Thanks to its '*aggressive*' approach, this project had huge relevance on national and international press, introducing many debates on the reasons for such a decision. But it was not a case that this project happened in Oslo, indeed there were some preconditions and a context that led to this concept of the car-free city. Furthermore, the initial idea of removing all the private cars from the city centre has changed becoming a project with a greater focus on the improvement of the liveability of that area. Through an analysis of the case of Oslo from a different perspective, the thesis tries to unfold the reasons and the forces that worked behind this idea, shaping it until it reached the final result, the realization of the project.

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## Chapter 1: Introduction

This chapter wants to help the reader to have an overview of the thesis, it is composed by three sections: starting with an introduction on the concept of idea and its relation with the thesis, then illustrating of the logical process, the reasons for the choice of the topic and the objectives of the research, and finally presenting in details the research methods and the philosophy of science applied during this investigation.

### 1.1 The concept of idea

Ideas are abstract representations of our thoughts and knowledge, they are tools for reality's transformation, but being abstract most of the time they don't coincide with it. Ideas are the first step of a possible change of status of artefacts or actions, as a first step, during their process of realization, they are subject to multiple changes due to the facing of the reality. In many cases, due to their unattainability, ideas can just remain abstract not having any kind of influence on the reality. Indeed, Ideas are transformative but also transformable, they adapt to the real world in order to be born. Ideas have a life journey in three main steps: conception - when an idea is born -, transformation - when the idea changes form - and death - when the idea is realized or non-realized. The birth of ideas is influenced by some preconditions that create a necessity, so the idea has the aim to fulfil a requirement. After the conception, ideas are subjects to transformation, they can be influenced by material or abstract forces like interests, stakeholders or other ideas, changing forms one or multiple times. The last step of the life journey of ideas is the death, it coincides both to the realization or to the non-realization of them, in both cases the ideas stop to be that abstract concept and become something else, in addition when the ideas stop to be, their effects can last after their death.

Following the same steps, in Oslo in 2015 was conceived the idea of having a car-free city centre. As will be presented in the thesis, this concept became first a project and, after facing all the forces of the city, it changed turning into something different from the starting idea. Moreover, even if the project is ended its effect will last for years, influencing Oslo and its citizens in many aspects.

## 1.2 Research design

### The choice of the topic

To start I would like to list the reasons that direct me to the theme choice, which is the car-free city. The first reason is related to my previous semester, I had the opportunity to take part in a research about pedestrian mobility, having the chance to investigate a vast number of cities all over the world and during this period I encountered the '*Car-free liveability plan*' of Oslo, making me immediately interested about it.

The second reason is the media coverage of this plan, usually, plans are very technical documents that rarely are presented among the general public, but in this case, many press sources were talking about it, making me, not only interested to understand the plan, but also curious of the communication strategy used by the municipality of Oslo.

The third reason is about the car-free trend, indeed many cities all over the world are thinking to ban cars from their city centre, so to investigate a 'hot topic' makes me more interested to work in this field.

The fourth reason is the location, indeed working on a close location it should have helped me to do the fieldwork (did not happen because of the coronavirus), living in Aalborg it is easy and cheap to reach Oslo compared with other destination.

The fifth and last reason is about the approach to this topic, indeed this particular master allows me to work on an interdisciplinary way using as a backbone of the research the theory of the mobilities turn (fusion between quantitative and qualitative data), therefore I decided to base my investigation on these theories.

### Research question

The objective of this thesis is to analyse the reasons and the modalities on how it developed in Oslo the project of the car-free city centre, trying to base the investigation on the theories of the mobilities turn. In order to reach this objective, I designed a research question that could help to structure the thesis, coming up with:

*“What is the life journey of Oslo’s car-free city project?”*

The research question aims to find out how the project of closing the city centre to cars has changed from the initial idea to the final project, after all the forces’ influence that it had encountered in its journey. In relation to this main question, there are also other sub-questions strongly correlated with the main one, that will be naturally answered during the thesis:

*“What led Oslo to ban cars from the city centre?”*

*“How did the project change?”*

*“Why did the project change but not the name?”*

*“Is the car free-city, in political terms, a popular choice?”*

These sub-research questions are all related with the analysis done in the thesis, they approach the car-free city theme from a different point of view and in a more specific way, answering to these questions, it will be possible to finally answer to the main one.

So, to answer all these questions, it will be needed a multidisciplinary approach, using theories from different fields and analysing Oslo from a different point of view in order to have an overview as complete as possible. The intent is also to conduct the research with a neutral point of view in order to uncover as much as possible all the blind spot of the theme, trying to be influenced by previous knowledge, or prejudices, the least possible and trying to take into consideration all the possible interests of the stakeholders related to this project.

### 1.3 Methodology

In this section, it is presented the way I structured my research, which philosophy of science I followed and which methods I used to achieve the objectives. After I have decided the thesis topic, the following step was to organize the research understanding which methods I could have applied in my research. To have better organization of the methods I decided to select a philosophy of science that could have to help me, so in the following section I am going to introduce which philosophy of science I have chosen, then I will explain which method I have selected and their use in the research.

## Philosophy of Science

The Philosophy of science is a subdivision of philosophy and it is concerned about methods and their application in science, in other words, it is the explanation of the methods used to reach a result/knowledge using methodical steps (Delanty & Strydom, 2003). Therefore, I thought about using the philosophy of science to help me to structure my investigation and make understandable to the reader the way it was developed the thesis.

Thanks to its flexibility and its feature to adapt to many methods I have decided to follow the Hermeneutic. The hermeneutic is a methodology to understand every kind of text (as the laws, research, religious books, etc.) and human activity (such as engineering, philosophy, research, etc.). Hermeneutic gives the tools to interpret these texts and activities giving a method to follow (Mantzavinos, 2016).

Therefore, the interpretation and the understanding it is a fundamental point of hermeneutic, indeed to find an answer to the ontological question, it is essential to go through a complex process of interpretation, where there has to be an interaction between interpreting subject and the interpreted object. This process is called hermeneutic circle, indeed there is a kind of circular movement that passes from the detail (part) to the whole (structure), and if necessary, it can go back to the detail until the interpretation is complete. It is a kind of continuous movement of the focus from the detail to the generic and then again to the detail, and endless exchange between text and the context (Kemerling, 2011). For example, during my research I have analysed the transport system of Oslo moving from national to local plans, so moving from different scales, from the general to the detail.

So, the hermeneutic was the best philosophy of science to choose for my thesis because it helped me to interpret the text, documents, papers, etc. that I was going to encounter during the investigation. Due to the interdisciplinarity of my work, it was also very useful this approach to move between different fields and on different layers, it was helpful to have a complete overview on Oslo, for example passing from the local to the national or moving from history to politics, trying always to find a correlation between them.



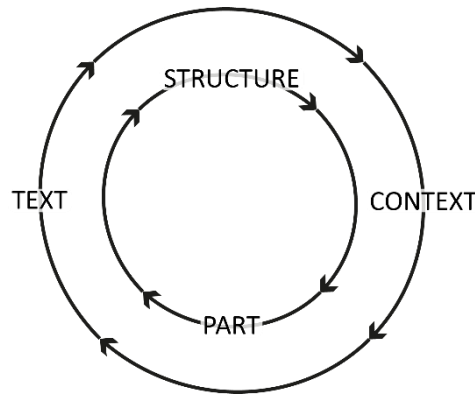


Figure 1 Hermeneutic circle (Bassi, Consalvi, Langeland, Svineng, 2019)

Interesting also with my thesis is also the viewpoint of the Hans-Georg Gadamer, a German philosopher, that introduced in the hermeneutic some fundamentals that can explain to the reader the reasons of why the author interpreted some data in a certain way. Thus, he introduced the concept of historicity, for Gadamer history, has a relevant role in understanding the method used by the researcher, the historical period justify and explain the interpretation of the interpreter: “[...] *the hermeneutical problem of understanding concerns ‘truth’ which is contained in ‘our own historicity’*[...]” (Delanty & Strydom, 2003, p. 94).

Moreover, Gadamer added another interesting concept to Hermeneutic, he stated that every human has some subjective prejudices so there is no possibility have a pure interpretation of things, the prejudice is a part of the understanding, he considers the prejudice as a positive pre-judgment that decisive to the process of interpretation (Malpas, 2018)

So, the interpretation for Gadamer was a circular process between the part and the structure but it was influenced by both the historical context and by the prejudice of the interpreter, in this way the idea of a definitive interpretation for Gadamer does not exist. But the union between the interpreter, the interpreted, the historicity and the perjure give birth to the “fusion of horizon”, the closest concept of a final interpretation (Malpas, 2018).

With the precondition of being an international student, studying in a foreign university and researching on another country, my interpretation of the texts and human activities is the result of all the criteria listed before, so the prejudice (cultural background), the historical context and the circle of hermeneutic. So, due to language and cultural differences, my understanding is certainly different from a Norwegian citizen, hopefully, this will result not as a weakness of the research but as an opportunity to have a different point of view on the topic researched.

## Methods

After the prerequisite of the philosophy of science, I am going to present the methods used to develop my thesis and to answer the research question.

To answer to the research questions, I have to deal with different fields and so different kind of methods, moreover the choice of the methods was also influenced by my study background as I have a bachelor in city planning.

The first step of my work was to have an overview on Oslo and its project, so the first step was to collect information and to take notes, I started with the easier sources of information so general press website, forums, blogs, videos, and podcasts. This first step is visible in the thesis but it was a useful backbone to dig in the topic, a sort of generic base knowledge.

Then I focused my work on the literature review, this part was basically to analyse documents, plans and academic papers, depending by the topics I could have used one of the listed sources or all of them together. The literature review was based on theories, so: the mobilities turn, the place brand, the sustainable mobility paradigm and the dark side of mobilities, but there was also a section where was explained the historical relation between city and car, and its role in the mobility, this section was both composed by theories (automobility, car dependency) general data.

Ended the literature review, I started the analysis, it was developed by investigating through documents, news, academic papers, websites, statistics and also an interview with Terje Elvsaas, an Oslo's communication consultant of the car-free programme. All the sections are based on the interpretations of texts, data and partially influenced by the interview done with Elvsaas. The first 4 sections: the historical context, the political context, the planning context and the public transport in Oslo are needed precondition knowledge to have a deeper understanding of the car-free programme.

The conclusive chapter is based on the elaboration of all the information collected during the other chapters in order to come up with some outcomes of the analysis and to understand where the research can go on this field. Also, it needs to be mentioned the section on the COVID-19 that is the result of personal experience, news, academic papers and other sorts of data, in order to reconnect the thesis with the current historical moment we are living in.

In conclusion, the overall approach on the topic was desktop-based, this is not an intentional will but more a unique solution due to some limitation in relation to the coronavirus situation. Indeed, to have more accurate research there would have been needed some fieldwork with site inspections and small streets interviews with locals.

## Limitations

The thesis, due to three main reasons, was subject to clear limitations that influence the development of the investigation. The first limitation is the language because even if there is plenty of information in English, many reports and plans were just available in Norwegian making harder and slower the process of understanding them. The second reason was the coronavirus because due to the pandemic the methods were changed during the development of the thesis, making impossible the fieldwork and slowing down the writing process. However, the COVID-19 gave me the possibility to have a different experience, to see how is to live in a city with few cars in the streets, transforming a weakness to an opportunity for a different type of investigation. The third was the difficulty to get in touch with the stakeholders, I had the chance to have a proper interview just with Terje Elvsaas a communications advisor of Oslo Car Free City Programme. I also had a brief phone call with Carina Holm Thorvaldsen, a planner of the municipality of Oslo, the conversation with her was not included in the thesis because the information gained is the same that I obtained with the interview of Terje Elvsaas - just more concise; in addition, due to technical problem, it was not possible to record the call so I did not include it either in the appendix. I tried to contact many others stakeholder (politicians, associations, agency of planning of Oslo) but few of them answered and always with a negative response.

## Disposition

The thesis is structured on four main chapters: the introduction (just above), the literature review, the analysis and the conclusion.

Starting from the literature review, there will be presented some theories to have a better understanding of the topic and to have as a toolbox to analyse the case of Oslo. Then the chapter of the analysis will be composed by four sections useful to describe the surrounding (history,

politics, planning, public transport) and to give a prior knowledge needed to understand the actual plan, and then there will be the analysis of the 'Car-free liveability plan'. Finally, in the last chapter there will be a section dedicated to the car free-city generated by the coronavirus, then the discussion where all the outcomes of the research will be presented and finally a conclusion with some ideas for possible future researches.

## Chapter 2: Theory Framework

This second chapter is the theoretical framework of the thesis, is based on the literature review and on the theories that are needed to develop the research. The chapter is divided into five sections: an introduction on the theory of the mobilities turn to present which is the perspective on the theme of the mobility that is going to be taken into consideration during the development of the research. The second section is about place brand, fundamental theory to understand the car-free project of Oslo. Then there will be a section that is going to explain the sustainable mobility paradigm and its role in the urban context. The fourth section is focused on car mobility and its relation to the city, in order to give an overview of the historical role of the car and its relation with the urban areas. Finally, the last part of the chapter introduces the concept of the dark side of mobility to underline the possible unintended consequences of mobility.

### 2.1 Mobilities turn

During the XX century life of people has been radically changing, thanks to the technology's innovation the style of life of people have been influenced by activities that before were not possible. These activities have had repercussions on many fields but in particular on the way and on the possibilities of people to move; gradually, people from every social background had access to explore new places:

*“The global order is increasingly criss-crossed by tourists, workers, terrorists, students, migrants, asylum-seekers, scientists/ scholars, family members, business people, soldiers, guest workers and so on. Such multiple and intersecting mobilities seem to produce a more ‘networked’ patterning of economic and social life, even for those who have not moved” (Hannam, Sheller & Urry 2014:2).*

As explained by Hannam, Sheller and Urry, there are many new actors driven by different interests that move in the space crossing each other, leading to have a more networked society where people influence each other, both in case of movement and in case of immobility. This change if the style of life of people has influenced the way of people moving increasing mobility. But, while the way of moving has changed, the approach of research to the topic of

transportation was fixed with the traditional approach, leaving a gap in the understanding the phenomenon of the movement:

*“While metaphors for humanity such as homo sapiens, homo ludens, homo socialis, homo communitas, homo ipse, homo memor, and homo performans have, respectively, highlighted the significance of knowledge, play, sociality, community, identity, collective memory, and performativity for cultural formation, much is still to be learned about homo movens, that is, one of the most fundamental dynamics of human existence: movement.” (Vannini 2010:118)*

Vannini defines the human that has the ability to move as ‘homo movens’ in relation with the crucial act of human’s life: the movement, and while in social studies the human has been investigating for long and in different perspectives, there is a gap in the research of the humans in relation with the movement.

