

Planning too fast to slow down traffic? The planning culture of Amsterdam as a 30 km/h city



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(Cover image: own work, 2024)

Abstract

Cities throughout Europe are implementing measures and policies to reduce speed limits to 30 km/h on their roads, as the negative effects of cars on road safety and urban liveability are considerably reduced when vehicles drive at this speed. While the quantitative effects of such speed limit reductions on the environment are researched thoroughly, the influence that culture has had on the planning and implementation of such policies are less well understood. In this thesis, planning cultures are used as a lens through which the planning and implementation process have occurred in the context of Amsterdam's "30 km/h in the city" project. Qualitative methods such as expert interviews and policy analysis have been used to understand the planning culture. It was found that, while planners and stakeholders shared views that a 30 km/h speed limit was desirable, planning cultures among the planning group and stakeholders differed during the planning process regarding the need to implement measures quickly and achieve results in a quick merit. Although the planning culture did not harmonize such as suggested by Wolff (2020), but rather a cultural divide between actors arose that caused them to dig trenches and defend their own views, in line with Hanssen's (2011) findings, the planners managed to realize their goal of a quick implementation. The outlook that a quick implementation was necessary shaped how the planning process and implementation came to be.

Keywords: 30 km/h city, planning culture, plan-making, policy implementation

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List of abbreviations

CROW	Research and regulation institute on road construction and traffic management
ETW30	30 km/h roadway standard for local streets
GOW30	New 30 km/h roadway standard for urban thoroughfares
GOW50	50 km/h roadway standard for urban thoroughfares
GVB	Municipal transport company Amsterdam
OM	Public prosecution service
SWOV	Research institute for road safety

1. Introduction



(Own work, 2024)

Ever since their introduction, cars have had a big impact on our cities. On a sociotechnical level, streets were shared spaces before cars were introduced in the beginning of the 20th century (Norton, 2007). The introduction of the automobile altered the way how the street as a concept was perceived by the public. With skyrocketing injury rates in the 1910s and 1920s, it was the automotive industry that, by blaming pedestrians for these accidents and framing them as misusers of the roads, successfully changed the public perception of the street as a corridor for transportation, rather than a place where all types of users could make use of the space. Norton calls this framing as a part of the social reconstruction of streets, and these new views legitimized planners of the 20th century to redesign roads to accommodate motorized traffic and prioritize traffic flow. With the prioritization of motorized traffic came negative externalities. Miner et al. (2024) categorized these effects as violence (e.g. because of accidents), ill health (e.g. because of pollution), social injustice (e.g. with positive effects of mobility experienced by more privileged parts of society), and environmental damage (e.g. resource extraction).

Present day, a trend is ongoing to reduce these negative effects that resulted from this pro-car movement. In an attempt to increase road safety, reduce vehicle emissions, and improve urban liveability, cities worldwide are implementing measures in an effort to combat the negative externalities. One of such measures is the slowing of traffic and reducing of speed limits to 30 km/h on the vast majority of urban roads, in what for this thesis is called the *30 km/h city*. Graz was one of the first European cities to implement a 30 km/h speed limit on 80% of its roads starting in 1992, and over the last two decades, cities such as Helsinki (2004) and Zurich (2010) have been frontrunners in their adoptions of a 30 km/h speed limit, with Valencia (2015), Grenoble (2016), Bilbao (2018), Lille (2020), Paris and Brussels (2021), Lyon (2022) and Bologna (2024) following in their footsteps (City30 Brussels, n.d.; Šeruga, 2024). Moreover, Spain introduced a policy in 2021 to make 30 km/h the default speed limit throughout the country on all single-lane urban roads, affecting an estimated 60% to 70% of all Spanish roads (European Transport Safety Council, 2021), and Wales followed in 2023 with a speed limit reduction to the equivalent 20 mph (Griffith & Shuttleworth, 2023). In the Netherlands, there are also efforts ongoing to make 30 km/h the default speed limit. Despite a motion that aimed to introduce a nationwide 30 km/h speed limit on local roads was put aside by the minister for Transport, a new road standard that allows Dutch municipalities to introduce a 30 km/h speed limit on through roads was approved in 2023 (Ministry for Infrastructure and Water Management, 2023).

Although drivers are inconvenienced by having their travel times increased, proponents of 30 km/h measures claim that a reduced speed limit has many benefits. Foremost are the effects that a 30 km/h speed limit has on road safety. The chance of a person getting killed in a car-related accident is 5 times smaller on a road with a 30 km/h speed limit compared to a 50 km/h speed limit, with the survival-rate increasing to over 98% (Rosén & Sander, 2009). Likewise, the chance of heavy injuries is drastically reduced.

Given that accident rates and fatalities have been increasing over the last decade in the Netherlands, a speed limit reduction became a topic that gained the attention of Dutch cities. In nearly 50% out of all fatal traffic related accidents that occurred in 2022, either a pedestrian or bicyclist was killed (Oude Mulders et al., 2023). Moreover, for over half of pedestrian and bicycle fatalities, the opposing party in the accident was a passenger vehicle (Oude Mulders et al., 2023).

There are other benefits of a reduced speed limit named by Dutch research institute for road safety (SWOV), namely a “positive effect on the quality of life (...), [because] the sound level of traffic is lower, crossing a street is easier and emissions are lower.” (Dijkstra & van Petegem, 2019). Additionally, as speed limits are reduced, roads become less hostile environments to non-motorized traffic, so alternative transportation modes such as cycling and walking become more

attractive for people to use (Arato, 2023). In other words, streets become more people-friendly and the urban liveability increases.

In the Netherlands, road planning has for decades been influenced by concerns over road safety, and road safety has been a core principle for many years. In the 1990's, the 'Sustainable Safety' vision was drawn up which aimed to reduce injuries and fatalities by making the road design a foundational piece in setting the speed limit (Koornstra et al., 1992). The Sustainable Safety vision has been altered over the years, but a fundamental piece of the vision is the simplification of roadway standards. On urbanized streets, these were brought back to two standards. There is a standard for local access roads in primarily residential areas that have a 30 km/h speed limit, and a standard for thoroughfares with a 50 km/h speed limit. In large parts of the Netherlands, a 30 km/h speed limit is thus already a commonality. The debates to reduce speed limits therefore only applies for the thoroughfares (Dijkstra & van Petegem, 2019). This is where the 30 km/h city comes into the picture: increasingly, Dutch cities implement measures to reduce speed limits. Amsterdam is one of these. In December 2023, the speed limit was reduced over night on 270 kilometres of roadways throughout the city, bringing a 30 km/h speed limit to over 80% of the city's road network.

The 30 km/h city concept does, however, also face some criticisms. Ex-ante research by Dijkstra & van Petegem (2019) on the effects of a 30 km/h speed limit in the Netherlands indicates that the implementation of a 30 km/h speed limit has an effect on the traffic distribution, with roads exempted from a 30 km/h speed limit becoming attractive alternatives as their speed limit is relatively higher compared to the other roads. As a consequence of this, the capacity of such roads might need to be expanded to accommodate the increase of traffic. Another point of concern is, among others, gaining public support. Dijkstra & van Petegem (2019) state that there is no support for a nationwide speed limit reduction to 30 km/h on all roads, but there might be support for a partial speed limit reduction. This is in line with the findings of an opinion poll by Messelink (2020), where over 60% of respondents answered that speed limit of 30 km/h would be a bad idea. On a local level, however, there might be more support.

