# The Environment and Planning Act and Sustainable Mobility

*How the Environment and Planning Act can enhance sustainable mobility in the Netherlands*

university of groningen / faculty of spatial sciences / Witteveen + Bos

''Progress lies not in enhancing what is, but in advancing toward what will be''

- Khalid Gibran

# Colophon

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## ABSTRACT

In July 2011, the minister of Infrastructure and Environment (Schultz-Van Haegen) announced a bill for the Environmental and Planning Act. The minister described this change as the 'largest legislative operation since the Second World War'. The Environmental and Planning Act seeks to modernise, harmonise, and simplify current rules. Furthermore, the Environment and Planning Act comes with four main points for improvement: Increasing clarity, ensuring a coherent approach, increasing flexibility, and accelerating the decision-making process. Whereas the revisions within Environmental law are situated in the process side of the planning system, there are also big challenges ahead in the content side of the system with for example challenges regarding the energy transition, climate adaptation, and more and more. Currently, a big challenge, or even the biggest challenge of today's society, is the need to deal with climate change and the need to reduce $CO_2$ emissions for this matter. Although there is a large variety of contributors to $CO_2$ emissions, the impact of transport- and mobility processes on the environment has gained more and more attention in recent years. The transport sector is a large contributor to global warming (Santos, 2017). Transportation planning has traditionally been focused on sectoral working (Zuidgeest & Van Maarseveen, 2000). Whereas according to Banister (2007) a sustainable mobility paradigm requires a focus on consistency between different measures and policy sectors, as many of the problems in the transport sector do not emanate from the sector itself, rather they are coming from one, or a combination of other sectors. Therefore, Banister and Zuidgeest & Van Maarseveen (2000) are arguing that a holistic and integral perspective in transport planning is needed. The Environment and Planning Act aims to tackle problems integrally. This research is focused on discovering the potential opportunities and limitations coming from the combination of two simultaneous transitions, being the transition towards the Environment and Planning Act and the transition towards sustainable mobility.

To research the potential possibilities and limitations coming from these transitions, the implications of th core instruments have been researched. Following from this, chances for working with more integrality can be derived from several instruments. The instrument of the Environmental vision is indicated as the instrument with the most potential for improving integrality. The Environmental vision brings opportunities to integrate sustainable mobility practices as a red line through this vision. Furthermore, the Environmental vision can have the function of a leading document. However, choices have to be made in this vision and this needs strong political support. In this way, a governmental body can state that sustainable mobility is important, and following from this every project and development needs to consider and incorporate this point of focus. Political support and the will and dare to make choices are essential to create these focus points. The quote beneath describes this situation. The Environment and Planning Act itself will not solely enhance sustainable mobility in the Netherlands, however, with political support and the dare to make choices, it can be a toolbox. On the other hand, without political support and the dare to make choices, the Environment and Planning Act is not bringing improvement in itself regarding the enhancement of sustainable mobility in the Netherlands.

Next to this, this research led to the observation that the (formal) instruments coming along with the installation of the Environment and Planning Act are not regarded as completely new instruments, as most of them are already present in similar forms. The potential opportunities to enhance sustainable mobility are mainly lying in working with another approach, a broader view and the goal to work with more integrality in the living environment. In this way, various spatial issues (e.g housing shortages traffic jams, liveability issues) can combined to find and create win-win situations.

> *''Simply put, it [The Environment and Planning Act] is actually a toolbox and you can use the toolbox to make something beautiful, but you can also use it to smash the neighbour's head" (Respondent 4)*

Keywords: Environment and Planning Act, Sustainable Mobility, Institutions, Environmental Law, Governance

## ACKNOWLEDGMENTS

Dear reader,

I, Kim Poelsema, present you my master thesis on the Environment and Planning Act and the chances to enhance sustainable mobility in the Netherlands. By finishing this master thesis, I finish my master's in Environment and Infrastructure planning at the University of Groningen. Therefore, this master thesis symbolizes the end of a very interesting and enjoyable period of 5 years of studying at the Faculty of Spatial Sciences. During my masters, I have always been interested in the broad variety of transitions towards a more sustainable world. After writing this thesis, I certainly want to contribute to these transitions by using my gained knowledge in practice to create a better and more sustainable living environment in the Netherlands. I am looking forward to what is coming.

In the process of writing, I received support from many people. First of all, I want to thank dr. Ferry Van Kann for his quick responses and his flexibility with making appointments, and of course his very constructive feedback during the process. I also want to thank Drs. Maurits Schilt, my supervisor at Witteveen+Bos, for his constructive feedback and the ability to make use of his network to find participants for this study. Additionally, I want to thank all people I had contact with at Witteveen+Bos, as they made my internship a very enjoyable and interesting period.

Next to this, I want to thank my parents and friends for always supporting me during my study and the process of writing my thesis. A special word of thanks goes to Britt Bosma, as she helped me to get through the last weeks of finishing this thesis by being present in joint thesis office hours.

Enjoy reading my thesis!

Kim Poelsema

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## LIST OF TRANSLATIONS AND ABBREVIATIONS

| English | Dutch | Abbreviation |
|---|---|---|
| (first) Spatial Planning Act | Wet Ruimtelijke Ordening | WRO |
| | Afdeling bestuursrechtspraak van de Raad van State | ABRVs |
| Administrative room | Administratieve afwegingsruimte | |
| Admission planning | Toelatingsplanologie | |
| Articles of law | Wetsartikelen | |
| Carbon dioxide | Koolfstofdioxide | CO2 |
| Crisis and recovery Act | Crisis- en herstelwet | Chw |
| Custom regulations | Maatwerkvoorschriften | |
| Decentral rules | Decentrale regelgeving | |
| Development planning | Ontwikkelingsplanologie | |
| Digital system | Digitaal Stelsel Omgevingswet | DSO |
| Environment and Planning Act | Omgevingswet | |
| Environmental Assessment Agency | Planbureau voor de Leefomgeving | PBL |
| Environmental desk | Omgevingsloket | |
| Environmental impact report | Milieueffectrapport | MER |
| Environmental Law | Omgevingsrecht | |
| Environmental Permit | Omgevingsvergunning | |
| Environmental Plan | Omgevingsplan | |
| Environmental Vision | Omgevingsvisie | |
| Framework law | Kaderwet | |
| General administrative measures | Algemene maatregelen van bestuur | AMVB |
| General government rules | Algemene rijksregels voor activiteiten | |
| General provisions of environmental law | Wet algemene bepaling omgevingsrecht | Wabo |
| Governing body | Bestuursorgaan | |
| Groundwater regulation | Grondwaterverordening | |
| Housing Act | Woningwet | |
| Implementing regulations | Uitvoeringsbepalingen | |
| Integration plan | Inpassingsplan | |
| Invitation planning | Uitnodigingplanologie | |
| Landscape regulation | Landschapverordening | |
| Law for Environmental Management | Wet Milieubeheer | Wm |
| Minister of Foreign affairs and Kingdom relations | Ministerie van Binnenlandse Zaken en Koninkrijksrelaties | |
| Ministerial regulations | Ministeriele regelingen | |
| Ministry of Infrastructure and Environment | Ministerie van Infrastructuur en Milieu | |

| | | |
|---|---|---|
| Ministry of traffic and water management | Ministerie van Verkeer en Waterstaat | |
| Mobility as a Service | Mobiliteit als dienst | MaaS |
| Multi-year program Infrastructure, Space and Transport | Meerjaren programma Infrastructuur, Ruimte en Transport | MIRT |
| National Climate Agreement | Het klimaatakkoord | |
| No, unless | Nee, tenzij | |
| Outline document of public transport for 2040 | Contouren toekomstbeeld OV 2040 | |
| Plan Act traffic and transport | Planwet Verkeer en Vervoer | |
| Planning regulation | Planologische verordening | |
| Programs | Programma's | |
| Project decision | Projectbesluit | |
| Provincial environmental regulation | Provinciale milieuverordening | |
| Provincial regulation | Omgevingsverordening | |
| Route Act | Tracéwet | |
| Route Decree | Tracébesluit | |
| Second Spatial Planning Act | Wet ruimtelijke ordening | Wro |
| The Mobility platform | Sectortafel mobiliteit | |
| Soil removal regulation | Ontgrondingenverordening | |
| Spatial planning | Ruimtelijke ordening | |
| Statement of no objection | Verklaring van geen bedenkingen | |
| Sweeping laws | Veegwetten | |
| Target regulations | Doelvoorschriften | |
| The National Strategy on Spatial Planning and Environment | De Nationale Omgevingsvisie | NOVI |
| Traffic and transport | Verkeer en vervoer | |
| Yes, provided that | Ja, mits | |
| Zoning plan | Bestemmingsplan | |

# 1. INTRODUCTION

## 1.1 BACKGROUND AND RELEVANCE

In the Netherlands, the government is strongly involved in spatial planning. Ensuring good spatial planning is also one of the government's core tasks. Furthermore, spatial planning is a government task which is enshrined in the Constitution. Article 21 of the Constitution states “The concern of the government is aimed at the habitability of the country and the protection and improvement of the environment”. To achieve this, the government uses amongst other the instrument of legislation and the system of Environmental law. The Netherlands has a long history with revisions and changes in environmental law. The Environment and Planning Act aiming to be installed in less than one year from now (1 January 2021*) is the next legislative operation in the Netherlands. Furthermore, this legislative operation also aims to steer a cultural change (Ministerie van Infrastructuur en Milieu, 2017; Van Buuren et al., 2014). This cultural change is amongst others, focused on changing from the prevailing principle of no, unless towards the principle of yes, provided that.

The Netherlands has a long history with national legislation and spatial planning. At the end of the 19th century, problems arose within Dutch cities due to overcrowding and forthcoming health problems. Due to the growing awareness of living conditions in relation to public health, the government decided in 1901 to regulate housing at the national level. Until then, there were only some local regulations in place. The Housing Act of 1901 was the first national legislation on spatial planning. The Housing Act was installed to make construction and habitation of poor- and unhealthy homes impossible, and to promote the construction of good houses (Van Buuren et al., 2014; De Volkskrant, 2000; Van der Lans, 2020). After the Second World War legislation changed and one of the key instruments was born, the zoning plan in the first Spatial Planning Act (WRO) from 1962. The WRO has been in force for a long time and it encountered many revisions. Due to this amount of revisions, the WRO was experienced as unclear and difficult. For instance, the distinctions between policy and regulation were regarded to be unclear (Kamphorst et al., 2008).

Therefore, the second Spatial Planning Act (Wro) was introduced in 2008. The Wro had a starting point to create a more comprehensible and easier system of Environmental law. Alongside this, two new laws were introduced in 2010: the Crisis and Recovery Act (Chw) and the General Provisions of Environmental Law (Wabo). The objective of the Chw was particularly aimed at the acceleration of the development and realization of infrastructural projects. Next to this, the Chw was established to provide an economic boost to the construction sector in times of the credit crises. Intentionally, Chw was initiated as a temporary law. However, the assumptions of the Chw will have a definitive character in the upcoming Environment and Planning Act. The Wabo was installed because judicial procedures were experienced as difficult and time-consuming due to the large set of permits, exemptions, and notifications. To improve this, the Wabo combines a large number of permits and exemptions into one permit, the environmental permit. Therefore, the objective of the Wabo was to simplify the existing decision-making process for initiators of projects and civil society. Although the system of environmental law experienced many revisions and changes with the WRO, Wro, Chw, and Wabo, the next legislative operation is already ahead: the Environment and Planning Act (Ministerie van Infrastructuur en Milieu, 2017; Van Buuren et al., 2014)

* Situation changed at the end of the research. Due to the corona virus crises and the observation that the implementation of digital system (DSO) takes more time, the installation of the Environment and Planning Act has been postponed untill futher notice (Binnenlands bestuur, 2020).

In July 2011, the minister of Infrastructure and Environment (Schultz-Van Haegen) announced a bill for a new Environmental and Planning Act. The minister described this change as the 'largest legislative operation since the Second World War'. On 17 June 2014, the Ministry for Infrastructure and Environment submitted the bill for the Environmental Planning Act to the Dutch parliament. After adoption by the Dutch Parliament, the final Act was published on 23 March 2016. At that time it was expected that the Act would enter into force in 2019. However, the installation of the Act is currently delayed to 2021*. This is mainly due to the experienced complexity of the implementation of the Act and the observation that, amongst others, government officials and suppliers (e.g for the digital system) have doubts about their ability to handle the job (Ministerie van Infrastructuur en Milieu, 2017; NRC, 2019).

The Environmental and Planning Act seeks to modernise, harmonise and simplify current rules on land use planning, environmental protection, nature conservation, construction of buildings, protection of cultural heritage, water management, urban and rural redevelopment, development of major public and private works and mining and earth removal, and aims to integrate these rules into one legal framework. When the changes are mapped out, it appears that the Environment and Planning Act will replace a large number of existing laws. Around 5,000 articles of law will be integrated into 350 articles, 120 ministerial regulations will be integrated into 10 regulations, and 120 general administrative measures will be limited to 4. Finally, the scope of the law changes, whereas 'good spatial planning' had to be met during the WRO, this will be changed to 'a good physical living environment' under the Environment and Planning Act. This means working in a broader context with a variety of interests, where the goal is to set more integral policies for the physical living environment. (Ministerie van Infrastructuur en Milieu, 2017).

Whereas the revisions within environmental law are situated in the process side of the planning system, there are also big challenges ahead in the content side of the system with for example challenges regarding the energy transition, climate adaptation, and more and more. Currently, a big challenge, or even the biggest challenge of today's society, is the need to deal with climate change and the need to reduce $CO_2$ emissions for this matter. Although there is a large variety of contributors to $CO_2$ emissions, the impact of transport- and mobility processes on the environment has gained more and more attention in recent years. It is evident that the transport sector is a large contributor to global warming, as the transport sector as a whole is responsible for more than 23 % of total worldwide $CO_2$ emissions (Santos, 2017). Furthermore, road transport is responsible for more than 20 % of $CO_2$ emissions. Following this observation, a change in transport- and mobility systems is needed to reach, for instance, the safety threshold of 2 degrees Celsius increase in average temperature agreed by many governments all over the world in the Paris Agreement (Santos, 2017).

Following this, planning for mobility and transportation seems to be standing at an intersection. On the one side, and despite the hype of dematerialization in society, physical mobility systems appear to be more crucial in granting individuals and organizations the needed access to their admired resources. While on the other side, mounting financial and fiscal constraints for further infrastructure expansion, and a growing awareness resistance towards the negative impacts of mobility result in the statement that the traditional ''predict and control'' approach is no longer seen as the ultimate option (Bertolini, 2007). Whereas Bertolini already stated this important dilemma between infrastructure expansion and the negative impacts of mobility expansion in 2007, the intersection still seems to be highly present in current (political) times. For example, it is clear that the transport and mobility system has to change considerably to reach the safety threshold agreed upon by the Paris Agreement (Rijksoverheid, 2019; Castellani., 2017). Figure 1 visualizes the need to change the mobility system. The figure shows that the amount of greenhouse gas emissions emitted by the transports sector has been increasing from 1990 till 2014. While the greenhouse gas emissions emitted by all other sectors have been stable or even decreasing.

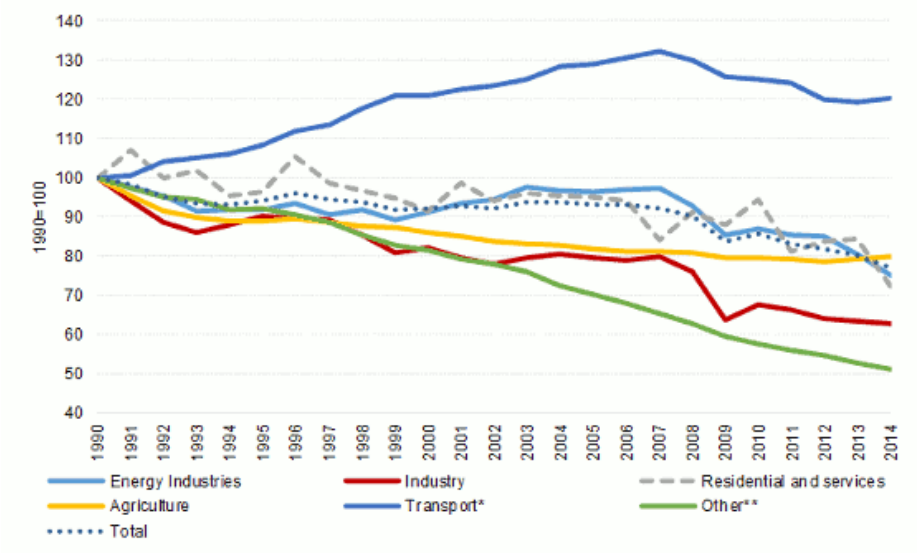



**Figure 1. Greenhouse gas emission by sector between 1990 and 2014 (Castellani et al., 2017, p7)**

The Dutch government aims to achieve the safety threshold anchored in the Paris Agreement by setting out national climate goals for the Netherlands, these goals will be enforced by The Climate Act and the National Climate Agreement (Rijksoverheid, 2019a). The National Climate Agreement was presented on the 28th of June 2019. The Agreement contains a set of measures created in consultation with various parties across Dutch Society to jointly combat climate change. The overarching goal of the Climate Agreement is to reduce $C0_2$ emissions by 49 % by 2030 compared to 1990. This overarching goal is an agreement between different sectors and it contains what these sectors will do to achieve the climate goals. The represented sectors in the Climate Agreement are: electricity, industry, built environment, traffic and transport, and agriculture (Rijksoverheid, 2019c).

For this study, the transport sector is the sector of focus, however, it is without saying that this sector cannot be seen as an is isolated and/or separated subject. The Environment and Planning Act aims to tackle problems in an integral way, however, transportation planning has been focused on working in a sectoral manner (Zuidgeest & Van Maarseveen, 2000). According to Banister (2007), a sustainable mobility paradigm requires a focus on consistency between different measures and policy sectors, as many of the problems in the transport sector do not emanate from the sector itself, rather they are coming from one, or a combination of other sectors. Therefore, Banister and Zuidgeest & Van Maarseveen (2000) are arguing that a holistic and integral perspective is needed in order to integrate decision making across sectors and to widen the public discourse. As one of the main improvement points of the Environment and Planning Act is to integrate and enhance consistency in the physical living environment it is relevant to research whether the Environment and Planning Act can be valuable in generating this needed integral point of view for sustainable mobility. The Mobiliteitsalliantie (2019) describes the need for a good sustainable mobility system in order to achieve a good physical living environment:

*''A good physical living environment, which the Environmental and Planning Act seeks to ensure, consists of a good, sufficient, and sustainable mobility system. Currently, the Dutch road network and public transport system are under pressure, and insufficient to accommodate the increasing demand for mobility. To prevent the Netherlands from getting stuck in the coming years, mobility needs to be redesigned (Mobiliteitsalliantie, 2019)''.*

## 1.2 RESEARCH GOAL

As shown in the previous paragraph two simultaneous transitions* are important in this research, being the transition towards the Environment and Planning Act, and the transition towards sustainable mobility. This research aims to investigate whether and how the transition in Environmental law can influence the transition of the mobility system. The Environment and Planning Act seeks to modernise and improve the instruments and procedures in spatial planning by enhancing flexibility, integrality, efficiency, and quickness (Ministerie van Infrastructuur en Milieu, 2017). Therefore, good implementation of the Environment and Planning Act is essential for the support and legitimacy of Environmental law. Furthermore, The Dutch planning system has been considered as a flagship by many international spatial planning academics and practitioners. Thus, the processes and the way the Dutch environmental law system is changing is of interest to many planning specialists from over the world and, therefore, it is of high societal relevance to investigate whether the Environment and Planning Act is an innovative and better way of doing environmental law and planning (Zonneveld, 2017). Additionally, it is relevant to examine the expected outcomes of the Environment and Planning Act ex-ante the actual installation in order to be able to compare the expected outcomes and the actual outcomes afterwards. Therefore, this study has an explorative character.

Moreover, the relation between the Environment and Planning Act and mobility processes has not yet come up in research, especially not the relation with sustainable mobility. As explained in the background and relevance section, the mobility sector is ripe for renewal and an integral mobility system is needed. The Environment and Planning Act aims to tackle problems in an integral way, whereas transportation planning has been focused on sectoral working with specialised expertise (Zuidgeest & Van Maarseveen, 2000). Therefore, it is relevant to research whether the Environment and Planning Act can be valuable in generating a more integral approach in order to enhance sustainable mobility in the Netherlands. This research aims to answer this question by exploring the potential opportunities and limitations coming from the Environment and Planning Act to enhance sustainable mobility in the Netherlands.

Although this research is focused on the concept of sustainable mobility, the focus on sustainable mobility could be seen as a case in broader possible research agenda examining the relationship between the Environment and Planning Act and the challenges of today's society. Therefore, this research could also be done on, for example, the concept of climate adaptation, the energy transition, or other similar challenges faced by today's society. This increases the generalizability of this study.

* When the word transition is used in this research, it is used with the intention of describing a change from one status to another status (in Dutch: overgang). It is not the intention to focus on transitions as described and used in the transition management theory of authors as Loorbach and Rotmans.

## 1.3 RESEARCH QUESTIONS

Following from the above-described background and relevance, the following research question has been formulated:

### MAIN RESEARCH QUESTION:

How can the Environment and Planning Act enhance sustainable mobility in the Netherlands from a planning perspective?

In order to answer this question, the following secondary research questions have been established:

### SECONDARY RESEARCH QUESTIONS

1. What is needed to change from a traditional transport planning paradigm towards a sustainable mobility paradigm in the Netherlands?

2. How are developments in planning approaches related to and underlying the installation of the Environment and Planning Act?

3. What is changing with the installation of the Environment and Planning Act and which instruments entail the Act (in the context of secondary questions 1 and 2)?

4. Which opportunities and limitations are coming from the Environment and Planning Act and its instruments for enhancing sustainable mobility?

## 1.4 GUIDE FOR THE READER

Chapter 2 starts with explaining one of the challenges of today. Being the need to change to a more sustainable mobility system. This is done by an exploration of the concept of sustainable mobility and the vision of the Netherlands regarding sustainable mobility and how this could be achieved. Furthermore, the needed (attitudinal) changes for a sustainable mobility approaches are explained. After this, chapter 3 focuses on the discipline of Environmental and Infrastructure Planning, being the underlying institutional changes and developments leading to the installation of the Environment and Planning Act. This is done in order to understand where the revision in Environmental law with the Environment and Planning Act is coming from. Furthermore, whereas on the one hand the Environment and Planning Act can be seen as a paradigm shift of Environmental Law in the Netherlands. It can also be seen in the light of a changing planning- and institutional perspective where the relations between government, society and market are changing. This will also be explained in chapter 3.

Chapter 4 elaborates on the Environment and Planning Act itself. This is done by explaining the previous revisions in Environmental law and spatial planning, the process towards the installation of the Act, the points of improvement and its core instruments. Figure 2 shows the relations between chapter 1,2,3,4 and the conceptual model.

The conceptual model in chapter 5 visualizes the red line of the research based on the chapters of the theoretical framework (chapter 2,3,4). The methodology of this research is explained in chapter 6. In this chapter the study design, the research methods, the data analysis and the ethical considerations are presented. Chapter 7 presents the opportunities and limitations for four themes: the transition towards sustainable mobility itself, the formal institutions, the informal institutions, and lastly the overall system (the formal

institutions and informal institutions combined). Chapter 8 provides the conclusions of this research. Lastly, the discussion, reflection and suggestions for further research are provided in chapter 9.

When reading this thesis, it is important to know from which angle of study this research has been performed. Furthermore, it is important to know the academic background of the author to understand the perspectives and results in this research. This research has been done by a (technical) urban planner, which means that the focus lies on (urban) planning related developments and perspectives. Thus, it is likely that other disciplines as for example, jurist or public administrators, would focus on other perspectives and developments regarding this research question.

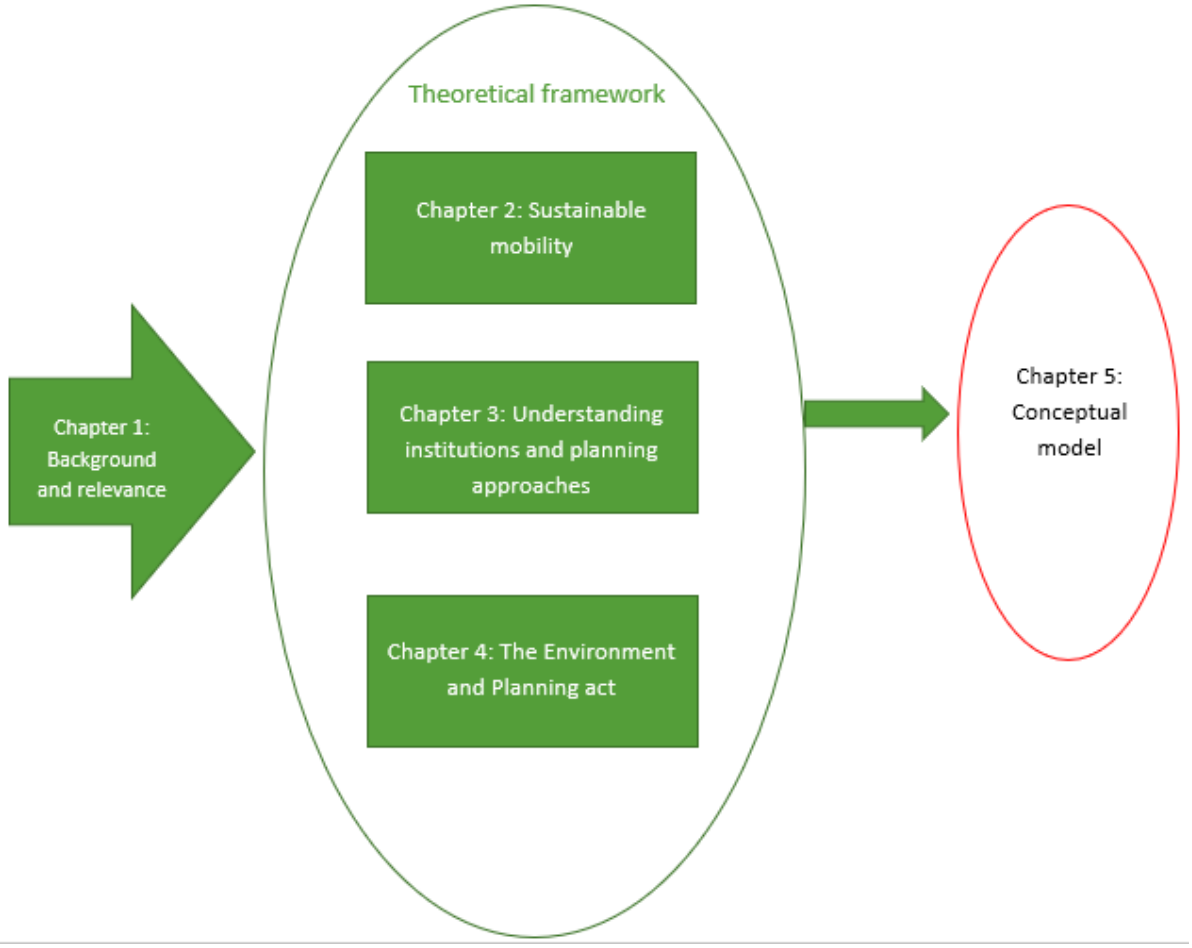



**Figure 2. Relation between chapters (made by author)**

# 2. SUSTAINABLE MOBILITY

This section explains why sustainable mobility is relevant to study as a particular area of interest, and in relation with the Environment and Planning Act. First, an explanation on what a sustainable mobility approach entails will be provided together with the circumstances that have until now impeded the sector from changing. After this, there will be an explanation on how sustainable mobility is related with current legislation compared to the situation with the Environment and Planning Act.