In ‘Mobile Cultures’ Vannini explained how the term ‘mobilities’ has an interdisciplinary application, concerning to different fields: *“the study of mobilities generally focuses on such phenomena as migration, transport, travel and tourism, the social organization and experience of transportation and communication infrastructures, and regional and transnational flows of capital and material things”* (Vannini 2010:112). Therefore, while the classic concept of mobility is taking into consideration *“go from a point A to a point B”*, the term ‘mobilities’ is related to the movement but also to what surrounds the movement, both human and non-human, and both material and immaterial.

The mobilities turn is a change of direction in the approach to the topic of transportation, it includes dynamics that often are forgotten. While that the classic view to transportation is: *“daily practices of ‘dead time,’ inconveniences to be minimized”* (Vannini 2010:112), the concept of mobilities: *“conceptualizes experiences of movement as transformative of both its agents and users, as well as of the spatial, temporal, and socio-political contexts of which it is part.”* (Vannini 2010:113). Hence, not only caring about the transfer but including the surroundings, taking into consideration both the generators and the outcomes of the movement, trying to understand how user and the agent influence each other, and keeping in consideration the context (social, economic, morphological, temporal etc.).

Analysing the phenomenon of movement with the perspective of the mobilities it makes possible to uncover new functions of spaces that create new forms of social life:

*“Mobilities thus entails distinct social spaces that orchestrate new forms of social life around such nodes, for example, stations, hotels, motorways, resorts, airports, leisure complexes, cosmopolitan cities, beaches, galleries, and roadside parks. These are places of intermittent movement constituting for some at least relatively smooth corridors”* (Sheller & Urry 2006:213).

Sheller and Urry explain that there are some spaces where the movement is intermittent, these places are the point of contact between different movements which they define as ‘nodes’, where there are new forms of social life peculiar to each of these places. While the traditional approach transportation considers the demand as given, the mobilities turn gives relevance to the social aspect in the process of transportation trying to answer to the question ‘*why do people move?*’ and consequentially ‘*why do mobilities happen?*’ (Urry 2003), so that the mobility becomes the core for the understanding of the ‘social’ focusing on how mobility can create and change the social forms (Lassen 2018).

This new approach opens up many new points of view in the research field, for example, Vannini states: *“The social aspects of movement in and through means of transportation are evidence of the fact that journeys have the potential of being transformative of the traveller’s experience”* (Vannini 2010:115), explaining that the journey with different means of transportation has an influence on the traveller’s experience; therefore the same journey with a different mode has a different impact on people. Again Vannini, in ‘Mind the Gap’, presents the case of the line up in British Columbia, a place where people have to spend time waiting for the ferry. In this particular place, the meaning and the form of the space change as changing the behaviour of people: *“[...]people-watching and conviviality tend to make line-ups a rather unique place of transition: a very private kind of public space, and a very public type of private space[...]*” (Vannini 2011:289). Thus, the social life is an effect of the movement of people which consequentially change the value and the meaning of places and artefacts.

This new approach to look at the mobility has been becoming fundamental to analyse everything concerning the phenomenon of the movement, Vannini states: *“The new mobility paradigm is only beginning to show the dominance of such discourse and to uncover its consequences at the level of geopolitical, economic, and cultural practice”* (Vannini 2010:118), reviling that the value

of mobilities could be seen in many fields of research, and also that in the future is going gain more relevance.

In conclusion, the mobility turn is a radical change in the way of looking at the phenomenon of the movement, it helps to have a wide overlook including dynamics and reasons that normally are left apart by the traditional engineering approach. For example, while traditionally the reason of demand of transportation is to consider as a 'given' element of the analysis, the mobilities turn has the ability to uncover the social reason for the movement deepening the understanding. As explained above, the mobilities have the ability to reveal meanings and dynamics, the influence of the movement can change the meaning and the use of spaces, as well as the choice of the means, can influence the traveller's experience changing also the behaviour of the same. The mobilities turn gives us a kind of pair of glasses to have a wider point of view that helps to have a deeper understanding of the movement.

## 2.2 Place brand

Since the 2000s cities are starting to look at the green policies as the main direction to take for their urban development, Oslo itself started to adopt policies following the concept of a sustainable city. In relation to this new sustainable concept, there is also the new image that the city is trying to give, the place brand theory is needed to understand what is the place brand and what there is behind the creation of a new brand.

To talk about the place brand, it is important to start defining what are brand and place. Starting from the place there are many different definitions, indeed the term 'place' could refer to different meaning from the own house (my place) to a city, region or even a state (Cresswell, 2014). The dictionaries define it in many different ways, such as a location or a particular position in the space. The meaning of place and space are many times overlapped and confused, like in the case of a city, region or state they can actually refer to the same thing but with a different meaning. So, what is the difference between the space and the place? Cresswell (2014) says that space has more a geometric value while the place is a space "*which people have made meaningful*" (ibid, p.12). So, to define a place it is important the role of the user give a value to it, Tuan explained that "*what begins as undifferentiated space becomes place as we get to know it better and endow it with value*" (1977, p.6) in other words the human interaction with the space gives a particular value creating the place.



Concerning the branding, the Cambridge Business English Dictionary defines it as *“the activity of connecting a product with a particular name, symbol, etc. or with particular features or ideas, in order to make people recognize and want to buy it”* (Cambridge Business English Dictionary). Therefore, the act of branding has the power to connect a product with a specific meaning, making easier the recognition of creating a kind of interest in people.

So the place brand is the connection of the brand with the context of the place, Zenker and Braun (2010, p.275) describe the place brand as: *“A place brand is a network of associations in the place consumers’ mind based on the visual, verbal, and behavioural expression of a place and its’ stakeholders. These associations differ in their influence within the network and in importance for the place consumers’ attitude and behaviour”*. So as the brand, the place brand creates an association of ideas with a place, giving it a new meaning. It is interesting how Zenker and Braun refer to the people as *‘consumer’*, indeed even though the place brand is a practice closed to the field of planning it is important to remember that is also a practice coming from the business field. This definition leads also to another reflection on the place brand, the brand of a place is not about the reality of a place (if it exists one) but it is also about how people perceived, making the understanding of the place subjective, therefore the practice of place branding it is about orientating the association of certain ideas with a place in order to make it more attractive to the consumers.

When did cities start to use with the place brand theory? The answer is not well defined but the literature put emphasis in a particular period of urban areas, it started everything during a crisis period for cities, in the post-industrial era, many of them had to reshape their image: *“Arguably, one of the drivers for the shift towards place branding has been the need of industrial cities to redefine themselves through a process of reimagining”* (Kavaratzis & Hatch, 2013:70). In many cities, there were problematic brownfields that needed to be rehabilitated and in a parallel way also the image of the city, the strategic answer to this need was founded in the practice of the place brand. We are facing a similar change in nowadays cities; the cars are not considered anymore the centre the future of the urban mobility and in the same way, this change has led to a new reshapes of city image that found again its solution in the place brand.

Despite today the place brand is a quite use practice, in the literature, there is not a well-defined process to organize it, so this part will try to make clearer what are the necessary features to have a place brand strategy:

### 1. Place identity

The place identity is a natural step to have a place brand strategy. But as was stated above the concept of place is relational, indeed it can change over time and space. At the same way place identity has still a non-fixed nature and cannot be the result of a fixed process (Kavaratzis & Hatch, 2013). So, the place identity as the place brand is: *“formed through a complex system of interactions between the individual and the collective, between the physical and the non-physical, between the functional and the emotional, between the internal and the external, and between the organized and the random”* (Kavaratzis & Hatch, 2013, p. 75). So, the creation of a place identity cannot be the result of a fixed process but it is more a continuous interaction between different elements.

### 2. The target groups

We explained before that the place brand is based on the perception of people, but even though everyone has a unique perception of things, in some cases the perception can be somehow similar. The place brand theory indeed tends to get together these people in so-called target groups. Therefore, it is possible to say that the place brand is *“based on the perceptions of the different target groups, making branding a multi-faceted subject.”* (Zenker & Braun, 2010, p. 1). So, to have a successful place brand communication is not needed to have a comprehensive strategy that works for the different target groups, creating sub-branding (ibid).

### 3. The role of the stakeholders

Finally, to have a successful place brand strategy it is relevant the role of the stakeholders and in particular, the leadership: *“Developing a brand identity [indeed] is dependent on the effectiveness of brand leadership in engaging and managing stakeholders based on shared objective”* (Hanna & Rowley, 2010, p. 464). But by leadership is not intended the classic political leadership but more a stakeholder able to engage with all the other and trying to set some common objective (Kavaratzis & Hatch, 2013). So, the stakeholders are important for the process of place brand and there is a need for leadership to organize and set common objectives.

To conclude to have a successful place brand strategy it is important to take into consideration the place identity, the different target groups and to involve the stakeholder in the process of creating the brand. That means that place brand is not a fixed process that can start from scratch but it has to have a relation with the context, the people and the time in order to be something than just an attempt to communicate something new. As it is going to be shown in the analysis, in the case of Oslo, the car-free city plan had an important role in the development of the brand of the city, and the perception of people had a relevant role in this process.

### 1.3 The sustainable mobility paradigm

As mention in the previous section, and as it will be presented in the analysis, for years Oslo has been trying to develop following sustainability criteria, as well in the sector of transportation, sustainability has become a starting point for strategies and policies. To fully understand the project of the car-free city it is needed to understand the sustainable mobility paradigm, so this section aims to present this paradigm.

To introduce a debate about sustainable mobility is necessary to start from the generic term sustainable. The word sustainability opens up a lot of questions, indeed while it is quite easy to understand if something is not sustainable, it is more complex to say what is sustainable. Looking at the Cambridge dictionary sustainability is defined as: “the quality of being able to continue over a period of time”. This generic definition has then different declinations in each of the fields that could be related (to economic, environmental, social...) and in this section case, I am going to talk about suitable mobility.

So, what does mean sustainable mobility? There are so many fields of sustainability, such sustainable economy, socially sustainable and so on, in some cases what is sustainable for a field could not be for the others, therefore some authors think that it is necessary to take into consideration all the fields in order to have complete sustainability (Gudmundsson, 2003). But in this section, the topic is going to be investigated specifically about the sustainable mobility taking as an example the approach that Mella and Pentucci had in their book “*Mobilità Urbana Sostenibile. Verso un Nuovo Paradigma*” (2018), they stated that the generic principle of sustainability has to be a premise but then has to be done a trade-off between advantages and disadvantages finding the best solution (not the perfect).

Once defined what is sustainable mobility it could be useful to look at the transport planning theory, this subject is based on two main principles that traditionally have been the main criteria to plan the transportation (Bannister, 2007). The first principle is that the demand for travel is derived and it is not a pleasant activity that people are intentioned to do, the second is that people are always intentioned to minimise the general cost of travel, that includes both costs of travel and time of travel (ibid, 2007). As Bannister (2007) explains these two principals were used to be the base for most of the studies and projects about transportation, making the travel as an impediment to minimize in order to reach the final location; they also explain why while cities have expanded and distances are grown, the time of travel remained the same thanks to the increase of speed. This approach to the transportation has facilitated the use of cars over other means like public transport, walking and cycling, therefore in this context sustainable mobility provides an alternative to approach the complexity of the urban context and the relation between land use and transportation (ibid, 2007).

Both the point of the travel demanded travel time and the minimization of the travel time reflect two main principles of the traditional approach of transportation planning, with the advent of the sustainable mobility some of these principles were modified and some were created, Mella and Pentucci (2018) listed six emergent principles:

- 1- Guarantee accessibility instead of increasing transportation infrastructures;
- 2- Manage and improve mobility (integrated mobility) instead of trying to fulfil the transportation demand;
- 3- Take into consideration the social needs as objectives to direct policies and investments;
- 4- Go beyond the speed paradigm and start to consider the relevance of travel experience;
- 5- Include in the agenda the intrinsic conflict between the needs and the concept of sustainability on a local and macro-regional scale;
- 6- Take into consideration the economic and financial sustainability, not in the traditional way looking at the singular case but more at a network/system scale (Mella and Pentucci, 2018).

These six points represent the principles of sustainable mobility, to achieve these principles are needed actions and Bannister (2007) also listed four basic actions that the sustainable mobility approach needs:

- 1- Reduce the number of travels, thanks to technologies is possible to do some activities in remote (smart working, online shopping, etc) and consequentially reduce the need for movement;
- 2- Transport policies that increment the modal shift, some measure indeed can reduce the car use and improve another way of moving such as walking, biking and public transport;
- 3- Land use management, to create a sustainable mobility system in the urban fabric is needed to adopt measures that could improve density, with a mixed of use development, planning following a public transport-oriented development, creating some car-free zones and a minimum of available services and facilities;
- 4- Technological innovation, the technology can be fundamental for the future development of sustainable mobility solving many problems though innovative solutions (renewable fuels, data collection, etc.).

These four fields of action are the base to work with sustainable mobility, but the literature gives also a strong relevance on people, their needs have to become central in transportation planning. To make people central to the transportation planning process is needed to involve them, and to do so it is important to start to aware them of the problem, organizing events and advertise the need for a change, in this way it will be possible to involve the citizenship making people the real protagonists of the change.

In conclusion, the theory of the sustainable mobility paradigm is useful for many aspects of the thesis. This theory is going to be useful to understand what has been done in Oslo and if it follows the principle of sustainable mobility. Furthermore, the concept of sustainability will be also touched during the political analysis to understand which was the context of Norway during the years when was founded the green party. Finally, the aspect of participation will be also fundamental for the investigation, indeed the stakeholders will have a relevant role in the development of the project.