The views and opinions on 30 km/h city policies thus differ. In relation to planning, these views and opinions are part of the planning culture. As a concept, a planning culture is concerned with not only the formal rules and methods of planning, but more so the shared sets of beliefs, values, as well as the planning traditions, concepts of justice, and interpretations of planning tasks (Hansen, 2011; Knieling & Othengrafen, 2009; Othengrafen, 2023; Othengrafen & Reimer, 2013; Wolff, 2020). Literature on planning cultures states that all of these factors influence how plans are created. Plans can appear to be spoken with a united voice but are in reality created by various actors involved in the planning process. This can be a messy process, as the actors that are involved can have various outlooks and opinions on these matters (Gale, 2003). Policy is created in a political arena with a multitude of actors working on such measures. As the public opinion polls show, transportation measures and speed limit reductions can be a topic on which (political) opinions differ. The culture can thus influence how the policy process takes place. Moreover, the engagement and management of stakeholders and the public are important factors. These stakeholders have the power to make or break policies such as these.

Previous research on the 30 km/h city has not been primarily concerned with issues of planning cultures. Rather, researched has focused on quantitative effects of a 30 km/h speed limit on road safety (e.g. Engel & Thomsen, 1992; Rosén & Sander, 2009; Vis et al., 1992), and side effects such as noise reductions (e.g. Brink et al., 2022; Recio et al., 2016; Rossi et al., 2020), and air pollution (e.g. André & Hammarström, 2000; Baltrėnas et al., 2017; Tang et al., 2019). Studying the planning cultures of policy production process has been far less common. Specifically on the politics of

reducing speed limits, only in Sweden have views, interpretations, perspectives, and priorities of local and regional actors been analysed. This was done in context of the implementation of the Vision Zero road safety programme, which has similarities to the Sustainable Safety vision of the Netherlands (Svensson et al., 2014). Kristoffersson et al. (2024) analysed on what basis regional authorities, municipalities and other local stakeholders have sent appeals to government to oppose the implementation of speed limit reductions. These studies on views and opinions about speed reductions have, however, been exceptions to the norm.

Transport research being strongly focussed on quantitative research methods about the outcomes of specific policies are for this reason critiqued. Marsden and Readon (2017), for example, criticize existing transport research methods, stating that the technical-rational approach is most common, while questions of governance are largely ignored in existing literature. They argue that this is problematic as this means that “as a field we are artificially, but more importantly, disproportionately generating a science of applied policymaking which is unlikely to be utilised because of the distance between it and the realities on the ground” (p. 1). Research on the way planning cultures influence policymaking on the 30 km/h city is, however, lacking. As these cultures can have a large impact on way policy documents are produced, it is highly relevant to understand how views and opinions of involved actors in the creation of the 30 km/h city policy have contributed to this matter.

The goal of this thesis is therefore, to investigate how the policy of the 30 km/h city is created and negotiated in a political space and how the different views and opinions of actors have influenced the policy production process and its implementation. Moreover, the findings by Svensson et al. (2014) and Kristoffersson et al. (2024) on speed limit reductions indicated that stakeholders were either primarily concerned with the risk of a reduction in accessibility or improving road safety, but do not mention how other factors such as improving the urban liveability might have influenced their views. This thesis can provide new insights that will be beneficial to not only the scientific community, but also civil society. With 30 km/h city policies becoming more mainstream throughout European cities, an analysis of the implications that cultures have in the policy production process can give policymakers working in other cities a better understanding how this process takes place.

Amsterdam’s *30 km/h in the city* implementation is used as a case study in this thesis. This plan was initiated in January 2020 after a motion in the city council (Ernsting et al., 2020). Plans were published in 2021, and a 30 km/h speed limit was, as mentioned above, implemented in December 2023 on 270 km of roads (Municipality of Amsterdam, 2021a). Amsterdam was the first Dutch city to implement a city-wide 30 km/h speed limit, which makes it an interesting case to explore. Moreover, their choice to change the speed limit on many roads over night has not been chosen by other Dutch cities that have chosen for a more phased and slower implementation.

This thesis starts by providing an overview of the existing literature on the 30 km/h city concept and planning cultures, as well as introducing the research questions and conceptual framework in chapter 2. After this, the research methodologies, including case study, and the limitations, validity and reliability are discussed in chapter 3. Chapter 4 presents the findings of the research, and the thesis concludes with chapter 5 with a conclusion and discussion of the findings.

2. Theoretical Framework



(Own work, 2024)

This chapter introduces the key concepts and their theoretical backgrounds. First, the 30 km/h city is explained in section 2.1. After this, the concept of the planning culture and its theoretical basis are explained in section 2.2. Section 2.3 presents the research questions and section 2.4 shows the conceptual framework.

2.1. The 30 km/h city

The concept of the “30 km/h city” is central to this thesis. The name of the 30 km/h city is not used in other texts but is defined here as an amalgamation of policy ideas aimed at reducing speed limits on roads in urban areas to 30 km/h (or the 20 mph equivalent in countries using the imperial system). As a concept, the 30 km/h city is part of a movement that aims to transform the urban and reclaim areas for pedestrians and bicyclists.

2.1.1. 30 km/h cities to reduce the negative effects of motorized traffic

The negative effects of wide-spread car usage are well known. Miner et al. (2024) state how cars harm people and the environment. In their synthesis of existing literature, they have identified four categories where cars have negative externalities, being violence, ill health, social injustice, and environmental damage. There exists some overlap between these categories. For example, it is noted that environmental damage such as the extraction of resources needed to build cars has most negative effects in areas of the world where automobility is lowest and where there are few benefits from automobility. But in places where automobility is high, negative effects are also experienced, for example in terms of high death rates; 1 in 34 deaths are caused by the effects of automobility (GBD 2019 Diseases and Injuries Collaborators, 2020), noise pollution causing health problems such as cardiovascular disease and high blood pressure, among others (Allen & Adar, 2011; Khan et al., 2018) and car dependency which can isolate people that are unable to drive and are consequently prone to isolation (Steptoe et al., 2013).

Car related harm is, however, facing pushback: cities worldwide are trying to undo the mistakes of the past that created this car-dominant environment, and are implementing policies that aim to limit car usage and reclaim space in urban areas for pedestrians and bicyclists (Bourke, 2024; Connolly, 2020; Moss, 2015). Tosics (2023) sets out a variety of planning interventions that are currently underway that all share the goal to rebuild cities for people rather than cars. The vast majority of these planning interventions have two components, focussing on reimagining the urban design and public spaces, as well as changing mobility infrastructures. The common denominator in their reasoning to reimagine the urban design and mobility infrastructures is that cities want to reclaim urban spaces and make their cities more liveable.