In order to understand how the Environment and Planning Act can enhance sustainable mobility in the Netherlands, it is important to answer the following two questions:

1. What is a sustainable mobility approach?
2. How is (sustainable) mobility anchored in the current Environmental law system and in the Environment and Planning Act?

## 2.1 THE SUSTAINABLE MOBILITY APPROACH

Being able to transport yourself from location A to location B has always played an essential role in the daily life of people. In particular, the invention of the car changed society, as towns could expand, industries could grow, and daily commuting distances increased. As a result of these developments, mobility became a common right. (Burrows and Bradburn, 2014). However, although the first car was invented around 150 years ago, the transport sector itself did not really change from then. Cars have been improved in terms of efficiency with new models, and new roads have been built in order to adjust to a growing number of trips and commuters (Burrows and Bradburn, 2014; Couwenbergh, 2020).

However, the principle of driving from A to B with a private car is still very prevalent and the needed renewal proposed by Santos (2017) has not yet taken place. Next to the challenges of dealing with growing congestion, the impact of transport- and mobility processes on the environment has gained more and more attention in recent years. It is evident that the transport sector is a large contributor to global warming, as the transport sector as a whole is responsible for more than 23 % of total worldwide $CO_2$ emissions. Furthermore, road transport is responsible for more than 20 % of the $CO_2$ emissions (Santos, 2017). Following from this observation, a change in transport- and mobility systems is needed in order to reach, for instance, the safety threshold of 2 degrees Celsius increase in average temperature agreed by many governments all over the world in the Paris Agreement (Santos, 2017). Moreover, $CO_2$ emissions coming from the mobility sector are likely to increase further in the coming decades if there are no additional policy measures integrated. This necessity for a change in the mobility sector is also presented in figure 3. The figure shows that without the integration of additional policy measures, $CO_2$ emissions from only the mobility sector are likely to be as high as the admissible $CO_2$ emissions for all the sectors combined in the EU-27 countries (Ministerie van Infrastructuur en Milieu, 2014).

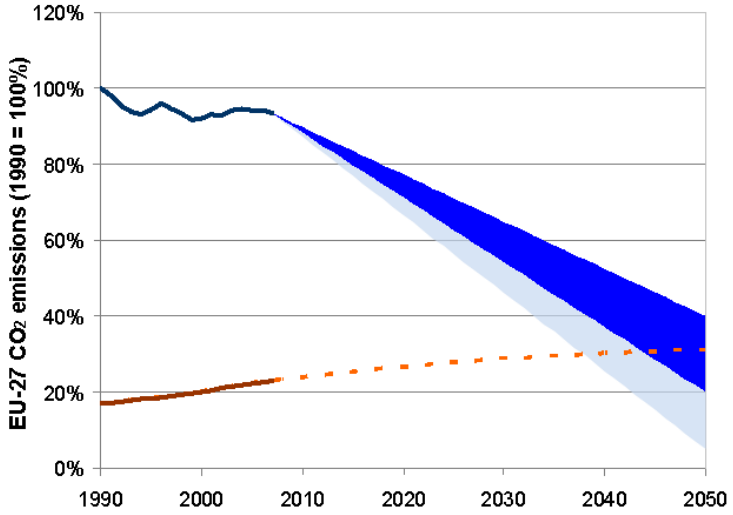



Figure 3. $CO_2$ emissions in the EU-27 (blue line) and in the mobility sector (brown line) between 1990 and 2050 (Ministerie van Infrastructuur en Milieu, 2014, p6)

The above described developments and circumstances indicate that an alternative approach is needed. Banister (2007) states that an alternative approach moving away from the traditional transport planning is needed in order to achieve sustainable mobility. This is seen as the transition* towards the sustainable mobility paradigm. This paradigm provides an alternative paradigm where the complexity of cities has to be investigated in order to strengthen the links between land use and transport. As already shortly stated in the introduction a shift from a more sectoral focus towards a holistic focus is needed for a sustainable mobility paradigm.

Zuidgeest & Van Maarseveen (2000) and Banister (2007) are explaining two contrasting approaches to transport planning, the traditional transportation planning approach and the sustainable mobility approach. Table 1 provides the contrasting characteristics of the two approaches.

| Traditional transportation planning | Sustainable mobility |
|---|---|
| 10 till 15 years | Intergenerational |
| Static in time (snapshot) | Dynamic in time |
| Local problems, local solutions | Think global, Act local |
| Sectoral | Integral (holistic) |
| Reactive | Proactive |
| Physical dimensions | Social dimensions |
| Motorised transport | All modes of transport (focus on bicycles and foot) |
| Forecasting traffic | Visioning on cities |
| Economic evaluation | Multicriteria analysis (economic, social, environment) |
| Focus on supply of infrastructure to fulfil demand | Focus on diminishing demand by management |
| Focus on travel time minimisation | Focus on reasonable and reliable travel times |

Table 1. contrast between traditional transport planning and sustainable mobility

* When the word transition is used in this research, it is used with the intention of describing a change from one status to another status (in Dutch: overgang). It is not the intention to focus on transitions as described and used in the transition management theories of authors as Loorbach and Rotmans.

According to Banister (2007) a sustainable mobility paradigm requires a focus on consistency between different measures and policy sectors, as many of the problems in the transport sector do not emanate from the sector itself, rather they are coming from one, or a combination of other sectors. Therefore, Banister and Zuidgeest & Van Maarseveen (2000) are arguing that a holistic and integral perspective is needed in order to integrate decision making across sectors and to widen the publics discourse. This change of perspective is further explained in the chapter 3 about the underlying institutions and planning approaches. This change of perspective is in line with one of the main improvement points of the Environment and Planning Act to enhance consistency in the physical living environment. Not only the improvement points about consistency and integrality in the Environment and Planning Act is raised by Banister (2007), he also argues that empowering stakeholders through an interactive and participatory process is needed to commit the public to the sustainable mobility paradigm and to increase the willingness to change. Consequently, he argues that broad coalitions should be formed in order to start a real debate about sustainable mobility. This is in line with the improvement points of the Environment and Planning Act to increase collaboration by involving stakeholders in order to balance different interests (Aan de slag met de omgevingswet, 2020). To conclude, Banister (2007) argues that sustainable mobility has a central role to play in the future of sustainable cities.

To further dig into the transition towards a sustainable mobility paradigm, Rooijakkers (2016) and Burrows and Bradburn (2014) provide some particular circumstances that constrained the transport sector from changing. These circumstances involve the cost- and time for developing transport infrastructure, the difficulties related with entering the markets for newcomers, and the vast set of regulations. The Environment and Planning Act could be valuable in tackling the issues related with entering the markets for new initiatives and the vast set of regulations. As two main improvement points of the Environment and Planning Act are: increasing flexibility to open up more space for initiatives and increasing the clarity of rules and reducing the amount of rules (Aan de slag met de omgevingswet, 2019b). There are already signs that the transport market is changing, as new technologies, products and services are growing and changing the way transport is used. Transport can become more intelligent and more user-friendly due to these transitions. According to Wappelhorst (2014) the potential for smarter mobility is growing and customers, companies and government acknowledge their potential. An example of the growing potential of smarter mobility is the upcoming concept of Mobility as a Service (MaaS). In this concept the user pays a monthly fee to a mobility provider, in this monthly package all different transport modes are included. In this way, the provider offers the user a combination of transport modes depending on the travel needs of the user (Burrows and Bradburn, 2014). According to Rooijakker (2016) governance has to evolve in order to make such cooperations between private and public companies as efficient as possible.

### FROM PERMITS TO POSSIBILITIES

Whereas Rooijakkers (2016) argues that governance has to evolve in order to enhance cooperation between public and private parties. Deckers[1] (2016) states that another way of thinking is needed in order to establish the needed evolution. First, currently, mobility instruments need to shift away from the prevalent approach of bans and permits, once conceived to protect the physical living environment. Second, according to Deckers (2016), there is a growing need for customization in regulations, and space has to open up for citizens' initiatives. Third, the mobility domain has traditionally been focused on project-based work as this is necessary to realize complex, large, and expensive infrastructural projects. However, this project-based way of working is at odds with the objectives of integral thinking and working within the Environment and Planning Act.

[1] Not an academic source

Following these observations, a different approach in as well the organizational setting, as the institutional setting is therefore needed. Deckers (2016) is describing the needed different approach as:

- Acting from the principle of "no, unless" to "yes, if"
- Making integral assessments (more room for administrative consideration instead of tight project management)
- Offering local customization (room for local ambitions)
- Focus on participation

### THE VISION OF THE NETHERLANDS

In order to understand how the Netherlands wants to achieve sustainable mobility three leading national policy documents have been investigated. The documents are used to grasp the vision of the Netherlands regarding sustainable mobility.

| Document | Publishing date | Responsible author(s) |
|---|---|---|
| 1. The National Climate Agreement | June 2019 | Rijksoverheid |
| 2. The National Strategy on Spatial Planning and Environment | August 2019 | Ministerie van Binnenlandse Zaken en Koninkrijksrelaties |
| 3. Outline document of public transport for 2040 | February 2019 | Rijksoverheid |

**Table 2. Overview Document analysis**

#### *The National Climate Agreement*

The overarching and main goal of the National Climate Agreement is to achieve a reduction of 49 % greenhouse gas emission by 2030 compared to the levels of 1990. To reach this ambition, measures have to be made in all sectors. The national government divided 5 sectors and pillars with their sector-specific commitments: the built environment, mobility, industry, agriculture, and land use, and electricity.

The Mobility Platform [2] has formulated a vision to formalize the ambitions regarding mobility:

> *''Carefree mobility, for everything and everyone in 2050. No emissions, excellent accessibility accessible to young and old, rich and poor, able-bodied and disabled. Affordable, safe, comfortable, easy, and healthy. Smart, sustainable, compact cities with an optimum flow of people and goods. Beautiful, liveable and well-accessible areas and villages where mobility is the link between living, working, and leisure"*

The Mobility Platform wants to achieve this by focusing on an integral approach to the mobility system, whereby all modalities and the infrastructure are optimally developed and utilized and ultimately all modalities are clean. The mobility sector distinguishes four key themes and pillars: 1. Sustainable energy carriers, electric 2. (passenger) transport, 3. sustainable logistics, and 4. sustainable passenger transport. As all 4 themes have linkages with and effects on the spatial environment, is it inevitable that spatial planning is an essential part to guide and shape these developments. In this research this wide definition with several pillars and themes to realize sustainable mobility is used. In appendix, an infographic of the different pillars provided by the Mobility Platform is presented.

[2] Consist of representatives of a number of organizations and companies to achieve the climate objectives in the mobility sector (list of representatives: https://www.klimaatakkoord.nl/organisatie/sectortafels/mobiliteit

*The National Strategy on Spatial Planning and Environment*

The National Environmental Vision (Hereafter: NOVI) states that the Netherlands has a strong tradition of regulating the living environment. The NOVI is one of the instruments of the Environment and Planning Act. The NOVI represents an integrated approach for a sustainable perspective for the living environment.

The NOVI states that guaranteeing and realizing a safe, robust, and sustainable mobility system should be a focal point in future developments. The economic and social importance is served by good accessibility at all levels of scale and the overall functioning of the total system is of national importance. The movement and transport of people and goods must be safe and affordable with reliable and acceptable travel times, traveling must have a small negative or preferably a neutral or positive impact on the environment. Moreover, the interdependence of different modalities must be optimized to arrange a sustainable mobility system. This includes seamless switching between the various modalities. In addition, changing mobility behaviour must be stimulated and encouraged.

The NOVI want to achieve a sustainable mobility system by focusing on 5 pillars:

- Diversification of the patterns of mobility (more diverse patterns of how and when we move around)
- Excellent accessibility (a reliable sustainable mobility system with clean and sustainable vehicles in 2050)
- Choice of location (mobility in cities has to be simpler and more efficient by bicycle, foot or by public transport)
- Air transport ($CO_2$ emissions reduced by 2050)
- Transport of goods (a futureproof and climate robust transport system for goods)

To conclude the NOVI aims for a robust mobility system that is future-proof and, therefore, the environmental impact must be minimal.

*Outline document of public transport for 2040*

The public transport sector wants to contribute to social (spatial) tasks related to the economy, housing, and living environment. By stating this, the public transport sector aims for an integral approach. 5 goals are provided for public transport towards 2040:

- Public transport absorbs its share of mobility growth; in urban areas, public transport and bicycle are the most important means of transport.
- The customer rating in the entire public transport goes to an 8 average.
- The entire public transport sector zero-emission and circular.
- The Netherlands is a leader in innovation and renewal of public transport.
- We strive - also with the intensification of public transport - for continuous improvement of safety and less disruption to the environment.

To conclude, the three documents have shown that the vision of the Netherlands to achieve sustainable mobility is focused on diverse pathways, themes, and pillars. Moreover, the point of enhancing integrality by embracing a holistic approach is seen as the way to go to reduce $CO_2$ emissions in all documents. This point of stimulating integrality is also shown in the goals provided in the documents.

## 2.2 MOBILITY IN ENVIRONMENTAL LAW

Amongst others, The Plan Act Traffic and Transport (Dutch: Planwet Verkeer en Vervoer) is one of the 26 laws that will be integrated into one law for the physical living environment (Korthals-Altes, 2016). This is important as The Plan Act Traffic and Transport aimed to promote more integrality between spatial planning and mobility, and the previous sections showed that integrality and integrating different interests are important aspects to foster sustainable mobility. The Environment and Planning Act is building further upon this objective. In the Environment and Planning, Act there is no place for independent plans solely focused on traffic and transport, rather mobility issues should be addressed in Environmental visions on the national, provincial and municipal level. In this way, the integrality between different policy sectors would be enhanced (Van Angeren, 2019). This is done on the three governmental levels as the Environment and Planning Act follows the principle: "Decentralized what is possible, central what must central". In this way, the integrality between different policy sectors would be enhanced (Van Angeren, 2019).

Van Angeren (2019) argues that mobility is not yet enough integrated into future spatial developments and that more coherence is needed. An example he describes is that Minister of Foreign affairs and Kingdom relations announced that 700.000 houses have to be added until 2025 to fulfill a growing population. However, the Minister did not indicate the effect of mobility following from this extensive housing construction. Van Angeren (2019) explains this by raising that the mobility sector has always been very successful in focusing on specific modalities and the associated infrastructure. However, this way of thinking is potentially a constraining factor in the aim to change the way how mobility is integrated into spatial developments. Therefore, van Angeren (2019) and Van t'Foort en Kevelam (2015) are arguing that mobility effects should be more integrated into spatial planning, and it should not stop by only determining the amount of traffic generated with spatial development and the number of parking places associated with it. As this is solely focused on car traffic, and active mobility policy cannot be implemented, and other forms of mobility as public transport, shared cars and mobile apps are not taken into consideration. To embody this, Van 't Foort en Kevelam (2015) are stressing that there is no need for a separate strategic plan for transport and traffic, rather it should be an integral part of the provincial environmental vision (one of the core instruments of the Environment and Planning Act, further explained in chapter 4). Van Angeren (2019) argues that the Environmental vision could, therefore, be a valuable instrument to contribute to sustainable mobility.

# 3. UNDERSTANDING INSTITUTIONS AND PLANNING APPROACHES

The Environment and Planning Act can be seen as a paradigm shift of Environmental Law in the Netherlands (further explained in chapter 4). However, it can also be seen in the light of changing planning perspectives and institutional perspective, where the relations between government, society, and market are changing. This results in a changing planning approach to fulfil the current societal needs and to find solutions to current societal issues. For example, given in the National Environmental Vison of the Netherlands:

*''In the Netherlands, we are faced with several urgent challenges that play a role locally, nationally, and globally. Consider the tasks in the field of climate change, energy transition, circular economy, accessibility, and housing''. (Ministry of foreign affairs and Kingdom Relations, 2019)*

In this chapter, the changing planning approaches and institutional approaches are explained through a diligent and extensive literature review. Therefore, this chapter serves as a transcending part of this study, to understand the Environment and Planning Act in the light of the broader planning debate about changing planning approaches. These planning approaches are following the observation of Van Maarseveen (2000) that a holistic and integral perspective is needed.

The chapter starts with a historical overview of the dominant planning approaches. In this historical overview, it is explained where the sectoral focus, which is also prevalent in traditional transport planning, is coming from. Moreover, the attempt to work with more integrality, which is needed in the sustainable mobility paradigm (Banister, 2007) is also visible in the transition in planning approaches.

After the overview of planning approaches, the tensions between planning and regulating are discussed. Whereas the chapter ends with an elaboration of the importance of formal- and informal institutions in institutional design and the path dependency factor of institutions.

## 3.1 GOVERNANCE AND PLANNING

The term governance is indispensable when researching challenges related to planning approaches and institutions. When starting to research the concept of governance, it is inevitable to come across the observation that governance is subject to a shift (Wegener, 2012; Boelens, 2010). To understand this shift, it is important to understand what the term 'governance' means, as according to Gonzalez and Healey (2005) the term is in itself problematic. As for some governance indicates the shift from government to governance. This shift has been explained by Kearns and Paddison (2000) as the process that government authorities are no longer able to give clear indications for spatial planning as they were used. This time of top-down governmental directions to spatial planning was especially associated with the post-war period in Europe, as in this period there was a strong role for the government to support the economy and civil society (Gonzalez and Healey, 2005). However, in more recent times there is a stronger role for the economy and civil society itself to manage what has been previously done in a top-down manner by the government.

There are even authors that go as far as stating that governance is the opposite of government, as governance is the move away from a state-focused regulation system to a system focused on social coordination by collective action (Nuissl and Heinrich, 2011). However, the attempts to define governance as the opposite of government are hardly feasible in practice (Wegener, 2012). Most authors agree that the government is part of governance, and, therefore, the shift from government to governance mostly refers to a changing role of the government. In this changing role, there is a stronger role for companies, organizations, and civil society in a self-managing way (Wegener, 2012). Gonzalez and Healey (2005) agree on this by stating that governance is the organisation of collective action in general. According to Wegener (2012) these changing roles between the

government, the market, and civil society, also mean that governance refers to governing with and via networks. Due to the importance of these networks, the traditional planning model has been supplemented by a more flexible system of communication and adjustments between public and private actors via networks. The changing relations between public and private actors are further explained by Lemos and Agrawal (2006) as they provide two alternative models to the governance through coordination model, which is state focused. Figure 5 shows the governance triangle adjusted for the developments in the field of sustainable mobility.

According to Lemos and Agrawal (2006), the first alternative opposed to the traditional model is the competitive model (situated in the right bottom corner in figure 4) and the second alternative is the argumentative model (situated in the left bottom corner in figure 4). Although these models have to be seen as ideal types and the extremes are not expected to be existent in reality, they show the perceived changes in governance types. The competitive model follows neo-liberalistic ideas from recent decades. Developments constituting this model are decentralisation to increase competition, privatisation, and deregulation for reducing government control (Allmendinger, 2009). On the other hand, governance subject to more communicative practices. The communicative turn where the author Healey (1996) is most known for is an example of these practices. Active participation from multiple and diverse societal groups and stakeholders are the means for decision making in this communicative model, defined as the governance through argumentation in the figure. Later in this chapter, the communicative turn will be further discussed in relation to changing planning approaches to understand how planning approaches evolved alongside this transition.

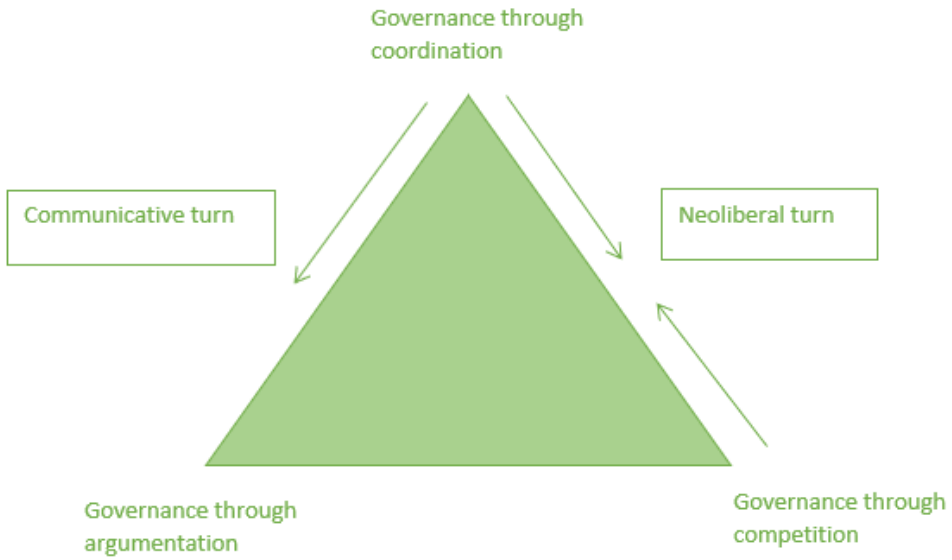



**Figure 4. The governance triangle (Faaij, 2018)**

Whereas figure 4 shows that the government aims for citizen participation, self-reliance, privatization, and liberalization. Van der Steen et al. (2013) are arguing that bottom-up development coming from within the market and society themselves are also present. Thus, whereas figure 4 only shows one-way relationships, the relationships can be extended to two-way relationships. These bottom-up developments from the market and society can be seen as a form of 'socialization'. This 'socialization' means that there is a large production of public value coming from within the market and society. Forms of this 'socialization' are active citizenship and self-initiative and power and social entrepreneurship. Figure 5 illustrates the two-way relationships between the government, the market, and society in relation to sustainable mobility. Both turns are also visible in the mobility sector. On the one hand, there are more interest groups, for example, the Mobility table, influencing

mobility practices due to more active participation and power. Whereas on the other hand there are concepts as MaaS arising due to the combination between liberalization and upcoming entrepreneurship

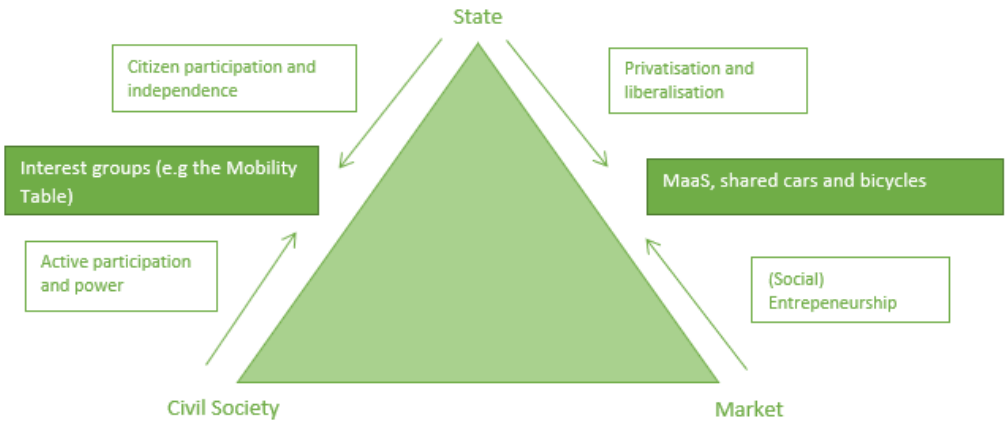



**Figure 5. Changing relationships in the governance triangle (Creation of the author based on Van der Steen et al., 2013)**

Both turns are also visible in the mobility sector. On the one hand, there are more interest groups, for example, the Mobility table, influencing mobility practices due to more active participation and power. Whereas on the other hand there are concepts as MaaS arising due to the combination between liberalization and upcoming entrepreneurship.

To conclude, governmental authorities have been shifting away from a determining and implementing role to a framework creating and facilitating role (Wegener,2012; Buitelaar et al., 2011; Spaans, 2006). Moroni (2015) explains that due to the problems of complexity and the intrinsic unpredictability of our social system, a radical overhaul is needed in the tools used to regulate land use, he states that the idea of framework-instruments has to more explored in the urban planning field. The Environment and Planning Act follows this idea.

These developments and assumptions can also be linked to the assumptions and goals of the Environment and Planning Act as two leading principles of the Act are:
1. deregulation with fewer and clearer rules
2. opening up room for initiatives from within the market and society.

## 3.2 OVERVIEW OF PLANNING APPROACHES IN TIME

The concept of governance and the turns it experienced in recent years can also be traced back to different planning approaches. The Environment and Planning Act can, therefore, also be seen as a result of the call for renewal in planning approaches. To understand this call for renewal, it is important to understand the historical timeline of prevalent planning approaches and the involved changes in the Netherlands. This chapter will give a historic overview of the planning approaches prevalent in the Netherlands. Appendix C provides a more elaborated historical overview of the planning approaches.

To understand the shifts in planning approaches, it is important to acknowledge and understand the divide between technical rationality and communicative rationality, as these contradicting rationalities can be seen as the underlying dilemma in planning approaches (De Roo, 2006). In a technical rationality worldview, the world is seen as an orderly system with specific conditions, whereas in the communicative rationality it is acknowledged that the world is not always ordered and, rather complex, uncertain and chaotic (De Roo, 2006).

Table 3 shows the underlying characteristics of technical rationality and communicative rationality (De Roo, 2008). The tension between certainty and flexibility is also reflected in the two rationalities. Whereas the technical rationality relies on the concept of certainty, the communicative rationality acknowledges that uncertainties are prevalent. This tension is also present in the system of the Environment and Planning Act.

| Technical Rationality | Communicative Rationality |
|---|---|
| Direct causality | Remote causality |
| Clear entities | Fuzzy entities |
| Stable context | Unstable context |
| Unifocal perspective | Plural perspective |
| Implicit consensus | Explicit consensus |
| Explaining | Exploring |

**Table 3. Underlying characteristics of technical rationality and communicative rationality (de Roo, 2006)**

### OVERVIEW OF PLANNING APPROACHES

The tensions between the two types of rationalities can also be traced in the shifts in planning approaches over time. These shifts in planning approaches also explain where the prevalent sectoral focus, which is also prevalent in traditional transport planning is coming from. At the same time, the attempt to work with more integrality, which is also needed in the sustainable mobility paradigm (Banister, 2007) is visible in the transitions in planning approaches.

According to de Roo (2006), long-time planners assumed that controlling the physical environment could be done by technical, instrumental, and procedural expertise. This planning paradigm was especially visible in the post-war period in Europe. After the world war, there was a strong demand for a technical-rationality approach as Europe had to be rebuild as quickly as possible, thus there was a need for quantity. Therefore, it was logical that certainty and control were the ultimate criteria. This criteria are also prevalent in the technical rational approach. After the post-war period, the urban renewal aimed to decrease the distinction between the city and the landscape, which was reinforced by the technical rational way of planning (Lodder et al., 2014).