## 1.4 City and Car

In this section will be clarified the role of the car in the city's development of the last century, looking at the different outcomes that had in different fields. The section is divided into 3 main parts, it starts with a historical overview on the invention of the car as an innovative technology that revolutionized the way of moving of people; then the focus moves to the influence that had

on the urban fabric, the car use outcomes on different perspectives (social, human behavior, economic and cultural) introducing some phenomena such as automobility and car dependency; to conclude there will be an overview on the actual trend of cities trying to reduce the use of them.

The invention of the car is considered a turning point of modern technological development, indeed the car empowered movement of people. To be specific is not the invention of the car by itself, but more the car as a mode of transportation accessible to everyone. The accessibility of car to the most was achieved with the introduction in the market of the Model T, launched by Ford from 1908 in Detroit. Indeed, this particular model, pushed by the introduction of the assembly line that made faster and cheaper the production line, become affordable by every common US citizen (History.com 2010). This particular model had a huge impact on the market indeed by the mid-1930's one out of two US households had their own car (Ralph Buehler, 2014). Making the car accessible to everyone revolutionised the way of moving of common people, influencing also the public investment in infrastructure and consequentially in the development of cities in the US. Also, after WWII the personal wealth in the US influenced the growth of the number of cars (Ralph Buehler, 2014).

The car revolution arrived in Europe a little later, due to a different economical context the ownership of the car did not become common until the end of WWII and the beginning of the economic boom. The car gave people the possibility to move to commute in a short time and in a cheap way, giving people many new possibilities both for business and for their personal life. The automobile freed people to move in and outside of the city, becoming an important sector of many national economies and also shaping our culture and social practices. The car rapidly became a key point of the lives of people, becoming a part of our daily life that we take as granted. While, on average, the literature, until the late 1980s, praises the value of the car, nowadays we are starting to face the dark side of the use of the automobile.

The invention of the car introduced a new term in the field of transportation, the automobility which is the result of the union of the words automobile and mobility. But what does really mean automobility? Starting from automobile, the meaning comes from the innovation of the engine that substitutes the use of horses, so the word 'auto' in a sense of self-propelled vehicle (Featherstone 2005). But the term auto did not only show an independency from the need of horses but it represented also the possibility to have a vehicle without the need of rail tracks (ibid), the movement of cars introduced the freedom of moving in the space independently from

the need of some heavy infrastructure. The real beginning of the myth of the car started with this idea of private autonomy of movement in an efficient, affordable and comfortable mode.

The automobility is the definition of the mobility of cars, having its own terms shows how influential is the movement of cars, but cars do not just have a power of mobilizing people and goods, they have a wider ability to influence, to understand this ability it is needed to introduce the concept of 'car system' (or 'automobile system'). In *"The little book of the car-free city"* (Urry, Leach, Dunn and Coulton, 2017) is presented the concept of the 'car system', the authors take into consideration everything is around the world of the car. For example in simple activities like going to buy some groceries at a supermarket, there are plenty of relations with the car, the streets, the car licence, the ability of driving, the road signs, the fuel, etc.; around the car, there is a complex assembly of objects and practices also called 'car system' (Urry, Leach, Dunn and Coulton, 2017). So, it is possible to understand as the automobile is much more than a mode of transport but it has influenced our lives in many aspects (economical, cultural, social, environmental, etc.).

*"We can see then, that over the past century, this system that developed around the motor car has transformed economies, resource-consumption, social life, air quality, noise, personal safety, global climate, notions of the 'good life', geopolitics, warfare and almost every town and city."* (Urry, Leach, Dunn and Coulton, 2017)

Becoming the most popular way of moving, the car slowly revolutionized many aspects of living, it became the symbol of progress, indeed it has led a period of intense technological development. From a simple way of transportation, it became a crucial object of our lives, so crucial that had many effects, some positive and some negative. The automobile helped to develop progress and wealth in all the western country making the movement achievable for everyone. On the other hand, becoming the most popular mode of transportation, the car started to be also essential, in some cases, it could also be mandatory, and with it comes also all the car system that became essential/mandatory, transforming the car from a tool for moving to a need for living.

This transformation of the car from a solution to a need is defined as 'car dependency'. In the literature there are two distinct points of view on the car dependency, some authors as Jeekel (2013) and Harms (2004) see the car as a solution for the needs of the modern life composed by tight schedules, the autonomy of movement and many different trips purpose. In other words, the need for mobility partially finds its answer in the car use. Other authors like Urry (2004) and

Handy (1993) confirmed the need of mobility of the modern life but also that the car's feature in terms of space needed (parking spaces and infrastructures) and speed capacity transform the urban and suburban context, increasing the dispersion of activities and residential areas. This phenomenon causes the 'cycle of CD' where the car is a necessity to move and, in many cases, the only answer (or at least the most efficient). In other words, the characteristics of the car influence urban development in a way that makes people dependent on the use of the car.

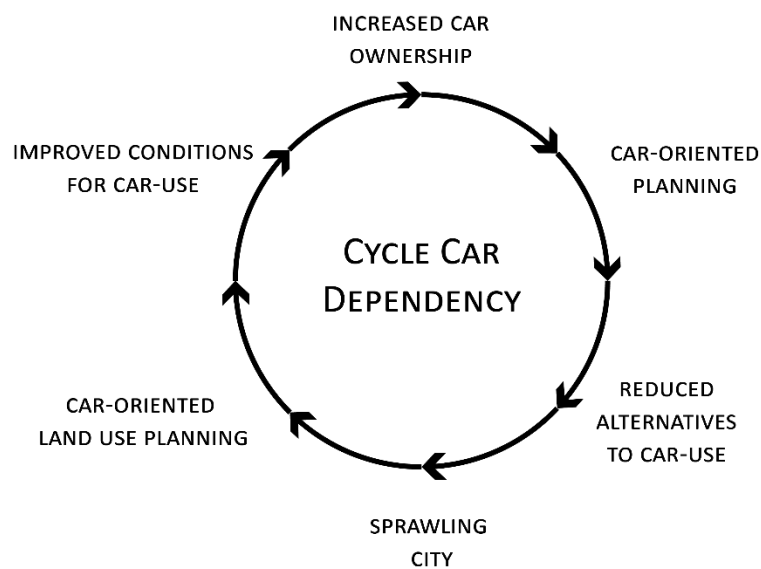


Figure 2 Cycle of Car Dependency diagram. Source: made by the author

The car dependency is just one of the side effects of the care system, but the car is way more than a mode of transportation, as we mention above it influenced entire cities, regions and countries. The technological innovation of the car brought changes also to the urban forms, many European cities in the late nineteenth century has started to expand their city due to the capacity of expanding their rails lines, in the USA happened a similar process but just with a stronger influenced of the car (Philip Steadman, 1999). The rapid growth of the automobile forced cities to change in order to make space for them, modifying the spaces and the shapes of cities (Urry, Leach, Dunn and Coulton, 2017). If we give a look to nowadays cityscapes it is easily recognizable how the public space id dominated by cars and spaces for cars. Most of the time this urban changes had been accepted until the recent years but it is necessary to mention the case of New York with the fight undertake by Jane Jacobs against the decision of the government to build a four-lane highway through neighbourhoods, what happened in New York was one of



the few examples of the 60ies where citizens actively protested against a project to expand the car's space (Wainwright, 2017).

Accepted by the majority of people, it starts to have a deeper value, it became the image of freedom of movement, becoming influential in many other fields. The car influenced economies, the resources-consumption, the social life becoming a status quo, a symbol of the 'good life' (ibid, 2007). In the nineteenth century, the car became a symbol, its value has grown to start to be "*associated with sexual success, career achievement, freedom, family and masculinity*" (Urry, Leach, Dunn and Coulton, 2017).

It is possible to identify how historically the value of cars has changed, David Gartman (2004) in his article 'Three ages of the automobile: the cultural logic of the car' present three main periods where the meaning of the car has changed in relation to the model of consumption. The first period (1900-1925) is when the car is for the few, it still an object of luxury that just wealthy people can afford; the second stage (1925-1960) is the mass consumption period, the car becomes an object accessible to the most and with some standardize characteristics that could fit with the use of a common user; the third age (1960-present) is the evolution of the second one, there is still the mass production but the car become customizable, there are plenty of different models and sizes each of them expressing a different car culture (Gartman 2004). In the third period, the car became even more strong representative of each individual personality, in this context, it is interesting the concept of "*humanity of the car*" introduced by Daniel Miller (2001). He basically suggests that when we speak about the car, we have to take into consideration the '*humanity of the car*' as the car is part of the common culture (Miller 2001). Miller explains that to understand the phenomenon of the use of the car, it is important to look at it to all the degrees, looking at the possible negative externalities but also at the human aspect of it, which coincides with a part of personal life (ibid).

There are two main periods in the scientific literature that gave to the car two opposite meanings, the first is in relation with the car as technological development, at the beginning of the XX century it was a symbol of technology and speed. For example, Le Corbusier - an icon of modern architecture and design - considered the noise and fury of the traffic of Paris as a new concept of the beauty of the modern city that it has to be embraced (Ralph Buehler, 2014). The second period is the more recent, the literature faces the theme with a more critical point of view, Urry (2004) stated that the modern economies and societies are 'Lock-in' in the

automobile system explaining how the car became much more than a mean of transportation expanding its influence in many aspects of our lives.

After having presented the reasons why the car become so popular and the power that is gained through the time, it is necessary to try to outline the possible future of the car looking at the most recent trends.

Recently many cities are starting to adopt policies to reduce the number of cars in their streets shifting their focus to greener solution in order to reduce pollution and creating a citizen-oriented environment (Nieuwenhuijsen and Khreis, 2016). The approaches are different in every case but mainly are focused on creating more green spaces, more pedestrian and bicycle-friendly environments, alternative solution for on-demand mobility and of course working on car restrictions (ibid, 2016). Increasingly the policies are becoming more radical, an example is Hamburg that in 2014 announced that by 2034 is going to be private car-free, the plan aims to reduce the car space giving more space to pedestrian and bicycles linking parks and public spaces (ibid, 2016). Another example is Madrid that in 2015 has published a plan with a specific focus on people and with the goal to gradually pedestrianize the urban centre; some cities are approaching the car problem from a different perspective like Helsinki, where they have decided to invest on a system of 'mobility on demand' in order to create a more competitive offer of alternative modes of transportation to cars (Cathkart-Keays, 2015). Many other cities around the world are thinking in this direction and probably one of the most ambitious projects is the plan of Oslo, it was published in 2014 and it had the goal to completely close the city centre to cars (ibid, 2015), that is the reason why I have chosen it for my thesis and is going to be analysed in the next chapter.

## 1.5 The dark side of mobility

As we saw in the section above there is always the backside of a phenomenon, as well the movement creates always some externalities (economic impact, environmental impact, transport-related social exclusion, pollution etc.) that most of the time are hidden. Usually, the traditional transportation literature approaches the externalities looking at the economic aspect, both positive and negative, while other effects are ignored. This section tries to investigate how important is the keep into consideration the unintended consequences and not

only from the economic perspective but also from all the others. In the common imaginary, the concept of mobility has a connotation of something positive and it is considered a right:

*“The right to roam is the material manifestation of human autonomy, the restriction which is often understood as an act of coercion. However, as much as individual free movement may be felt as a right, a relational understanding of mobility justice clearly illustrates that this is not so simple. At times, someone mobility is relationally interdependent with others immobility – as for example, when roads and infrastructures are built between cities and neighbourhood with so-called ‘barrier effect’, enhancing the mobility of drivers while blocking previously rich spatial interactions between neighbours”* (Jensen, 2018, p. 118).

Jensen explains how the relation between movement and immobility is strongly correlated and reciprocally influenced, making the right of one the restriction of the others. The car is the perfect example of how is common in today’s culture to think that is a right to be able to move with the cars in cities and also to find a parking space. The following question comes consequently, *‘how can we balance the individual right to move in the space taking into consideration the rights of the people influenced these movements?’* in other words: *‘when the mobility is just?’*. To answer this question, it is necessary to define what is mobility justice, Mimi Sheller (2014) stated that:

*“Mobility justice, for me, is a way of thinking about differential mobilities, and thinking about the ways in which people’s mobilities are interrelated, and that we have different capabilities for mobility and different potentials for mobility. [...] So mobility justice is a way to talk about those different relations around mobility.”*

For Sheller the mobility justice is a way to analyse the mobility taking into account both the mobile and the immobile, uncovering the powers that influenced this phenomena and possibilities of people take part or not to the movement. So, the mobility justice is a useful and complex way to look at the movement in its entirety: *“we need to understand the contextual complexity of specific mobility systems and practices in order to see if we are dealing with violations of mobility justice.”* (Jensen, 2018, p. 118). Consequentially even if the movement is a right, it is considered as an exercise of power but also as a possible tool for the social exclusion (Kaufmann, 2002). So, taking into consideration of the right to be able to move freely in the space and the consequences of this act, it might be necessary to reduce the individual freedom

of movement before having a clear understanding of the possible unintended consequences, specifically in this case could be both on socially and environmentally.

## 1.6 The use of the theory

Before going to the analysis chapter, this section will help the reader to understand the use of the theories in the analysis of the empirical data. The mobilities turn is needed to approach the topic of transportation from a different point of view from the traditional, having a comprehensive understanding of the phenomenon of movement, mixing qualitative and quantitative data. This theory so it will be a pillar of the thesis and it will be used in all the analysis.

The place brand theory will help to understand if the city has planned a place brand strategy in relation to this project and also to discover the perception that the people have of the city. This theory will be used for the analysis of the planning context, the political context and also for the *“Car-free liveability programme”*.

Facing the theme of the car-free city it comes naturally the connection with the concept of sustainability so the theory of the sustainable mobility paradigm it is necessary to have background knowledge of this theme. Moreover, this theory will be used to analyse the project and the context where it was born.