Reducing speed limits to 30 km/h and slowing the cities’ traffic is one of the ways how cities try to change their mobility infrastructures. The prime reason to bring speed limits down to 30 km/h is to increase road safety and bring down the number of people that get injured or killed because of roadway accidents. Other factors such as reducing noise pollution, promoting car-free/car-light areas, and making streets more liveable for all road users are also reasons why cities choose to reduce speed limits.

Several European cities have implemented measures such that the speed limits are reduced to 30 km/h on the vast majority of their roads. Graz (1992), Helsinki (2004), and Zurich (2010) have been frontrunners, and in the last 10 years many have followed in their footsteps. There are various ways how a transition to become a 30 km/h city can be achieved. Some cities have chosen for an incremental approach, such as Helsinki (City30 Brussels, n.d.) and Zurich (Brink et al., 2022). In these cities, the speed limit was initially reduced on a subsection of the total road network, and

later expanded to cover the vast majority of roads. Other cities such as Brussels and Graz changed the speed limit in practical sense overnight on all non-arterial roads (City30 Brussels, n.d.).

2.1.2. Quantitative and environmental approaches of the 30 km/h city

Research on the 30 km/h city has been primarily focused on quantifiable effects of the 30 km/h city. There is a strong focus on the effects that a 30 km/h city has on road safety, its impact on traffic, and environmental effects such as the urban liveability and pollution. The findings of these are presented here.

In case of an accident between a pedestrian and a motorized vehicle, the chance of a fatality is strongly influenced by the impact speed at the moment of collision. Fatality risks are more than 5 times lower (less than 2% fatality risk) at a speed of 30 km/h than at a speed of 50 km/h (8% fatality risk) (Rosén & Sander, 2009). Engel & Thomsen (1992) found that the number of serious injuries dropped by about 75% when road speeds were lowered from 50 km/h to 30 km/h in urban areas of Denmark, while accident numbers were lowered by about 25%. The same effect was measured in the Netherlands (Vis et al., 1992). Changing the physical infrastructure by implementing speed reduction measures such as speed humps, chicanes, and narrowing road widths, seem to be an effective way to make drivers lower their speeds, while changing speed limit signs and implementing public awareness campaigns do not (Anderson et al., 2022; Fitzpatrick et al., 2001; Godley et al., 2004; SWOV, 2018b). Speeds should be low in urban areas, as most accidents between motorized vehicles and pedestrians occur in these places (Rosén & Sander, 2009).

Reducing speed limits does lower the theoretical road capacity: a speed reduction from 50 km/h to 30 km/h results in a 13% lower capacity, although other factors such as intersection throughput and disturbances caused by drivers braking and/or merging have a stronger effect on road capacity in urban settings (CROW, 2021). The effects of speed limit reductions can negatively impact public transport usage as these routes may become slower and consequently less competitive to other transport modes, especially to urban cycling (CROW, 2021; Huisman et al., 2022; OVPro, 2021).

It has been found that reducing speed limits on urban roads has a positive effect on the liveability (Cleland et al., 2024; CROW, 2021; Liang et al., 2022). Traffic-related noise is reduced, which is an important factor as road traffic noise is argued to be a major public health issue, especially for cardiovascular, respiratory, and metabolic diseases, as well as stress and general annoyance experienced by local residents (Brink et al., 2022; Recio et al., 2016; Rossi et al., 2020). Nitrogen oxides (NO_x) and particulate matter (PM) concentrations are unlikely to change by a lot when speed limits are reduced from 50 km/h to 30 km/h (Koster et al., 2023; Tang et al., 2019). Baltrėnas et al. (2017) found larger variations, with PM concentrations increasing from 18% to 80% on a local scale. This comes in particular because of the instalment of speed calming measures, such as speed bumps, where drivers slow down and subsequently accelerate. This moment of acceleration is where vehicles emit the majority of their pollutants. As long as drivers can move at a (semi-) constant speed of 30 km/h, emissions should remain similar to the 50 km/h alternative speed limit (Baltrėnas et al., 2017; Koster et al., 2023).

2.1.3. Qualitative approaches and the political controversies of the 30 km/h city

Research on the opinions of actors concerned with plan-making and policy-implementation (such as public officials and planners working within public administration, as well as external stakeholders) about speed limit reductions is slim. Marsden & Reardon (2017) state that this is a

major research gap that is prevalent throughout the research of transport planning issues, and that there is a need to study the governance of transport planning issues. Such research has not been conducted yet on the 30 km/h city.

From news media, we learn that in some cities where the 30 km/h speed limits have been introduced, there has been public criticism. When Bologna implemented a city-wide 30 km/h speed limit, drivers protested. They did so because they feared longer commutes and the impact that it might have on peoples' lives; as one opponent stated: "this law is completely changing lives" (Giuffrida, 2024). Protests in Wales, where a 20 mph speed limit was introduced found protesters stating that such a speed limit "causes congestion and pollution", and that people "get frustrated as it causes tailgating and people try to overtake each other and that's when the accidents happen" (Rees, 2024). In similar vain, readers of the Amsterdam-based newspaper *Het Parool* (2023) mentioned that that they expected the 30 km/h speed limit to lead to less fuel efficient driving and thus to cause more pollution, and that people would drive more reckless because of impatience. Some view a 30 km/h speed limit as gesture politics. An opinion poll by Messelink (2020) found that 60% of respondents in the Netherlands answered that a nationwide speed limit of 30 km/h would be a bad idea, with people indicating that they found such rules pedantic. These reactions show that governments have been ineffective in stating their reasoning for 30 km/h city policies, or that people do not trust the government's reasoning.

However, once speed reductions are implemented, public support for them tends to increase. For example, after speed humps and chicanes were installed and succeeded in their goals of reducing average speeds accidents rates, residents became highly accepting of the redesign and preferred the redesign over the old situation (Vis et al., 1992). Williams et al. (2022) found that after a 20 mph speed limit was introduced on a limited amount of roads in Edinburgh, city-wide support grew to increase the number of 20 mph roads in the rest of the city. Research on citizens' perceptions of the implementation of 30 km/h speed limits shows that a majority of people (62%) are willing to comply with the new speed limit, but that they expect that a larger share of other drivers (83%) will not do so. The social norm is thus unclear (Merkelbach et al., 2023).

Regarding the views and opinions of planners, Svensson et al. (2014) present that the aforementioned views are also prevalent here. They found that traffic planners and safety engineers have a more positive outlook on reducing speed limits because they value road safety higher than politicians, who tend to find accessibility and economic opportunities more important and argue that road transport should serve to increase mobility and reduce travel times. These different views come from deeper misalignment among actors on questions such as what constitutes as accessibility of good quality, and what risks are acceptable on the road network (Kristoffersson et al., 2024; Svensson et al., 2014). In other words, they are the result of different outlooks on the planning issue. It has however not been researched how these outlooks, views and other cultural factors have influenced the planning- and implementation processes of such speed limit reductions. In the following section, the concept of the planning culture is explored as this studies the effects that cultures have on the planning and implementation of planning issues.