In the late ’60s, the quality of the local environment became increasingly important (De Roo, 2006). Moreover, the belief that planning could be seen as a process with a straight line was no longer the only prevalent approach. In the 1970s, several developments and incidents led to a growing distrust in the controllability of society, and sectoral policies were increasing. In planning this meant that in addition to spatial planning, areas as transport planning and the planning of green areas became distinct fields. This is also resulted in presence of different policy sectors and the installation of different ministries.

The eighties witnessed a substantial elaboration of these distinctive fields policy sectors as each developed its legal system, planning system, specialized instruments, financial structure, and professional organization, including formal and informal networks. These various sectors became highly specialized, including the development of sector-specific languages. The outcome was a sharply divided planning system, based on strong sectors, each claiming authority over their peers. Separate ministries with their sectoral legislation were

established in the late 1970 and 1980. The establishment of the ministry of traffic and water management is an example of this sectoral way of working. Therefore, also the mobility sector has its own strong specializations (Forkink, 2019). The result of this specialization of policy and spatial planning was that policymaking had little to do with 'controlling' the outside world through planning anymore, as every government department struggled to increase the extent of its influence and control (De Roo, 2006). Furthermore, this sectoral and protecting focus gradually retreated into its bureaucratic reality due to the vast set of regulations and contradicting interest (De Roo, 2006).

As the previous timespans showed an increase of the sectoral focused approaches. Planning in the 1990's aims to deviate from this trend. Healey (1996) describes the promising new planning paradigm, communicative planning, as the ultimate way to solve all problems that the previous planning paradigm, the technical and comprehensive paradigm, encountered. Furthermore, there is a focus on interactions and actors, rather than on content and goals, as in the technical paradigm of planning. With communicative planning the first signs to enhance the integral character of planning became clear. Communicative planning aims to include diversity, inclusiveness, and the complexity of the world into planning practice. Moreover, recently more attention has been given to the importance and opportunities coming from integrated, and holistic planning approaches. According to Yigitcanlar and Teriman (2015), a more holistic approach in planning is needed to support the progress towards achieving sustainable agendas. The Environment and Planning Act aims to shift away from a sectoral way of planning to a more integral approach. Table 4 shows the contradicting characteristics of technical- and communicative planning. These characteristics can also be related to the Environment and Planning Act and its assumptions with integrality, participation and bottom-up processes (Aan de slag met de omgevingswet, 2019b). Figure 8 provides a summary of the planning approaches over time

| Technical rational planning | Communicative rational planning |
|---|---|
| **General** | Custom-made |
| **Simple questions** | Complex questions |
| **Sectoral** | Integral |
| **Top-down** | Bottom-up |
| **Result** | Consensus |

Table 4. Characteristics of technical rational planning and communicative rational planning (De Roo, 2007)

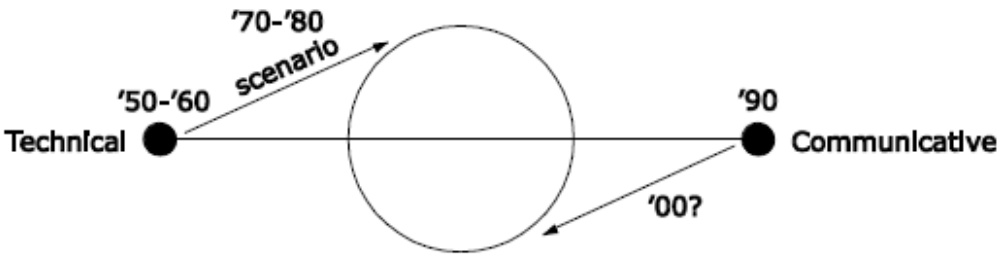



Figure 8. Timeline of planning approaches (De Roo, 2007, p110)

### FLEXIBILITY VS LEGAL CERTAINTY

This tension between certainty and flexibility is also recognizable in the Environment and Planning Act. One of the assumptions of the Environment and Planning Act is to govern with customization, which means that the Act recognizes that the world is not such an orderly place as in the technical rationality worldview (Aan de slag met de omgevingswet, 2019b). Furthermore, the Environment and Planning Act acknowledges that whenever a solution fits the problem at one place it does not mean that it automatically is the solution for all similar problems. Increasing flexibility is, therefore, one of the overarching aims of the Environment and Planning Act. For administrative bodies, this flexibility lies in the administrative room for assessment, which will be offered to them in the implementing regulations. For citizens and companies, this increased scope for action will be created by including target regulations. In this way, they can more or less determine for themselves how they will meet the intended result or an equivalent solution. However, there is a limit to flexibility and this is the object of legal certainty. When flexibility is increased, the legal certainty may be compromised. Therefore, it is important that the administrative judge is not sitting on the board's chair in the Environment and Planning Act situation. When flexibility and the room for assessment are increased for the governmental bodies, the more reason for a marginal assessment by the administrative judge. In these cases, the legal certainty of citizens could be compromised. More room for assessment and more deviations possibilities will lead to potential processes where only at the very end of a journey it will become clear whether the (Environmental) permits will hold. Therefore, the potential success of the Act depends on the context, and whether the legal certainty can be upheld. (Aan de slag met de Omgevingswet, 2019; Rooilijn, 2015)

## 3.3 THE DUAL NATURE OF PLANS

According to Sørensen (2015), the history of planning can also be seen as a history of institution-building. Institution building has to deal with the balance between flexibility and certainty. Every planning process contains a tendency between flexibility and certainty. This leads to a paradoxical contradiction. On the one hand, a spatial planning process must be flexible; to respond to various developments, changes, and initiatives. On the other hand, a planning process must be robust, to offer certainty to the actors involved. Individual legal rights must be protected within spatial planning. However, a planning process must also be flexible as it must be able to respond to developments and changes. The challenge is to balance and legitimize this dualism (Korthals-Altes, 2016).

The traditional idea of resolving this tension is the idea that development will be guided through the implementation of the plan, and since the plan is a set of legal regulations, 'implementation, then, boils down to upholding the plans' (Mastop, 2001, p231). Even exemptions to the plan are bound by the plan itself. Thus, all subsequent decisions are bound by the framework set out in the plan.

Also in the Dutch context, the tension between the planning system which provides binding legal rules and the practice of development planning has been considered to be a problematic situation (Janssen-Jansen & Woltjer, 2010; Buitelaar et al., 2011). The tensions between the different planning approaches is also coming forward in the article of Korthals-Altes (2016) as he describes the dual nature of plans illustrated by the installation of the Environment and Planning Act. Korthals-Altes (2016) states that a dual-track policy is commonly seen in planning. For example, land-use plans have a so-called ''Janus Head'', as they provide legal security, while on the other hand, they have to be an instrument by which spatial development in the future can be directed and managed. A land-use plan aims to designate the existing situation and deviations from that plan are used to accommodate new development. This tension is especially relevant for the Environment and Planning Act. According to (Korthals-Altes, 2016) critics of spatial planning frequently highlight the need for less specific and more flexible rules. However, drafting less specific and more flexible rules is more easily said than

done, especially if legal certainty must be upheld (as described in paragraph 3.2). The Environment and Planning Act is an attempt to manage the tensions described.

## 3.4 INSTITUTIONAL DESIGN: FORMAL INSTITUTIONS AND INFORMAL INSTITUTIONS

In order to understand how this tension could be managed, the influence of institutions has to be understood. According to Nuissl and Heinrichs (2011) governance is related to the deregulation of publicly relevant issues. Therefore, governance is especially relevant and present in societies where public and private actors agree on certain institutional and structural conditions. The term "institution" is used extensively in the social, economic, and political sciences. Nevertheless, there is no unanimity in the definition of the concept. A definition that is often quoted is the definition of North (1991, p97) In this definition the divide between formal- and informal institutions becomes visible:

*''Institutions are the restrictions devised by people that structure political, economic, and social interaction. They consist of both informal restrictions (sanctions, taboos, customs, traditions, and codes of conduct) and formal rules (constitutions, laws, property rights).''*

Furthermore, North (1991) stresses that informal institutions are underlying and supplementing formal institutions and all planning processes are taking place within a specific institutional context (Alexander, 2005).. Buitelaar et al., (2007) distinguishes the differences between formal and informal institutions as the following: formal institutions are considered to be norms and rules, whereas informal institutions are values, conventions, and codes of behaviour. This is in line with the observation of Alexander (2005) as he describes formal institutions as laws, rules, regulations and standards, and informal institutions as norms, habits, practices, knowledge, and worldviews.

Van Assche et al., (2014) provide an overview of the legacies of formality and informality. Historically, formal institutions were meant to be tools to structure and rationalize societies. Therefore, the rule of law emerged as both a precondition and a result of stable political institutions. Van Assche et al., (2014) are describing the potential formal institutions in planning as plans, policies, laws, and unwritten rules. Where they see unwritten rules, as rules that can be derived from tradition or a conscious balancing of interest. However, they argue that these rules can also be informal because when a rule is to be taken as a formal one, on many occasions it is to be expected that it has a substantial influence on the kind of alternative rules that develop and their pattern of application. On the other side, if a rule is taken as informal in many situations, then it is expected to transform into a formal environment over time. It is evident that formal institutions co-exist with informal ones and that these institutions co-evolve over time, therefore they mutually shape each other. The same applies to laws and policies affecting the spatial organization. Lastly, Van Karnebeek and Janssen-Jansen (2018) are stating that combining both formal and informal rules and different types of rules is essential for understanding planning practices. Furthermore, they are highlighting the interplay between the types of institutions as essential. As together they enable and constrain the way how actors interact, and how decisions are made.

The Environment and Planning Act comes with six core instruments that can be regarded as formal institutions. On the other hand, the Act intends to work in a different way, to work with more collaboration with different sectors and interests, and to work with more integrality to tackle contemporary challenges. These aims can be regarded as more informal institutions.

### PATH DEPENDENCY OF INSTITUTIONS

Path dependency can be an inhibitory factor in the success of new institutions. According to Mahoney (2000), path dependency means that historical sequences are determined by contingent events set into motion by institutional pattern or event chains that have deterministic properties. In addition, Salet (2018) stresses that

economic developments and political developments have to be seen as relatively deterministic processes in historical order. This is in line with the findings of González and Healey (2005) as they state that a certain moment in time induces deeper structural changes that transform ongoing routines and governmental practices. Thus, according to them, innovative planning practices cannot be seen as a replacement of other practices, rather they should be seen as a building upon traditional practices containing deterministic path-dependent actors (González and Healey (2005).

In this research, the implementation of the Environment and Planning Act is seen as an institution-building in a historical perspective. This historical perspective assigns an important role to the institutional design. In North's (1990) view some institutions evolve by themselves whereas others are deliberately created. Yet the scope of the design of the Environment and Planning Act is strongly path-dependent, as it is strongly determined by past experiences, and place dependency. According to Weimer (1995), institutional design comes down to the articulation and advocacy of one of the many options brought up by a particular historical trajectory at a certain place. Institutions thus result from a historical path, which is punctuated by acts of purposeful design.

According to Salet (2018) the basic assumption that path dependency is able to explain the links and influences between events in the past and current events misses the important feature of the process of self-reinforcing systems. These processes are often called positive feedback effects. According to (Sørensen, 2015) when these effects are present, each step taken on this particular pathway increases the likelihood of more steps to be taken on the same path, leading to an increase in the 'costs' of alternatives and a reinforcement of the path-dependent situation. Thus, this means that institutional change becomes more different over time as it has grown strongly during the time of use.

### INSTITUTION BUILDING AND INSTITUTIONAL CHANGE

According to Sørensen (2015), the history of planning can be seen as a history of institution-building. By stressing this character of building upon each other rather than replacing each other, Sørensen (2015) acknowledges that many urban institutions contain features of path dependence. This eventually leads to the generation of positive feedback effects. The argument that planning can be seen as a history of institution-building is strengthened by the argument of Van Karnenbeek and Janssen-Jansen (2018), as they state that proposing 'new' planning approaches like 'the incremental urban development' to criticize and replace rational comprehensive thinking are likely to ignore the adaptive and incremental progress already present in traditional planning practices. According to Van Karnenbeek and Janssen-Jansen (2018), this aimed replacement of traditional planning practices can only give a sense of apparent change, while instead just being the relabelling of already existing planning strategies.

According to Van Buuren and Edelenbos (2008) the path-dependent character of legislation and the normalization in the 'way of doing things' in governmental organizations, can result in the hesitation of these organizations to enable the new Act to reach the desired outcomes. To illustrate, governments are used to their 'vertical control' mode which is also deeply culturally embedded, a more 'horizontal' control mode is, therefore, resulting in tensions between innovative modes of governance and planning and the customary top-down approach. Moreover, ''lock-in'' situations might occur, which eventually result in stagnating development and simply a relabelling process of traditional planning practices (Salet, 2018; Van Karnebeek and Janssen-Jansen, 2018). Figure 9 visualizes how institutions, actors, legislation and behaviour are constantly influencing each other.

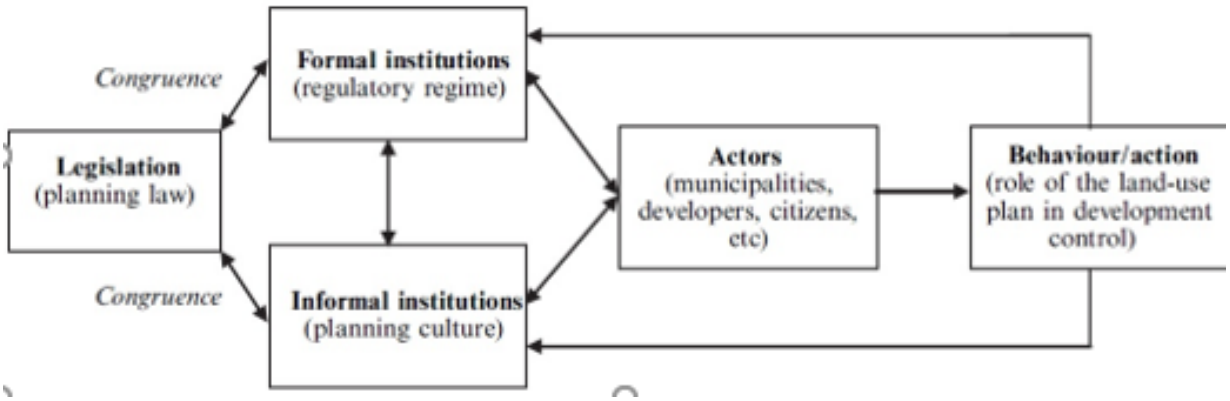



**Figure 9. How institutions and actors and behaviours are influencing each other (Buitelaar, 2011, p932)**

# 4. THE ENVIRONMENT AND PLANNING ACT

As the previous chapter elaborated on the different planning approaches and developments underlying the Environment and Planning Act. This chapter focusses on the Environment and Planning Act itself.

According to Assche et al., (2012) successful policies and projects often attract and keep public attention going, while failures seem to be forgotten rather quickly. For many present-day theorists, it is often hard to say whether a specific policy or project should be considered successful or not. Assche et al.., (2012) states that it is already difficult to determine whether a certain policy or project is successful. It is without saying that it is difficult to explore the success rate of a change. However, to gain an insight into the possible enhancing capacity that the Act can have for sustainable mobility, it is necessary to have an insight into former system revisions, it's points of improvement and the instruments it entails. This chapter provides these aspects.

## 4.1 THE SYSTEM OF ENVIRONMENTAL LAW

To understand the system of Environmental law it is important to acknowledge that this is a layered system. The preconditions of Environmental Law are to a large extent guided by European designed frameworks. Within these European frameworks, there is scope for National elaboration. The Europen Union (EU) and the Member States have a shared competence in Environmental policy. This means that member states are allowed to legislate about the Environment, however only if the EU itself does not take similar measures. The European Union pursues Environmental policy mainly through the use of guidelines. These guidelines are implemented in national legislation, and further on embedded in provincial and local policies and decision-making processes. Thus, provinces and municipalities have to incorporate European Environmental Policies. For example, the Law for Environmental Management (Dutch: wet milieubeheer) is from a large part coming from EU legislation. The EU can act in all areas where environmental damage occurs (on the basis of art. 190, 191 and 192). As a result, European environmental regulations have become extensive. These EU competences are limited by the principle of subsidiarity. Thus, subjects are only regulated at the European level if the problems cannot be (better) solved by the Member states themselves (Ministerie van Infrastructuur en Milieu, 2013; PDC, 2020).

Regarding mobility policies, the feasibility of the ambitions set by municipalities or provinces is also influenced by the EU and national climate policies. An important part regarding mobility policies concerns the setting of EU standards for the emissions of road vehicles. The EU standards are in place regarding passenger cars, trucks, buses, and delivery vans. In addition to these technical guidelines, the European Commission has drawn up recommendations for local- and regional policy implementation. The European Union is committed to integrating sustainable mobility in cities in the coming years and stimulates the development of sustainable mobility plans. The European Union transport policy aims to ensure easy, efficient, safe, and free movement of people and goods across the EU with integrated networks using all forms of transport (road, rail, water, and air). EU policies also address a range of other issues, such as climate change, travelers' rights, clean fuel, and reducing the many customs forms in ports (Ministerie van Infrastructuur en Milieu, 2013; PDC, 2020).

Thus, the major part of European Environmental Law consists of guidelines and these guidelines leave room for integration in national environmental law.

### ENVIRONMENTAL LAW IN THE NETHERLANDS

To further understand the potential impact of the installation of the Environment and Planning Act in the Netherlands, it is important to recognize the Dutch planning culture and the Environmental Law system. Van der Cammen and de Klerk (2012) describes the Dutch planning culture in five characteristics:

1. Serving the common good trough deliberation and pragmatic measures.
2. Promotion of physical safety and the production of the landscape by technical measures.
3. The plan as an instrument to shape not just space, but also society and the economy.
4. An institutional status of plans and a high level of respect for the public institutions.
5. A strong position for local governments and heavy reliance on the subsidiary principle.

These and characteristics of spatial planning policies of the Netherlands received vast international recognition. However, now they seem to be under pressure due to multiple crises and societal changes. As a reaction to this pressure, several system revisions have taken place (Van Cammen and de Klerk, 2012). Since the establishment of the Housing Act in 1901, installed due to the bad quality of housing and the growing awareness of the public health, several revisions and new laws emerged. The Housing Act was in force until 1965. After that, the first Spatial Planning Act, the WRO entered into force.

*WRO*

The WRO served from 1965 to 2008. The law focused on making key planning decisions on the level of the national government. A regional plan had to be established at the provincial level, and zoning plans were the most used instruments at the municipal level. In the WRO the aim to have "good spatial planning" plays a key role. Therefore, the WRO includes rules concerning good spatial planning. Furthermore, The WRO worked according to the principle of “admission planning”. In this type of planning the government has a leading and framework creating role. The WRO was established as a framework law. A framework law mainly contains a framework of rules. These rules are elaborated in General Administrative Orders and Ministerial Regulations. (Kamphorst et al., 2008; Van den Broek, 2014; Van der Schoot, 2013).

The national government had a leading and framework-creating role. Within the WRO the vertical coordination between the various government layers was not satisfactory, as mostly the alignment between the national and the provincial policies was not functioning properly. The WRO was focused on transmission between vertical policy levels with administrative supervision. However, this was also seen as unnecessary interference and there was growing tension between the decentralization power base and the centralizing legal base of Spatial Planning (PBL, 2011). This resulted in the growing desire that each layer of government (national, provincial, and municipal) has to Act in their own interest. Next to this, the growing number of rules resulted in a problematic situation, as, the implementation and enforcement of the zoning plan were lacking sometimes. (Van der Schoot, 2013). Due to these observations and the desire to work with the principle of ‘development planning” and to work together with the market, a new law emerged. This resulted in the installation of the Wro (Kamphorst et al., 2008; Van den Broek, 2014).).

*Wro*

The Wro was installed in 2008. The Wro was established to have a more simple and modern system in order to ensure uniformity, standardization, clarity, and legal certainty on the rules that apply throughout the Netherlands. In contrast to the WRO, the Wro plans according to the principle of development planning, rather than admission planning, which was prevalent in the WRO. In the Wro, the market had a more important role than in the WRO and the collaborations between the market and the government improved and increased. The Wro has three objectives: to do decentralized what is possible, centralized what must be, the reduction of rules; and a focus on implementation (Kamphorst et al., 2008). The biggest improvements compared to the WRO are: compulsory structural visions for central government, provinces and municipalities for their territory, the offering an alternative to the zoning plan in the form of the municipal management regulation, and an improved set of instruments for land exploitation, which also provided a separation between regulations and policies (van der Schoot, 2013).

In the Wro, the provinces could establish one or more structural visions on thematic aspects as spatial quality, nature, water, cultural history and geology, agriculture and horticulture, tourism and recreation, mobility and infrastructure, housing, and soil, environment, and energy. Mobility and Infrastructure were often separate structural visions. According to Van Angeren (2019), this sectoral focus leads to problems regarding the implementation, as other interests also play a role in this. Thus, a broader assessment must often be made.

*Chw and Wabo*

After 2008, the Wro was adjusted a couple of times. First of all, by several sweeping laws, after which the law was amended in 2010 by the Crisis and Recovery Act (Chw, Dutch: Crisis- en herstelwet) and the General provisions Act (WABO, Dutch: Wet Algemene Bepalingen Omgevingsrecht). Amongst others, the Chw provided an additional set of instruments for projects to accelerate the implementation process. The Wabo provided a new system for granting permits, as it provided the environmental permit, this permit could be arranged from a single contact point: The Environmental Desk (Dutch: Omgevingsloket). The Environment and Planning Act is building further upon these developments, revisions, and laws (van der Schoot, 2013;).

*The Environment and Planning Act*

The Environmental and Planning Act was announced in 2011. The minister of Infrastructure and Environment described this change as the ”largest legislative operation since the Second World War”. This revision in Spatial planning is considered necessary after the Netherlands Environmental Assessment Agency (Dutch: Planbureau voor de leefomgeving) had evaluated the Wro negatively twice (Van der Schoot, 2013). In addition to these evaluations of the PBL, the Ministry of Infrastructure and Environment concluded that the current Environmental law is still too complex (after several attempts as the WRO and wro to decrease the complexity). The main cause for this was the sectoral structure, which means that in many cases initiators have to deal with different and sometimes contradicting laws and procedures. Shifting away from this sectoral focus is also essential for enhancing sustainable mobility. According to Van Maarsseveen and Zuidgeest (2000) this focus is restraining the sector to evolve to more sustainable mobility developments, as these developments need a broader and more integral focus. As also shown in table 6, Ensuring a coherent approach to the physical living environment in policy, decision-making, and regulations is one of the key assumptions of the Environment and Planning Act. Next to this, following from a research of the PBL (2014), initiators of initiatives regarding sustainable mobility indicate a lack of coordination and cooperation at the administrative level. For example, different layers of government are responsible for just placing a charging station. This bureaucracy often led to delays, and this is reflected in the price of mobility services.

Van den Broek (2014) concludes that current legislation no longer meets the needs of society. With the Environment and Planning Act, the government is trying to continue its way towards simplifying and integrating area-specific regulations and making better use of existing general rules. On 17 June 2014, the Ministry for Infrastructure and Environment submitted the bill for the Environmental Planning Act to the Dutch parliament. After adoption by the Dutch Parliament, the final Act was published on 23 March 2016, and, at that time, it was expected that the Act would enter into force in 2019. However, the installation of the Act is currently delayed to 2021[*] (Ministerie van Infrastructuur en Milieu, 2017). As already mentioned in paragraph 3.2, ensuring legal certainty versus increasing flexibility is a complex tension in the Environment and Planning Act, this is also one of the reasons that the Act has been postponed.

[*] Situation changed at the end of the research. Due to the corona virus crises and the observation that the implementation of digital system (DSO) takes more time the installation of the Environment and Planning Act has been postponed untill futher notice (Binnenlands bestuur, 2020).

## 4.2 POINTS OF IMPROVEMENT

The scope of the Environmental law system changes, whereas 'good spatial planning' had to be met during the Wro this will be changed to 'a good physical living environment' in the Environment and Planning Act. To achieve a good physical living environment, the legislator established two main objectives (Aan de slag met de omgevingswet, 2019b):

1. Achieving and sustaining a safe and healthy physical living environment and good environmental quality,
2. Efficient management use and development of the physical environment for the fulfillment of social needs.

Van Angeren (2019) explains what this can mean for sustainable mobility, as he argues that a safe and healthy physical living environment also means that one must be able to move safely from A to B. Furthermore, mobility can be seen as a social need, so it can be argued that mobility is the use and development of the physical living environment to fulfil a social need. In addition to these objectives, The Environment and Planning Act has four overarching improvement goals, as provided in table 5. Additionally, the Environment and Planning Act requires a different way of working. This different way of working entails: more coherency, acting as one government, ensuring more chain cooperation, and consultation with society (Aan de slag met de Omgevingswet, 2019a).

| Points of improvement |
| --- |
| Increasing the clarity, predictability, and ease of use of environmental law |
| Ensuring a coherent approach to the physical living environment in policy, decision-making, and regulations |
| Increasing administrative room for initiatives by allowing an active and flexible approach to achieving goals for the physical living environment |
| Accelerating and improving decision-making about projects in the physical environment |

**Table 5. Improvement goals (Aan de slag met de omgevingswet, 2019b)**

To give an insight into the large number of legislative changes associated with the implementation of the Environment and Planning Act, table 6 gives an overview of the changes related with the installation of the Environment and Planning Act.

| Current Situation | Environment and Planning Act |
|---|---|
| 26 different laws | 1 law for the whole physical living environment[5] |
| 4700 articles | 349 articles |
| 120 general administrative orders | 4 general administrative orders |
| 120 ministerial regulations | Around 10 ministerial regulations |

**Table 6. Situation before and after the installation of the Act (Ministry of Infrastructure and Environment, 2019)**

## 4.3 CORE INSTRUMENTS

The Environment and Planning Act provides six core instruments for managing and utilizing the physical living environment. An infographic of the six core instruments is provided in appendix A, this infographic can be used as a summary of this section. As described in the previous chapter (3.4) institutions can be divided into formal- and informal institutions. The core instruments explained in this section, are regarded to be formal institutions. Whereas the wish of the Environment and Planning Act to work differently is defined to be a more informal institution. This is following from the classification of Alexander (2005) as he describes formal institutions as laws, rules, regulations, and standards and informal institutions as norms, habits, practices, knowledge, and worldviews.

The six formal instruments are (Aan de slag met de Omgevingswet, 2019b):

1. Environmental Vision
2. Programs
3. Decentral rules
4. General government rules
5. Environmental permit
6. Project decision

These core instruments will be set out one by one in this section. The instruments of the Environment and Planning Act follow a policy cycle. This policy cycle provides a structure for arranging the instruments. The cycle consists of: policy development, policy impact, performance, and feedback. An infographic of the policy cycle and the interplay between the instruments is provided in appendix A (Aan de slag met de omgevingswet, 2019m.

### 1. ENVIRONMENTAL VISION

The Environmental vision is an integral long-term vision about the physical living environment situated in the policy development phase. Visions determine to what extent governments can set rules and supervision. The

[5] The scope of the physical living environment contains buildings, infrastructure, water systems, water, soil, air, landscapes, nature, cultural heritage, world heritage.