The theme of the car will appear quite often during all the thesis, so the theories of automobiles, car system and car dependency will help to find out all the possible correlations between the car and the other themes.

Finally, the theory of the dark side of mobility will be a reminder of possible unintended consequences of projects and ideas. Moreover, the concept of mobility justice it will be useful to analyse taking into account both the mobile and the immobile, that the car-free city might produce.

## Chapter 3: Analysis

In this chapter will be analysed the case of Oslo as an example of a car-free city. The analysis is divided into five sections: the first is presenting the history of Oslo in order to understand the reasons of the what is Oslo today and how it became like this. The second section is about the plans that influenced the development of the city and create the today's urban fabric. The third section is the political analysis, both on a national and local level, that it will help to uncover the politic trend in Norway and Oslo, that made possible to plan to ban cars from the city centre. Then to understand how is Oslo's mobility of today there will be a section analysing of the public transport in order to understand which is the alternative to the car use. Finally, the last section will analyse the project of the car-free city centre, presenting the initial objectives, the type of interventions, and the changes that have to be done during the development of the project.

### 3.1 Oslo's history

Before starting to analyse the case of Oslo it is necessary to introduce a brief overview on the history of Oslo in order to understand the context where the city has been founded and thought out the history becoming the Norwegian capital.

There is not a sure date about the first settlement in the area where now is located Oslo but historically has been recognized as the date of foundation of the city the in 1049 by King Harald Hadråde on the east side of Bjørvika inlet, making that place a centre for trading (Kaupstad) (Andrew McKay, 2019). During the reign of Olaf III (1067-1093) Oslo gradually became a relevant cultural centre on the Norwegian panorama, becoming a bishopric in 1070. In 1174 a Cistercian monastery was built on the Hovedøya island, at that time the Christianity had a huge influence in the growth of the settlement and most of the buildings were owned by the church (ibid, 2019).

It took 250 years to become capital of the country, thus in 1299 king Haakon V decided to move his residency to Oslo making the city capital instead of Bergen, during his reign was also built the Akershus Fortress to fight the invasions of Swedish (ibid, 2019). The Fortress has never been conquered by any invader, just in 1940 the Defensor had to surrender because of the German invasion, nowadays it has a central position in the city and it is possible to see how it became the central fulcrum of the future city would have developed.

In 1349 the plague of the black death reached the city killing almost half of the population of the city, this tragedy has impacted the city also in terms of power holders, indeed due to this crisis the church had lost influence on the city while the Hanseatic traders became more important (ibid, 2019). In 1397, with the Kalmar Union Norway, Sweden and Denmark were unified under the same reign, with Copenhagen as capital, consequentially Oslo lost partially its importance (ibid, 2019).

In 1624 there was a devastating fire that destroyed most of the city (at that time it was common to have wood building), King Christian IV of Denmark decided that instead of rebuilding the city from the ruins it was a better solution to build a new city on the other side of the fiord near the Akershus Fortress and decided to name it Christiania (ibid, 2019), which seems like a first attempt of rebranding the city. The king also imposed that the new city had to be built using stones and bricks in order to avoid another future fire, this choice influenced the city inequality because the poorer which had not enough resources to use these materials had to live outside of the new city Vaterland and Grønland, living in wooden houses (ibid, 2019).

During the eighteenth century, the Great Northern War stormed all over the northern countries, Sweden was fighting against the alliance of Norway-Denmark, Russia and Saxony-Poland-Lithuania. The war was lost by Sweden and won by the alliance; this victory had an important influence on Christiania making it a central point of the Baltic economies as a centre of trading and shipbuilding leading the city in a period of prosperity (ibid, 2019). The two main trade partners were Grand Britain and the Netherlands, which had many trades networked around all over the world, making Christiania the access point for many goods such as tobacco and coffee (ibid, 2019).

In 1819 the city became again capital but this time Norway was unified with Sweden due to the Treaty of Kiel, the countries were forced in a union but both of them had their own laws, costumes and capitals (ibid, 2019). So, becoming again capital gave to Christiania the possibility to grow more, during the nineteenth century were built in the city many institutions that are still in place today, like the Bank of Norway (1828) and the Royal Palace (1848) (ibid, 2019). During this period the city continued to expand arriving to include the old Oslo where there used to be the first settlement.

The twentieth century Norway finally obtain the independency due to the end of the union with Sweden, with the independency started also a debate about the name of the city, indeed having a capital named after a Danish king was considered non-pertinent so in 1925 after about 400

years the name was switched again, this time from Christiania to Oslo (ibid, 2019). With the exception of the WWII, the city of Oslo has been developing in a peaceful and flourish context, in 1928 was opened the first metro line, in 1958 the municipality Oslo merged with Aker, which was a municipality surrounding Oslo and with a dimension of 7 times the city, that administrative change mutates a lot the border of the actual city making it closer to the Oslo of today.

This brief history of the city of Oslo it can help to have better understanding of how Oslo became the city of today. Oslo is today the capital of Norway and it has a relevant role as a European capital in particular in the maritime industry with some of the world's largest shipping companies and shipbrokers, this is thanks to its past as one of the most important trade and shipbuilder centre of the Nordic countries.

### 3.2 Planning context

After the overview on the history of Oslo, in this section will be analysed the urban development of the city and its related plans, starting from the 1990s and arriving to today's situation.

#### From sprawled to a dense city

To have a complete understanding of the car-free plan of Oslo is necessary to understand the current planning context, and to do it is also to start to look in the past 20-30 years in order to understand how the strategy and the urban development shaped the city of today.

To start it is necessary to mention that the city had a growth in terms of the population from 9.000 habitants in 1801 to 250.000 in 1925, and the same years were registered in Norway 25.000 cars which most of them were from Oslo (Oslo Kommune [a], 2019). From the 1950s had a relevant urban expansion for a long time (Næss P, Næss T. & Strand, 2011), influenced by the presence of the car in the streets, the mass-motoring influenced not only the capital but all Norway directing investments to car infrastructures such as road systems, tunnels, bridges (Oslo Kommune [a], 2019). This system started to create the conditions for car jams and local pollution throughout the 1960s, a symbol of this trend was the Rådhusplassen of Oslo full of cars parked and moving in all the direction, while now is the symbol of the car-free spaces as it becomes since 1996 car-free.



*Figure 3: Rådhusplassen of Oslo in 1960s. Source: Oslo byarkiv, Harstad*

In 1990 the Commission of European Communities (1990) stated that the ‘compact city’ is the most sustainable form for the urban development, indeed a dense city, in opposition with the sprawled one, can bring many benefits in many fields. The densification can help to rethink the empty brownfields inside of the already existing city, it has direct benefits to the reduction of private transport and at the same time reinforced of the public transport, the compact city helps also the optimization of the energy consumption (multifamily houses have a reduced need of energy compared to the single-family houses), it reduces the land consumption and it creates neighbourhoods with higher accessibility facilitated by proximity (Næss, Saglie, & Richardson, 2019).

So, after decades of urban expansion and population increased, in the 1990s the municipality of Oslo started to have a growth in the population density if we take into consideration the continuous urban area of the greater Oslo this process of densification it started from the early 1980s (Næss P., Næss T. & Strand, 2011). Even if Oslo had an important population growth in the period 1996-2008 the car traffic had an increase of the 29% while in the rest of the country increased of the 36% but with a much lower rate of population growth, compared with the population growth the increase of the car traffic in Oslo metropolitan area was about 7% and in Oslo municipality about 1% (ibid, 2011). These statistics explain that even if the population



growth and consequentially the car traffic increase, the use of the car had a way lower impact in the denser part urban areas.

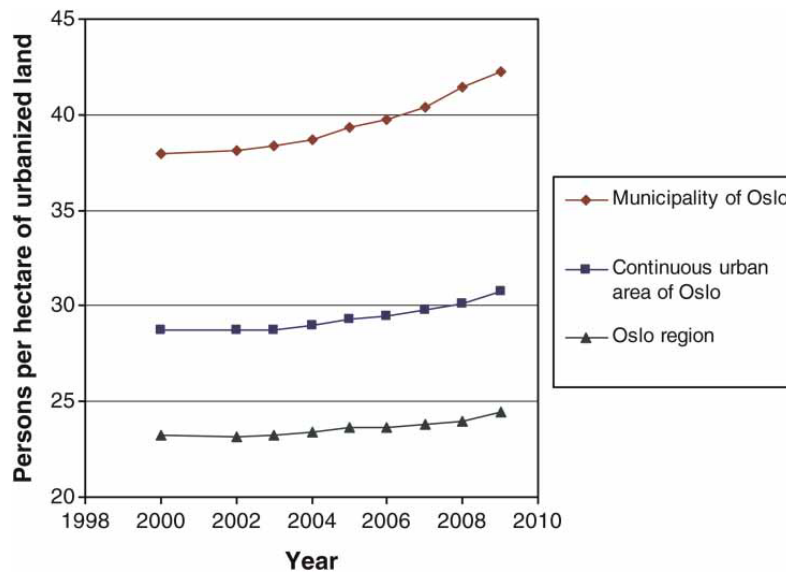


Figure 4 Population densities 2000–2009 within the urbanized land of the Oslo region (below), the continuous urban area of Greater Oslo (in the middle) and within the urbanized land of Municipality of Oslo (above). Persons per hectare of urbanized land. Source: Statistics Norway (2009b,c).

So, Oslo, following the concept of the sustainable city, could be considered a best practice, indeed in 2003 received the European Sustainable City Award. But what was the condition of such intense densification? Five main conditions influenced the development of Oslo:

- 1- After the post-war expansion, the city had a lot of potential for a future densification thanks to the many empty spaces left in the city;
- 2- The globalization had an impact direct impact on the city economy, many manufacturing industries had moved outside of the country due to the lower cost, leaving large areas in the inner city.
- 3- The combination of low density in the city, a strong economic growth, and relevant immigration to the city and restricted rules to reduce the urban expansion had influenced even more the densification process;
- 4- With the introduction of the densification policies, were also started some investments to improve the quality of the facilities in the city making the central areas even more attractive;
- 5- An external expansion of the city has to be followed by high-cost infrastructures due to the morphology of the region (ibid, 2011).

These five historical and topographical reasons make the densification of Oslo even more intense directing the growth of the city. Another important reason that creates a fertile ground for the densification is the high degree of professionals and politician that agreed on the importance of a compact city, giving years of continuity for this concept of the sustainable city (ibid, 2011).

However, it is necessary to underline that the densification had some negative impacts, in the period 1999-2004 there has been a reduction of 5% of the open-access spaces in the continuous urban area of the Greater Oslo (Englelien, Steinnes, & Bloch, 2005; Næss, Saglie, & Richardson, 2019). This reduction combined with a growing population density brought to a need of more facilities such as schools and kindergarten reducing, even more, the green and open spaces per person in some areas of the inner city (Næss, Saglie, & Richardson, 2019). The need of green and open spaces has a direct impact on the health of people but also on facing the future challenging of the impacts of climate change, for example, the densification in the harbour area could create problems in case of future flooding (ibid, 2019). Moreover, people living in the inner city will be subject to a higher degree of air and noise pollution created by the one that is living outside of the city, which on the other hand will benefit of the one that leaves in the city because of the reduction of traffic jam and cars in the streets of the outwards, this means that the densification on a degree advantages people that live outside of the city (ibid, 2019). Another risk of the densification is that as a result of many living in the centre, there will be a rise of the prices because the places are more attractive, making hard to most of the population to afford a life in the inner cities (ibid, 2019). The densification of Oslo has many positive aspects but also some negative points, but the process that is above described brought to the situation of today and to the plan of having a car-free city.

### The plans for today

Before starting to look at the 'Car-free liveability programme' it is needed to analyse also the latest plans released by the municipality in order to understand where the city is intentioned to be in the next future.

There are several plans to look at, the most influential for the car-free plan is probably '*The Urban Development of Oslo*'. The plan starts with the population forecast, the city is expected to grow and in particular, the population to rise of the 28% by 2040, having such an important

prevision of growth the objectives of the development are to make the city able to accept all the future citizens maintaining Oslo a “*good place where to live, work and visit – for everyone*” (Oslo Kommune [c], p.4, 2018). The population growth will affect also in the transportation system of the city, while there will be an increase of the population is expected to rise also the goods traffic of 40% by 2030, so it is important to have a good land and transportation planning for the future (ibid, 2018). The development plan is based on 5 main strategies:

- 1- Oslo is still (like it happened in the past) aiming to grow following the concept of the compact city, the goal is to continue the densification in particular in the areas where there are the new metro lines and in proximity to the major hubs, and also in case of necessity will be established also new hubs.
- 2- The green and blue city’s structure has to be preserved and where possible further developed (ibid, 2018). Both the green and blue structure provides direct benefits to the city and to the citizens in many fields (health, climate change adaptation, attractiveness, leisure...) becoming fundamental for the future development of the city (ibid, 2018).
- 3- The city of Oslo has to be an attractive city with appealing, safe and welcoming urban areas (ibid, 2018). The urban development had to create public spaces where people are welcome to go and feel safe, designing aesthetic, inclusive and qualitative public spaces (ibid, 2018).
- 4- Oslo should be a world-leading eco-city, Oslo already set as an objective to reduce greenhouse gas emissions of the 50% by 2020, of 95% by 2030 and to achieve the neutrality by 2050 (ibid, 2018).
- 5- Create an arts axis that crosses the centre of the city along the fjord, in order to create attractive spaces accessible to citizens and tourists (ibid, 2018).

Based on these 5 strategies there will be the future development of the city, the intention is to maintain the city compact and sustainable but also to make it more attractive to people to come to live there and to attract investors.

Other than the urban development there are other plans that affect indirectly the outcome of the car-free project, there is the “*Climate and Energy Strategy for Oslo*” published in 2016 that listed 16 actions that could help the city to reduce emission and have more renewable energy (Oslo Kommune [d], 2016). Many of these actions are related to the transportation indeed the 61% of the city’s emissions are related to transportation, the first action in the list is to increment the modal shift to public transport, cycling and walking (ibid, 2016).