2.2. Planning culture and its relation to transportation planning

Culture has become an important factor in social sciences, not least for planning studies. Whereas the cultural turn started in the 1970s, it was only during the late 1980s and 1990s that the significance of culture in planning was recognised (Knieling & Othengrafen, 2009). Whereas planning was historically viewed as 'neutral,' the cultural turn put more emphasis on the value of cultural diversity and how cultural factors influence decision-making processes. Language and

discourse were seen as important elements that shaped decision-makers and decision-takers worldviews and mindsets, and thus are of major importance in the policy formulation and implementation (Hansen, 2011).

Hansen (2011) denotes culture in relation to spatial development, policy-making and planning as “the set of values, assumptions, meanings, mentalities, etc. that underpins, or is reflected in, the traditions, habits and practices of processes” (p. 91). Such shared values make it much more difficult to plan, as “the interpretation of concepts and actions would have to be negotiated constantly among the participants in order to avoid confusion” (Paulsson et al., 2017, p. 2296). This should be understood as a ‘planning culture’: the culture of the planning process.

A planning culture is an analytical term that explains the ways that planning processes develop (Wolff, 2020). A planning culture consists of multiple factors. Originally, there are the “manifested elements” (Othengrafen, 2023, p. 91). These are the legal foundations, organisational structures and rules that set out how a plan should be created (Othengrafen, 2023; Wolff, 2020). After the cultural turn, the “non-manifested elements” (Othengrafen, 2023, p. 91) became more important. The non-manifested elements encompass the individual and collective sets of beliefs, values, and systems of interpretation of a given planning issue, and the organizations involved in the governance of regional public transport planning, among others (Hansen, 2011; Knieling & Othengrafen, 2009; Othengrafen, 2023; Othengrafen & Reimer, 2013; Wolff, 2020). These cultural elements have temporal and spatial dimensions (Hansen, 2011; Othengrafen & Reimer, 2013), and thus are dependent on the time and local context in which they are set. In other words, planning culture consists not only of the official procedures and constraining rules that define the framework in which policy is created, but more importantly the attitudes and established unconscious routines of the involved actors. Such a culture is not a homogenous entity, but rather “characterised by diverging interests, ideas, and diverse negotiation processes. It is thus a multitude of different practices, which together make up a planning culture” (Othengrafen, 2023, p. 92).

Whereas the communicative turn in planning in the late twentieth century moved away traditional, top-down approaches in favour of more participatory and communicative approaches, it is debated whether such a turn has occurred in transport planning (Koglin, 2015; Marsden & Reardon, 2017; Vigar, 2017). Legacy (2016) states that “transport planning is inherently political, as it always involves priority setting and investment decision-making that will ultimately serve some needs better than others” (p. 3109), even though transport planning is often hidden behind a veil of neutrality (Koglin, 2015). Plans may from the outside appear to be spoken by a single voice but are instead created by various actors in what is often called a messy process (Gale, 2003). Planners and other actors involved in the planning process do so on a playing field that already has a set of rules and boundaries, and this shapes the strategies and preferences of said actors when creating plans and making policy decisions. Policy is the product of struggle and conflict among policy makers (Gale, 2003), and through interaction and cooperation, actors create a space of process that defines the actor’s relationships and deal with conflict and negotiate the power relations, such that a planning culture is constructed. Wolff (2020) notes how power only exists in relation to others and that these power relations can be asymmetric, but this does not mean that the actors with less power have no impact on the planning process. It is the power constellations that determine the decision-making process and what problems should be prioritized and in what way they should be solved. At the same time, the planning culture is characterized by “the ability of a planning process to integrate collaboration or conflict as well as by the ways actors use the modes of interaction, established within this specific process, to promote their goals” (Wolff, 2020, p. 2214).

Planning cultures thus play an important role in the policy-making process. As it is debated whether a communicative turn has taken place in transport planning such as has happened in other planning fields, researching the planning culture in the transport planning discipline is a relevant endeavour. At the same time, it is argued that for transport planning issues such as the 30 km/h city concept, the strategy-making techniques and practices are under-researched (Vigar, 2017). The 30 km/h city concept is in this thesis approached through the lens of planning cultures. This concept is approached not only on the policy-making process, but also on the policy implication, as these form the effects of the policy-making process. The research questions that are central to this research are presented in the following section.

2.3. Research questions

The literature review showed that the policy-making and implementation processes of the 30 km/h city is a topic that has been under-explored by scholars. This thesis aims to shed light on this process and the cultural factors that influence this process. Therefore, the following research question stands central in this thesis.

How does the planning culture shape the policy of the 30 km/h city, from policy-making to implementation?

This research question is aimed to provide insight into the planning culture of the 30 km/h city concept, and how these have influenced the planning and implementation processes. Three sub questions have been constructed that will guide the research and help us with answering the main question.

SQ1: What is the planning culture for the 30 km/h city in Amsterdam?

SQ2: What did the policy-making process look like for the 30 km/h city?

SQ3: What did the policy implementation process look like for the 30 km/h city?

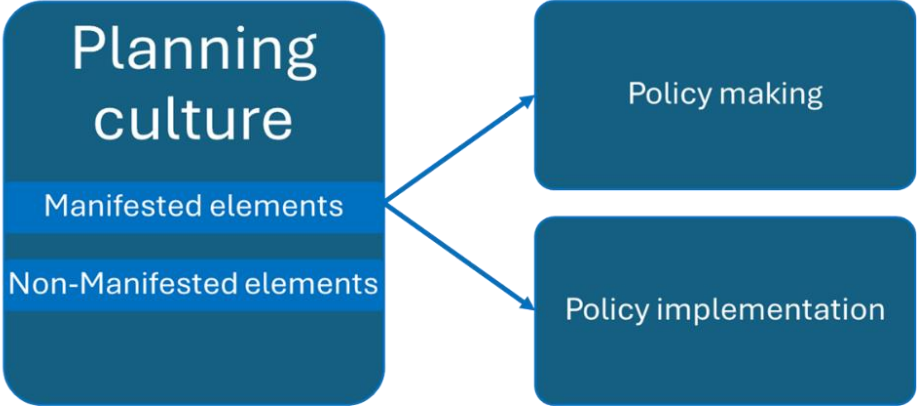
Sub question 1 is on the planning culture in regard to the topic of transport planning. The literature has shown that transport planning in general is more top-down focussed than other planning processes, but as culture has a local component, it is important to examine whether that is also the case here. As this thesis focusses on the Dutch context, it is important to take the local circumstances into account. Moreover, we are interested in how this culture manifests itself. Sub questions 2 and 3 are on the policy-making process and the policy implementation process. As we are interested in the ways that the planning culture influences the policy-making process and the implementation process, we need to examine how these processes take place. A conceptual framework is constructed that give guidance to these questions and is presented in the following section.

2.4. Conceptual framework

This thesis is concerned with the effects that the planning culture of Amsterdam's 30 km/h city has had on the planning and the implementation process. A conceptual framework was constructed (see figure 2.1, below) that aims to show how the concepts that have been found in the literature study are expected to influence each other.