Environment and Planning Act requires that each governing body adopts a long-term vision. The National government (The National Strategy on Spatial Planning and Environment), the Province (the Provincial Environment Vision), and municipalities (the municipal Environment Vision) are establishing one environmental vision for their entire territory. This political and administrative document is a self-binding document for the administrative body that drafted it. However, according to the jurisprudence of the Administrative Jurisdiction Division of the Council of the State (Dutch: ABRVs, Afdeling bestuursrechtspraak van de Raad van State), citizens can appeal to it when concrete statements are made. Additionally, administrative bodies may deviate from the Environmental vision in case of special circumstances (Aan de slag met de omgevingswet, 2019n).

In comparison with the current environmental law under the Wro, the Environmental vision replaces the area-wide structural visions; parts of the nature vision, traffic and transport plans, strategic parts of national and provincial water plans, and environmental policy plans. Although some provinces already integrated these documents, in the system of the Environment and Planning Act integration becomes obligatory.

The main objective of the Environmental vision is to promote the coherency between policies for the physical living environment. Due to this objective of integrality, governments do not have to develop separate strategic visions per domain, which is the case in current Environmental law. (Aan de slag met de omgevingswet, 2019). Although this can lead to more integrated and integral plans, this also brings along the possibility of Environmental vision being loose instruments with hopeful sentences without making actual choices for the physical living environment (Ten Cate, 2019).

### 2. PROGRAMS

The Program is a flexible instrument that the government can apply at different stages of the policy cycle. The program is a policy document. To achieve the desired quality (defined by the governmental layer or the governing bodies) of the physical living environment a Program can be installed by these establishers. In some cases, a program is also mandatory. The Program contains specific measures for the protection, management, use, and development of the living environment. The programs are drawn up by the municipality, the province, the water board, the national government, or their governing bodies. These measures must contribute to the achievement of predetermined environmental values in the Environmental vision. In contrast to the Environmental vision, Programs can have a sectoral or area-oriented character and one governmental body can establish several programs (Aan de slag met de omgevingswet, 2019e). In some cases, a program is also mandatory. A program is prescribed by law for certain subjects. For example, a program can be legally prescribed if a predetermined environmental value recorded in the Environmental vision is not met or is threatened to be met.

### 3. DECENTRAL RULES

The Environment and Planning Act is based on the principle that authorities bring all their rules about the living environment together in one regulation. This makes this legislation coherent, transparent, and comprehensible for all levels of government. Therefore, different governmental layers have their own decentral rules. At the municipal level, this is the Environmental plan, for the provinces this is the Provincial regulation, and for the waterboards this is the Waterboard regulation. In the current legal system, in many cases, the municipal rules on the living environment are spread over a large number of different zoning plans and regulations. In the Environment and Planning, Act the existing zoning plans and local regulations will be automatically transferred and classified as the Environmental plan. This is done on the purpose to create an integral set of rules that covers all aspects of the physical living environment. (Aan de slag met de omgevingswet, 2019g; Aan de slag met de omgevingswet, 2019h; Aan de slag met de omgevingswet, 2019i).

### 4. GENERAL GOVERNMENT RULES

Most activities within the living environment are initiatives from citizens and businesses. Therefore, it is practical to establish national rules for the protection of the living environment in some areas. The government aims to have generally applicable rules where possible. In this way, it prevents the process that citizens and businesses have to ask the government for permission in every case. However, it is not possible to use general rules in all cases, with a custom regulation (Dutch: Maatwerkvoorschrift) the competent authority can deviate from general rules in specific cases. Amongst others, these specific cases could be achieving ambitions regarding the physical living environment (Aan de slag met de Omgevingswet, 2019p). General government rules have the aim to increase uniformity and to decrease the administrative burden for initiators (Aan de slag met de Omgevingswet, 2019j).

### 5. ENVIRONMENTAL PERMIT

The Environment and Planning Act aims to arrange as many activities as possible within the general government rules. However, if an activity is not admissible in the general governmental rules, an initiator has to apply for an environmental permit. This review in the Environment and Planning Act is an extension and expansion of the Environmental permit from the Wabo. By keeping the granting of permits as simple as possible, procedures do not last unnecessarily long for initiators. To ensure this, a choice must be made between the six-month procedure and the regular eight-week procedure and according to Environment and Planning Act, the regular procedure should be used as much as possible. In this way, Initiators can quickly get clarity for all the activities they want to carry out through one application at one counter. However, this is not as straightforward for the permit granting authorities, as the Environmental permit consists of different partial permits. These partial permits need ‘statements of no objection’ from other governing bodies when for example the concerned Environmental permit relates to deviating from planning rules. In such cases, the competent authority cannot grant the Environmental permit without a ‘statement of no objection’. (Aan de slag met de Omgevingswet, 2019K; Ministerie van Infrastructuur en Waterstaat, 2019b).

### 6. PROJECT DECISION

The Project Decision offers a uniform procedure for decision-making on complex projects from the responsibility of the National government or Provinces. Infrastructural and mobility projects are often complex projects, these projects will be subject to the Project Decision. For instance, the project decision is an obligated instrument for railways. The instrument of the Project Decision aims to make these types of procedures run faster and better than in the past. In this way, the Project Decision is building further upon the objectives of the Crisis and Recovery Act (Dutch: Chw). To illustrate this, in the situation when a project conflicts with an Environmental plan, it is possible to deviate from the Environmental plan. In appropriate cases, the Project Decision can also replace the Environmental permit. In the Project Decision, governments have to indicate how they have organized participation. The Project Decision replaces several instruments, amongst others: the integration plan from the Wro, the Route Decree from the Route Act, and the Route Act itself (Aan de slag met de Omgevingswet, 2019l)

## LEGISLATION IN PRACTICE

The previous section has focused on which aspects of the Law are written down. However, it is important to recognize that legislations are not just written texts, legislation and laws are also interpreted and used by people. This research aims to find out what could be expected from working with the Environment and Planning Act regarding enhancing sustainable mobility in the Netherlands. Therefore, it is important to verify the attitude and thoughts of people towards the Law, as this will influence the actual outcomes of the Law.

As shown in the previous sections, the Environment and Planning Act has promising aspects, however, ex-ante analyses of the impact of laws are often optimistic (Van Dijk and Beunen, 2009). After installation, it is often difficult to trace back what the law or the legislative change specifically produced. This difficulty is coming from the observation that not solely direct effects are coming from the Law, there are also indirect and/or unintended outcomes. Furthermore, policies are often implemented through formal laws. However, social structures and informal laws are guiding how laws are used. Laws influence which changes can be achieved in the social and physical living environment. Furthermore, laws are possibilities to steer a certain process to achieve a desired outcome (Needham, 1982; Van Assche et al., 2014; Van Dijk and Beunen, 2009)

To understand the potential outcome of a law, it is needed to understand that laws are made and used by people. "*Laws do not do anything themselves"* (Van Dijk and Beunen, 2009, p2). Van Dijk and Beunen are arguing that laws are sometimes personalized as if they are acting for themselves. However, laws can only be effective if they are accepted and incorporated by people. Thus, a law should not be treated just a written text, it something that has been adopted in a complex system of existing rules and an influential institutional context. Thus, laws are adopted by people in their wider social context and everyone interprets this differently. Therefore, there are differences in the actual meaning of a Law across different people. This is also described by Posner (1993) as he describes the problems of jurisprudence (as the philosophy of law), these problems are coming from the question whether and in what way law is objective and autonomous, rather than political or personal. Posner (1993) and Van Dijk and Beunen (20009) agree that laws are also subject to the interpretation of legal texts. This is also the case when researching the potential outcomes of the Environment and Planning Act.

There are, for example, doubts about the ability of organisations to adopt and incorporate the Law and the needed cultural changes associated with it. For instance, working with more integrality raises issues from officials and administrators, as they are worried that it will be difficult to weigh interests fairly. Moreover, they expect difficulties because professionals have to break free from their professional backgrounds in order to work with more integrality. Therefore, it is important to understand that the interpretation of a law influences the potential outcomes. (Buitelaar, 2017).

Healey (1996, p200) describes this situation with an expressive quote: *"It takes two to tango: the law as the institutionalised product of social interaction, and the people's cooperation toward the intentions of the legislator "*

## 5. CONCEPTUAL MODEL

From the above-described chapters, the following conceptual model has been constructed. The explanation of the model can be found beneath, and an enlarged exemplar can be found in Appendix G.

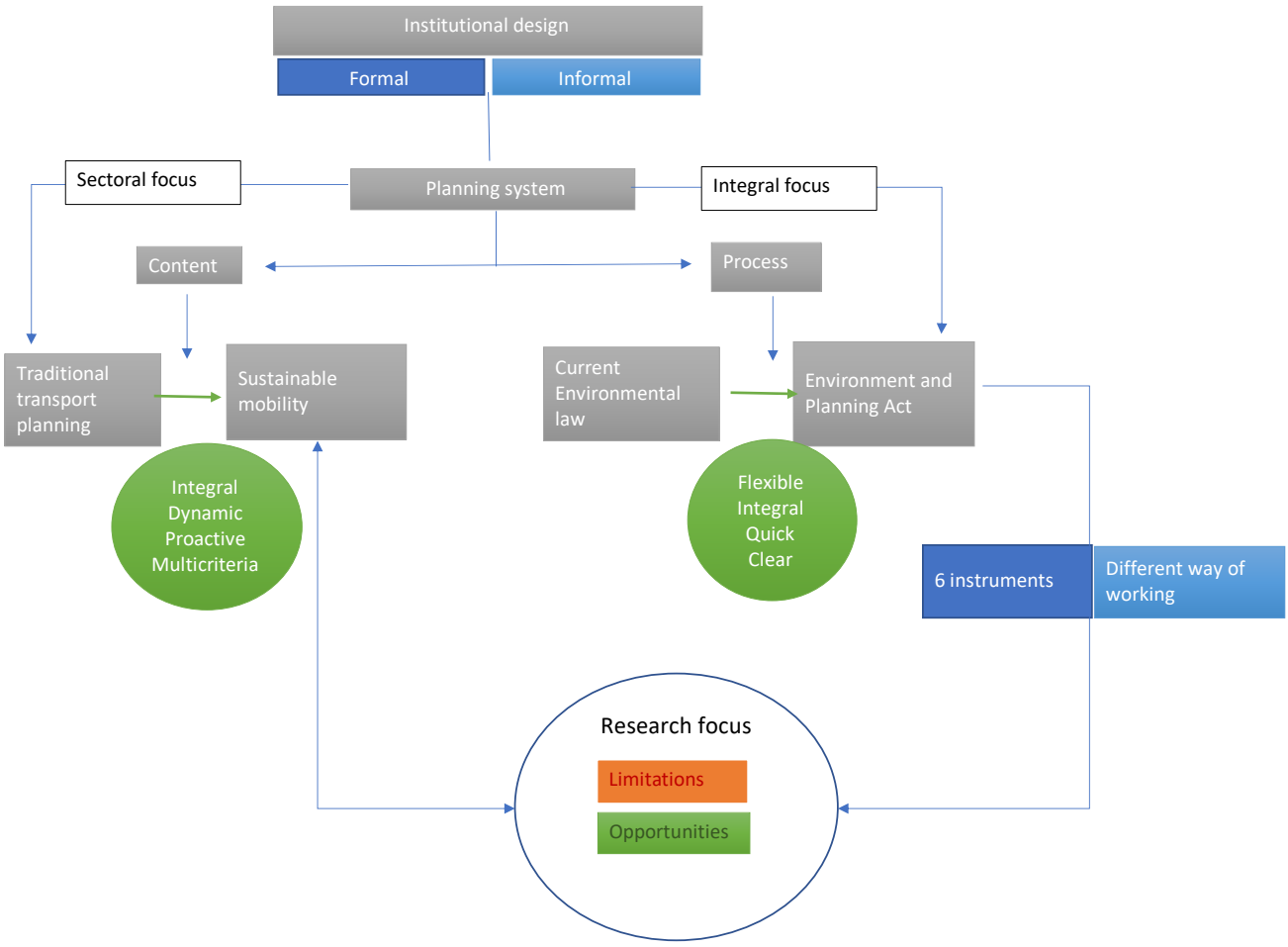



*Figure 10. Conceptual model (made by the author)

## EXPLANATION CONCEPTUAL FRAMEWORK

Theoretical starting point: Institutional design

This conceptual framework starts with the divide between formal- and informal institutions in institutional designs. The importance of this divide has been coming forward in chapter 3. Moreover, chapter 3 explained where the sectoral focus prevalent in the mobility sector is coming from, whereas in chapters 2 and 4 the need to shift from the sectoral focus to an integral focus in order to enhance sustainable mobility has been explained.

After that, the conceptual model splits into 2 sides, the content side and the process side of planning systems. The content side of the planning system is focused on questions as: what needs to be done? And which developments and transitions are needed? On the other side, the process side is more concerned with the questions as: how are things organized? And which institutions are in place? However, it is important to note that the content and process side are mutually influencing each other, and they cannot be seen as separate and closed systems (as visualized by the two-sided arrow).

Process side: In the process side the transition within Environmental Law from the current system towards the Environment and Planning Act is situated. The 4 points of improvement constituting the transitions are provided with the green circle. The Environment and Planning Act entails 6 core instruments (formal institutions in dark blue), whereas it also aims for another way of working (informal institutions in light blue). The transition in the process side of the system leads to certain opportunities and limitations.

Content side: The content side entails the transition from traditional transport planning towards sustainable mobility. Four characteristics constituting this transition are provided in the green circle. This in itself brings difficulties and opportunities, however, there are also difficulties and limitations arising from the Environment and Planning Act for sustainable mobility. Therefore, sustainable mobility is a starting point and an endpoint, as visualized by the two-sided arrow.

Research focus: Opportunities and limitations from two simultaneous transitions

The research focus is situated at the bottom of the model. This research is focused on the relation between the opportunities and limitations coming from two simultaneous transitions, being the transitions towards the Environment and Planning Act, and the transition towards sustainable mobility. The research focus is visualized by the blue circle.

# 6. METHODOLOGY

This chapter elaborates on the methodology used in this research. In the previous chapter, the conceptual model visualized the theoretical basis of chapters 2,3 and 4. In the conceptual model and the theoretical basis, it became clear that there is a need for researching the relation between the opportunities and limitations coming from two simultaneous transitions. In this chapter, the corresponding study design to research this relation is provided, together with the corresponding research methods and data analysis is described. The chapter will be closed with an overview of the ethical considerations involved.

This study has a qualitative character. According to Baxter and Jack (2008), qualitative research is an interpretive method to understand complex phenomena within a specific context. The combination of the Environment and Planning Act and sustainable mobility leads to the observation that a study with a qualitative character is most suitable to do this research. As this research is done in a specific context, being the Netherlands, with it specific planning system as explained in chapter 3 & 4 and the complexity coming from the concept of sustainable mobility as described in chapter 2.

Next to the qualitative character of this research. This research has also an explorative character as not much research is done on these topics until now. Due to this explorative character and the specific context, this research should not be seen as an attempt to establish a grounded theory with high generalizability. Rather, this research should be seen as a first start to identify the relations between the Environment and Planning Act and sustainable mobility. Indicating the timeframe is crucial for the validity and reliability of the research. This research was conducted from October 2019 until March 2020. The collection of the data with semi-structured interviews occurred between the 5$^{th}$ of December 2019 until the 8$^{th}$ of January 2020.

## 6.1 RESEARCH STRATEGY

This study aims to find out how the Environment and Planning Act could foster more sustainable mobility in the Netherlands. In order to find an answer to this, the main question is divided into four sub-questions. Table 7 shows the applied research methods to each individual sub-question. The sub-questions also reflect on different stages of the study, where sub-questions 1, 2, and 3 should be seen as an input and starting point to answer question 4. Therefore, the literature research and the document-analysis were performed before the semi-structured interviews were held. However, the sub-questions have linkages and do not have univocal directions and therefore, it should be understood that their findings are always in connection with each other, as visualized by the circle in figure 11.

| Related subquestion | Research method |
|---|---|
| 1. What is needed to change from a traditional transport planning paradigm towards a sustainable mobility paradigm in the Netherlands? | Literature research, document analysis, and semi-structured interviews analysed by a coding process. |
| 2. How are developments in planning approaches related to and underlying the installation of the Environment and Planning Act? | Literature research |

| | |
|---|---|
| 3. What is changing with the installation of the Environment and Planning Act and which instruments entail the Act? | Literature research, document analysis, and semi-structured interviews analysed by coding |
| 4. Which opportunities are coming from the Environment and Planning Act and its instruments for enhancing sustainable mobility? | Document analysis and semi-structured interviews analysed by a coding process. |

Table 7 Sub-questions and applied research method

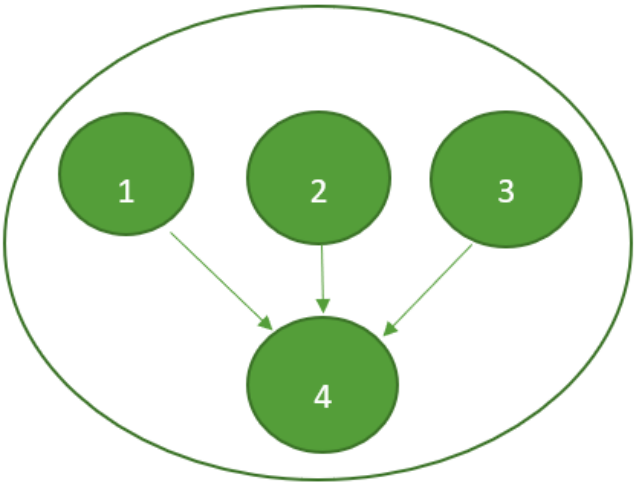



Figure 11 Relationships between the sub-questions.

## 6.2 RESEARCH METHODS

Research questions 1,2, and 3 are partly answered by the use of extensive literature research provided in the theoretical framework. In order to enhance the results of this research, data triangulation is used. According to Wilson (2014), data triangulation refers to using more than one particular approach when doing research to get richer and more complete results. In this section, the research methods and their implications to derive primary data are described.

### DOCUMENT-ANALYSIS

One method to derive primary data for this research is a document-analysis, this document-analyses is used to derive the vision of the Netherlands towards sustainable mobility and as an input for the semi-structured interviews. When using a document-analysis it important to realize that a document is often produced for own purposes, and not for scientific research. Therefore, Reulink and Lindeman (2005) argue that the researcher has to acknowledge the fact that documents can be produced selectively or in some cases even censored. Furthermore, Bryman (2012) states that is important to consider the authenticity, representativeness, and credibility of the documents to verify the quality of the documents. The documents used in this research are leading policy documents in the Netherlands. However, it is important to verify the positions of the authors that wrote the documents when using the input of these documents.

### SEMI-STRUCTURED INTERVIEWS

Another method to derive primary data for this research is the use of interviews. According to Bryman (2012) interviewing is a much-used technique in qualitative research. There are several types of interviews, the structured interview and the semi-structured interview are the most used standards. In this research, semi-structured interviews are the most appropriate technique. As in this technique, the incorporation of important themes is ensured, while on the other hand, it keeps space for important not predetermined themes identified by the research and the participant during the interview. Thus, a valuable advantage of semi-structured interviews is that it provides flexibility for the researcher by deviating from the beforehand prepared interview guide (Longhurst, 2012). Deviation from the questions can be useful when there are unexpected turns in the interview, or if they interviewee has more knowledge about certain topics than other topics and this can be of value for the research. The interview guide that was used during the interviews can be found in appendix F. The framework of the interview guides for each participant was similar, however, the interview guides were with small parts adjusted for each participant to ask a question directly related to their function or organization of the participant.

The participants of this research were approached with an e-mail where the goal of the research was explained together with the approximate duration of an interview, and further implications of the research and the rights of the participant. An example of the e-mail can be found in Appendix H. The interviewees were selected in two ways. Some candidates were approached based on the documents and other relevant organizations encountered during doing this research, and some were approached by making use of the network of the organization of the internship (Witteveen+Bos). Nine potential participants were approached for this research, of whom seven respondents participated. Table 8 gives an overview of the participants of this study. The aspect of data saturation is important to consider when doing qualitative research. In particular, this means that the researcher has to think about the question: how many interviews are enough to reach data saturation?. This is often a dilemma by doing research, and due to the limited time available for this study data saturation cannot be guaranteed. Furthermore, it was challenging to find experts in the field that had a connection with both the field of the Environment and Planning Act and Sustainable Mobility. This was also felt when doing the interviews. Thus, this study has an explorative character and high generalizability is therefore difficult. Nevertheless, this observation strengthens the relevance of this study.

At the moment when the participants agreed to an interview, they were given the option to choose the location of the interview, by ensuring this the participants could choose a location where they were comfortable (Elwood and Martin, 2000). Before the interview started, the participants were notified that they could withdraw from the interview at any moment and they were free to ask all questions. Additionally, the researcher explained why it was beneficial for the research that the interviews were recorded, all participants agreed with recording the interviews. Furthermore, the participants were asked to read and sign an informed consent (Appendix E)

### PARTICIPATORY OBSERVATION

During this period of this research, the researcher performed participatory observation trough an internship at the consultancy and advisory company Witteveen+Bos. During this internship, the researcher was, amongst others, involved in the organization of a series of seminars aimed at the Environment and Planning Act. Moreover, by attending meetings and activities insights have been gathered to further improve the quality of this research. The participatory observation is used to help the research further understand the context of the research, although the information has not been directly used to answer the main- and sub-questions of this thesis. According to Clark et al., (2009) a common factor in participatory observation is the belief that the researcher develops a better understanding of the research process, and the phenomena being investigated. Consequently, the researcher acts upon this knowledge to further improve the study (Clark et al., 2009.

Table 8. Overview of participants

| Participant | Function and organization | Date and time | Location | Duration |
|---|---|---|---|---|
| 1 | Projectmanager Spatial Planning (Dutch: Projectleider Ruimte), Platform 31 | 5 December, 13:36 | Office of the participant, The Hague | 39 minutes |
| 2 | Senior policy maker environmental policy and m.e.r coordinator, Province of Groningen | 10 December, 10:23 | House of the Province, Groningen | 60 minutes |
| 3 | Traffic psychologist and lawyer | 11 December, 11:33 | Central Station, Utrecht | 49 minutes |
| 4 | Senior policy maker mobility policies, Province of Groningen | 12 December 13:37 | House of the Province, Groningen | 65 minutes |
| 5 | Project manager Veendam-Stadskanaal, Province of Groningen | 12 December 13:37 | House of the Province, Groningen | 65 minutes |
| 6 | Expert Environment and Planning, Prorail | 16 December 14:07 | Prorail Office, Utrecht | 46 minutes |
| 7 | Senior project manager transport and traffic, CROW | 8 January, 10:28 | CROW, Utrecht | 60 minutes |

### FOCUS ON ONE AREA

As the Province of Groningen acted as a particular area of interest in this study their Environmental vision is examined to grasp their vision and to prepare an interview guide for the participants of the Province of Groningen. Furthermore, the rail line Veendam-Stadskanaal was used as an example to verify the implications of the instrument of the project decision. An overview of the Environmental vision of the Province of Groningen and a description of the project Veendam-Stadskanaal can be found in appendix B.

## 6.3 DATA-ANALYSIS

To analyse the semi-structured interviews the interviews were transcribed. The full transcripts can be requested at the researcher. After the transcribing process, the interviews were coded with the software program Atlas.TI. Coding means that the transcriptions are broken down into themes to find answers to the research question (Cope, 2010). Coding is an iterative process, which means that there is a continuous exchange between theory, data, and codes (Auerbach & Silverstein, 2003). Initially, the codes were based on the theoretical framework. However, during the process of interviewing additional themes and implications turned up and additional codes were created. Thus, a deductive approach of coding has been combined with an inductive approach. Figure 12 shows how the coding process helps with the transition from data to theory. The code trees used in the coding process is provided in appendix D.

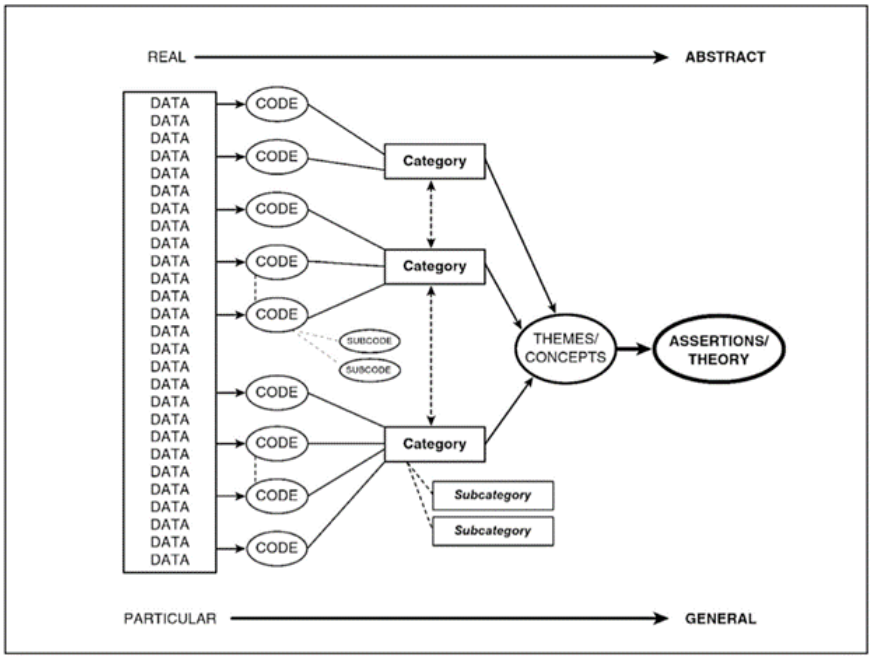



**Figure 12 From data to theory by coding (Saldaña, 2016).**

Codes and quotations are translated from Dutch to English. This may implicate some translation issues due to interpretation. However, the researcher tried at best to translate the quotes in the most representative way. Dutch transcripts and the exact quotations can be requested at the researcher. To give an insight into the coding process an example is given. Consider the following quote:

*"Where the instruments of the Environment and Planning Act can play a role, is to look with a more integral view to certain challenges, I think that the environmental vision can play a role in how different tasks are related to each other"*

This quote received the labels: Opportunities of Environmental Vision and Integrality. The code tree with all codes used in the coding process is provided in appendix D.

## 6.4 ETHICAL CONSIDERATIONS AND LIMITATIONS

It is important to maintain high ethical standards during the research. The researcher has taken the Code of Conduct for Research Integrity at heart. Every researcher at the Faculty of Spatial Sciences works by this code. In this code of conduct four principles are leading (Ethical Committee Faculty of Spatial Sciences, 2020):

1. The principle of reliability (to ensure the quality of the research)
2. The principle of honesty (being transparent, fair, full and unbiased)
3. The principle of respect (for amongst others, research participants, society, and the environment).
4. The principle of accountability (from idea to publication and its wider impacts)

Furthermore, the researcher followed the flowchart (figure 13) in order to determine the ethical steps needed in this research.