Need to be mention also the “*Climate Change Adaptation Strategy for the City of Oslo 2014-2040*” published in 2014, it outlines 6 areas of intervention that is: water, energy response, natural environment, health, land use and infrastructures, all areas that are going to be influenced by the above-listed plans and the car-free city plan.

As of last, it has to be mentioned also the “*Action plans for: Age-friendly city Safe and diversified care of older people*” published in 2014. This action plan has the objective to make the city inclusive also for elderly, it had six main focus areas of intervention: social participation, housing, communication, health and service care, outdoor areas and transportation (Oslo Kommune [f], 2014). Relevant for my thesis are the fields of the outdoor areas and the transportation, indeed these two fields of intervention are related with the car ban plan from a point of view of inclusivity, accessibility and liveability (ibid, 2014).

In conclusion, the Oslo of today was influenced by the plans and policies adopted by the city starting from the 1980s, partially the urban development was also influenced by some historical and topographic reasons. Until the end of the 1990s, the main objective was the densification to have a compact city, today's plan has still the densification as a backbone but there is also a strong focus on the green and climate change issues, that in some cases could be in contrast with too high densification. Therefore, the policies are designed in order to solve the environmental and climate change issues and at the same time trying to keep the city as compact as possible but avoiding the excess.

### 3.3 Political context

To completely understand the reasons that led Oslo to get rid of cars in its city centre it is also needed to have an overview on the political context both at the local and national level, the plan of the car-free city centre indeed was strongly wanted by the green party.

The green party, called in Norwegian Miljøpartiet De Grønne that literally means ‘Environment Party the Greens’, was founded in 1988 and in the foundation took part also important philosophers like Arne Næss, Johan Galtung, and Sigmund Kvaløy Setreng. In those years in Norway, there was a strong philosophical stream of thought on the environmentalist issues, is not a case that in 1987 was realised the Brundtland report. This report was made by the World Commission on Environment and Development, presided by the former prime minister of

Norway Gro Harlem Brundtland, the document introduced the concept of sustainable development based on three pillars: economic growth, environmental protection, and social equality. So, the green party was the result of this cultural atmosphere on these environmentalist and sustainability themes.

At the beginning of its history, the party haven't had so much success, in the period between the 1991 and 2009 in the local elections the party used to get about 6-8 representative elected every time and it has never taken more than the 0,5% on the national level. But since 2005 the party registered a growing number of members, having, as a result, the many representatives from other parties joining the greens (Løset, 2013).

Things starting from 2013 has changed on a national level, indeed the green party gain passed from the 0,4% of votes in 2009 to 2,8% in 2013, an increase of 2,4% obtaining the first seat in the parliament (Valgresultat.no). In the election of 2017, the party that got more votes was the labour party (Arbeiderpartiet) with a share of votes of 27,4%, the second was the conservative party with a share of 25,0%. The green party was still far from the two biggest parties but still it has even more improved its share, the Miljøpartiet De Grønne received the 3,2% of the votes and had an increase of the 0,4%, maintaining the seat in the parliament. It is interesting also to see that the vote to the green party is overall spread in all the country but in particular, from the area of Oslo comes the higher percentage of voters (as it is possible to see in the map) (Valgresultat.no).

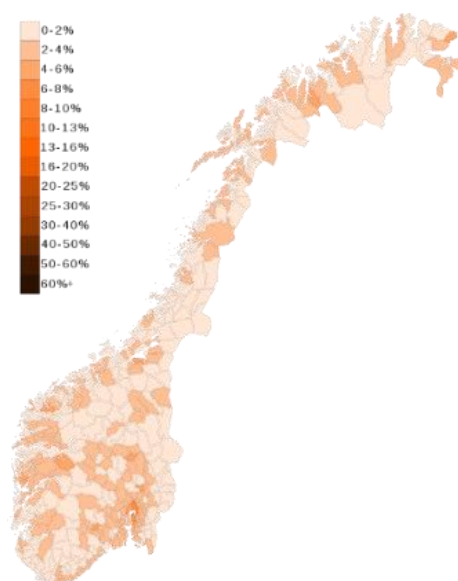


Figure 5 Support for Green Party by municipality in the 2017 Norwegian election for the Storting. Source: Wikipedia, 2020, Source: [https://en.wikipedia.org/wiki/2017\\_Norwegian\\_parliamentary\\_election](https://en.wikipedia.org/wiki/2017_Norwegian_parliamentary_election)

In the case of Oslo the county council is the same of the municipal council, in the last election in 2019 the party that gain more votes is the conservative party (Høyre) with the 25,4% but compared with the election of 2015 had a reduction of 6,4% of votes, the second party was labour party with a share of 20,0% compared to the election in 2015 with a drastic reduction share of 12,0%. So, while the two most important parties lost votes, the green party had a remarkable increase, starting from 2011 when they first got a seat in the county council with the 2,5% of votes (Valgresultat.no). In 2015 Miljøpartiet De Grønne obtain 5 places in the county council thanks to 8,1% of the votes becoming the third party for the number of votes overall (ibid). In 2019 increased, even more, the share with an incredible result of 15,3% and achieving 9 seats in the council (ibid), so in just 8 years the green party was able to improve its consensus of six times.

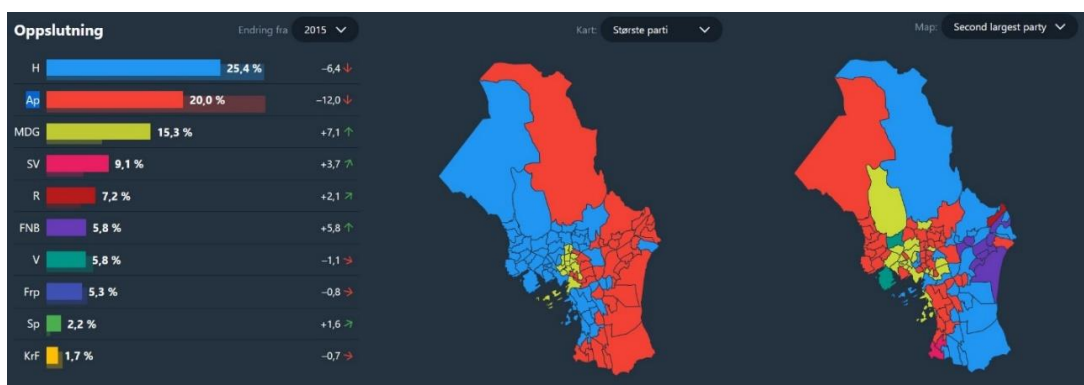


Figure 6 Share of votes of the council election of Oslo of 2019 and first/second party by municipality. Source: <https://www.vg.no/valg/2019/valg/ko/fylker/oslo/kommuner/oslo>

The growth of the green party is an indicator of how the Norwegian citizens are becoming more involved by the issues related to the environment, especially the share of votes obtained in the county and in the municipality of Oslo express how citizens appreciate the work done on the local scale. In the map above it is shown the vote distribution in the county of Oslo in the last election (2019), it is possible to see how the municipalities near the city centre are the ones that voted the green party (yellow) as the first or second choice, this underlined in a way underline how the plan of closing the centre to cars is liked more by people living in the city centre and in the surrounding municipalities. So, considering that historically the fight to the car use has always been politically unpopular in some way the case of Oslo presents a new scenario that it could be also seen as a trend of a cultural change of people to the approach to ecologist themes.

### 3.4 Oslo's Public transport

In order to be able to get rid of cars in a part of the city, it is necessary to have an efficient alternative to move in the city, this alternative is the public transport that has to be efficient and accessible in order to be able to compete with the private car. Therefore, in this section, we are going to try to analyse the public transport in order to understand which kind of service is provided to the citizens.

#### The national transportation plan and the agency Ruter

Before speaking about the public transport of the city it is necessary to mention the national transport plan 2018-2029, a twenty-year plan to establish the direction of the future mobility of Norway (Norwegian Ministry of Transport and Communications, 2017). The plan, approved by the Norwegian parliament in 2017, has the role to set goals and strategies in a long-term perspective (ibid, 2017). The objective of the plan is inspired by the 2050 horizon set by the European Union, so to make Europe the first continent to be climate neutral by 2050 (ibid, 2017). The goal is to achieve: *"A transport system that is safe, enhances value creation and contributes to a low-carbon society"*, therefore the objectives are divided into three areas: Mobility, Transport Safety, and climate and environment (ibid, 2017). The ambition of the plan is supported with a budget of 933 billion NOK, moreover, it is expected to have an income of 131 billion NOK coming from the road tools making the final budget of 1064 billion NOK to allocate in the time period of twelve years (ibid, 2017).

The focus of the section is now moving to Oslo, investigating on the public transport system that there is in the capital. The company that manages the public transport in Oslo is Ruter, which is a state-owned company 60% by Oslo municipality and 40% by the county of Akershus, this company was founded in 2007 and it helped the improve of the management of the system creating also the fare integration. Ruter does not operate the system but it manages it, organizing competitive tender for the assignment of the contracts to private companies to run busses and ferries, instead of with the tram and the metro it has a long-term operating agreement with another state-owned company called Sporveien Oslo AS. In 2016 Ruter published the Long Terms Strategy Mobility Plan 2016-2020 (M2016), the plan was not anymore focused on the public transport but was trying to improve the mobility solution to ensure a better service for the residents, the M2016 is based on 10 points:

- 1- The user should have more choices and more competitive alternatives to cars;
- 2- There should be better collaboration between private and public, the customer should be at the centre of the transportation system and also it should be facilitating the use of new technologies;
- 3- There has to be urban sustainable development that finds in the mobility support for this process;
- 4- Cycling and walking have to become part of a more comprehensive mobility system;
- 5- The tram system has to be improved because they have the potential to increase the quality of the system and the attractiveness of the city;
- 6- Modern and environmentally friendly buses in order to have a more attractive and user-friendly service. To achieve it is also necessary to implement infrastructure creating dedicated.
- 7- Prioritize projects that have a great impact on the system and that have the best market potential;
- 8- Invest in on-demand service RuterFlex
- 9- Shorter planning process in order to have a more effective and immediate influence on the city;
- 10- The bases for a competitive and innovative public transport is the financial resources, so there is a need a new boost for investments (Ruter [a], 2016).

These ten points underline the direction of all the plans listed above and in the other section, the transportation is the backbone for sustainable urban development, with a particular focus on people, making everything necessary to have a useful service for the citizens.

### The Public transport system – Metro, bus, tram and ferry

Due to its territorial morphology, Oslo has a vast variety of modes of public transport: metros, busses, trams, ferries and bike-sharing. So, there are many options to move, in the city centre walking is the best option, indeed the city is compact and it is easy to reach most of it by foot, instead, it is different when there is a necessity to move in the suburbs.

The metro of Oslo has 5 lines that cover all the city of Oslo, the metro operates from 5.30 am until midnight (Ruter [b], 2016). During the weekdays it has a frequency of 10 minutes (until 21.00), while in the weekdays after 21.00 and in the weekends the frequency is of 30 minutes



(ibid, 216). The metro system has a total length of 85 km, with 101 stations of which 17 are underground or indoor and it is the most used public transport with a share of the 42% (ibid, 2016).

The bus system is the vastest of the public transport modes, indeed is divided into city buses (red) and regional buses (green). The city bus is quite used in the city with 106 million journeys per year, that correspond to the 37% of the total amount of journeys with public transports.

The tram system is based on 6 lines with a total length system of 41 km, every year it runs 51 million of journeys and it represents the 18% of the public transport (Ruter [b], 2016). The tram system has a total of 99 stations of which 12 are directly connected with other modes (bus, metro, train, boat) in order to facilitate the modal shift.

The system of the ferries connects the city to other part and island of the Oslofjorden. There are five mains lines, four of them leaving from the tram stop of Aker Brygge and one from Lysaker in connection with a train station, there are also some routes that are just seasonal (B2, B3, B4, B21, B22) (Ruter [b], 2016).



Figure 7 Maps of Oslo's public transport. Source: Ruter.no

While the metro and the tram have a similar function and connect the suburban parts of the city to the centre, the busses have a different role, indeed, they pass from the central area but also many lines connect the neighbourhoods without the need of going to the centre, giving alternative decentralized mobility.

## Cycling and Walking

The bike-sharing system of Oslo (Oslo Bysykkel) is owned and operated by Urban Infrastructure Partner, a Norwegian private company, on behalf of the city of Oslo. It is a station-based system, so with fixed parking places, today there are 244 parking stations spread all over the city (Oslo Bysykkel). Thanks to the trip planner app of Ruter it is also possible to see in real-time the number of bikes available and the spots to park them (Oslo Bysykkel). Moreover, with the trip planner, it is possible to plan the trip by walk, finding the fastest way to reach the destination and with the option to choose three different speeds of walk.

## Ticketing

To organize the ticketing in Oslo there is a zone system, there are in total 11 zones but including areas that are formally outside the county of Oslo, taking into consideration just the city of Oslo all the metro and the tram system operating in one zone. Bus, trains and ferries instead could cross more than zone making the ticket price depending on the travel distance. Moreover, there are various pricing options: single tickets, 24h tickets, 7 days ticket, 30 days ticket, 365 days ticket, Pay-as-you-go ticket, Rufus ticket (school group). Some of the listed tickets have also a price subdivision depending on the category, so there are the: Adult, student, youth, children and senior prices. Different the system of the bicycles, there are two different prices, the day passes for 49 NOK and the yearly pass for 399 NOK for an hour of use per day (Oslo Bysykkel).