The central concept in this framework is the planning culture. The literature has shown that this concept in itself consists of a variety of variables. These are the manifested elements on the one hand, and the non-manifested elements on the other. (Hansen, 2011; Knieling & Othengrafen, 2009; Othengrafen, 2023; Othengrafen & Reimer, 2013; Wolff, 2020).

Figure 2.1: Conceptual framework



Source: Own work

The planning culture influences the policy-making and policy implementation process. It is the culture that influences how the planning problem is framed, which problems are prioritized and which ones not, and what planning decisions are taken. Wolff (2020) shows that the culture can harmonize during the planning process. For individuals within the planning process, it is thus not only their outlooks, views and opinions that shape the planning culture of the group, but also the other way around.

3. Methods



(Own work, 2024)

This research is concerned with understanding *how* the planning process of the 30 km/h city took place, and how the planning culture influenced the formulation and implementation of the policy. To analyse this, a case study of Amsterdam's '30 km/h in the city' policy is used. Section 3.1. is dedicated to describing and contending the case study. To analyse how Amsterdam's policy was created and what influenced the planning culture, the views, opinions and outlooks of local actors on the issue of the 30 km/h city, as well as the political context have been analysed using a mixed-methods approach. Interviews have been conducted with local policy makers, political figures, and other stakeholders, giving insight into the planning culture and showing how the planning and implementation processes took place. How interviews are conducted is explained in section 3.2. Policy documents and other relevant literature has also been analysed, and how this was done was explained in section 3.3. Section 3.4 is concerned with the data analysis, and the validity and reliability of the study is presented in section 3.5.

3.1. Case study

A case study is used to gain understanding of the implementation of the 30 km/h city concept. Case studies are a way to study a specific occurrence in a natural context. Although there is no focus on a statistical generalisability, case studies give insight in social mechanisms and add to the understanding of a more abstract understanding of society through theoretical generalisability (Scheepers & Tobi, 2021). As this research attempts to find understanding in the policy creation process of the 30 km/h city, studying a specific case is a rational method to use. A single case study of Amsterdam's approach in creating a 30 km/h city policy is put forward.

3.1.1. Why Amsterdam?

The 30 km/h city concept is seen as an (inter)national trend, and many Dutch cities are working on creating and implementing policies. In 2021, for example, the 4 largest municipalities in the Netherlands made a call to the Ministry for Infrastructure and Water management to make 30 km/h the default speed limit nationwide (NOS, 2021). For this research, Amsterdam is chosen as a case study because it has been the first city to implement a city-wide speed limit reduction policy. Amsterdam opted for a 'big bang' approach where the new speed limit would be implemented over night (Oerlemans, 2024). This approach made them a frontrunner in becoming a 30 km/h city (Wagenaar, 2023). Other Dutch cities are either considering a similar approach but have yet not been able to implement this or opt for a more incremental approach where speed limits are changed after a roadway redesign. Moreover, it is argued that Amsterdam as a frontrunner lowers the barrier for other Dutch cities to implement 30 km/h city policies (Wagenaar, 2023). Amsterdam's plans could incentivise other cities to continue in their footsteps and present ambitious plans themselves. This makes Amsterdam a logical candidate to analyse.

3.2. Interviews

Interviewing actors involved in the planning process is a key aspect of this research. As the conceptual framework is based on the planning culture, interviews are a suitable approach. An open-ended questioning is a useful technique to understand the opinions held by actors and how and why they act in a particular manner. In-depth interviews allow us to uncover the "motivations, values, and positions of all those implicated in the occupation and use of space and places" (Dunn, 2021; Stratford & Bradshaw, 2021, p. 94). This helps in uncovering actors' views and opinions on the policies and gives insights in the planning culture. Moreover, actors can provide first hand insights in the planning process and explain how they perceived the planning culture to be.

Stratford and Bradshaw (2021) note that carrying out in-depth interviews with a limited number of knowledgeable informants provides significant insights and should allow a well-informed analysis. For the sampling of participants to be interviewed, two approaches have been used, namely *Expert sampling* and *Snowball sampling*. Expert sampling is viewed as a particular well-suited practice to planning research, because “planning itself is a form of expert practice, and also because different types of knowledge from various fields are often required to provide input into planning processes” (MacCallum et al., 2019, p. 153). However, the policy documents that have been published by the municipality of Amsterdam do not present a list of authors, let alone all other actors involved in the planning process (Municipality of Amsterdam, 2021a). The documents only state which alderman is responsible for said policy document. This made it more difficult to find the *key informants*, and therefore the social media network of LinkedIn was conducted to sample for experts. This career-oriented social media allows users to post messages and descriptions about their profession. In addition to writing about current and previous jobs, users can post messages about their interest. It is relatively common for users to post on current or previous projects that they have been working on. This publicly available data has been used to identify three persons that have been working on the creation of the 30 km/h policy for the municipality of Amsterdam. Because not every actor working on this project has a LinkedIn account and/or posts about themselves working on this project, the best approach is to continually identify actors using the approach of *Snowball sampling*. This technique identifies interesting cases through people who know other people who are involved in similar projects (Stratford & Bradshaw, 2021). Svensson et al. (2014) used this approach to find key actors within and outside the organization that have been involved in the policy creation process, and this approach is also useful for this research.

For this thesis, interviewees need to be, or have been, present in the policy-making or implementation. They have done so either as an employee for the municipality, or as an employee for an external stakeholder. In the policy document, several stakeholders are named to be of major importance (Municipality of Amsterdam, 2021a). These are the emergency services (police, ambulance, fire brigade), the Public Prosecution Service (OM), public transport companies (GVB & Connexxion), and the Transport Region Amsterdam. The latter is a metropolitan government region concerned with traffic-related issues, such as tendering the public transport and providing subsidies for regional traffic plans. Unfortunately, it has not been possible to speak to all of actors. For example, actors working for the OM declined to be interviewed, while other actors were unable to participate due to personal circumstances. Provided in table 3.1, below, is the list of interviewees, stating what part of the project they have worked on and on what day the interviewees were conducted.

Table 3.1: List of interviewed actors

Role	When involved	Interview date
Former alderman for transportation	Plan-making	18/04/2024
Project member 1	Both	19/04/2024
Project member 2	Plan-making	23/04/2024
Project member 3	Policy-implementation	01/05/2024
Project member 4	Policy-implementation	01/05/2024
GVB employee	Policy-implementation	21/05/2024
Transport Region employee	Policy-implementation	22/05/2024

Source: Own work

For the interviews, a semi-structured approach was used such that in-depth questions can be asked, depending on actor's answers. A semi-structured interview has the benefit that, while structured around a set list of questions, it allows for the possibility to deviate to go in depth depending on the answers given. An interview guide was created (see Appendix A) which served as the core structure for the interview questions. The questions were created such that the interviewee can provide their insights into the planning culture, the political context, and their own worldviews regarding the planning of the 30 km/h city. All interviews took between 30 minutes and an hour to complete. Some interviews were conducted in person, while others were done so through videoconferencing. For this, software by Microsoft Teams was used.