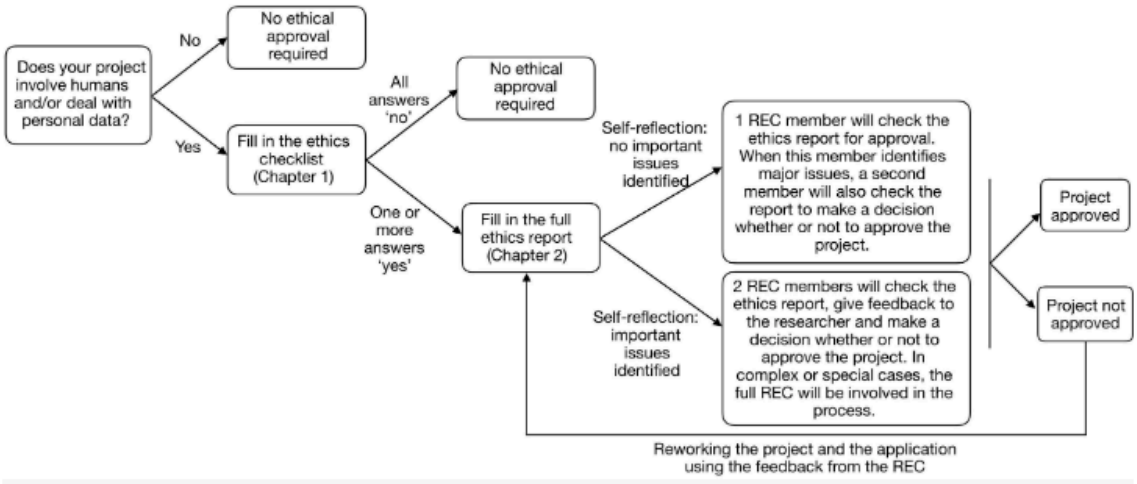



**Figure 13. Flowchart Research Ethics Committee (Faculty of Spatial Sciences, 2020)**

According to Dowling (2010) maintaining high ethical standards means that the research is carried out thoughtful, informed, and reflexive. A key part of ethical research is integrity (Hay, 2010). Integrity issues are the main areas of concern as this can lead to harm for participants (Bryman, 2012). To treat the participants with as much integrity as possible, only the functions of the participants are used. The names are known by the researcher; however, they are not used in this research to prevent the possibility that quotes can be traced back to an individual. The transcripts are also not included in this research for the same reasons. By doing this the privacy of the participants is guaranteed by the researcher. Furthermore, the participants were free to choose the location of the interview, they were informed about the goal of the research before-hand, and they signed the informed consent letter after carefully reading it before the interview started. Another part of the ethical considerations is considering the position of the researcher. According to Howell Major & Savin-Baden (2013), positionality is determined by the subject of study, the participants, the context, and the process of the research. Positionality is inevitable when doing qualitative research. Therefore, it is important to critically self-reflect how this can influence the research (Bryman, 2012).

Another considerable implication of this research is the need for translations from Dutch to English. Figures of the research are unfortunately only available in Dutch and, therefore, they are attached in the appendices. The researcher can be contacted by the contact-details given in the colophon if the reader wishes to have a further explanation of the Dutch figures. To gain consistency between abbreviations and translations from Dutch concepts to English, a list of translations and abbreviations is provided at the beginning of this thesis. However, the author cannot guarantee that the Dutch concepts are perfectly translated throughout the thesis as they are sometimes typical Dutch concepts, which makes it a challenge to translate them on a representative basis.

# 7.RESULTS

In this chapter, the findings following the data collection and the data-analyses are presented. This helps in answering the sub-questions. The chapter is divided into 4 parts. The first part of the results is concerned with the concept of sustainable mobility, its definition, and the difficulties and opportunities arising from the concept itself, as also visualized in the conceptual model. After that, the implications regarding the formal institutions are presented, followed by the implications of the informal institutions. After that, the implications of the whole system combining the formal- and informal institutions are presented.

## 7.1 SUSTAINABLE MOBILITY

In this chapter, the definition of sustainable mobility is examined and presented. This chapter presents the findings of the sustainable mobility system without the involvement and possible influence of the Environment and Planning Act. However, it is important to determine the definition of sustainable mobility from the involved actors in this research, in order to have a coherently understood definition. After that, the difficulties and opportunities for sustainable mobility are presented.

### 7.1.1 DEFINITION

To have a coherent definition for sustainable mobility, each participant was asked to indicate what 'sustainable mobility' means for them, as well as how far the Netherlands is in the transitions towards a sustainable mobility system. For this research a broad definition of sustainable mobility is used, as according to the mobility table in the climate accord, sustainable mobility can be achieved by aiming fora n integrated approach to the mobility system, whereby all modalities and the infrastructure are optimally developed and utilized and ultimately all modalities are clean. Furthermore, sustainable mobility consists of many pillars, to illustrate this the mobility table indicated 4 different pillars, which have also been used in this research, being: Sustainable energy carriers (for example the electrification of transport and the deployment of sustainable biofuels), electric (person) transport (for example the installation of charging stations), sustainable logistics (for example emission-free busses) and sustainable passenger transport (for example the stimulation of multimodality). Moreover, a sustainable mobility system aims to reduce the dependency on cars and fossil fuels. An infographic of the variety of pillars provided by the mobility table in the climate accord can be found in appendix A.

The definition provided by the participants is in line with the broad definition provided by the mobility table in the climate accord. All participants agree that sustainable mobility has many concepts and different pillars and that the dependency on cars and fossil fuels has to be reduced to have a more sustainable system*:*

*''I think there are many things in it, sustainable means that it is able to maintain itself and that supply and demand are connected, sustainable is also that you treat the earth properly, that you do not take more than you put into it, that it will continue as a matter of course, that is not the case with cars''* (Respondent 3)

However, one respondent also indicates that mobility in itself is uncomfortable in terms of sustainability:

*"If you really want to have more sustainability, then mobility is always uncomfortable in principle or you really have to be a somewhat idealist"* (Respondent 1)

### 7.1.2 DIFFICULTIES

The participants agree that there is still much to do in the Netherlands to enhance a sustainable mobility system. There is a variety of difficulties arising regarding sustainable mobility. In this chapter the most frequently stated difficulties are given, these categories can be divided into 3 different categories: the attractiveness of the system, increased mobility needs, and technical challenges. In the chapter about informal institutions (7.3), the political will is discussed as a possible obstructing, but also a possible fostering factor for further operationalising more sustainable mobility.

#### THE ATTRACTIVENESS OF THE SYSTEM

Many participants stated that there many developments aiming to put mobility on the 'right' track but there is still much to do to make the sustainable ways of mobility more attractive than the current way of transporting themselves. All participants agree that the attractiveness of a sustainable mobility system is the most decisive factor for success: "*More thoughts are given to how you can, for example, stimulate high-quality public transport systems, and how you could use different types of buses, biofuels, things like that, but also electric, and how you can make a system that is so attractive that you actually get people out of the car" (Respondent 2)*

And as respondent X puts it: "*The point is that you stimulate people to make other choicer or that you just have to make the alternative attractive enough"* (Respondent 1)

#### INCREASED MOBILITY NEEDS

Another factor that is coming forward is the growing need for mobility and the demand-following system which is currently prevailing *''To what extent do we want mobility and the range of possibilities that we offer to be demand following, and if we say, yes, when there is a traffic jam, we will start building a new road, or do we need to rethink that and do that more demand-driven'' (Respondent 1)*

And as respondent 2, who is policymaker in environmental policy for the Province of Groningen, puts it: "*Every year we have population growth, people have to live somewhere, have to consume, but they also have to transport themselves, so they also go on buses and trains or cars or bicycles, so at a certain point you can ask yourself whether we could give that all a place in our country without going completely wrong''*

#### TECHNICAL CHALLENGES

As with many developments and transitions, there are also many technical challenges for sustainable mobility. As respondent 4 puts it*: ''After such a turning point, with charging points, you have to ensure that there is enough electricity, you need enough batteries, there is a whole new world behind it''*

### 7.1.3 POSSIBILITIES

The possibilities coming from sustainable mobility are divided into 3 categories: Attractiveness of the system, behavioural change and awareness, and smart combining with a broad view

#### THE ATTRACTIVENESS OF THE SYSTEM

Although the attractiveness of the system is also presented as a difficulty, the attractiveness of sustainable mobility concept can also be a possibility to foster sustainable mobility: *''Well that is not necessary of course [sustainable mobility less attractive than car use], yes that is now, but it is becoming less and less, if you want to go the centre of Utrecht by car you are pretty crazy, you should not do that, then you just have to ride a bike''* (Respondent 3).

### BEHAVIOURAL CHANGE AND AWARENESS

And the rethinking of rituals of people could lead to other, more sustainable mobility choices which can be more attractive for them. Respondent 4 states: *"It means that people have to think about whether they will be standing in that long traffic jam or if they want something else, that are the moments to get people into a behavioural change*''

Respondent 3 strengthens this statement: *"Awareness is of course super important, technical possibilities, that is starting to come, you know of course that you will never reconsider a choice, humans are creatures of habits [….], so there are only a few moments in your life when you are open for crazy twists and turns''*

### SMART COMBINING WITH A BROAD VIEW

With a more sustainable way of transporting, other fields can also improve, therefore, gaining a broad view of the living environment can be a possibility to foster sustainable mobility. Respondent 7 indicates that sustainable mobility can make the living environment better and more attractive: *"Things that attract people [to live somewhere], start-ups, for example, it is not only that we have to create a good working environment, but also a good living environment, and that people do not have to stay in traffic jams for too long to get from A to B"*

Furthermore, smart combining can also be situated in the designing process: *''We [the Province of Groningen] are also the ones who say: "construct a number of roads" and there are examples of how you try to construct roads in a greener way, so working with other structures for example, or something with reflexive asphalt, so you need less lightning, we do experiments and we see what works and what not''* (Respondent, 4)

Respondent 7 strengthens this view by embracing the 'golden triangle' to integrate more sustainability*: "I call that the golden triangle, that means that when you design something outside, a nice new neighbourhood, if that is all traditional, that is not it anymore, so I think, with the golden triangle you need sustainability in design, spatial planning, and maintenance and management''.*

### GOVERNMENT ROLES

Lastly, it important that policies and plans are made at the right level. For sustainable mobility, most of the respondents indicate that the province is the most suitable governmental layer for this: "*when it comes to good bicycle connections that often goes beyond municipal boundaries, and when it comes to forms like Mobility as a service, you can't just do that in one place, you have to do that in a broader network, so those provinces play an important role".* Furthermore, the respondents agree that the national government has to guide the lines for the living environment, as respondent 3 argues: *"the national government must create frameworks, and the province must connect issues, if one municipality want to make a bicycle network, then you need the province to ensure that it goes from a to b"*

## 7.2 FORMAL INSTITUTIONS

This chapter entails the findings related to the formal institutions of the Environment and Planning Act. Being the six core instruments provided in chapter 4.3. This chapter elaborates on the possibilities and limitations to enhance sustainable mobility coming from formal institutions.

During the interviews, it turned out that only four instruments were appointed as of possible influence for sustainability. Therefore, only the environmental vision, programs, decentral rules, and the project decision are discussed in this section. Although the general governmental rules and the environmental permit are not discussed in this section due to the absence of the data, possible opportunities, and limitations for sustainability mobility coming from these instruments cannot be excluded.

In the first section of this chapter, it is explained that the instruments are not seen as completely new instruments, and most governments and organizations are already using familiar instruments. However, although they are not regarded as fundamentally different or new, the instrument themselves are bringing certain possibilities and difficulties for sustainable mobility with them, this is explained in the following sections of this chapter. Lastly, other possibilities and difficulties from formal institutions are presented.

### 7.2.1 ARE THE FORMAL INSTITUTIONS ALREADY PRESENT?

The Environment and Planning Act comes with six core formal instruments to achieve its objectives. Although the instruments all bring their own opportunities and barriers, many participants indicate that the instruments themselves are already present and being used. Thus the instruments provided by the Environment and Planning Act are not completely new instruments and many governments and organizations are already familiar with the instruments in the current situation.

Respondent 7 and 2 are describing this situation. 6: *''I often hear from people from the field …. are we not already doing that?' '*and respondent 2*: ''Whether it is really changing, I think most of the things are actually a new term for actually more or less existing structures''*

Furthermore, the respondents situated in the province of Groningen indicate that they are already using similar instruments. As respondent 2 sketches the situation with the environmental vision: *''Look, we are now already using environmental visions, only it is in the form of structural visions''* and respondent 4 confirms and strengthens this by stating that: *''We already have it, our environmental vision for 10/15 years, our environmental vision is not only focused on mobility, but also on spatial developments and all those things together, spatial development, environment, water, mobility*'. Additionally, the same applies to programs and the project decision "*the project decision, yes, that step is also not that big for us […] we have had a similar type procedure for about 10 years"* (Respondent 4*).* This is confirmed by respondent 6: *"Route decisions [Dutch: tracébesluiten] are working really well, so actually, in my opinion, it was fine if it had stayed that"*

However, for the instrument of the decentral rules, the respondents indicated that there will fundamentally change something as it would lead to the disappearance of the zoning plan [Dutch: bestemmingsplan].

Although it seems that the instruments themselves are for a large part not fundamentally changing, this research aims to find the opportunities and difficulties coming from the instruments for a more sustainable mobility system. In the next section, the opportunities and limitations related to the four instruments: the Environmental vision, programs, decentral rules, and the project decision are provided.

### 7.2.2 ENVIRONMENTAL VISION

The Environmental Vision is an obligated instrument for the national government, the provinces, and the municipalities (VNG, 2020). In the policy cycle (appendix A) the Environmental Vision is situated in the policy development area. The participants were asked whether the Environmental Vision could be a valuable instrument to stimulate sustainable mobility in the Netherlands. This section provided some opportunities and limitations coming from this instrument.

#### OPPORTUNITIES

The opportunities for this document are related to the point of improvement of integrality. Many respondents indicate that the installation of an environmental vision can lead to more integrality of plans and policy documents, as many documents are still very sectoral and for each policy field there is a different policy document or vision. Respondent describes it: *"[The environmental vision] is to look more integral towards certain assignments and I think that the Environmental vision or the drafting process of the environmental vision can play a role in this by looking into how these different tasks are interrelated"*

Furthermore, respondent 4 states that the Environmental vision can be a valuable instrument for the province to have an integral mobility policy: *"All those documents aim that there is the same mainline in the city, in the inner city a lot of public transport, and bicycles and walking, towards the city there have to be strong linkages with high-quality transport connections with the Qlinks and Qliners and trains, just basic lines for public transport and a certain role for the car".*

Another frequently mentioned opportunity related to the Environmental Vision is that it can be a leading document where the agenda is set, ambitions are formulated, and choices are made, and as respondent 7 indicates it, the Environmental Vision can be the "*Heart on the horizon".* Furthermore, respondent 3 states that mobility can be then used *as the connection of all activities and therefore as the leading line of the Environmental Vision: "Mobility is of course the connection between all activities, without mobility, there are no activities and vice versa, it would be smart, if all governmental layers, would use mobility as the leading principle trough the Environmental Vision, and for the vision that I have seen, mobility is certainly coming back, you see bike paths and e-bikes everywhere, it [mobility] comes back everywhere"* Respondent .. strengthens this argument by stating that the Environmental Vision can Act as a leading document where every activity or development in the living environment has linkage with*: "If you said in your environmental vision that sustainability is important in everything, then that must be reflected in every consideration, if you find a hook with sustainability you can continue your [activity/intervention in the living environment].*

Furthermore, according to many respondents the National Environmental Vision has to Act as the leading document for provinces and municipalities to indicate tensions between certain choices. As respondent *1. states that: well the national environmental vision has now formulated four major priorities, but there are also certain tensions between them, and I think it is important to properly visualize what these tensions are"*

#### LIMITATIONS

The limitations of the use of the instrument the Environmental vision are related to the possible accumulation of documents without really integrating them and the possibility that the visions are set up as delusory hopes without further political impact.

As one of the possibilities of the environmental vision lies in that it can Act as a leading document for the governmental layer, there is also a possible limitation that the vision is not used a leading principle, rather as a document of delusory hopes, as respondent 2 puts it: *"if you really want something then you also really have to choose it and then you also have to make it happen, and at the moment when only talk about it and you only*

*keep circling in ambitions, then you also face the moment where people do not believe in it anymore, that is too soft and too vague, then nothing will happen"*

To further strengthen this argument, respondent 7 indicates that the NOVI stagnates at the policy *level "Suppose you call the alderman of Utrecht, of course, sustainable mobility, but if you really have to look for [policy] implementation with knowledge, you need to know from where do I have to install those charging points and what do I have to arrange for that, why fewer parking spaces, you will notice the real difference in practice and implementation".*

### 7.2.3 PROGRAMS

Within the Environment Act and Planning Act, a program contains specific measures for the protection, management, use, and development of the living environment. The programs are drawn up by the municipality, the province, the water board or the national government. In the policy cycle (appendix A) the program is situated in the policy impact area.

#### OPPORTUNITIES

The opportunities for sustainable mobility coming from the instrument of the program are coming from the obligated and self-binding character of a program. As respondent 1 puts it: *"a program is self-binding, and I think that that is the way to go"* and respondent 7 takes it even further by stating that: *"Integral and programmatic working is the key for success".*

Furthermore, respondent 3 illustrates the opportunities coming from the program for sustainable mobility*: "There is a [place X] that wants clean- and sustainable mobility, so the cars have to leave the city centre, we have to integrate electric vehicles in a small area, so much electric driving in a small area, that is a problem in itself, so you have to get it further [……] and those difficulties should land in a program, that's how we will do it"*

#### LIMITATIONS

A possible limitation coming from the use of the program is that governmental layers are reluctant with the installation of a program due to its obligated and self-binding character. As respondent 1 describes the situation: *"Municipalities are also a bit reluctant to do it because when they don't make it [the targets in a program], they impose all kinds of problems on themselves, so it's easier to just say: we have certain visions and objectives and we want to achieve that, and then when you don't make it, you only have a few people that can confront you with hey you had a vision and you did not make it, but the moment you put it in a program you impose all kinds of consequences on yourself, why would you do it then, you only make it harder for yourself"*

Furthermore, the possibility of an issue with the available time and knowledge capacity at governmental layers becomes visible. Respondent 3 states that: *you have to imagine it, and you have to have time for that, to actually think of things like that, you actually have to look a lot out of the window for those things".* Additionally, respondent 3 argues that most aldermen do not have time for that and the consultancy firms are probably getting much more involved in the installation of programs.

### 7.2.3 DECENTRAL RULES

The decentral rules consist of the environmental plan on the municipality level, the provincial environmental regulation, and the water board regulation (Aan de slag met de omgevingswet, 2020)

#### OPPORTUNITIES

The respondents did not indicate much opportunities for sustainable mobility coming from the instrument of

the decentral rules. However, respondent 3 indicates that the spirit of the decentral rules can be valuable for the installation of sustainable mobility. As initiatives should have more room as there will be less tight rules*: "The idea with the environmental plan is that everything should be possible in principle"*

#### LIMITATIONS

The possible limitations coming from the decentral rules are that it is only a written document, in itself it has not the ability to really change mobility, as respondent 1 puts it: *"In an environmental plan you might be able to write it down a bit better now, you can say: you should not go with the car, that has not that much of an actual effect"*

### 7.2.4 THE PROJECT DECISION

The project decision aims to make procedures run faster and better than the procedures nowadays. The project decision can lead to a deviation from the environmental plan or to replace the environmental permit (Aan de slag met de omgevingswet, 2019). In this research, the rail connection project between Veendam Stadskanaal is investigated to examine how the project is preparing for the upcoming instrument of the project decision and how this will influence the project.

#### OPPORTUNITIES

The opportunities coming from the project decision are related to clarity and the speeding of procedures and the obligation to integrate participation in the procedure. As respondent 4 indicates: *"at least, it is a bit more manageable [with only 1 procedure for projects], and another big difference for us is that you think at the very about how you will involve stakeholders" and "you have to offer clarity right from the start, so people know where they stand, we did not really have that till now".*

The situation regarded as the speeding up of procedures is also described by respondent 4*: "the biggest difference is that in the project decision you can basically arrange everything that is needed to make the project after that [.....] so to speak, you can adapt the environmental plan that lies within the municipality directly with the project decision, you have already arranged that then"*

#### LIMITATIONS

The limitations from the project decision are mostly related to the fact that many governmental layers are already working similarly, and that according to respondent 6 it may actually become more complicated for certain projects: *"We often work with the route decisions [Dutch: Tracébesluit], and I think that it will become more difficult because soon we will not have the route decision anymore, but the project decision, the project decision must also immediately change the environmental plan insofar as the environmental plan conflicts with the project and what we are doing now, we just write, and so to speak, we do not look at the zoning plan with its rules, but now we maybe have to go through every area to see whether or project conflicts with a certain provision, so I think that it will be a bit more complicated for us"*

#### RAIL CONNECTION VEENDAM-STADSKANAAL

Following the interview, it could not be examined whether the project would be better in the current system or the system of the Environment and Planning Act. This is due to the project only being in the preparation stage and the observation that there were some difficulties regarding the responsibilities and definitions of the project. Therefore, expectations about the comparison between the current situation and the situation when the project decision is in place could, unfortunately, not be made. As respondent 5 puts it: *"We are aware of it [the installation of project decision], but it has not been studied a lot till now"*

However, respondent 5, who is the Project manager Veendam-Stadskanaal, indicates that he sees possibilities for participation to enhance the overall project: *"There are some people who say: the province of Drenthe is also already doing something here with windmills and I can see it from my garden, and at the very back yard of my garden there will be a railway visible, so they think that we do not consider them to be important, you get such a response, but when I speak with to those people and I explain why we do it, to do them pleasure, to make Stadskanaal more accessible and more attractive, then I hear much relief so far"*

Although it must be mentioned that the Province of Groningen already has a similar system for participation and that they think that the Environment and Planning Act will not fundamentally change their already existing system, as respondent 4 states: *"We already use an environmental manager by default"* and the observation that you should not Act as *an "autistic government".*

### 7.2.5 OTHER OPPORTUNITIES AND LIMITATIONS

#### OPPORTUNITIES

A formal opportunity for enhancing sustainable mobility is raised by one respondent. Although this is only raised by one respondent, it is important to note, as it may be used as a strong principle. This is the precautionary principle present in the Environment and Planning Act. Respondent 3 explains the precautionary principle: *"with the precautionary principle it is important that we don't wait until there is scientific evidence, with the precautionary principle you can say we don't do this because it doesn't feel right"* and more specifically for sustainable mobility: *"it can be very powerful, if you say well we should not use fossil fuel because it will run out, well from the precautionary principle you can already say we should stop it now, and you can stimulate other things and that also applies to safety and health, if we know that sitting in the car is bad for a person you can better start walking, then the municipality is obliged to encourage other things as much as they can, so if an initiative comes up where this is the biggest interest, the municipality can only grand and facilitate it"*

#### LIMITATIONS

A frequently mentioned limitation following from the formal institutions is that obligatory measures are missing in the formal institutions, as respondent 1 describes: *"if you want to continue on the same way as now, then you can just continue it, so it [the formal instruments] offers slightly more options if you want it, and if you want to make choices, but if you don't want that, then there is nothing obligatory"* and it is not clear what happens when something is not done according to the rules, so mandatory principles are missing. Respondent 3 states: *"The Environment and Planning Act states that all governments must consult each other, however, if this does not happen, it is not stated what will happen then, only the obligation is included.*

## 7.3 INFORMAL INSTITUTIONS

Although this research started with the aim to focus on the possibilities and limitations coming from formal instruments. In the process of the research, it became clear that the formal instruments could not be examined without acknowledging the direct relation with informal institutions. Therefore, this section provides the possibilities and limitations coming from informal institutions for enhancing sustainable mobility in the Netherlands. This section starts by explaining how the political will is influencing the possibilities for sustainable mobility. Thereafter, the different way of working and the spirit of the law are discussed as a possible factor of influence. Lastly, it is discussed whether or not informal institutions are fundamentally changing compared to the current situation.

### POLITICAL WILL

In this research, it turned out that the possibilities and limitations following from the formal instruments could not be examined without acknowledging the influence of the informal institutions. Moreover, the respondents indicate that political will is the first step towards the more sustainable mobility, and the formal instruments provided by the Environment and Planning Act can offer chances to enhance sustainable mobility. However, the formal instruments should not be seen as the ultimate way to go to foster sustainable mobility as the political will is an indispensable factor in this process. As respondent 1 describes the situation:

*"I always wonder a bit, if you do it from the Environment and Planning Act, then you approach it in a really instrumental way, while this is still about whether you are willing to make those choices, and whether or not the Environment and Planning Act or an environmental vision portrays this, it is about the will of policymakers who want to visualize something like that and to dare to make choices"*

And as respondent 4 states: *"those same instruments can also help us to say well we are going to make a really $CO_2$ rich policy, from now on we will only prescribe roaring old diesels, I mean that says nothing about the instruments, they are not about which course you want to sail and how much effect it will have, they can help with it, but you can also use them in a very wrong way".* This is argument is also strengthened by respondent 4 as he argues that*: "the success for these kinds of big changes do not lie within the law, they lie in the culture, the political culture, the wish to work together, and to steer very strongly towards that, to be ambitious in taking it a step further"*

Furthermore, to enhance sustainable mobility in the Netherlands choices have to be made. Many respondents indicate that making choices is an important factor to influence sustainable mobility. As respondent 2 puts it: "*you can kill everything by stating that everything is political will, but I sometimes think that politicians and directors just have to make harder choices, if you really want something then you have to see to what extent that is within your possibilities.*

### SPIRIT OF THE LAW

The spirit of the law is frequently mentioned by the respondents as something positive towards the more sustainable mobility, however, there are also doubts about the implementation. As respondent 7 states: *"we embrace the spirit of the law and we have translated that into sustainable area development, which is in my knowledge the essence of the Environment and Planning Act"* and *"Everyone agrees with the essence of the law with integrality and more cooperation, but now the implementation has to follow".*

Furthermore, respondent 2 describes the potential from the spirit of the law for the integration of more sustainable practices: *"The focus should be on developing, maintaining, and seeking balance, the sustainability pillar is also much more present [in the Environment and Planning Act], this is also much more based on the fact that for example, the theme of health becomes more important for citizens, this is also very clear one of the subject of the Environment and Planning Act"*

However, there are also doubt what the spirit of the law really is, as respondent 3 indicates that: *"Everyone calls it the spirit of the law, but that is not really written down, that is unfortunate, there is no manual about the spirit of the law, perhaps that would be the most useful instrument*".

Moreover, many respondents indicate that the cultural change is not only beneficial, as it may suggest that everything was done wrong until now *"there is a lot of talking about the cultural change, but that is also suggesting that it was not good until now"* and *"I also get the question from people from the practice: are we not already doing that*?" (Respondent 7).

## 7.4 THE OVERALL SYSTEM: FORMAL INSTITUTIONS AND INFORMAL INSTITUTIONS

The previous section showed the possibilities and limitations coming from the formal institutions and the informal institutions as separate systems. However, during the research and analyses, it turned out that a lot of the possibilities and limitations are coming from the relations between both, formal and informal, institutions. This in itself is an important finding of this research, which will be further elaborated on in the theoretical reflection in chapter 9. The section starts with possibilities and limitations coming from the whole system. After that, specifically, the 4 points of improvement, the different way of working, and the concept of participation are discussed.