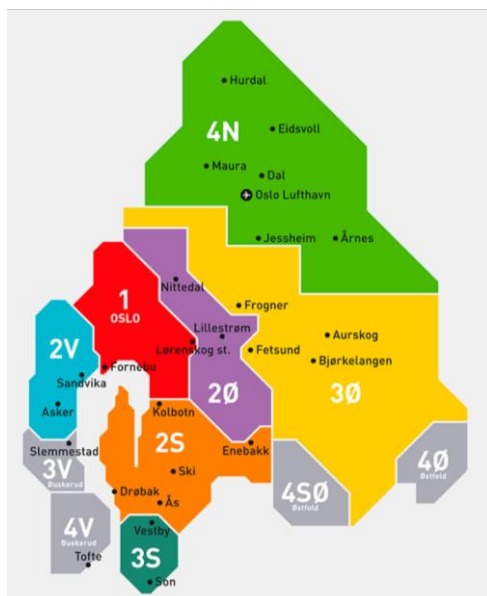


Figure 8 Ticket Fare Zones. Source: Ruter.no

### Public vs Private transport

After having an overview of the public transport system of Oslo, it can be interesting to analyse the modal split and try to compare the accessibility to the centre of the city of all the different means. Oslo modal split is distributed in this way: the car is the most used mean with the 35% of the share, the Public transport is the 30%, the share of walk is very high compared with other cities and it's 29% and finally there is the bike with only the 6% (Ruter [a], 2016).

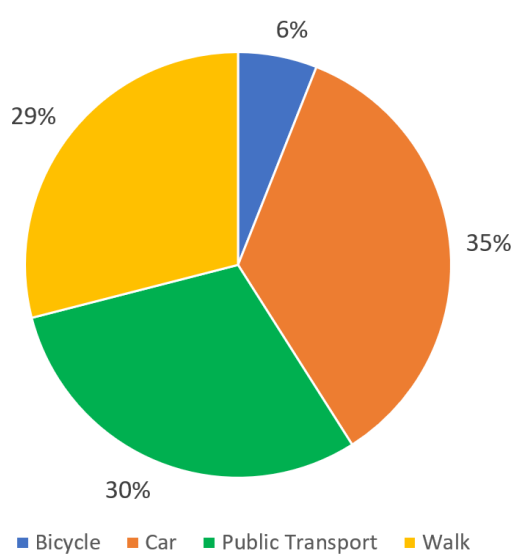
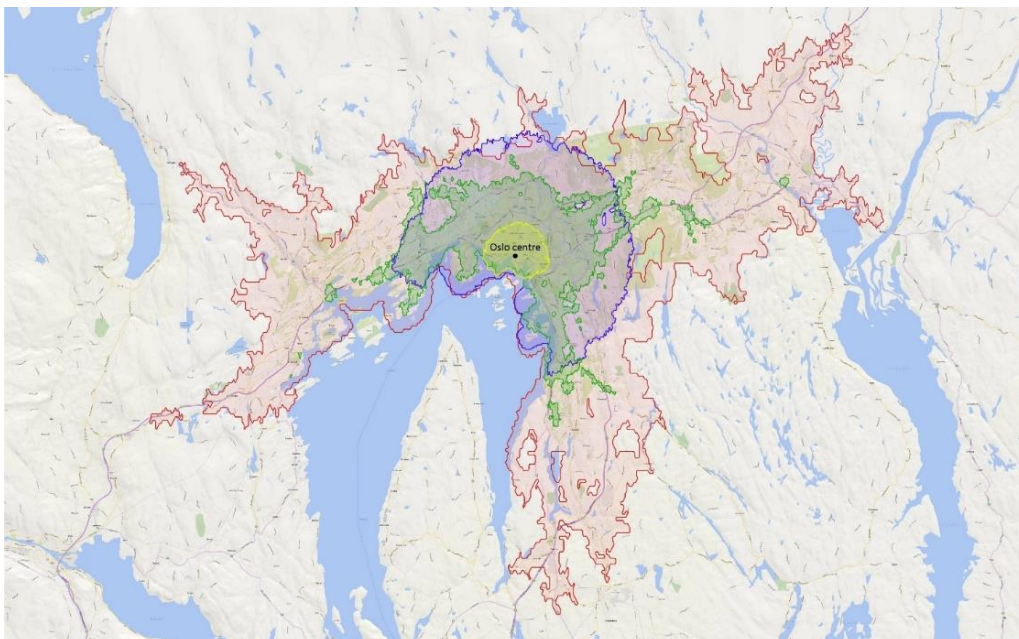


Figure 9 Oslo's modal split. Source: made by the author

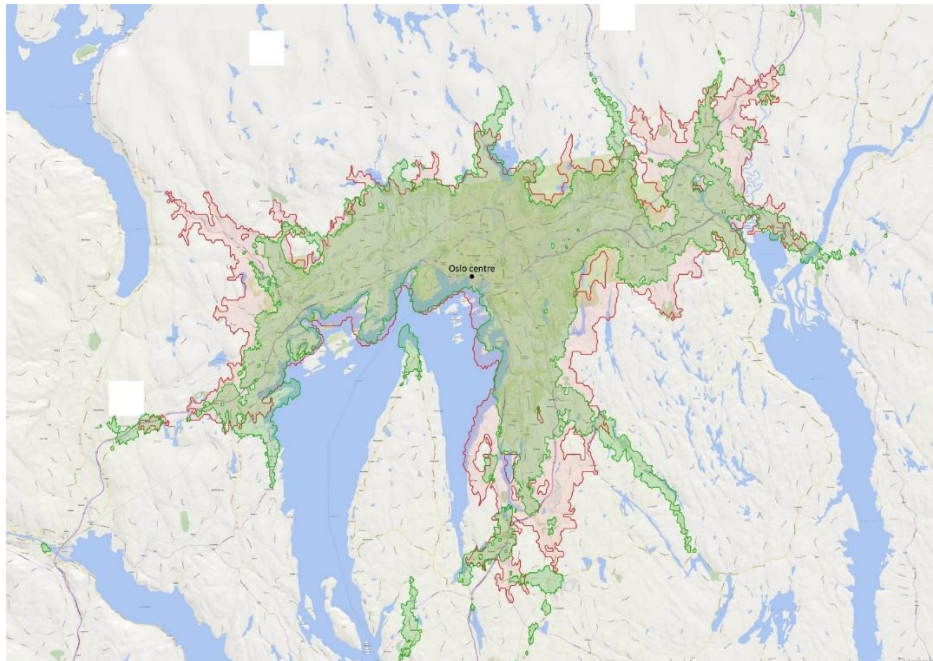
The modal split shows how the car is still the most used mode of moving in the city, but both walk and public transport have a good share making them almost of the same level of cars, especially walking, considering that these data are prior to the car-free plan. Seen this distribution of the use of the means, it will follow an analysis of the accessibility to the city centre comparing all the different modes: walking (yellow), cycling (blue), public transport (green) and car (red). The first map represents the accessibility to the city centre within 30 minutes of travel distance, for this analysis it was chosen a central point of the city - Christiania Torv - and thanks to a plugin of QGIS (Traveltime) it has been calculated from where it is possible to reach this point within 30 minutes of travel time in an average day (Monday at 8.30 am). As it is possible to see the car is still the strongest mode, it has a wide area of influence, compared to the public transport it almost doubles the distance that it is possible to do with 30 minutes of travel, it is also interesting to see how the bike in some cases can be faster than the public transport, so, considering the short travel time, the bicycle can be a valid alternative to the car.



*Figure 10 Oslo's modal accessibility: 30 minutes journey, Source: made by the author*

The second map it is an attempt to understand how much time the public transport would have needed to have a similar coverage of the car, setting the travel time to 50 minutes for the public transport, the coverage of the two modes is quite similar with some exceptions. Twenty minutes

of difference is quite high time considering that if you commute the travel has to be repeated two times per day making the difference between the two means doubled. Moreover, it has to be mention that the travel time it was chosen in a rush-hour 8.30 am on Monday, so in other times of the day, the car can have even better performances.



*Figure 11 Oslo's accessibility: comparison between the car (30 minutes) and public transport (50 minutes)*

In conclusion, Oslo has a very vast and efficient public transport system that covers all the city, moreover, thanks to the strategic plans at the local and national level, the public transport as a system will have even a more central role in the city mobility. However, it is important to highlight that the car is still the most attractive way of moving, indeed, as the analysis on the half-hour accessibility it shows that while in the city the public transport is competitive, in the surround the car is still the best option in terms of time.

## 2.5 Oslo's car-free liveability programme

In this section it will be finally presented the 'Car-free Liveability Programme' (Bilfritt byliv), firstly there will be an introduction on the reasons and the objectives of the project, then

through the information obtained during the interview with Terje Elvsaaas there will be a journey inside of the project to understand the complex dynamics and relations that are set in motion by this project, finally, there will be an analysis of all the type of intervention and measure adopted.

### The birth of the Car-free project

The car-free city idea started to take form in 2015 with the election of the green party in the municipal council and the adhesion to the City Government Declaration 2015 with the Labour party and the Socialist party (Oslo Kommune [g], 2019). This declaration was for the period 2015-2019 and it has the goal of reding the car traffic in the city (ibid). So, one of the goals of the administration was to reduce as much as possible the car traffic in the first ring of the city (ibid).

The municipality so selected an area of intervention of 1.3 km<sup>2</sup>, from Oslo central station in the east to the Royal Palace in the west. In this particular area, there was huge car traffic compared with the population living there, indeed there were 1000 residents while every day were travelling more 100.000 cars in and out of this area. The plan so was to try various measure to apply in six pilot areas in this space, the objective was to reduce the car traffic, to re-activate social life improving the space for people and encouraging the use of bicycles.

In 2018 the measures were extended in all the areas, starting new pilot projects to understand which design could have fit for a permanent intervention(ibid). During this year were reduced the car parking also of 760 spots, not many considering that in the area there were still 9000 parking places (ibid). But were applied some new driving rules for the ring 1, in order to discourage the use of the car, in particular, to drive from west to east (or vice versa) (ibid).

In 2019 the work continued following the direction of the other years, so were improved spaces, added facilities and was also prepared a street zoning plan (ibid), which has the aim to establish the different possible alternative use of the streets.

Moreover, in 2017, Oslo was awarded as European Green Capital of 2019, thanks to the green policies adopted by the city, and partially thanks to the transport policies. Here are listed some data that explains the trend that Oslo has been taking:

- In ten years (2007-2017) the number of trips had increased by 63%, from 228 million to 371 million trips (Ruter [b], 2016).

- Just in 2017 Oslo's public transport has grown by 6.1% (ibid).
- In 2017 56% of public transport operated on renewable energy (ibid).
- In 2020 public transport in the capital region will operate using only renewable energy (ibid).
- By 2028 all public transport in the capital region will be emission-free (ibid).

All these achievements are due to the policies adopted and that will be adopted by the city. Part of the success for the award it is thanks to the closing of the city centre to cars announced in 2015.

### Behind the scene of the plan

So, going back to 2015 the plan was incredibly ambitious, to close a part of the city to cars within four years of time. As soon as Oslo announced the project, the press highlighted the news, not only the local news but also international. So, the question arises spontaneously, how did Oslo decide to undertake such a complex and visionary project? And why did it have such relevance on the news? Teje Elvsaa, an Oslo communication consultant, helped me to understand better the situation: *"Well, I think it was mainly two things that happened. First, we have this new Green-Red City Council coalition that came into the offices back in 2015 and especially the green ones. They were quite new as politicians. They had this new ideas, new visions, very ambitious visions. Earlier, I would say that they were more activist than politicians. So, when they came into the city hall offices, they had this idea of doing things rather quickly, much more quickly than this urban development process earlier were done. So, they had these ideas about doing things in two years, two-year period very quickly. And they also got at the city council with them to spend a lot of money on this project. So that is so maybe the most important thing, that there was a political will, there were economic muscles to do it and of course, in 2019, we had this green capital year which gave Oslo a lot of attention abroad. So, a lot of international journalists came to Oslo and they were interested in what Oslo did in the green capital year, and this liveability program (Car-free liveability programme) was one of several things."* (Elvsaa, 2020) So, as Elvsaa explained, there were two main reasons that explain why this project was done and why it had such a relevance on the news: the first was the political will, especially of the green party that was interested to do things in a much faster way than a usual development process; the second was the relevance given by award of green European capital of 2019, this

award was followed by a year of events and many journalist forms all over the world came to see Oslo and discovered the car-free program.

The European Green Capital Award was an attractor for journalists to come to Oslo but was there a communication strategy?: *“Well, we made this communication strategy, but mostly that was about a domestic question, for the local initiatives, for inhabitants of Oslo, for the businesses in Oslo. But we also saw that when we had this all visitors from abroad, we made some standard business moves for them. When they were actually in Oslo, we took a time to guide them through the city and we made some presentation for them. So, we so we had this thing of engaged them when they actually where in Oslo, telling them about what we have done, what the future plans will be and what Oslo will look like in 10 years from now.”* (Elvsaas, 2020). Therefore, the municipality did not plan to have such international media attention on their case, there was a communication strategy but it was for citizens and business of Oslo. The ability of the municipality was to understand the that, due to all these journalists visiting the city, it could have been possible to go on the international press, so they have planned a special treatment for the foreign media. So, the communication strategy was just for local, what was the aim of this strategy?: *“I think it was both (to convince people of the validity of the project and to involve them - ed). As I said, this new way of thinking, the politicians had these ambitious plans of doing a lot of things in a short period, that was very radical for most people in Oslo. So, it was very important to get people along with these ideas. when we are closing a lot of streets in the city centre, we made things harder, it was more difficult to drive in the city. And of course, the businesses in Oslo were worried about their customers because they had this old-fashioned way of thinking that when you go to these independent small shops in the city centre, you need your car. So, we had to talk to them to convince them that that wasn't necessarily right.”* (ibid, 2020). So, the communication strategy was both to convince people of the need of this project but it also has the role to involve people in different ways: *“we worked in different way there, in these specific streets that we were removing parking spaces in the city centre, we organised groups and meetings to discuss how the streets will look like in the future also asking them their opinion. So we had several meetings with them, where they could bring their ideas and what the street can be like. When we came to ordinary citizen of Oslo, we have worked with social media a lot to have these open idea process online, where people could come with their ideas. [...] So, we had meetings with different stakeholders all the time. We had breakfast meetings with business as inhabitants of Oslo. So, yeah, we tried to reach as much of stakeholder's groups as we managed. There were businesses, of course, property owners or people from organizations for*



*disabled people in Oslo.*" (ibid, 2020). The process of involving people was divided into two different groups, the businesses and the citizens. To involve the business were organized some meetings to present and discuss the ideas directly with people. With the citizens were both organized meetings with associations and to reach the single citizen we mainly used social media to both presents and to have a participative process of ideas.