3.3. Policy and literature analysis

In addition to interviewing planners and other stakeholders, the policy that has been produced is analysed. The municipality of Amsterdam introduced their policy to make their city a 30 km/h city in 2021 with the "30 km/h in the city" program (2021a), and the implementation program (2021b). These policy documents serve as the reasoning and justification by the municipality. They are therefore important in this research but will only serve as a basis. This comes because these documents are the result of the planning processes and are, as Jacobs (2006) warns, a product sanitized of political discussion, disagreement or contestation, and by that means, give little insight into the planning culture. Still, however, the policy documents do present how the planning organization has framed the issue, what they find important about the issue and how they planned to resolve the issue. Therefore, they are still relevant to be analysed for this thesis.

Moreover, literature on the historical origins that influence the Dutch roadway practice have been analysed. Because planning cultures have a temporal and spatial dimension, it is important to recognise what factors might have influenced the local planning culture.

3.4. Data processing and analysis

The interviews have been recorded with permission of the interviewees. Recording interviews has been necessary for data analysis. Transcriptions have been made of these recordings, and afterwards recordings have been deleted. Respondents' answers have been anonymized. This all is done to create more trust between respondent and interviewer and to allow the interviewees to answer in freedom, which benefits the research outcomes (Dunn, 2021).

After data collection, the interviews and policy documents have been coded such that the findings can be analysed. Coding is the "systematic labelling of qualitative data by linking of words, phrases or images to distinct tags or codes", and "allows a data set (...) to be broken down into manageable parts to assist with analysis and interpretation" (MacCallum et al., 2019, p. 145). Coding is an iterative process. A three-step approach using open coding, axial coding, and selective coding is commonly used among scholars (Scheepers & Tobi, 2021), and is also used here. The open coding process is used to establish the initial set of codes by studying the data, using a bottom-up approach. In the step of axial coding, the initial codes are compared to find common patterns between the initial codes and are connected to the Conceptual framework. In the step of selective coding, a more abstract approach is taken where mutual connections between codes are sought. This is used to discover the most important themes that are communicated by the interviewees, as well as the published policy document. The NVivo-software package was used to perform the coding process, and the coding scheme is included in Appendix B.

3.5. Limitations, validity & reliability

The research methods in this thesis are of a qualitative nature. Although the reasons for these methods have been argued above, they also have certain limits. These are discussed here, as well as what measures are taken to ensure validity and reliability.

3.5.1. Limitations

One of the most prominent limitations for this research is that the results are reliant on the context of the case study. As stated above, Amsterdam has a different historical background and local context to other cities that make policy for a 30 km/h city. On the one hand, the fact that the city is a frontrunner means that they might had to start from scratch whereas other Dutch cities can take some inspiration from them. On the other hand, Amsterdam has – as the largest municipality in the Netherlands – one of the largest planning departments and consequently more resources to work on 30 km/h policy than other municipalities. These factors influence to what extend the results can or can not be generalized for other Dutch cities.

For the interviews, we are reliant on the recollections of the participants. These views are not statistical data but are personal experiences which can differ from person to person and may not be part of a shared experience. Moreover, it has not been possible to interview every actor involved in the planning process. While this is not a necessity for this research method (Scheepers & Tobi, 2021), it leaves the possibility that people with particular interesting experiences have not been interviewed and consequently that their views are left out of the results.

Moreover, the author and all interviewees natively speak Dutch, and so, the interviews were conducted in this language. All quotes have been translated from Dutch to English, and while all efforts were made to make these translations as best as possible, it might be possible that some of the meanings are lost in translation. The same holds true for the analysed policy documents.

Another factor of importance is that some (but not all) interviewees are co-authors of the final policy document that is analysed for the policy analysis. This is not problematic, as this research is concerned with what the policy is about and how it came to be, but it is important to keep in mind that the views communicated in the documents are of the same perspective by those interviewed. The policy document should therefore be seen as an extension of the views discovered in the interviews, and not as stemming from a separate entity.

Furthermore, Jacobs (2006) states that policy texts are written for a particular audience and that this is the most important factor in the language usage of said documents, and these texts are sanitised from political discussion, disagreement or contestation (Jacobs, 2006).

3.5.2. Validity & Reliability

To certify that the research is reliable, a comprehensive overview of the methods employed is provided. During the interviews, answers were verified by summarizing statements and in-depth questions were asked in case of uncertainty or ambiguity. Moreover, all interviews have been transcribed and coded, and are available on request to ensure full transparency. The same holds for the policy analysis; coded files are available upon request. The quality of the results in this study are dependent on the quality of the observations. The quality of these observations can only be ensured if the operationalisation is done adequately (Scheepers & Tobi, 2021).

4. Results



(Own work, 2024)

In this chapter, the results of the interviews policy analysis and literature consultation are presented, and are structured along the elements of the conceptual framework. Section 4.1 is about the planning culture as it existed during the planning and implementation process. Section 4.2 is about the policy-making process, presenting how this process took place and what planning choices have been made that decided the policy's outcome. Finally, section 4.3 focusses on the implementation process.

4.1. The planning culture

This section presents the planning culture for transport planning in the Netherlands, as well as for Amsterdam's *30 km/h in the city* project in particular. As explained in section 2.2, a planning culture consist of multiple facets, such as the written and unwritten rules of planning, but also the views, opinions and beliefs of those involved in the planning process. The first sub-section presents a short historical overview that gives context about the planning culture in the Netherlands regarding transport planning. Section 4.1.2 is on the Sustainable Safety vision, which has been the common approach in Dutch roadway planning for over three decades. To conclude, section 4.1.3 presents how the planning culture looked like in practice for the planning group of Amsterdam's 30 km/h city policy.

4.1.1. Historical background of Dutch transport planning

As planning cultures have a temporal and spatial dimension, it is important to understand the historical background of Dutch roadway planning. Two factors are discussed here: the polder model and the importance that road safety has in Dutch roadway planning.

The Dutch planning practice has been strongly influenced by stakeholder involvement practices. This is a form of consultation and consensus building that is known as 'polderen' (van der Linde et al., 2020). Although there is no consensus on the specific origin of the Polder model, scholars agree that it most likely originated from the medieval citizenship in Dutch cities in the late Middle Ages, founded in the cooperation in water management and/or a 'mercantilist spirit' (Besamcusca & Verheul, 2014; Keune, 2016). In modern times, the Polder model is a governance model based on traditions of bargaining and consensus decision making. In practice, this means that non-governmental stakeholders are often involved during the beginning of transport planning, as well as at the end of the process during the formal consultation. A consequence of this support seeking is that the Polder model is criticized for being a slow method that is unable to deliver quick change (van der Linde et al., 2020).