As respondent 3 puts it: *"I do not believe that its solely in the instruments, it is in its coherence, the house let me say, that is pretty good"*

### OPPORTUNITIES

Many respondents indicate that the system of the Environment and Planning Act offers opportunities for those that want to seek opportunities, as respondent 1 states: *"yes it can be old wine in new bags, but if you really want something then it definitely offers more possibilities".* This is also the matter for the ones that want to operationalize more sustainable mobility. *As respondent 1 is also stating that: "I see that there are progressive municipalities that want certain things and they cannot do so because current laws and regulations stand in the way, they cannot say: this is not sustainable enough, we do not want this. They cannot stop those processes now, for such things the Environment and Planning Act is positive"*

Furthermore, gaining a broad view and the seek to balance interest is often mentioned as a possibility to enhance sustainable mobility. As respondent 3 states: *"it is important that you find each other and that you are also talking about the same thing, if the Environment and Planning Act can already do that then that is already a profit point, just because everyone has the idea that we should do it together, that is what the law simply demands".* And more specifically for sustainable mobility: *"if you think about for example a bicycle street, then you can suddenly put a mobility theme in your environmental plan now, but we have to figure that out, but that still has to start"*

### LIMITATIONS

A possible limitation of the whole system of the Environment and Planning Act is that it is missing an obligatory character and that sanctions are missing. As respondent 1 describes: *"If you don't want to do that, it is not that you will not be able to levy fees, you can also just tick boxes in the Environment and Planning Act"* And as respondent 4 describes, it is not obligatory to make policy for more sustainable mobilities under the Environment and Planning Act, as he states: *"simply put it is actually a toolbox and you can use the toolbox to make something beautiful, but you can also use it to beat the neighbor's head together"*

Additionally, the transition towards the new system may bring some limitations. In some cases, the utility and necessity to delve into the Environment and Planning Act are sometimes missing, which is mainly due to time limitations. As respondent 2 describes: *"yes time is racing and I am in 7,8,9 major projects at the moment, I'm busy with that on a daily basis, so sometimes I think that I should actually put everything aside, and just stay a day at home and study the Environment and Planning Act for a day"* and as respondent 6 explains*: "everyone is busy with anything and everything, and then the Environment and Planning Act comes into force".*
Furthermore, some respondents are raising the issue that there are large differences between municipalities, as respondent 6 states: *"We have around 355 municipalities, 50 are the leaders, and then you have the middle bracket, but what really worries me is that I think that we have 100 laggards"*

### A DIFFERENT WAY OF WORKING

The previous section showed that the political will and the need to make choices is essential for enhancing sustainable mobility in the Netherlands. Many respondents indicate that chances and possibilities from the Environment and Planning Act are likely to come from the different way of working, which is also proposed by the Environment and Planning Act. This different way of working is focused on: more coherency, acting as one government, ensuring more chain cooperation, and more consultation with society (Aan de slag met de omgevingswet, 2019).

As previously mentioned the different way of working with more cooperation and gaining a broad view is mentioned as a possibility to enhance sustainable mobility. However, also a different way of working. Among others, the use of other competences as discussing, negotiating, and collaborating can be valuable. As respondent 7 stresses that the success of the Environment and Planning Act also has to do with the competences of the people involved with it, as he states that the civil servant 3.0 is needed: *"the civil servant 3.0 really needs to work together, that is really important, that broad view because with that integral approach you bring something in and then you have to know very well what you are bringing in now, you want an organization like a well-oiled machine, I get energy from that, so it has a lot of potential in it, but it also requires some effort"*

Furthermore, the legal world and the mobility world are completely different worlds, and therefore, cooperation between them can be difficult. This other way of working may also come with some difficulties, as the sense that everything has been done wrong until now may raise. Respondent 3 states: "*I do think that the art with the Environment and Planning Act is that you leave people in their value and wealth, and do not make them unhappy, because it apparently all went wrong and it all has to be different now, everything doesn't have to be different, but for those who want it is possible and that is, of course, good news".* Furthermore, the legal world and the mobility world are completely different worlds, and therefore, cooperation between them can be difficult and will take time.

### PARTICIPATION

Many respondents indicate that consultation with society can be valuable when aiming for a more sustainable mobility system. Good consultation with stakeholders can lead to more support. As respondent 7 describes the situation*: "We are reaching the limits of growth, certainly with car use in large cities and city centres, but how are you going to make that car-free? one of the insights is that parking places are a very important button, suppose that you sit around a table with residents and you say that you want less parking places [……] you have to carefully consider and explain why you do it, you can want more green because you think it is nicer, but if you also explain that the WOZ value of their houses increases, then you can also use that stake"*

It should be noted that many respondents indicate that they are already using many participation methods to increase the success of their projects (some respondents are project managers), this is also mentioned in the Veendam-Stadskanaal project. However, the respondents also indicate that more and better consultation with society can bring further successes, as respondent 4 states: *"it will be more manageable, and a big difference for us is that you think about it (participation) at the very front, you have to think from the front how you are going to involve stakeholders".* Nonetheless, many respondents indicate that also the obligatory character is a bit missing in terms of participation, as respondent 1 states: *"yes you have to motivate how participation has been done or such, but if you say: I did not do it because I know very well what is good for my residents, that is also possible"*

### POINTS OF IMPROVEMENT

Section 4.3 provides the points of improvement proposed by the Environment and Planning Act. These can be labelled as increasing and enhancing: integrality, clearness, flexibility, and quickness in environmental law. These four points are one-by-one discussed in this section.

The point of the improvement of enhancing integrality in the living environment and its plans and visions is coming strongly forward in the interviews. Many respondents indicate that enhancing integrality and working with a broad view may lead to more coherent policies and plans to integrate sustainable mobility. Furthermore, the Environment and Planning Act and its instruments are seen as a stimulant to work with more integrality which can be valuable for sustainable mobility. As the situation described in the previous section, when you want to have fewer cars somewhere, you also have to consider the consequences for the people living there. And as respondent 5 argues: *"the spirit of the law is also that you have to work more together with parties or if you have a problem somewhere and another party is also dealing with that problem, that you work together and cast things together in a project decision or another plan"*

However, it should also be noted that enhancing integrality does not only have positive sides, as it can also lead to more complicated processes. As respondent 1 states: *"integral is also very complicated, because taking everything into account is also extremely complex"* and working more integrally also means that the sectoral view of people has to be reduced, which can have some difficulties, as respondent 3 states*: "Integral is not necessarily better, sometimes it is very difficult to look for what should be integral, it sounds good, but if you put people together who work really sectorally, you need good guidance to come to good interactions, sectoral experts can work very well together, as long as you give each other something"*

After the point of integrality, the point of clearness and comprehensibility is most mentioned as beneficial for sustainable mobility as it can lead to more understanding between different policy fields, which can also lead to a more integral system. As respondent 6 argues: *"there is simply a need for clarity, clarity helps you to come into contact with other policy fields, are we talking about the same thing?"*

The improvement point of flexibility is mainly important to give initiatives more room, this can also be the case for initiatives situated in the field of sustainable mobility. As respondent 3 states: *"there are some desired developments blocked by the legislation or the interpretation of the legislation, and then you get a huge battle, and most people just don't want to start that, while if it is more flexible it can just all go through"*

Lastly, the point of quickness is not directly seen as something that can influence sustainable mobility. As respondent 1 describes the situation with the acceleration of procedures as: *"making speed is an important improvement goal, there can be made a lot of profit with projects in general, but to what extent this also applies to sustainable mobility, different than for any other project, I don't know, if you want to construct something you have faster lead times, but this is also the case for a road that is used by diesels, it is not differently threatened than a railway, so there is profit, but is also there for the other side of the coin"*

# 8. CONCLUSION

This chapter provides an answer to the main research question. In this thesis, the opportunities and limitations following the installation of the Environment and Planning Act to enhance sustainable mobility in the Netherlands have been investigated. This is done by using literature research, a document analysis, and the analyses of interviews with experts in the field. In this section, the main question of this research will be answered. This main question was formulated:

**HOW CAN THE ENVIRONMENT AND PLANNING ENHANCE SUSTAINABLE MOBILITY IN THE NETHERLANDS?**

To answer this question, four sub-questions have been established. These four sub-questions will first be answered separately to provide a detailed conclusion and discussion.

### 1. WHAT IS NEEDED TO CHANGE FROM A TRADITIONAL TRANSPORT PLANNING PARADIGM TOWARDS A SUSTAINABLE MOBILITY PARADIGM IN THE NETHERLANDS?

The transport sector is a large contributor to global warming, as it is responsible for more than 23 % of the total worldwide $CO_2$ emissions (Santos, 2017). Moreover, the $CO_2$ emissions coming from the transport sector will increase further if no additional policy measures are made. In the Netherlands, the vision to enhance sustainable mobility is that change has to come in various ways and various themes and pillars. One can, for example, think of more sustainable energy carriers, a more diverse pattern of mobility, the installation of hubs, but also the intensification of public transports. Thus, there is not one way to go, rather there are different pathways that lead to more sustainable mobility in the Netherlands. This is also coming forward in this research as the participants agree that sustainable mobility has many concepts and different pillars.

Banister (2007) explains that a sustainable mobility paradigm requires a focus on consistency between different measures and policy sectors, as many of the problems in the transport sector do not emanate from the sector itself, rather they are coming from one, or a combination of other sectors. Moreover, the historical timeline of planning approaches also showed that the sectoral focus has been prevalent and growing in the Netherlands. Thus, a holistic and integral perspective is needed (Banister 2007; Zuidgeest & Van Maarseveen 2000). The Environment and Planning Act could with its improvement points of enhancing coherency and integrality be a potential useful instrument to further embody this.

### 2. HOW ARE DEVELOPMENTS IN PLANNING APPROACHES RELATED TO AND UNDERLYING THE INSTALLATION OF THE ENVIRONMENT AND PLANNING ACT?

To understand where the revision in Environmental law is coming from it is important to understand which developments and planning approaches are underlying this transition. In the chapter 3 about understanding institutions and planning approaches it became clear that governance is subject to a change and that the relations between public- and private actors have been changing. This is embodied by the neoliberal turn (privatisation, liberalisation, and entrepreneurship) and the communicative turn (citizen participation and more power for civil society) in governance. These turns are also visible in the mobility sector with the growing presence of interest groups and the upcoming concepts of MaaS and similar developments. Furthermore, these changes in governance can also be seen in the transitions in planning approaches over time. As in the 1990s the aim to change to a more communicative planning approach, instead of the prevailing technical planning approaches, gained more and more attention and support. Additionally, the sectoral focus, also prevalent in the transport sector is related to the focus on highly specialized and technical measures. Furthermore, the sectoral focus led to the installation of different ministries with their own expertise, the Ministry of Transport

and Water management is such an example. The Environment and Planning Act can be seen as a consecutive step following from these transitions in governance and planning approaches.

In these changes in governance and planning approaches the tension between increasing flexibility and maintaining legal certainty has been recognized. This tension is also present in the Environment and Planning Act. As at the one hand, the act aims to provide more flexibility. However, this leads to potential problems where the legal certainty may be compromised. It is important to find a balance between these aspects.

### 3. WHAT IS CHANGING WITH THE INSTALLATION OF THE ENVIRONMENT AND PLANNING ACT AND WHICH INSTRUMENTS ENTAIL THE ACT?

The Environment and Planning Act builds further upon Wro (and the WRO) and its aim to come up with a more simple and modern system in order to ensure uniformity, clarity and legal certainty, while also protecting and developing the living environment. The Environment and Planning Act comes with four improvement points:

1. Increasing clarity
2. Ensuring a coherent approach
3. Increasing flexibility
4. Accelerating the decision-making process.

As mentioned, the Environment and Planning Act build further upon previous revisions. In this research the installation of the Environment and Planning Act has been envisioned in the perspective of institution building. To understand this, the influence of institutions has been researched. This has been done with the dichotomy of formal institutions and informal institutions. Alexander (2005) provides a definition for these two types of institutions. Formal institutions are laws, rules, regulations and standards, whereas informal institutions are norms, habits, practices, knowledge, and worldviews. following this classification, the six core instruments have been regarded as the formal institution:

1. Environmental Vision
2. Programs
3. Decentral rules
4. General government rules
5. Environmental permit
6. Project decision

In this research, the general government rules and the environmental permit are excluded (explained in the methodology and results). The next question (sub question 4) will answer the potential of these instruments.

Furthermore, together with the formal instruments, the Environment and Planning Act aims to trigger another way of working, with more coherency, consultation with society, and more chain cooperation, these processes are regarded to be the informal instruments. In this research, the spirit of the law and the political will are found to be the most important informal institutions to influence enhancing sustainable mobility in the Netherlands.

### 4. WHICH OPPORTUNITIES AND LIMITATIONS ARE COMING FROM THE ENVIRONMENT AND PLANNING ACT AND ITS INSTRUMENTS FOR ENHANCING SUSTAINABLE MOBILITY?

This research showed that the instruments coming along with the Environment and Planning Act are regarded as completely new instruments, and many of them are already there in a similar way. However, with the essential political support and the dare to make choices, the instruments can be helpful to gain progress. Below the potential of the instruments is explained for each instrument separately.

Furthermore, as the Environment and Planning Act comes with four points of improvement it has been researched which of these points of improvement could be most beneficial for enhancing sustainable mobility. Ensuring a coherent approach to improve integrality is found as the point of improvement that can be most beneficial for sustainable mobility. Sustainable mobility cannot be seen as a separate goal for the physical living environment, it has to be integrated into the vision and programs, together with the other goals of the province, municipality, or the national government.

The following four instruments can each have their own potential benefits to enhance sustainable mobility in the Netherlands:

Environmental vision: The Environmental vision can lead to more integrality in the physical living environment, this brings opportunities to integrate sustainable mobility practices as a red line through the vision. Furthermore, the environmental vision can have the function of a leading document and the heart on the horizon, where the agenda is set, ambitions are formulated, and choices are made. When a governmental body states that sustainable mobility is important, every project and developments need to consider this. However, political support is essential in these cases.

Program: Installing a program could be a valuable instrument, as this is a self-binding instrument and it deals with policy implementation. In the program, the operationalization of sustainable mobility has to gain a place. However, the self-binding character also brings along that governmental parties are reluctant to install a program.

Decentral rules: could help to give more space to (private) initiatives regarding sustainable mobility.

Project decision: could help to speed up procedures by integrating more uniformity, this can, for example, be beneficial for rail connections (as the Veendam-Stadskanaal project). Additionally, it can improve the overall project as the consultation with society has to be more prominent.

## Main question: How can the Environment and Planning Act enhance sustainable mobility in the Netherlands?

The Environment and Planning Act can be an opportunity to enhance sustainable mobility in the Netherlands in various aspects. A broad view and the seek to balance interests can ensure win-win situations when dealing with planning issues. However, it is often mentioned that the obligatory character and sanctions are missing in the Environment and Planning Act. Thus, the parties that want to move further on the current way can also do that, as the Act does not contain a strong stimulant (a sanction system or anything like that) to do things in another way. Furthermore, it has been indicated that the instruments are not completely new and many of them are already there in some way. Rather, political support is and the daring to make choices is essential. The line of thought that everything is possible has to change, not everything is possible anymore, we also need to focus on protecting our environment in the right way, this brings possibilities to foster the support for more sustainable ways of mobility.

As raised by Banister (2007) and Zuidgeest and Van Maarseveen (2000) the traditional transport planning has followed a sectoral approach. Moreover, the overview of planning approaches showed that the sectoral focus has also been prevalent and growing in the shifts of planning over time. Especially, in the 1970s and 1980s, various sectors became highly specialized. Separate ministries with their own sectoral legislation were established. The establishment of the ministry of traffic and water management is an example of this sectoral way of working. However, in a sustainable mobility paradigm, an integral approach is needed. Chances for working with more integrality can be derived from the instrument of the environmental vision. However,

choices have to be made in this vision and this needs strong political support. The Environmental vision can lead to more integrality in the physical living environment, this brings opportunities to integrate sustainable mobility practices as a red line through the vision. Furthermore, the environmental vision can have the function of a leading document and the heart on the horizon, where the agenda is set, ambitions are formulated, and choices are made. When a governmental body states that sustainable mobility is important, every project and developments need to consider this. However, political support is essential in these cases.

The six formal instruments coming with the Environment and Planning Act are not completely new, most of them are already there. However, with the essential political support and the dare to make choices, the instruments can be helpful to gain progress, outstanding is the environmental vision in these cases. Moreover, the possible progress lies in another way of working, using another approach, with a broad view and the aim to work with more integrality in the living environment. Next to the important point of increasing integrality, clearness and comprehensibility are mostly mentioned as beneficial for enhancing sustainable mobility as it can lead to more understanding between different policy fields, which can also lead to a more integral system. It seems that not only a broader understanding is needed, but also a better understanding between the sectors would be beneficial. This is in line with the more communicative rational world of Healey (1996), as in this rationale there is a focus on interactions and actors and consensus-seeking. To achieve this, a better understanding is needed. In this way, combinations between different fields when dealing with spatial issues can be found, this can create win-win situations. Thus, the formal institutions and informal institutions coming along with the Environment and Planning Act can, together, bring progress in enhancing sustainable mobility in the Netherlands with political support and the dare to make choices.

> *"Simply put, it [The Environment and Planning Act] is actually a toolbox and you can use the toolbox to make something beautiful, but you can also use it to smash the neighbor's head (Respondent 4)"*

# 9. DISCUSSION, REFLECTION, AND FURTHER RESEARCH

## THEORETICAL REFLECTION

Although in the theoretical framework the differences between formal- and informal institutions have been explained and the importance of recognizing both were explained. During the process of the research, and in the conclusions, it became clear that the formal and the informal institutions had to be regarded as inseparable concepts in the system of institutions where they are constantly influencing each other. Due to this observation Figure 14 provides a revised conceptual model, where the two circles and tow-sided arrows are added to visualize the system of institutions where the formal institutions and informal institutions are inseparable.

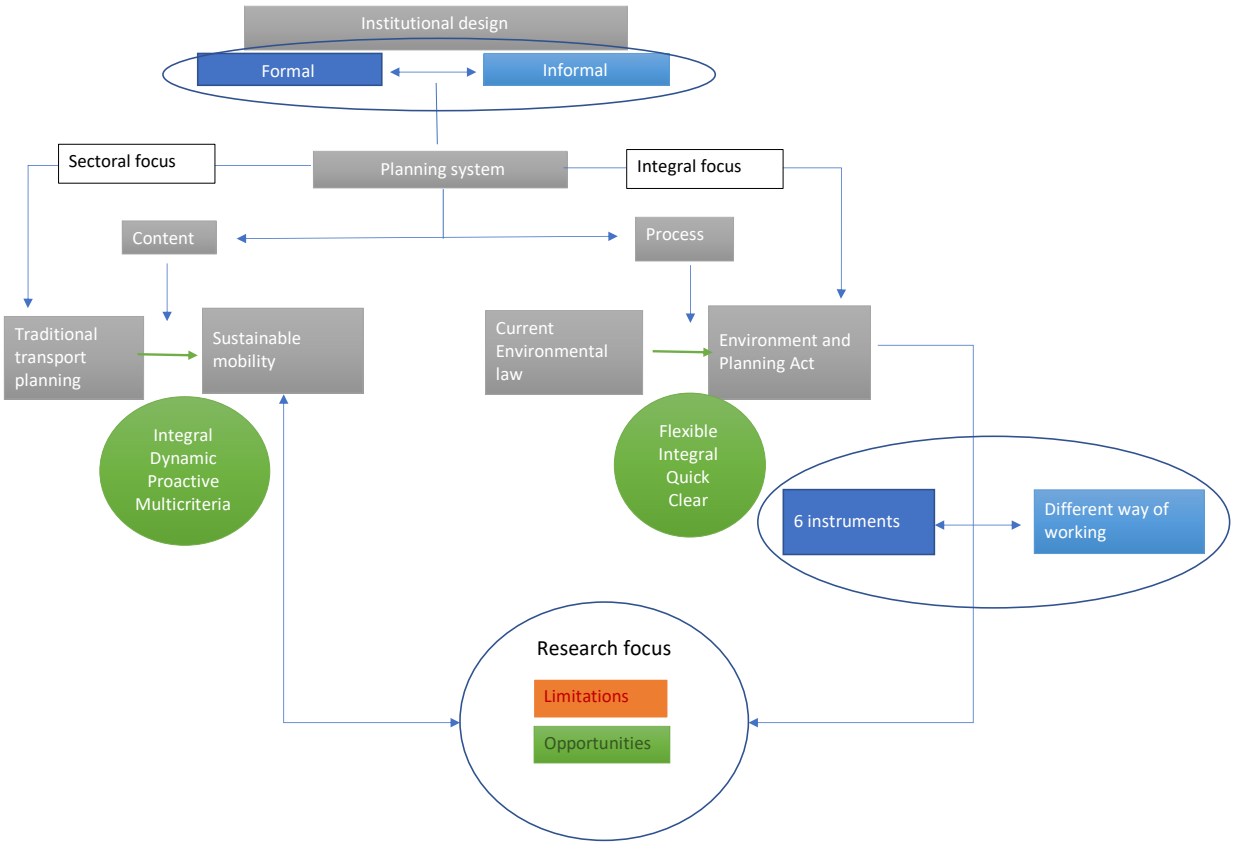



**Fig. 14 Revised conceptual model**

This study has followed a historical perspective on institutions. By doing this, other perspectives on institutional approaches (e.g institutional- actor analysis, urban-regime analysis, cultural institutions) have gained less attention in this research. Focusing on one perspective comes with advantages and disadvantages. A disadvantage of this focus is that aspects as the influence of agents and actors, international relations, or public norms are to some extent disregarded. However, the path dependence and historical perspective lead to a better understanding of the consecutive revisions in Environmental Law in the Netherlands as the Environment and Planning Act also builds further upon these revisions. A recommendation for further research is to use another institutional orientation, to see whether the results of this study are comparable and more generalizable.

## METHODOLOGICAL REFLECTION

This research encountered different challenges in methodological terms. First, there were few articles available on the Environment and Planning Act, and the combination with (sustainable) mobility has gathered very little academic attention. This is can be partly declared to the fact that the Environment and Planning Act is still something that is happening in the future. Thus, when researching it's potential the research automatically ends up in expectations about the future. However, as also mentioned in the introduction, it is relevant to examine the expected outcomes of the Environment and Planning Act ex-ante the actual installation to be able to compare the expected outcomes and the actual outcomes over time. This study is therefore not aiming to provide a grounded theory, rather it should be seen as a first attempt and an explorative study. Another aspect related to ex-ante analyses is raised by Van Dijk and Beunen (2009). They explain that ex-ante analyses are often too optimistic. Whereas it is often difficult to trace back what the law solely produced, as the outcomes of the law cannot be isolated and there are always indirect effects.

Furthermore, the connection between the Environment and Planning Act and contemporary challenges as sustainable mobility, but also climate adaptation or the aging population and other challenges has not been made until now. Although sustainable mobility is the focus of this research, this research could also be done on other current challenges (climate adaptation, aging population, sustainable energy systems, etc). Thus, this enhances the generalizability of this research, not in terms of transferring it to another context than the Netherlands to enhancing sustainable mobility, rather in terms of transferability to other current challenges and topics.

Another challenge of this research was to find suitable participants to gather valuable data. The pool of potential participants is regarded as small due to the need that participants are working in or are familiar with both the fields of environmental law and mobility. However, the success rate of approaching participants was high, as out of the 10 emails sent, 7 participants were keen to participate in this research. Furthermore, some participants indicated that they were a bit surprised that research has not been focused on this topic until now. This also confirms all the more the relevance of this study. Downsides of the data collection process are that data saturation was impossible to achieve and due to the different angles and approaches of the participants it was sometimes a challenge to compare the interviews. However, this was partly solved by using a systematic way of coding and labelling the typed-out transcript by the program Atlas.TI. When I would have the opportunity to do this research again, I would have tried to have a bit more structure in the interviews to get to a more systematic manner of analysing the interviews. Although the interview guide was set up in thoughtful structure, during the interviews it turned out that following this structure was a challenge. Additionally, the focus on the province of Groningen and the example of the Veendam-Stadskanaal rail connection brings along that this research it mostly transferable to similar contexts. Furthermore, it would have been better to focus on a project in a later phase of development. The Veendam-Stadskanaal project was only in the preparation phase, this made it difficult to verify the potential impact of the Project Decision.

Lastly, the fact that this research has been done in the Dutch context, and also the Dutch legal context, brought along quite a challenge. Coming up with appropriate translations in English for 'typical' Dutch planning language (for example ''uitnodigingsplanologie'') was hard on some occasions. By providing the list of translations, the researcher tried to translate the typical Dutch words into English, however, this is up for discussion and it could be that the translations are always not completely right. When there is any doubt about the translations the researcher can be contacted by the contact details provided in the colophon.

## FURTHER RESEARCH

As this research has an explorative character it can serve as a starting signal for further research on the topic of sustainable mobility and the Environment and Planning Act, and it also hopes to do so. Further research could

be done on different levels, for example, the implications for municipalities or the national government could be more integrated, as this research mainly took part on the provincial level. Next to this, involving other parties in the field could be valuable to get a broader view of the topic, this could, for example, be done by integrating parties as the Mobility Platform or other interest groups.

Next to this and as mentioned in the introduction, this research could also be done on, for example, the concept of climate adaptation, the energy transition, or other similar challenges faced by today's society. This increases the generalizability of this study, however it also a recommendation for further research as it can help with understanding the potential outcomes of the Environment and Planning Act. In this way, it can help with comprehending the potential limitations and opportunities for the Environment and Planning Act as a whole.

Lastly, it would be valuable to do this same research again in a few years when the Environment and Planning Act is actually there and there have been a few years of practicing to verify if the potential limitations and opportunities indicated in this research are actually there.

***LAST WORDS:***

The researcher hopes that this research will be helpful in stimulating and realizing a new way of thinking in the infrastructure and mobility field. A broader, more integral way of approaching the mobility questions and challenges is essential. As in my opinion, this is the only way to reach a more sustainable way of mobility in the Netherlands. This can be done by starting with relatively little changes to gain and accept the needed integral way of thinking in the mobility field. Every transition has to start with little milestones. An example of such a little milestone is proposed by Van Angeren (2019): changing the name of the MIRT fund (Multi-year program Infrastructure, Space and Transport, Dutch: Meerjaren Programma Infrastructuur, Ruimte en Transport) to MMF (Multi-year program mobility, Dutch: Meerjaren programma mobiliteit).