Talking about communication strategy, it comes naturally the connection with the place brand: *"The Agency for climate of Oslo had the ambition of this green city also I think they have this ambition that Oslo should be the number one big capital in the time of 2030 (of reducing greenhouse emissions of 95% - ed). So, they have they have some ambition towards that. And, of course, the Car-free Liveability program fits that projects pretty well. It's a first step on the way."* (ibid). So closing the city centre to cars is not related to a concept of a new Oslo, there is a place brand strategy but it is more related to the climate and environment policies, however, the car-free program fits well with this idea of green capital and it can be considered a start point.

So after some years, the project is going on, it is clear that the popularity of the green party (which was the main responsible of the project) has grown by the last election but what was the perception on the support of the stakeholders during the participative process?: *"Well, I we used to say that, you know, this this line where we have 10 or 15 percent in one hand who really hates everything we are doing. But I think they really hate the green and red politicians, from old habits, they are more conservative. And on the other hand, you have 10 to 15 percent that are really supportive, they are green, living green and supporting the green politicians. And in the middle, you have this big bubble of people who they could be supportive if things are okay. It doesn't make a lot of hassle for them to get into the city so that is group that we really worked on and during this period, we see increasing support from that group. And then these different polls we have done during the project show that it's more than half of the population of Oslo supporting the car-free city. [...] It could be higher. But of course, this is a radical change in Oslo. I guess it's ok that more than half of the population supports it."* (ibid). As usual, there was a context with two radical groups that were or against everything or in favour of everything, what it is interesting is that the most of the work was done to convince the group in the middle, the undecided. Also, interesting that this project was sponsored mainly by the green party but also almost all the other groups agreed on it: *"There is across political agreement on the project. There is only this progressive party who really is against almost everything we've done. They*

want to put the parking spaces back into the centre. But all the other parties are supported supporting this solution. There are small differences but we can say that there is a cross political agreement on the car-free city project.” (ibid).

The initial plan, presented in election plan of 2015 of the green party, said explicitly: “*The centre within Ring 1 must be free from private cars by 2017*” (Miljøpartiet De Grønne, 2015, p.7), so the idea was to completely close the city centre to cars inside the first ring. But things went differently, firstly not all ring 1 was included and secondly, the private car was not banned by 2017. Moreover, in the most updated documents, there is no clue about this date when the cars will not be any more allowed in the area: “*Yeah, well, I guess this is a kind of misunderstanding based on the first very, very ambitious sayings from the green ones, when they came into the city hall in 2014. I think they really said that Oslo would be car free within 2019. They have this very ambitious vision about Oslo, when they were in the city offices for a year or so, they saw that all these different stakeholders and all these different kinds of people who really need a car, that there would be almost impossible to remove all cars. So, during this time, we see a shift in terms of removing the private cars. We still have to take care of the city logistics like carpenters and people who really need to have to do a job in city centres, deliveries, people with disabilities... So, no. We are talking more of removing the unnecessary private cars by removing parking spaces and close more and more streets in this area. [...] I think it is impossible to take them completely away.*” (ibid). Therefore, even if the project is called ‘Car-free liveability programme’ there is not going to be a city centre where private cars are completely banned. After a year of work and after meeting all the stakeholder it was understood that the car is still necessary for some group of people, so the project has shifted to a softer solution, working on car parking and improving the quality of spaces for people.

So, consequentially, it follows this question: was it intentional to call it car-free in order to have more media coverage, even if it was already known that was impossible to do it?: “*Well, this vice mayor for Urban Development, Hanna E. Marcussen held a speech on this urban conference last summer, and she actually told that the idea of calling it car free was maybe that the thing she regretted afterwards, cause all the resistance. She really meant that this would be a great thing for Oslo, but she didn't have this thought of all the resistances that also would have brought up. But I think we would not have seen all the interest by journalists if you call it just ‘liveability programme’ without having ‘car-free’ in it. So, it is both ways, we have a balance there. But we have had a lot work with resistances because of the car-free thing, with a lot of emotions in this*

*project. It could have been easier if you call it something else. But when we look it back now, I think it was right to call it car-free because we really pointed out a new direction.”* (ibid). On one hand, calling the project ‘car-free’ was a very aggressive communication strategy, as Elvsaa said this name brought a lot of resistances that made harder the cooperation with the stakeholders. But on the other hand, this name helped to make more attractive the project to the media and even though it is not going to completely happen, it helped to point out the direction that Oslo is intentioned to take.

In conclusion, what is the future of the project? Which are the next steps?: *“We had we had this discussion last week, actually, because we are now what this program is was ended by December 2019. But it's now we are taking it out to this new nearest neighbour areas, but also include the city centre. So, we have these new two new areas get which are really close to this area. So, we will continue to call it car-free liveability programme. So, in this area, there are also streets that we were working on that will be pedestrianized.”*. Therefore, the project has ended but it will start a new plan for some areas next to the city centre in order to improve the liveability also of these areas and continue the pedestrianization.

### The measures introduced in the city centre

Understood how the project evolved through time, this section presents all the measures that have been adopted in the area of the project.

To have an impact in such a wide area the plan is focused on working specifically from three areas:

- A- Pipervika XL: *“The area around Oslo City Hall, known as Pipervika, already has a lot of pedestrian traffic and a bustling city life, but this is mainly concentrated around Spikersuppa and Olav V’s gate. When car traffic at Fridtjof Nansens plass is heavily reduced, the area will become an urban space with possibilities for attractions, activities and organising events.”* (Oslo Kommune [g], 2019)
- B- Cultural district: *“The City of Oslo has acquired the Myntgata district, which is now being developed into an attractive area both in a short and long term perspective. Today, as a place of activity and an urban oasis for children, young people and the elderly; In the future, as an upper secondary school. Øvre Slottsgate is being developed into a*

*pedestrian street towards the south, and the area between Myntgata, Kontraskjæret and Karl Johans gate will become a focus point for city life in Oslo.” (ibid)*

- C- The Recreation Trail: *“The area from Youngstorget northwards towards Grünerløkka has received a significant boost in recent years and is experiencing tremendous popularity and growth. Its extension, from Youngstorget to Kvadraturen and Grev Wedels plass, down Torggata and further along Kirkegata and Dronningens gate, is perhaps the most important new axis of city life.” (ibid)*

Looking at the interventions made in the project area, many of the actions of the plan were not visible (street regulations, speed limits, etc.) but this map shows the one that actually had a physical impact on the cityscape. These measures have the aim to improve safety, liveability, quality of spaces and accessibility, and the type of intervention are: street upgrades, outdoor event power sources, lighting improvements, lighting up trees in winter, play and activities, toilet, drinking fountains, planting, benches, small scale parks and some temporary interventions. All of them are very small measures that can be done with a very low budget, moreover, they are many different kinds to solve different problems but all together they improve the quality and the liveability of that part of the city.

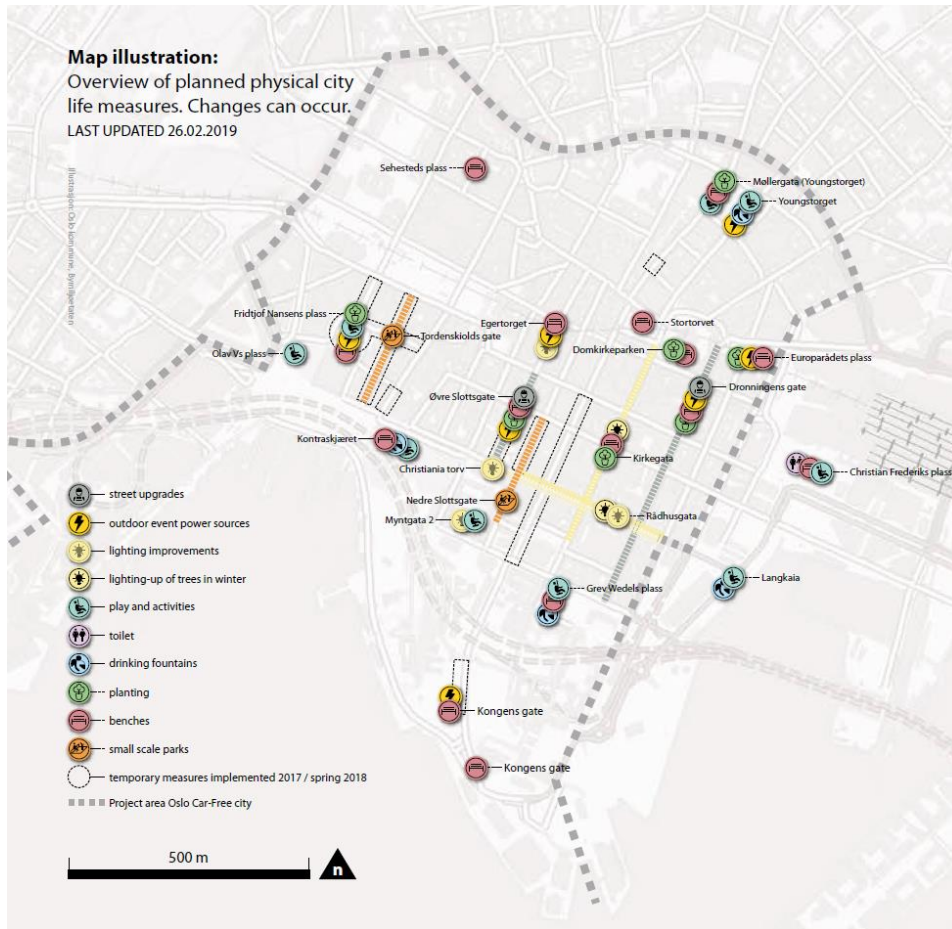


Figure 12 Planned physical measures. Source: Oslo Kommune [g], 2019



Figure 13-14 Two different types of measures. On the left some street furniture to improve the quality of the urban space. On the right an event with an open-air cinema. Source: Oslo Kommune [g], 2019

Another interesting and fundamental measure adopted during the car-free liveability plan is the street zoning plan. The zoning plan is a plan adopted by the municipalities to state how can be

used an area of the city, in this case, the zoning does not rule everything but just the public streets, in some cases it give to the street just a temporary use (figures 14 & 16-17). The aim of the plan is to fight the car using giving space and priority to people, to walk, cycle, play, gather. These areas are going to be transformed into places where to spend leisure time. This plan will not only give space to people but It will also take into consideration the need for other car users, keeping the car park for disables and space for goods delivery. The type of measures adopted is going to be of different intensity: from the permanent pedestrian street to some temporary use street or for public transport.

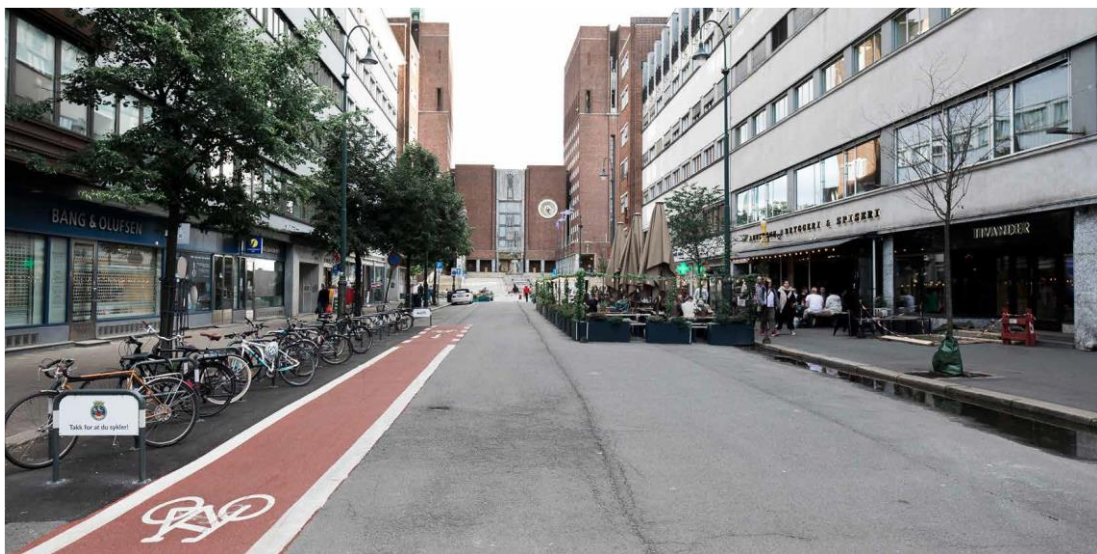


Figure 15 Cycle lane on Roald Amundsens gate. Source: Oslo Kommune [g], 2019

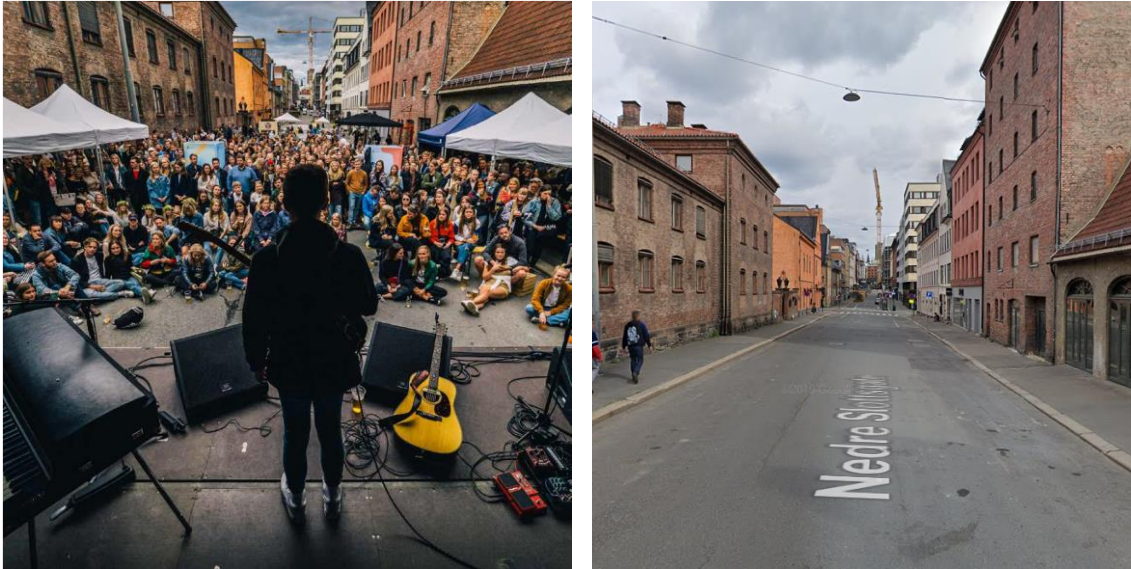


Figure 16-17 Temporary use of the of Nedre Slottsgate. On the left during the Musikkfest Oslo. On the right the view of the same street from google maps. Sources: Oslo Kommune [g], 2019 / google maps street view, 2019