Road safety has been an important pillar in Dutch transportation planning for over five decades. An important reason for this can be found in the relative importance of bicycle transportation. In the 1970's, bicycle usage had fallen by 80% in the Netherlands compared to the decades before (de la Bruhèze, 2000). Bicycle policy was up until then little more than an afterthought in transport planning, but contrary to other western European cities, there was no anti-bicycle policy, and the bicycle was still included in planning debates (Oldenziel & de la Bruhèze, 2011). Amsterdam adopted a "laissez-faire" policy where bicycles and cars were viewed as equals on the streets (de la Bruhèze, 2000). With car-ownership increasing and a lack of adequate protection for bicycles resulted in a stark increase in traffic casualties, with more than 3.300 deaths in 1971, of which 400 children (van der Zee, 2015). This led to a public outcry, and because of activism and civil disobedience, the political will was created to set up advocacy groups and knowledge institutions for safe road design such as the SWOV and the CROW.

4.1.2. The sustainable safety principles of Dutch road planning

In 1992, the Sustainable Safety vision was created by the SWOV with the goal to drastically reduce the number of accidents on Dutch roads (Koorstra et al., 1992). This vision was based on changing the physical infrastructure such that the chance of driver mistakes was drastically reduced and that the severity of outcomes for accidents that remained were minimized, and still forms the basis for Dutch road design.

The Sustainable Safety principle states that the road function and, consequently, the traffic mix and nature of possible conflicts determine what speeds are deemed safe. A street with a lot of residential functions where accessibility to houses and/or shops needs to be provided, for example, should have a 30 km/h speed limit. The same holds true for roads where motorized and non-motorized traffic mix, for example on roads without physically separated bicycle paths or many zebra crossings. Dijkstra and van Petegem (2019) state that a lot of urban 50 km/h roads in the Netherlands do not comply with this safety principle. According to them, these roads serve multiple functions: not only a local residential function where accessibility to adjacent houses needs to be provided, but also a traffic function where the throughput of larger traffic flows needs to be offered.

Another aspect of the sustainable safety principle is that the speed limit should be self-explanatory to drivers based on the road design (SWOV, 2018b). A wide street paved with asphalt and physically separated bicycle lanes, for example, indicates to a driver that they are expected to drive 50 km/h. On the contrary, a street with narrower lanes and a cobblestone-paving indicates that they should drive 30 km/h. In other words, the road design has been the leading factor when determining the speed limit, and drivers should understand what the speed limit is, based on the road design.

4.1.3. Planning culture of Amsterdam's 30 km/h in the city plan

In January 2020, the Amsterdam city council discussed the Agenda Amsterdam Autoluw (Municipality of Amsterdam, 2020). This policy agenda is a package of 27 traffic measures which aims to make alternative transportation modes more attractive than driving in the city. Measures that are part of this policy agenda include improving public transport and lowering ticket prices, as well as reducing the number of carparking spaces and the introduction of *knips*: a 'cutting'¹ of all through-traffic on a road by installing physical barriers, with the goal of artificially increasing travel times for cars such that alternative travel modes become more attractive. When the Agenda Autoluw was discussed in Amsterdam's city council, a motion by three councilmembers was passed which instructed the city's board of mayor and aldermen to "propose a timeline and approach (including a package of temporary measures) to turn many more streets in the built area throughout the city to make 30-kilometer streets under the motto: '30 kilometres per hour is the norm, 50 the exception'", and reasoned that this was necessary because a lower maximum speed increases road safety and lowers emissions and space reserved for cars (Ernsting et al., 2020). The city's department for Transport and Public Space positively advised on this motion, and together with the Agenda Autoluw passed in the city council. A planning group within the department for Transport and Public Space was formed that was tasked with the creation of a 30 km/h policy. The planning group consisted of five policymakers that were specialized in road safety, traffic management, as well as with the relationship between traffic and the city as a whole. The members

¹ Literal translation

of the of the planning group had their backgrounds in planning, policymaking, and management, and not in (traffic) engineering.

This motion marked the political basis of Amsterdam's 30 km/h in the city plan. Political meddling and influencing on the project were marginal, as there was a lot of political support for the project. "But in the end, there was a very broad majority for the policy and the implementation programme. There were critical questions, but the alderman had broad support. That was also very important for the subsequent implementation" (Project member 2, 2024). Moreover, it was perceived that the political actors wanted this project to progress quickly; it was important to reduce the negative effects that motorized vehicles have in the city urgently. "At the same time, we also noticed momentum within the organization: we also saw that there was room to explore this further, both politically and in the official organization. And also, there was urgency in the sense that we saw the number of road casualties increasing" (Project member 1, 2024).

However, members of the planning group state how they find the usual planning methods based on the Polder model to be a slow and somewhat tiresome process. For example, the project members and former alderman were critical on the concept that before every idea a level of consensus needs to be reached. Only after all actors agree about all the details, it is possible to advance to the implementation phase.

In the Netherlands you must always consult with everyone first. Only once we all agree on everything first, are we able to go to the implementation step. That slows things down rather than speeding up. Why don't we simply say: we can do 30, let's just try it and do it. But no, that is a typically Dutch way of thinking. And all that consulting and talking to each other before doing it – I do believe in that, by the way – you can have that conversation taking 3 years, or you can do it in 3 months. (Former alderman, 2024)

This concern that everybody's voice ought to be heard and that all precautions are taken to make sure that consensus can be reached can delay the planning process. "That's why I sometimes think: [the process] is very deliberate, but that care can also turn against you." (Former alderman, 2024). In similar vein, it is argued that the Dutch planning culture is shaped by ideas of prudence, un-hierarchical structures, and a certain amount of conservatism (Former alderman, 2024). All of these make it more difficult to make swift planning decisions. Moreover, the bureaucratic planning process is also deemed slow because of internal matters within the municipality. For instance, informing decision-makers can be a slow and sluggish process: "This takes months, this takes a very long time. You've got to deal with delivery times, with reconciliations" (Project member 3, 2024).

The project members had shared views on how motorized traffic ought to function in the city. While it is recognised that cars have brought many things in terms of prosperity and opportunities, the car is predominantly viewed in a negative light. The car is seen as a rather inefficient mode of transportation. "I find cars a strange means of transport anyway actually. That you move 1,300 kilos to transport 75 kilos². (...) And when I'm in a traffic jam on a weekday and I look around, everyone is in the car by themselves." (project member 4, 2024). It is argued that a lot of urban trips could be done by other modes of transportation such as bikes and public transport:

² Average weights of a car and a human being, respectively.

I have worked on [another transport project]. There we had a very clear prioritisation: the pedestrian comes first, then the cyclist, then public transport and only then the car. So, the car was at number 4 (...) And that the car was in fourth place, the lowest position, is actually something that I fully agree with. It is logical that other modes take precedence. (project member 4, 2024)

It was argued that a reprioritization needs to happen everywhere, such that safety and liveability will be valued higher than speed and accessibility: “what do we find important? That you can get from A to B quickly? Or that a city is safer and more liveable? What then is more important? That is the latter.” (Project member 3, 2024). There is some frustration that people have accepted the negative effects associated with motorized traffic. “650 deaths a year³, are we prepared to accept that? If you just put that out there, everyone will say: ‘Are you completely insane?’ But for the car, we apparently accept that. Likewise for emissions, space occupation” (project member 1, 2024). But even though cars are seen as harmful by all members of the project group, they all note that it is unrealistic to completely get rid of them. “You only need half a brain to realise that the car is an indispensable part of traffic, even in the city. Which is not to say you should do everything by car, but sometimes a car is just important.” (project member 1, 2024). Cars are here to stay and that is seen as something that will not change anytime soon. “You can't just say: we are going to reduce the car. You need to think: for whom are we going to reduce the car? Who are we going to spare in the process?” (project member 1, 2024). Members of the planning group stated that they already had such views before working on the project, but being involved in this further reinforced these views (former alderman, 2024; project member 1, 2024, project member 3, 2024; project member 4, 2024)

Within the project group, it was felt as if there was little time to lose to combat the negative effects caused by cars. Small, slow measures would not cut it. Rather, an ambitious plan had to be created such that a leap could be made.