## REFERENCES


Aan de slag met de omgevingswet. (2019a). Instrumenten. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/

Aan de slag met de omgevingswet. (2019b). Uitgangspunten en doelen van de Omgevingswet. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/uitgangspunten-doelen-omgevingswet/

Aan de slag met de omgevingswet. (2019c). Omgevingsvisie. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/omgevingsvisie/

Aan de slag met de omgevingswet. (2019d). Integraal werken. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/implementatie/implementatie-wet/anders-samen-werken/integraal-werken/

Aan de slag met de Omgevingswet. (2019e). Programma. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/programma/kenmerken-programma/

Aan de slag met de Omgevingswet. (2019f). Programmatische aanpak. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/programma/programmatische-aanpak/

Aan de slag met de Omgevingswet. (2019g). Decentrale regels. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/regels-voor-activiteiten/toelichting-milieubelastende-activiteiten/decentrale-regels-mba/decentrale-regels/

Aan de slag met de Omgevingswet. (2019h). Omgevingsplan. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/omgevingsplan/

Aan de slag met de Omgevingswet. (2019i). Omgevingsverordening. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/omgevingsverordening/

Aan de slag met de Omgevingswet. (2019j). Algemene Rijksregels s. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/omgevingswet/stelsel/omgevingswet-0/instrumenten/kerninstrumenten/algemene-regels/

Aan de slag met de Omgevingswet. (2019k). Omgevingsvergunning. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/omgevingsvergunning/

Aan de slag met de Omgevingswet. (2019l). Projectbesluit. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/projectprocedure-projectbesluit/projectbesluit/

Aan de slag met de Omgevingswet. (2019m). Beleidscyclus. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/uitgangspunten-en-doelen-omgevingswet/beleidscyclus/

Aan de slag met de omgevingswet. (2019n). Toezicht en handhaving. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/publish/pages/112833/resultaten_verkenning_ondersteuningsbehoefte_toezicht_en_handhaving_bij_de_implementatie_van_de_omge.pdf

Aan de slag met de omgevingswet. (2019o). Programmatische aanpak. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/programma/programmatische-aanpak/

Aan de slag met de omgevingswet. (2019p). Maatwerkvoorschrift. Geraadpleegd van https://aandeslagmetdeomgevingswet.nl/regelgeving/instrumenten/maatwerkvoorschrift/

Alexander, E. R. (2005). Institutional Transformation and Planning: From Institutionalization Theory to Institutional Design. *Planning Theory*, *4*, 209–223.

Allmendinger, P. (2009). *Planning theory* (2., rev.updated ed). Basingstoke, Hampshire: Palgrave Macmillan.

Alterman, R. (2001). *National-Level Planning in Democratic Countries: An International Comparison of City and Regional Policy-Making*. Liverpool University Press.

Assche, K. V., Beunen, R., & Duineveld, M. (2012). Performing Success and Failure in Governance: Dutch Planning Experiences. *Public Administration*, *90*, 567–581.

Assche, K. V., Beunen, R., & Duineveld, M. (2014). *Formal/ informal dialectics and the self- transformation of spatial planning systems*. 21.

Auerbach, C., & Silverstein, L. B. (2003). Qualitative data: An introduction to coding and analysis. *NYU Press*, *21*.

Banister, D. (2008). The sustainable mobility paradigm. *Transport Policy*, *15*, 73–80.

Baxter, P., & Jack, S. (2008). Qualitive case study methodology: Study design and implementation for novice researchers. *The qualitative report*, *13*, 544–559.

Bertolini, L. (2007). Evolutionary Urban Transportation Planning: An Exploration. *Environment and Planning A: Economy and Space*, *39*, 1998–2019.

Boelens, L. (2010). Theorizing Practice and Practising Theory: Outlines for an Actor-Relational-Approach in Planning. *Planning Theory*, *9*, 28–62.

Broek, J. H. G. van den. (2014). *Omgevingswet*; parlementaire geschiedenis. Amsterdam: Berghauser Pont Publishing

Bryman, A. (2012). *Social research methods* (4th ed). Oxford ; New York: Oxford University Press.

Buitelaar. (2017). Zorgen over Integraal Werken Omgevingswet Terecht. Geraadpleegd van https://www.binnenlandsbestuur.nl/ruimte-en-milieu/nieuws/zorgen-over-integraal-werken-omgevingswet-terecht.9559360.lynkx

Buitelaar, E., Galle, M., & Sorel, N. (2011). *Plan-Led Planning Systems in Development-Led Practices: An Empirical Analysis into the (Lack of) Institutionalisation of Planning Law*. 15.

Buitelaar, E., Lagendijk, A., & Jacobs, W. (2007). A Theory of Institutional Change: Illustrated by Dutch City-Provinces and Dutch Land Policy. *Environment and Planning A: Economy and Space*, *39*, 891–908.

Burrows, A., & Bradburn, J. (2014). *Journeys of the Future: Introducing Mobility as a Service*. Geraadpleegd van http://www.atkinsglobal.com/en-gb/uk-and-europe/about-us/reports/journeys-of-the- future

Cammen, H. van der, & Klerk, L. de. (2012). *The selfmade land: Culture and evolution of urban and regional planning in the Netherlands*. Houten: Spectrum.

Castellani, V., Fantoni, M., Cristòbal, J., Zampori, L., & Sala, S. (2017). *Basket of Products indicator on Mobility*. 188.

Clark, A., Holland, C., Katz, J., & Peace, S. (2009). Learning to see: Lessons from a participatory observation research project in public spaces. *International Journal of Social Research Methodology*, *12*, 345–360.

Clifford, N. J., French, S., & Valentine, G. (Red.). (2010). *Key methods in geography* (2nd ed). Thousand Oaks, CA: Sage Publications.

Couwenbergh, D. (2020). Uitvinding van de auto. Geraadpleegd van https://isgeschiedenis.nl/nieuws/uitvinding-van-de-auto

D.A Kamphorst, Kistenkas, & Kersten. (z.d.). *Nieuwe wet ruimtelijke ordening: Nieuwe bestuurscultuur?: Voorgenomen provinciale inzet van de nieuwe Wet ruimtelijke ordening (Wro) voor het landelijk gebied*.

De Roo, G. (2003). *Environmental Planning in the Netherlands: Too good to be true*. Geraadpleegd van https://www.rug.nl/research/portal/publications/environmental-planning-in-the-netherlands-too-good-to-be-true(54cbeea1-46da-4e03-b6de-1ae31a78c1c1)/export.html

De Roo, G. (2010). Being or Becoming? That is the Question! Confronting Complexity with Contemporary Planning Theory. *A Planners Encounter with Complexity*. Geraadpleegd van https://www.rug.nl/research/portal/publications/being-or-becoming-that-is-the-question-confronting-complexity-with-contemporary-planning-theory(89d92869-e519-4125-bcd8-adde66e5c857).html

De Roo, G., & Porter, G. (2006). Shifst in planning practice and theory: From a functional towards a communicative rationale. In *Fuzzy Planning—The Role of Actors in a Fuzzy Governance Environment* (pp. 97–108). Ashgate: Ashgate publishing.

De Roo, G., & Porter, G. (Red.). (2007). *Fuzzy planning: The role of actors in a fuzzy governance environment*. Aldershot [u.a,]: Ashgate.

De Volkskrant. (2000). Met dank aan de Omgevingswet.

Deckers, W. (2019). Wat de Omgevingswet betekent voor het mobiliteitsdomein. Geraadpleegd van https://www.hiemstraendevries.nl/nieuws/335-wat-de-omgevingswet-betekent-voor-het-mobiliteitsdomein-binnen-gemeenten-en-provincies

Dowling, R. (2010). Power, subjectivity, and ethics in qualitative research. In *Qualitative Research Methods in Human Geography* (pp. 26–39).

Elshof, P. (2017). *Mobiliteit in het Omgevingsrecht* (Phdthesis, Radboud). Radboud, Nijmegen.

Elwood, S. A., & Martin, D. G. (2000). "Placing" Interviews: Location and Scales of Power in Qualitative Research. *The Professional Geographer*, *52*, 649–657.

Faaij, A. (2018). Governance in the 21st century. Geraadpleegd van https://www.futurelearn.com/courses/energy-transition/0/steps/10241

Faculty of Spatial Sciences. (2020). Research Ethics Committee. Geraadpleegd van https://www.rug.nl/research/ursi/organization/research-ethics-committee

Flyvbjerg, B. (2003). Rationality and Power. In *Readings in Planning Theory* (2de dr., pp. 319–329). Oxford (UK): Blackwell.

Forester, J. (1989). *Planning in the face of power*. Berkeley: University of California Press.

Forkink, R. (2018). Het eerlijke omgevingswet verhaal [Https://www.anteagroup.nl/nl/blog/het-eerlijke-omgevingswet-verhaal].

Friedmann, J. (1987). *Planning in the public domain: From knowledge to action*. Princeton, N.J: Princeton University Press.

Gerrits, L., Rauws, W., & de Roo, G. (2012). Dutch spatial planning policies in transition. *Planning Theory & Practice*, *13*, 336–341.

González, S., & Healey, P. (2005). A Sociological Institutionalist Approach to the Study of Innovation in Governance Capacity. *Urban Studies*, *42*, 2055–2069.

Healey, P. (1996). The Communicative Turn in Planning Theory and its Implications for Spatial Strategy Formation. *Environment and Planning B: Planning and Design*, *23*, 217–234.

Hodgson, G. M. (2006). What Are Institutions? *Journal of Economic Issues*, *40*, 1–25.

Hytönen, J. (2016). The problematic relationship of communicative planning theory and the Finnish legal culture. *Planning Theory*, *15*, 223–238.

Janssen-Jansen, L. B., & Woltjer, J. (2010). British discretion in Dutch planning: Establishing a comparative perspective for regional planning and local development in the Netherlands and the United Kingdom. *Land Use Policy*, *27*, 906–916.

Kearns, A., & Paddison, R. (2000). New Challenges for Urban Governance. *Urban Studies*, *37*, 845–850.

Korthals-Altes, W. K. (2016). Planning reform beyond planning: The debate on an integrated Environment and Planning Act in the Netherlands. *Planning Practice & Research*, *31*, 420–434.

Lemos, M. C., & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, *31*, 297–325.

Lodder, M., Rotmans, J., & Braungart, M. (2014, september 23). *Beyond the current Dutch spatial planning system: Towards a beneficial spatial system that accommodates today's complex societal needs*. 151–163. Siena, Italy.

Mahoney, J. (2000). Path dependence in historical sociology. *Theory and Society*, *29*, 507–548.

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2019a). Kerninstrumenten. Geraadpleegd van https://www.omgevingswetportaal.nl/wet-en-regelgeving/wet/kerninstrumenten

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2019b). *The National Strategy on Spatial Planning and Environment*.

Ministerie van Infrastructuur en Milieu. (2014). *Handreiking klimaatbeleid en duurzame mobiliteit voor gemeenten en provincies*. Rijkswaterstaat.

Ministerie van Infrastructuur en Milieu. (2017). Environment and Planning Act—Report—Government.nl [Rapport]. Geraadpleegd 9 oktober 2019, van https://www.government.nl/documents/reports/2017/02/28/environment-and-planning-Act

Ministerie van Infrastructuur en Waterstaat. (2019a). De Wro in het kort. Geraadpleegd van https://www.infomil.nl/onderwerpen/ruimte/ruimtelijke/wet-ruimtelijke/wro-kort/

Ministerie van Infrastructuur en Waterstaat. (2019b). Verklaring van geen bedenkingen.

Mobiliteitsalliantie. (2019). *Deltaplan 2030*. Geraadpleegd van https://www.anwb.nl/binaries/content/assets/anwb/pdf/belangenbehartiging/mobiliteit/deltaplan-uitgebreid.pdf

Moroni, S. (2015). Complexity and the inherent limits of explanation and prediction: Urban codes for self-organising cities. *Planning Theory*, 20.

Needham, B. (1982). *Choosing the right policy instruments: An investigation of two types of instrument, physical and financial, and a study of their application to local problems of unemployment*. Aldershot, Hampshire, England: Gower.

North, D. C. (1991). Institutions. *Journal of Economic Perspectives*, *5*, 97–112.

NRC. (2019). Omgevingswet dreigt te stranden. Geraadpleegd van https://www.nrc.nl/nieuws/2019/11/27/omgevingswet-dreigt-te-stranden-a3981952

Nuissl, H., & Heinrichs, D. (2011). Fresh Wind or Hot Air—Does the Governance Discourse Have Something to Offer to Spatial Planning? *Journal of Planning Education and Research*, *31*, 47–59.

PBL. (2011). *De veranderende positie van de nationale ruimtelijke ordening in Nederland*. Geraadpleegd van https://www.pbl.nl/sites/default/files/rest/cms/E%20-%20middag%20-%20Ries%20vd%20Wouden.pdf

PDC. (2020). Milieubeleid. Geraadpleegd van https://www.europa-nu.nl/id/vg9pjk198axu/milieubeleid

Posner, R. A. (1993). *The problems of jurisprudence* (1st paperback ed). Cambridge, Mass.: Harvard University Press.

Reulink, N., & Lindeman, L. (2005). *Dictaaf kwalitatief onderzoek*. Nijmegen: Radboud universiteit.

Rijksoverheid. (2019a). Klimaatbeleid. Geraadpleegd van https://www.rijksoverheid.nl/onderwerpen/klimaatverandering/klimaatbeleid

Rijksoverheid. (2019b). *National Climate Agreement*.

Rijksoverheid. (2019c). *Outline document of public transport for 2040*.

Rijksoverheid. (2019d, mei 28). Klimaatakkoord—Rijksoverheid.nl [Onderwerp]. Geraadpleegd 9 oktober 2019, van https://www.rijksoverheid.nl/onderwerpen/klimaatakkoord

Rooijakkers, B. (2016). *Possible governance structures for dealing with transitions in mobility. Critical choices for Mobility as a Service in the Greater Copenhagen area*.

Rooilijn. (2015). Flexibiliteit en rechtszekerheid gaan niet samen in Omgevingswet. Geraadpleegd van http://archief.rooilijn.nl/download?type=document&identifier=594483

Saldaña, J. (2016). *The coding manual for qualitative researchers*. California: Thousand Oaks.

Salet, W. (2018). *Public Norms and Aspirations: The Turn to Institutions in Action*. Routledge.

Santos, G. (2017). Road transport and CO 2 emissions: What are the challenges? *Transport Policy*, *59*, 71–74.

Savin-Baden, M., & Major, C. H. (2012). *Qualitative research: The essential guide to theory and practice*. Milton Park, Abingdon, Oxon ; New York: Routledge.

Sorensen, A. (2015). Taking path dependence seriously: An historical institutionalist research agenda in planning history. *Planning Perspectives*, *30*, 17–38.

Spaans, M. (2006). Recent changes in the Dutch planning system: *Towards a new governance model? Town Planning Review*, *77*, 127–146.

Ten Cate. (2019). De NOVI: Wat staat er in en vooral: Wat niet? Geraadpleegd van https://www.ruimtelijkekwaliteit.nl/nieuws/nieuwsbrief/Nieuwsbrief%2049/Commentaar%20Novi

van Angeren, J. R. (2019). Omgevingsrecht en mobiliteit in ruimtelijke planvorming: Meer samenhang is nodig. *Tijdschrift voor Omgevingsrecht*, *19*, 43–51.

van Buuren, A., & Edelenbos, J. (2008). *Kennis en kunde voor participatie*. Geraadpleegd van https://repub.eur.nl/pub/13398

Van Buuren, P. J. J., de Gier, A. A. J., Nijmeijer, A. G. A., & Robbe, M. J. (2014). *Hoofdlijnen ruimtelijk bestuursrecht*. Deventer.

Van der Lans. (2020). 1901 De Woningwet. Geraadpleegd van http://mobile.canonsociaalwerk.eu/nl_vhv/details.php?cps=3&canon_id=265

Van der Schoot, T. H. H. A. van der. (2017). *Handboek ruimtelijke ordening & bouw*.

Van der Steen, M., van Twist, M., Chin-A-Fat, N., & Kwakkelstein, T. (2013). *Pop-up publieke waarde: Overheidssturing in de context van maatschappelijke zelforganisatie*. Den Haag: Nederlandse School voor Openbaar Bestuur.

van Dijk, T., & Beunen, R. (2009). Laws, People and Land Use: A Sociological Perspective on the Relation Between Laws and Land Use. *European Planning Studies*, *17*, 1797–1815.

van Karnenbeek, L., & Janssen-Jansen, L. (2018a). Playing by the rules? Analysing incremental urban developments. *Land Use Policy*, *72*, 402–409.

van 't Foort, S., & Kevelam, J. (2015). Het waarborgen van duurzaamheid in de Omgevingswet. *Tijdschrift voor Omgevingsrecht*, *15*, 8–19.

Voogd, H. (1995). Environmental Management of Social Dilemmas. *European Spatial Research and Policy*, 5–16.

Wappelhorst, S., Sauer, M., Hinkeldein, D., Bocherding, A., & Glaß, T. (2014). Potential of Electric Carsharing in Urban and Rural Areas. *Transportation Research Procedia*, *4*, 374–386.

Wegener, M. (2012). *Government or Governance? The Challenge of Planning for Sustainability in the Ruhr*. 10.

Weimer, D. L. (1995). *Institutional Design*. Dordrecht: Springer Netherlands.

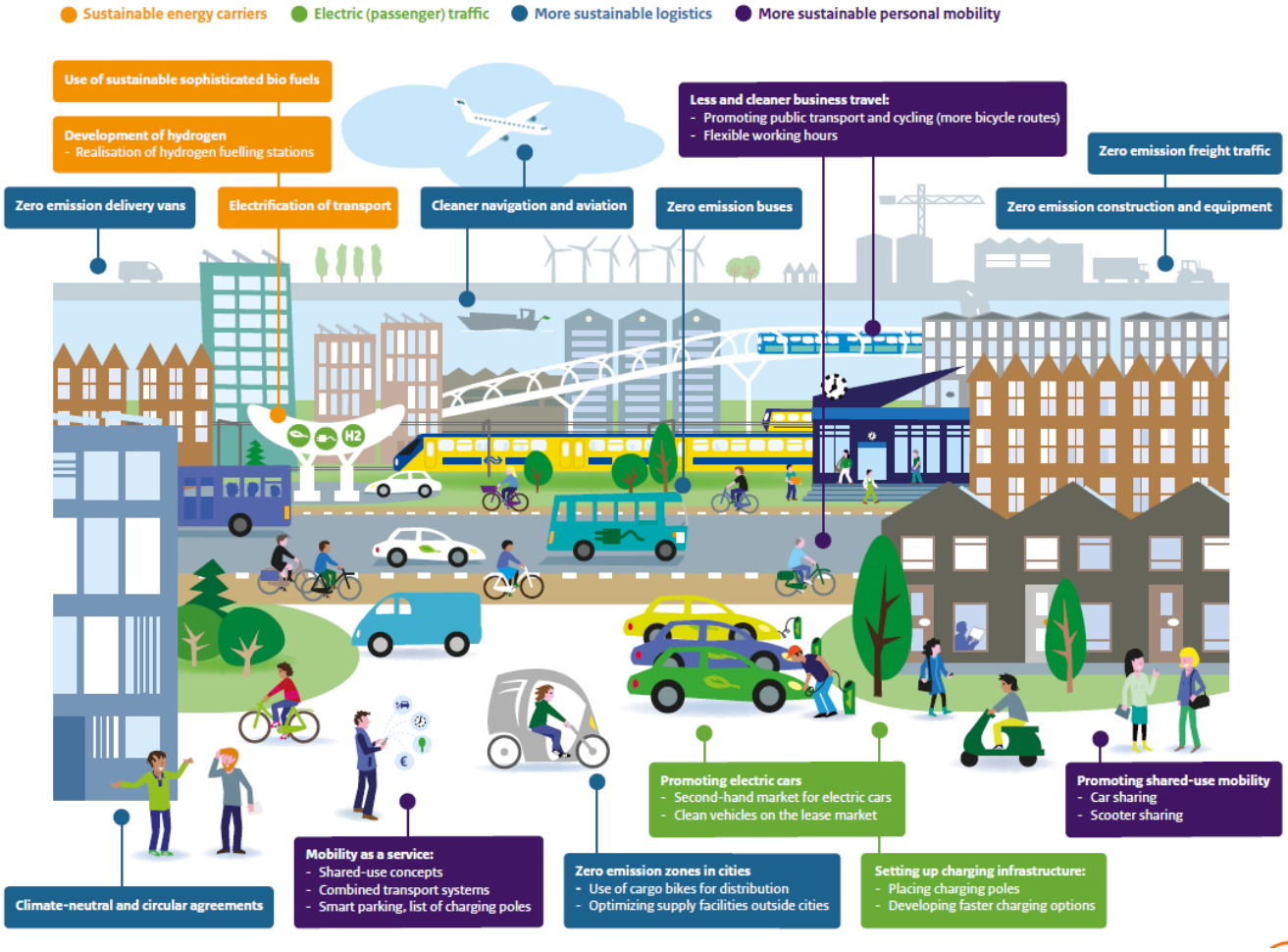
Yigitcanlar, T., & Teriman, S. (2015). Rethinking sustainable urban development: Towards an integrated planning and development process. *International Journal of Environmental Science and Technology*, *12*, 341–352.

Zonneveld, W. (z.d.). The Changing face of Dutch national spatial planning. *International Planning History Society Proceedings*, *17*, 21–23.

Zuidgeest, M. H. P., & Maarseveen, M. F. A. M. (z.d.). *Transportation planning for sustainable development*.

# APPENDIX A: FIGURES AND INFOGRAPHICS

**Figure Sustainable mobility (Mobility Platform, 2019)**



**Infographic core instruments (Aan de slag met de omgevingswet, 2019a)***

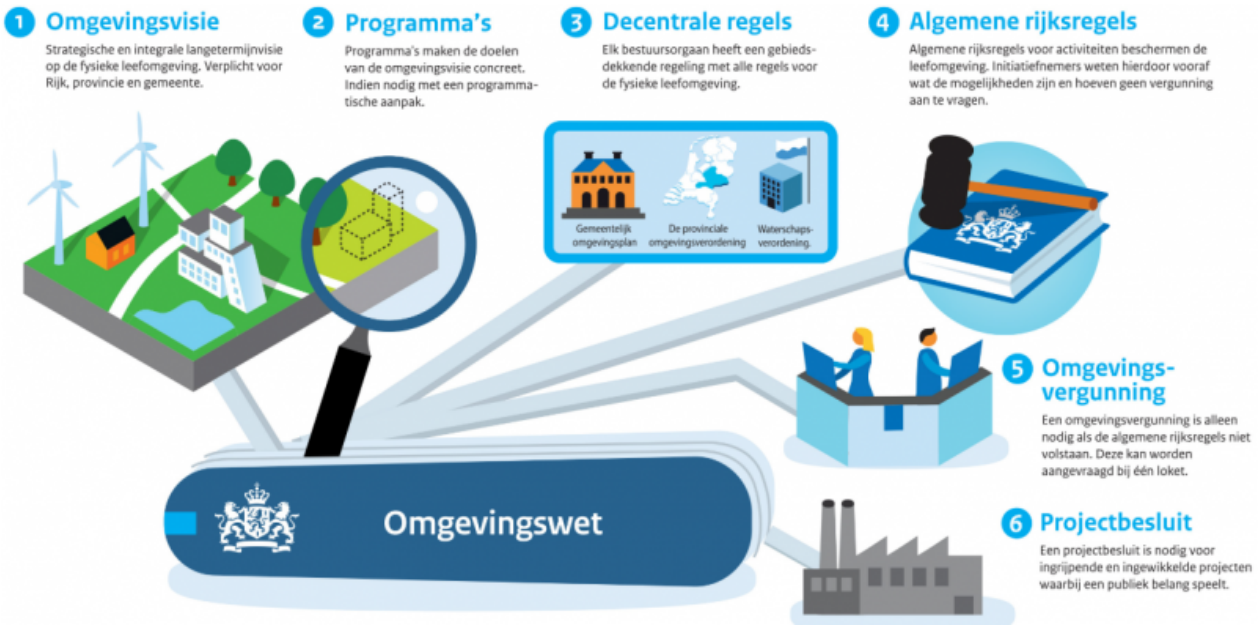
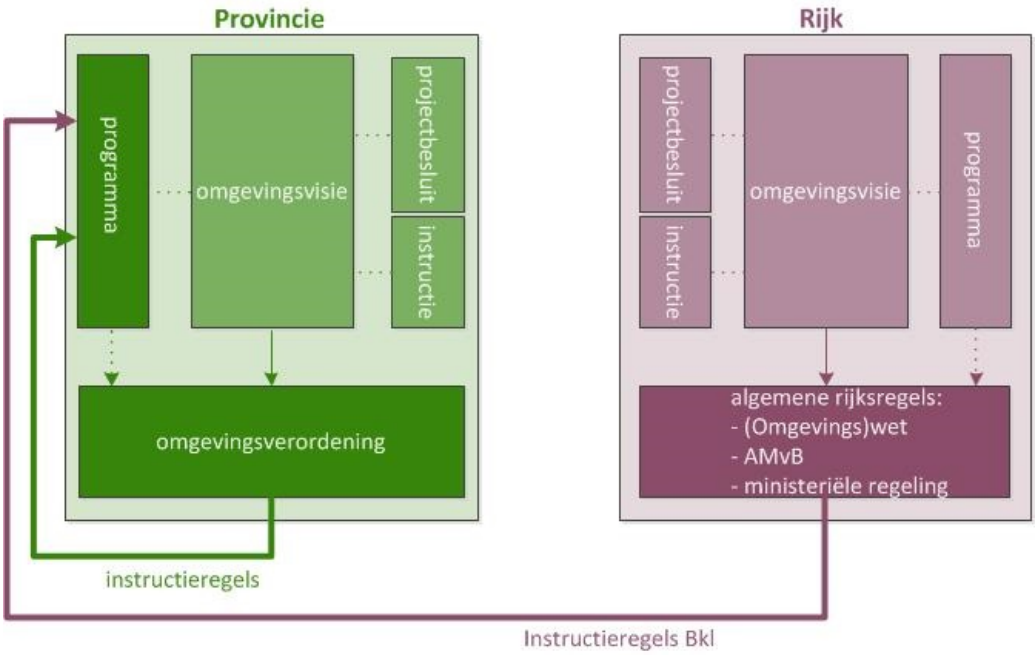



**Figure policy cycle (Aan de slag met de omgevingswet, 2019a)***

**Figure interplay between the instruments (Aan de slag met de omgevingswet, 2019a)***




**Unfortunately, the figures were only available in Dutch, the researcher can be contacted by the contact details provided in the colophon if the reader does not understand the Dutch language and needs an English explanation.*

## APPENDIX B: PROVINCE OF GRONINGEN + VEENDAM-STADSKANAAL PROJECT

*Environmental vision Province of Groningen*
Key words: Competitive, Accessible, Future-proof.
The mobility policy aims to connect spatial functions with each other so that people and goods can move smoothly, safely and sustainably from one place to another. A good one accessibility of cities and villages is important for the quality of life and further development of ours province. The province of Groningen is focusing on a smart and sustainable transport network.

The ambitions:

- Provide basic accessibility for the next ten years with a provincial Basic Network for Public Transport;
- Passenger growth of 2% per year in high-quality public transport and 1% per year in public transport as a whole;
- Customer satisfaction of at least 7.5 for the total regional public transport;
- Good accessibility, physically, but also in terms of rates, for specific target groups;
- High-quality public transport by bus between the main station / centre of Groningen and the major centres:
- travellers must be able to travel from the region into the city, if possible without transfer;
- connections that can compete with the car in terms of speed and comfort, with a travel time of up to 30 minutes to the main station in Groningen (within a distance of 15 km around the city of Groningen); frequency of at least 4 times per hour during rush hour and 2 times per hour outside rush hour.

*Example on the project level (Veendam – Stadskanaal)*
After years of negotiation, an agreement has been reached on a fully-fledged rail link between Veendam and Stadskanaal, part of the Lower Saxony line. The first Arriva train on the route will run in 2025, with an expected 1900 daily boarding and alighting passengers.

The province of Groningen has reached an agreement on this with rail manager ProRail, the Ministry of Infrastructure and Water Management (I&W), museum railway line STAR and train carrier Arriva.