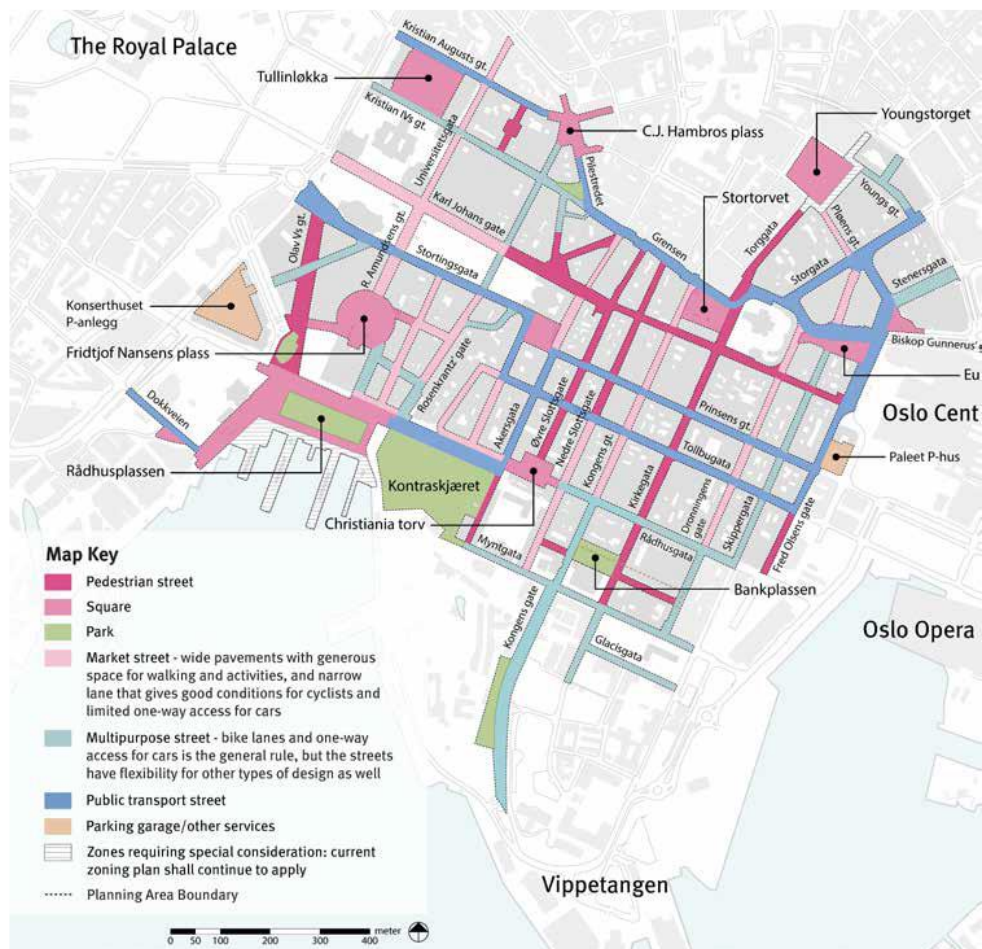


Figure 14 The street zoning map of the project area. Source: Oslo Kommune [g], 2019

To Conclude the 'Car-free liveability programme' was the result of many preconditions (social, economic, political), at the beginning it had the aim to ban private car from ring 1, but after the interaction with the citizens it changed and the objective became to reduce car use and to improve the quality of the urban spaces. To do that they have tried to work with different kind of measures (regulation, urban furniture, street design, etc.), changing the common idea and use of the public streets in the project area. The main force that was able to propose this plan was the green party that approached the car fight with a very aggressive communication strategy. This did not help to make the process smoother but it gave to the project worldwide notoriety. From a technical point of view, the project is composed by many small interventions (of many kinds) that actually somehow are in contrast with the communication strategy (lighter compared to the 'car-free' idea), but that are equal if not more effective.



## Chapter 4: Conclusion

The fourth chapter is the final one, it starts with the conclusion of the thesis, resuming all the information and data encountered during the research and matching them with the research questions that were presented at the beginning to understand if the objective of the investigation has been reached. Then there is a section dedicated to the (almost) car-free city that we were forced to live in during these last months, to try to use this event as an opportunity to understand the limitation and the benefits of forced reduced car mobility. Finally, the chapter concludes with a section dedicated to some reflections and possible future researches on this field.

Previously to the '*Car-free liveability programme*', in Oslo, there was already a context where the sustainability was having relevance in the urban policies, especially on the urban development, with the densification as one of the main objectives to follow. This process of densification started in the 1990s - due to a combination of economic, political, historical and topographic reasons - and it is still going on, just adapting to today's needs of the city, so taking into account the climate change issues and the need of open spaces for every citizen. Moreover, in the last years were released many plans in relation to sustainability and climate change, creating an even more environmentally friendly planning context.

Thanks to the dense city created by the development of the last 30 years, Oslo has a very efficient and reliable public transport that played as well an important role in the car-free project. The combination of: enormous public investments, the foundation of the transport agency Ruter – that made possible the fare integrations - and the wide offer of means of transportation make the public transport of Oslo a valid alternative to the car for the movements inside of the city, while the car is still the mode that guarantees the highest degree of accessibility from the suburbs and the rural areas. Still in relation with the transportation system of Oslo, it is important to take in consideration also the share of walking in the modal split, having 29% of movements by walk in 2016, there was already a strong base where to start to have a car-free city centre.

In parallel to the planning context, there are also some political preconditions that made possible to have this plan. These reasons derive from an environmentalist culture that was from the 1980s that took form with the foundation of the green party. But while the Miljøpartiet De Grønne at the beginning was not able to be attractive for the voters, in the last decade the green

party has grown a lot its consensus, in particular in the local elections, passing from 2,5% in the election of 2011 to 15,3% in 2019. This party was the promoter of many environmentalist initiatives, one of those was the idea of having a car-free city centre. So, based on these preconditions – dense city, environmentally friendly planning, efficient public transport and political will – the idea of having a car-free city started to take form and becoming an actual project.

As presented in the analysis, the initial idea was to ban all the private cars from the centre and the idea took form with the publication of the '*Car-free liveability programme*'. This plan was reflecting the soul of the green part that at the time was more movement than a party – as declared by Terje Elvsaas during his interview –, indeed the aim was to close the city centre to cars without any exception. But once the planners and politicians started to meet the stakeholders, things have changed. In fact, the plan, even if well-structured and innovative, did not take into account many groups of interest that were not able to carry out their activities without the use of the car. This is the part when the initial idea was trying to take a form and the forces of the city – in this case, the stakeholders – influenced and transformed it into something new. The stakeholders became active protagonists of the transformation of the car-free city centre into a different project, changing the final result and also the final use of the space.

But, while the project has been changed, the name of the plan did not, indeed it remained called '*care-free*'. This had many repercussions on the realization of the project, on the one hand, the concept of car-free create a lot of public discussions increasing the resistances to the project, making harder the development of the work and demanding many efforts from the public actors. On the other hand, such a powerful name had a strong relevance on the news making the project known worldwide. About this second aspect is also interesting to see how the name of the project had a way stronger effect to create a new brand of the city. Indeed, there was a process of the rebranding of the city to make look Oslo a greener city and to achieve this, were done many interventions in different fields – energy consumption, reduction of emissions, improvement of electric mobility, etc. – but to the press had a way more impact the '*Car-free liveability programme*'. This connects both to the theories of the place brand, as the perception of people make the brand of the place and also to the concept of the car system, the car is always one of the most discussed topics, connecting and influencing many fields, and in this case

enhancing the fame of a car-free project, creating, as an unwanted result, a green brand of the city.

The last step of the life journey of ideas it's their death, the same happened with the idea of the car-free city centre in Oslo, the initial concept of closing the city centre to cars has changed throughout time and the project took form in the reality with some intervention to reduce the car use and to improve the quality of the urban spaces. The death of the idea coincides with the change of status from abstract to real, in 2019 the plan has concluded, but its effects are still influencing the city and probably they continue for years.

The 'Car-free liveability programme was a project strongly willed by the green party, that, in four years, was able to propose and to conclude it, having results in a very short term. Thanks to this project the city of Oslo gained an image of a green and people-friendly city, the quality of the urban city centre has improved and the green party gained more popularity both on a local and national level. The success of the project was also the result of the participatory process that involved many stakeholders, adapting the project to the needs of the people, avoiding so the possible unintended consequences (difficult accessibility for disabled and goods delivery). In the future, there might be other dark sides of this plan but the realization of the project was too recent to show these possible side effects. In conclusion, the idea of the car-free city in Oslo was passed through the three phases (conception, transformation, death) and at the end, it was not realized, or it is also possible to say that it was realized but in a different form.

#### 4.1 The forced car(-free) city of the COVID-19

This section wants to try to create a connection between the car-free idea and the recent happenings, in order to introduce some reflections that might be useful to see the virus situation as an opportunity for a change.

The days that we are living in are impacted by the pandemic of coronavirus COVID-19, we have seen countries from all over the world closing their borders and forcing people to stay at home to avoid the spread of the virus. As a result, the mobility, as capability of freedom of movement, was drastically reduced showing us a reality we are not used to.

There are plenty of risks in relation to this mobility restriction, many sectors are going to face a period of intensive crisis, like for example in the aero mobility, the cancellation of two-three

months of flight had a strong impact on the companies and consequently to the consumer that might not be able to flight so easily and for the cheap prices that we were used to. But the aeromobility is not alone, indeed while it seems the all the kind of mobility are facing a crisis period, there is a mean of transportation that from this situation gained some advantages, this is the car. Even if at the beginning of the pandemic the car use was drastically reduced – due to reduction of the need of movement – now that our cities are reopening, the car seems to be one of the safest modes of moving, indeed it the perfect mode to move without having any contact with other people. On some degree, it is possible to say that the virus rehabilitates the car as a tool for independent free movement.

On the other hand, the collective means of transportation – like public transport and sharing mobility services – are most damaged by the virus, travelling in a closed space in contact with other people can drastically increase the chances of getting infected. Therefore, many cities from all over the world adopted some measures to fight this causality, for example in the next weeks the capacity of the metro of Milano will pass from a regular number of 1,3 million of passengers per day to a maximum of 350.000 passengers per day, 25% of the regular capacity, this capacity reduction will be the same also for trams, busses, trains, etc. So, with the return to the normality, the virus effect on mass transport will have a huge impact on people's mobility, directing most of the demand to the cars.

In this context walking and biking can play a fundamental role, both of these modes of moving are not safe as are the cars but there are some aspects that might make them more convenient. Starting from the environmental aspect, thanks to the reduction of the mobility of people it was possible to see an improvement of the air quality, especially in all the most polluted areas, this is the last of many proofs that the private vehicles pollute having a quite important impact on the environment. The environmental reason is also reinforced by some studies that stated that air pollution is likely to increase the mortality of the COVID-19 (Wu, Nethery, Sabath, Braun, Dominici, 2020; Setti et al. 2020), so in a context where the public transport has reduced capacity and the car use might increase, it is important to use walking and biking as alternative modes, because they are both able to reduce the pollution and the mortality. Moreover, in a period of reduced movements and growing sedentarism, the act of walking and biking could give also direct benefits to personal health. So, thinking of walking and cycling as an alternative to other means of transportation seems to have many benefits but to do so it is necessary to redesign the streets and the public spaces in order to have more room as possible. In addition, on the

support of this thesis also there is a personal perception on the reduce mobility of these last weeks, I did not miss the movement to reach a place, I miss the movement as an explorative practice that gives an active sensorial experience.

To conclude, while the car use could seem to have immediate benefits to reduce the spread of the virus, it might increase air pollution and so boost the death rate of the virus. Instead, active mobility it can be a valid alternative to move in the city, providing several benefits in this situation, so from this point of view the COVID-19 could be an opportunity for a change incentivizing active mobility.

## 4.2 Reflections

To conclude it is possible to do some consideration on the political relevance of what happened in Oslo. The first reflection is that, while in many countries there is still a certain level of resistance to the environmentally friendly policies especially when it comes to cars, even if there were some resistance at the beginning, the citizens of Oslo proved to be open to this change. The second reflection is on the growing popularity of the green party, the 'Car-free' project was firstly announced in 2015 and it started in 2017, and as result, in the elections of 2019, the green party obtained the best result in terms of vote share. This explains how not only people in Oslo are ready to accept the change but it is becoming also popular to work on car reduction policies, of course on the condition that there is a valid alternative to the use of the car. The last consideration is about the relation between planning and politics, it is clear that the project has had a strong political will that helped its realization in a very short time. Usually, there is a contrast between the political interest of obtaining result in a short period and the processes of city change that requires a lot of time. In this case, the political will forced the city to change faster obtaining the realization of this project in few years. This could be an example of a possible change in the practice of planning, of course, there is need for long term strategies but they also have to be supported by some action plans that have short terms solutions, even more, if we think about the necessity of adaptation during to the COVID-19. The rapidity of action, in this case, is fundamental in order to adapt the city to the needs of people, to do so it is not necessary to invest huge capitals but just the will and the courage to do small changes to go in the direction of the needs of the citizens.

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