Arriva now runs between Groningen and Veendam. In 2025 the line will continue to Stadskanaal. There is already a railway line on that part, but it is now only used by museum railway line STAR, the owner of the railway line. The historic train runs on different days, some weeks not at all and other weeks one to three times. The Veendam-Stadskanaal rail link will be built on an existing route.

# APPENDIX C: PLANNING APPROACHES OVER TIME

## PLANNING IN THE 1960'S

According to de Roo (2006), for a long-time planners assumed that controlling the physical environment could be done by technical, instrumental and procedural expertise. This planning paradigm was especially visible in the post-war period in Europe. After the world war, there was a strong demand for a technical-rationality approach as Europe had to be rebuild as quick as possible, thus there was a need for quantity. Therefore, it was logical that certainty and control were the ultimate criteria way to go, which is prevalent in the technical rational approach. Figure 6 shows a technical planning process. A technical planning process can be seen as a straight line, where uncertainties and hindrances have no place, there is complete information and cause-and -effect relationships are simple and predictable. However, it turned out that cases with these assumption and circumstance were very rare to find in real life cases. This period is nowadays often regarded as a time of primitive optimism (Voogd, 1995).

After the post-war period, the urban renewal aimed to decrease the distinction between the city and the landscape, which was reinforced by the technical rational way of planning (Lodder et al., 2014). Whereas the distinction between nature and the city increased in times of technical planning, for example by splitting the function as nature, agriculture and urban living as much as possible. A speaking example of these policies and practices is the Green heart, which became the ''food barn'' of the Randstad and shows the mono-functionality and sectoral ideas of urban areas, nature and agricultural areas. According to de Roo (2006) the quality of the local environment became important in the late sixties, and as described in the above section, the believe that planning could be seen as process with as a straight line was regarded to be only primitive optimism. Thus, other planning approaches incorporating this quality of the local environment became important.

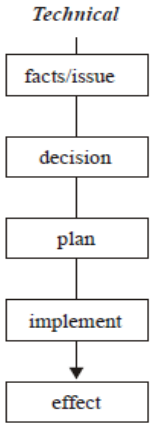



**Figure 6. Technical planning process (De Roo, 2007, p96)**

## PLANNING IN THE 1970'S

In the 1970s, several developments and incidents led to a growing distrust in the controllability of society. In Europe, there was a dramatic economic decline as a result of the oil crises in the middle east and the beginning of the collapse of the Fordist production model was becoming visible (the Fordist production model is also considered to be strictly functional, technical and procedural). On the other hand, citizens were becoming more critical and they organized themselves more- and more into interest groups. Decision made by authorities were no longer simply taken for granted by the public, and the governmental institutions lost a bit of the full trust they once had. Following from several internal- and external developments in the physical environment, sectoral policies were increasing. In planning this meant that in addition to spatial planning, areas as transport planning and the planning of green areas became distinct fields in planning, which also resulted in different policy sectors (De Roo, 2006).

### PLANNING IN THE 1980'S

The eighties witnessed a substantial elaboration of these distinctive fields policy sectors as each developed its own legal system, planning system, specialized instruments, financial structure, and professional organization, including formal and informal networks. These various sectors became highly specialized, including the development of sector-specific languages. The outcome was a sharply divided planning system, based on several strong sectors, each claiming authority over their peers. This resulted in a growing variety of initiatives within the various specialized sectors. Separate ministries with their own sectoral legislation were established in the late 1970 and 1980, this was mainly done to protect the people and the environment. The system was regarded as sectoral and deviations were proven to be difficult. The establishment of the ministry of traffic and water management is an example of this sectoral way of working. Therefore, also the mobility sector has its own specializations (Forkink, 2019).

The result of this specialization of policy and spatial planning was that policy making had little to do with 'controlling' the outside world through planning, as every government department struggled to increase the extent of its influence and control (De Roo, 2006). According to Assche et al., (2012) the Dutch planning system was successful in the Post-war years. However, it gradually retreated into its own bureaucratic reality. This bureaucratic reality was enhanced as the system failed to observe and integrate observing changing circumstances, changing concepts of democracy, citizen participation, and property rights.

### PLANNING IN THE 1990'S

As the previous timespans showed an increase of sectoral focused approaches. Planning in the 1990's aims to deviate from this trend. The post war planning approaches encountered a continuing series of responses and adaptations to the rational planning approach. Habermas and Healey are patriarchs of the start of the communicative turn in planning. Healey (1996) describes the promising new planning paradigm, communicative planning, as the ultimate way to solve all problems that the previous planning paradigm, the technical and comprehensive paradigm, encountered. Although there are also critics on the communicative parts of planning, as for example, it ignores the presence of different societal and legal background and the influence of power relations (Hytönen, 2016; Forester, 1989), the communicative turn is still very prevalent in planning literature today. Healey (1996) states that, in order to retain the legitimacy of planning, it is important to incorporate diversity and the complexity of the world into planning practice and that planning should be with people instead of about people. Furthermore, planning should according to her be open for consensus-

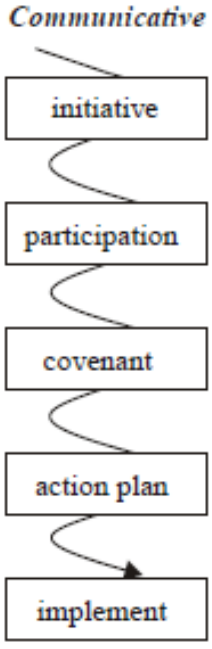



**Figure 7. Communicative planning process (de Roo, 2007, p97)**

seeking and inclusiveness, which changes the way planning has to be done to a more ''negotiating'' and ''communicative'' side. In this communicative turn, negotiation and argumentation, consultation and participation are keywords (De Roo, 2007).

Furthermore, there is a focus on interactions and actors, rather than on content and goals, as in the technical paradigm of planning. Table 4 show the contradicting characteristics of technical- and communicative planning be used to further understand the differences between communicative and technical planning approaches)

| Technical rational planning | Communicative rational planning |
|---|---|
| General | Custom-made |
| Simple questions | Complex questions |
| Sectoral | Integral |
| Top-down | Bottom-up |
| Result | Consensus |

Table 4. Characteristics of technical rational planning and communicative rational planning (De Roo, 2007)

### COMPLEXITY AS A FACTOR IN PLANNING APPROACHES

The believe that every problem fits the same solution has been drifting away in planning and it's approach, and the importance of contextual factors have gained more attention. Moreover, spatial issues vary in complexity and therefore they require different planning practices and strategies. There are three shifts visible that support the needed recognition of the variety of complexity in spatial issues (De Roo, 2003):

- the shift from fixed targets to ongoing, integral goals;
- the shift from functional rationality to communicative rationality;
- the shift from hierarchic structures to more horizontal and interactive networks.

To determine whether to use a technical rational planning approach or a communicative planning approach it is important to determine the degree of complexity in a certain question or problem. As the previous section showed, not all planning issues require the same approach and solutions. The number of involved actors and their role can differ in line with the planning approach that is chosen. On the other hand, a planning issue can be concerned with one single goal or multiple dependent goals. De Roo (2013) provides a framework connecting the type of goals and the involved stakeholders, the framework is provided in figure 9. In the left side simple issues are located, in these issues there is consensus on the goal and the number of actors is limited. In these issues a technical rationale approach is the most suitable. In the right site of the figure the very complex issues are situated, in these issues there is no agreement on the problems, the goals, and the possible solutions. Furthermore, a lot of different and maybe even contradicting interests and actors are involved. When dealing with a planning issue like this, the communicative approach is the most suitable. The two extremes, the technical- and the communicative approach are located at the edges of the framework, in the middle of the framework the so-called ''bulk of issues'' is located (De Roo, 2013). As it is no sharply defined approach for these issues, and a combination of both planning extremes is needed. The Environment and Planning Act seeks to focus more on multiple composite and dependent goals, as it aims to work with more

integrality towards the living environment to create win-win situations. Furthermore, the Environment and Planning Act aims to consult stakeholders and actors more explicitly. However, although the goals of the improvement of the Environment can be regarded to lean more towards the recognition of multiple goals and a variety of stakeholders, it should be noted that there will always be issues that require a technical rational based approach (Aan de slag met de Omgevingswet, 2019b; De Roo, 2003).

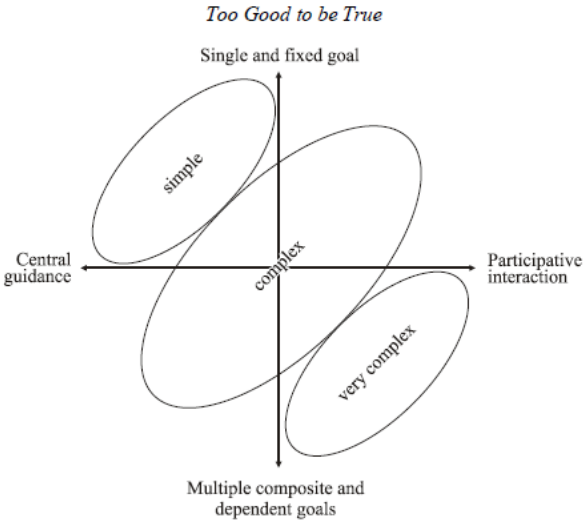
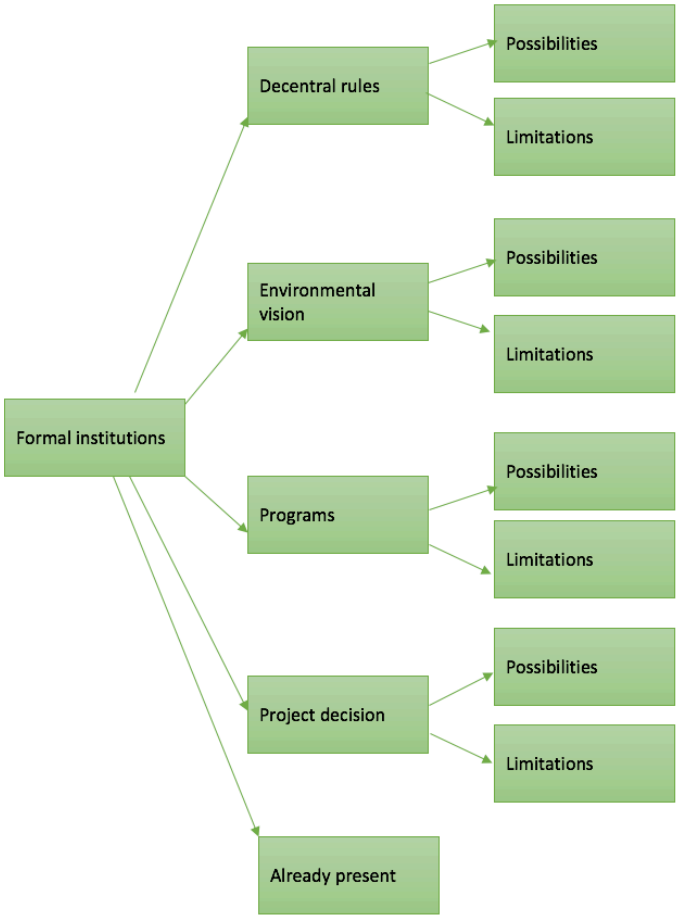
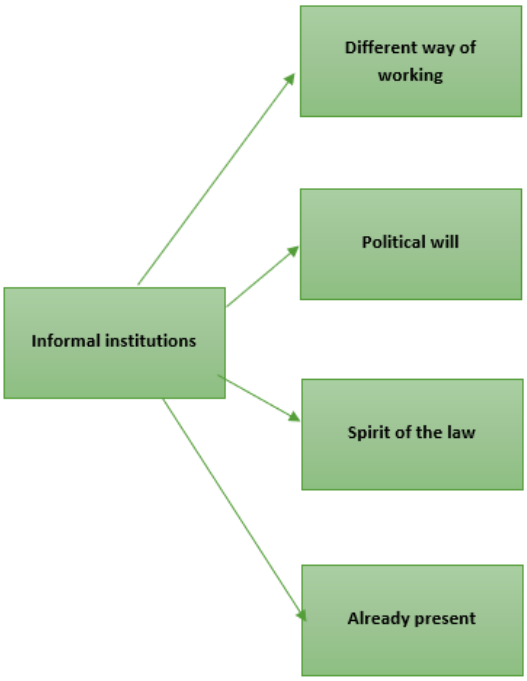
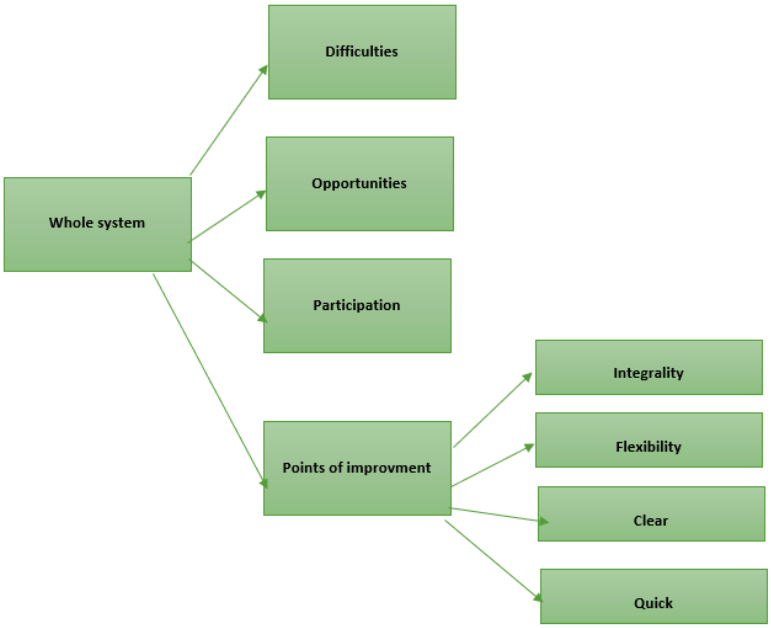


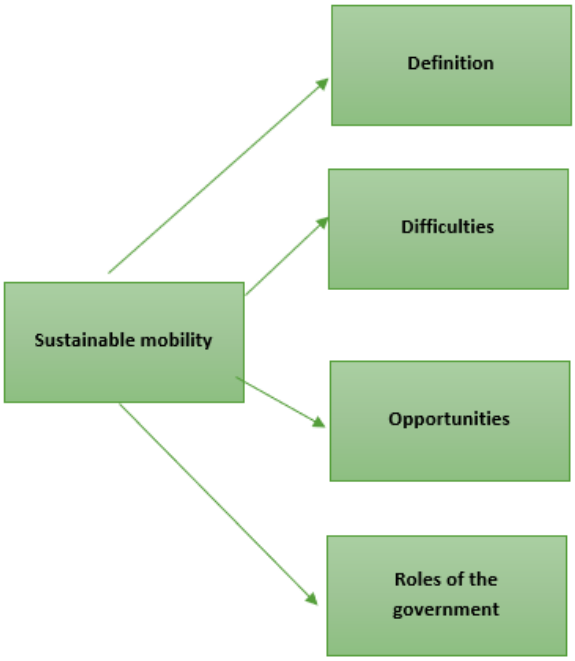

**Figure 15. Framework for planning-oriented action (De Roo, 2003)**

## APPENDIX D: CODE TREE




Informal institutions
Different way of working
Political will
Spirit of the law
Already present


Whole system
Difficulties
Opportunities
Participation
Points of improvment
Integrality
Flexibility
Clear
Quick


Definition
Difficulties
Sustainable mobility
Opportunities
Roles of the government

## APPENDIX E: INFORMED CONSENT

Beste deelnemer,

Allereerst wil ik u hartelijk bedankten voor uw bereidheid om deel te nemen aan dit onderzoek ter afsluiting van mijn master Environment and Infrastructure planning aan de Rijksuniversiteit Groningen. In deze masterscriptie worden de gevolgen en kansen van de overgang naar de omgevingswet voor duurzame mobiliteit onderzocht. Door middel van dit interview probeer ik uw gedachten en motivaties over dit onderwerp in kaart te brengen. De vragen voor dit interview zijn van tevoren opgesteld, maar waar nodig kan hiervan afgeweken worden. De verwachting is dat dit interview ongeveer 40 tot 60 minuten zal duren.

Door onderaan dit formulier te tekenen gaan u & de onderzoeker akkoord met de volgende zaken:
- De verkregen data zal alleen voor dit onderzoek gebruikt worden.
- Deelnemer kan ten alle tijden stoppen met het interview of een pauze inlassen.
- Deelnemer gaat akkoord met het opnemen van het interview.
- Deelnemer heeft het recht op het verkrijgen van het uiteindelijke onderzoek.
- Deelnemer heeft het recht om, wanneer gewenst, anoniem te blijven in het onderzoek.

Voor meer informatie kunt u altijd contact opnemen met Kim Poelsema via kimpoelsema@gmail.com of 0646720479.

Handtekening deelnemer:

Handtekening onderzoeker:

Datum:

Interesse in het ontvangen van het onderzoek:

***** *The researcher chose to only have an informed consent in Dutch. The researcher can be contacted by the contact details provided in the colophon if the reader does not understand the Dutch language and needs an English explanation.*

## APPENDIX F: INTERVIEW GUIDE

- Introduceren onderzoek en onderzoeker
- Toestemmingsformulier
- Starten opname

| **Onderwerp** | **Vraag** | **Notitie** |
|---|---|---|
| Introductie | Wat is uw achtergrond/functie?<br><br>Hoe bent u betrokken bij (duurzame) mobiliteit?<br><br>Hoe heeft de omgevingswet invloed op uw werkzaamheden? | |
| Duurzame mobiliteit | Wat is voor u duurzame mobiliteit?<br><br>Hoe ver zijn we volgens u met het verduurzamen van mobiliteit?<br><br>Wat zijn knelpunten bij het verder verduurzamen van mobiliteit?<br><br>Welke factoren kunnen de overgang naar een meer duurzame mobiliteit faciliteren? Hoe?<br><br>Welke actoren zijn hiervoor het meest van belang? | |

| | | |
|---|---|---|
| Omgevingswet | Hoe kan de omgevingswet volgens u bijdragen aan het verduurzamen van mobiliteit? Kansen?<br><br>Wat zouden volgens u verbeterpunten moeten zijn in de omgevingswet om duurzame mobiliteit te bevorderen?<br><br>Welke beperkingen/valkuilen kunnen er ontstaan door de omgevingswet in het verduurzamen van mobiliteit?<br><br>*Welk van deze punten (overzichtelijk, integraal, snel, flexibiliteit) biedt de meeste kansen voor duurzame mobiliteit?* | |
| Instrumentarium omgevingswet | Welk van de 6 hoofdinstrumenten van de omgevingswet is volgens u een verbetering t.o.v de huidige instrumenten?<br><br>Welk instrument verwacht u dat het meest van waarde is voor het verduurzamen van mobiliteit? | |
| Omgevingsvisie | Onlangs is de nationale omgevingsvisie gepubliceerd, hoe verwacht u dat dit voor mobiliteit doorwerkt in omgevingsvisies voor regio's/provincies? | |

| | | |
|---|---|---|
| | Hoe kijkt u naar de rol van regio's/provincies in het verduurzamen van mobiliteit?<br><br>Ziet u de omgevingsvisie als instrument als een verbetering van de huidige situatie? Zo, ja waarom wel/niet?<br><br>Waar moet opgelet worden bij het gebruik van dit instrument om ervoor te zorgen dat het een verbetering is t.o.v huidige situatie?<br><br>Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| (Decentrale regels)<br><br>-Omgevingsplan<br><br>- Omgevingsverordening | Ziet u dit instrument als een verbetering van de huidige situatie?<br><br>Wat denkt u dat het effect is van meer bestuurlijke afwegingsruimte in het omgevingsplan voor duurzame mobiliteit?<br><br>Denkt u dat er door het omgevingsplan meer ruimte wordt gecreëerd voor duurzame mobiliteitsinitiatieven?<br><br>Waar moet volgens u op gelet worden bij het gebruik van dit instrument/wat zijn valkuilen bij het gebruik van dit instrument? | |

| | | |
|---|---|---|
| | Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| *Programma* | Ziet u dit instrument als een verbetering van de huidige situatie?<br><br>Waar moet opgelet worden bij het gebruik van dit instrument om ervoor te zorgen dat het een verbetering is t.o.v huidige situatie?<br><br>Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| *Algemene rijksregels* | Ziet u dit instrument als een verbetering van de huidige situatie?<br><br>Waar moet opgelet worden bij het gebruik van dit instrument om ervoor te zorgen dat het een verbetering is t.o.v huidige situatie?<br><br>Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| *Omgevingsvergunning* | Ziet u dit instrument als een verbetering van de huidige situatie? | |

| | | |
|---|---|---|
| | Waar moet opgelet worden bij het gebruik van dit instrument om ervoor te zorgen dat het een verbetering is t.o.v huidige situatie?<br><br>Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| Project besluit | Ziet u dit instrument als een verbetering van de huidige situatie?<br><br>Waar moet opgelet worden bij het gebruik van dit instrument om ervoor te zorgen dat het een verbetering is t.o.v huidige situatie?<br><br>Hoe en in welke mate denkt u dat dit instrument kan bijdragen aan het verduurzamen van mobiliteit? | |
| Flexibiliteit en afwegingsruimte | Wat denkt u dat de invloed zal zijn van het verruimen van normen in de omgevingswet? Stimuleert dit initiatieven voor duurzame mobiliteit? | |
| Participatie | De omgevingswet is gericht op participatie en het betrekken van de samenleving, hoe kijk u aan tegen de effecten hiervan voor mobiliteitsprojecten? Biedt dit kansen? | |

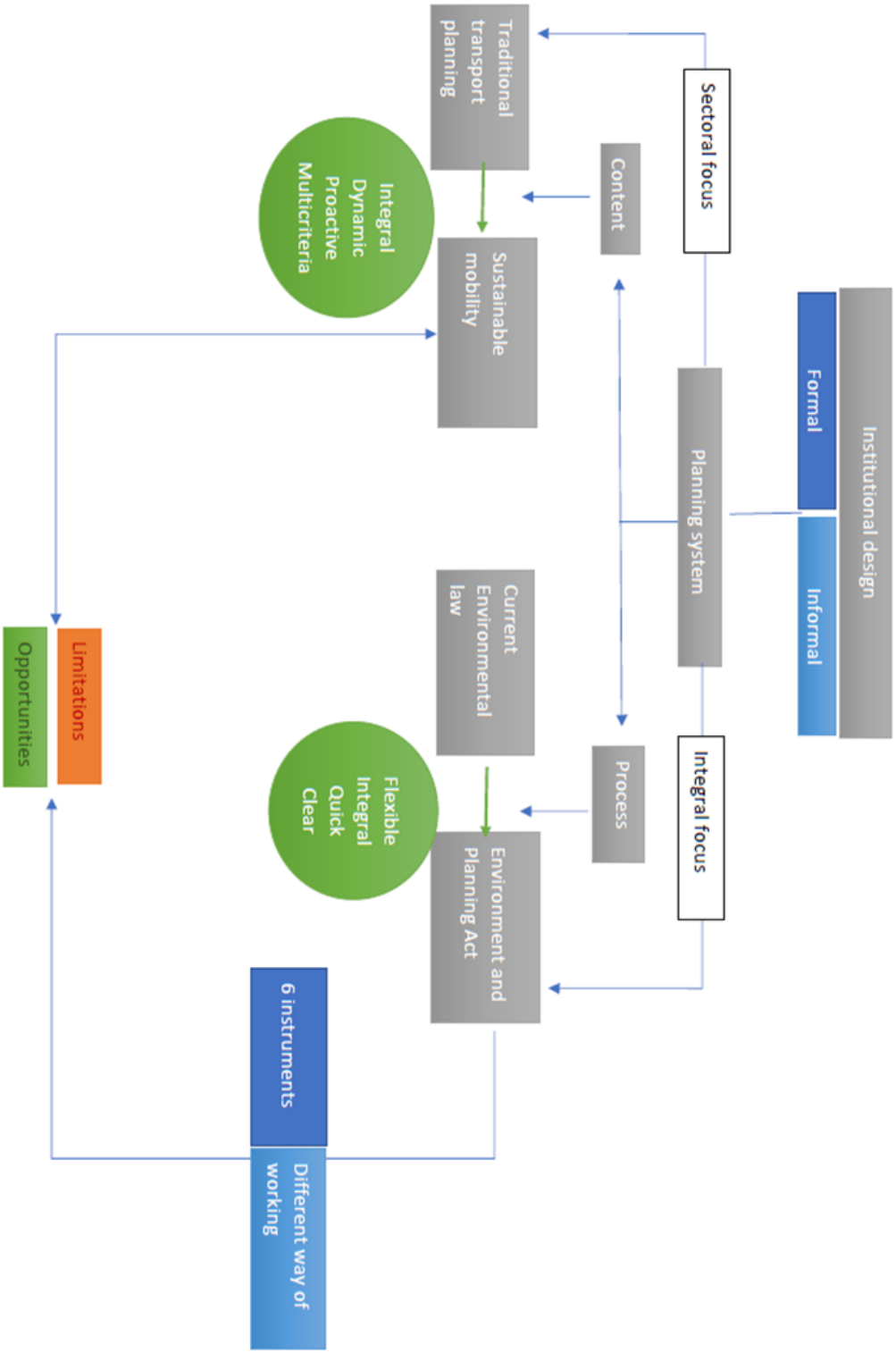
| | | |
|---|---|---|
| | | |
| Verbeterpunten omgevingswet | Welk van deze punten (overzichtelijk, integraal, snel, flexibiliteit) biedt de meeste kansen voor duurzame mobiliteit? | |

**Afsluiting**

- Heeft u nog toevoegingen aan het interview?
- Weet u andere personen die het onderzoek verder zouden kunnen helpen?
- Herhalen toestemmingsformulier
- Deelnemer bedanken en vragen voor mogelijkheid voor contact voor vragen naderhand.

**The researcher chose to only have an interviewguide in Dutch as all interviews were held in Dutch. The researcher can be contacted by the contact details provided in the colophon if the reader does not understand the Dutch language and needs an English explanation.*

## APPENDIX G: CONCEPTUAL MODEL



## APPENDIX H: MAIL TO (POTENTIAL) PARTICIPANTS

Beste (participant),

Mijn naam is Kim Poelsema en ik ben een student milieu- en infrastructuurplanning aan de Rijksuniversiteit Groningen. Voor het afronden van deze opleiding schrijf ik mijn masterscriptie over de overgang naar de omgevingswet in 2021 en de gevolgen en mogelijkheden hiervan voor duurzame mobiliteitsprojecten. Het doel van het onderzoek is om in kaart te brengen in hoeverre de intreding van de omgevingswet en haar instrumenten aansluit bij de ontwikkelingen in duurzame mobiliteitsprojecten, en zodoende kan zorgen voor een verbetering ten opzichte van de huidige procedures en instrumenten.

- (personal approach) -

Mocht u mee willen werken, vraag ik om ongeveer een uur van uw tijd voor het afnemen van een interview in de periode rond week 48 tot en met 50. Uiteraard is het mogelijk om volledig anoniem deel te nemen aan dit onderzoek. Ik ben te bereiken via dit e-mailadres of via 0646720479.

Ik hoop dat u wil overwegen om deel te nemen en alvast bedankt voor uw reactie!

* *The researcher can be contacted by the contact details provided in the colophon if the reader does not understand the Dutch language and needs an English explanation.*