We have also recently made calculations. Doing nothing would have increased car usage by 28% in 2050. (...) And we said: “We are just going to do everything we can to reduce the car's dominance (...)” Well then you come up with these kinds of measures. (Project member 1, 2024)

This sense of urgency to combat the rising number of traffic-related accidents and fatalities led to the idea that a shortcut to the existing way of implementing speed reductions had to be taken. It is argued that the message would not have been clear otherwise: “You get the discussion for every street: ‘why does it have to be 30 here, it is 50 there’. Then you have to have the same conversation every time with the risk that the step is not taken.” (Former alderman, 2024). A speedier approach was proposed:

Everyone throughout the organization thought we could do something with this. And then we initially started brainstorming with each other, within the policy department, but also with the asset managers; those are the people who manage the roads, the road safety experts. Like: “What if we just approach this in a slightly different way?” Let go of the standards and guidelines and

³ Number of traffic-related casualties in all of the Netherlands

start looking more for “what is it that we actually want” instead of “what is it that we can possibly do.” (Project member 1, 2024)

In all, the usual way of roadway planning focusses on the cooperative methods of the Polder model, with an important emphasis on road safety. As the Sustainable Safety vision states, roads ought to be self-explanatory to drivers and speed limits should be changed only once roads are redesigned. At the same time, this system was perceived to be slow and bureaucratic, and the problems of road safety and urban liveability were seen as too urgent by politicians and the planning group to wait. Instead, they had to be dealt with on a short basis.

4.2. The policy-making process

This section presents the policy-making process for Amsterdam’s 30 km/h city policy, and what planning choices have been made. The first subsection is on the project’s goals. Section 4.2.2 is about the choice to implement the plan on a large scale. 4.2.3 is about how the planning choice relates to the planning context. To conclude, 4.2.4 is on the involvement of key stakeholders.

4.2.1. Road safety as the primary goal

The project's primary goal was to reduce the number of accidents and injuries. Project members all note that this was the basis and that a 30 km/h speed limit was seen as the most effective instrument to achieve this. “Speed on its own is not all that interesting, on its own it is totally not about lowering speed limits. It’s about a reduction of the number of victims” (Project member 4, 2024). Speed is “a variable that is manipulatable. In the end its about less traffic victims and increased road safety” (Project member 4, 2024).

In one of the first meetings, it was decided to use the urban fabric and streetscapes already present as the starting point of where 30 km/h had to be implemented, rather than the road design itself. In other words, the speed limit had to adapt to the urban design:

There was a colleague (...) who came up with the idea: "If we take 30 km/h as a starting point, we could rely [for the justification] on the urban development structure instead of the traffic structure." (...) What if we say that we do not want to get rid of the car at all but that want to find a suitable way for it to remain, then 30 km/h is actually a very logical starting point. So, where there is urban life, so to speak, that is your starting point to say: there the car must adapt to that environment. (Project member 1, 2024)

By choosing to make the urban fabric and streetscapes one of the leading forces for choosing for what roads the speed limit had to be dropped, improving the liveability became a secondary major goal. Lowering speed limits on roads that are lively and have a certain ‘hustle and bustle’ makes them nicer places to stay at. “It’s about how the city and traffic are experienced. (...) If the speeds go up it can feel rushed and create a sense of unsafeness.” (Former alderman, 2024). The project group believed it was urgent that measures were taken because of the increasing crowdedness in the streets. Implementation of the 30 km/h speed limit is therefore, again, a continuation of the autoluw policies that have been active in Amsterdam for many years.

According to the former alderman (2024), the gained space can then be used for widened sidewalks, urban green spaces, small playgrounds, or outdoor cafés. “The central idea of a liveable city is that public spaces are not used for traveling but instead for staying, and for that you need sidewalks.” (former alderman, 2024). Such sidewalk widenings can be realized by reducing speed limits because of two reasons. Firstly, the road width can be reduced because cars drive slower and

need less space, and secondly, cyclists can, with this speed limit, safely share the road with motorists. Physically separating bicycle paths is not necessary if the speed limit of motorized traffic is sufficiently low. According to the former alderman (2024), a shared road space can consequently incentivise drivers to reduce their speeds further. This comes because a shared road space is perceived to be more dangerous, which makes motorists drive more cautiously. Discussions were held whether to remove protected cycle lanes, but in the end, it was decided to cancel this approach. “But we didn’t remove any cycle paths. In fact, we have added some.” (Project member 2, 2024). This could indicate a shift in the prioritization of the project goals. Although increasing the urban liveability was an important goal from the start, it may have lost some of its importance during the planning process. Project members 3 and 4, who joined at the project at a later stage where the project got advanced to the implementation phase, noted that increasing the liveability of the city should only be seen as a side goal. Increasing this was an added benefit, but not more than that. Increasing road safety was seen as the primary goal.

4.2.2. The choice for a ‘big bang’ implementation

According to the implementation program (Municipality of Amsterdam, 2021b), it was chosen to implement the speed reduction policy in a two-step approach. The first step is concerned with short term implementation and has a limited time-scope of less than 3 years, whereas the second step is about full road reconstruction and major maintenance works, which is a process that takes decades. The focus of this research is on the first step, as the results of these can be measured in the timeframe of this thesis, and “because the first step is the prime scope of the 30 km/h policy in Amsterdam” (Municipality of Amsterdam, 2021b, p. 8). The first step was to implement the speed limit in what got called a *big bang* approach: the new speed limit of 30 km/h would be rolled out city wide in one go on many streets. The new speed limit would overnight change on 270 kilometres of roads, and by doing so, a speed limit of 30 km/h would apply to over 80% of all roads within Amsterdam. Some roads would retain their 50 km/h speed limit. Figure 4.1 gives an overview on what roads the new speed limit would apply, and on which one it would not. Neighbourhoods that are largely exempted from the speed limit changes are the modernistic Bijlmer neighbourhood in the south-east, the industrial port in the north-west and the New-West neighbourhood. It was argued that on these roads, motorized traffic and cyclists and pedestrians were so separated and do not regularly mix, that there was no need for a reduced speed limit because of road safety concerns and liveability. Moreover, these neighbourhoods were developed with the car in mind, in contrast to the older parts of the city.

Table 4.1: Overview of proposed measures to be implemented in the first step.

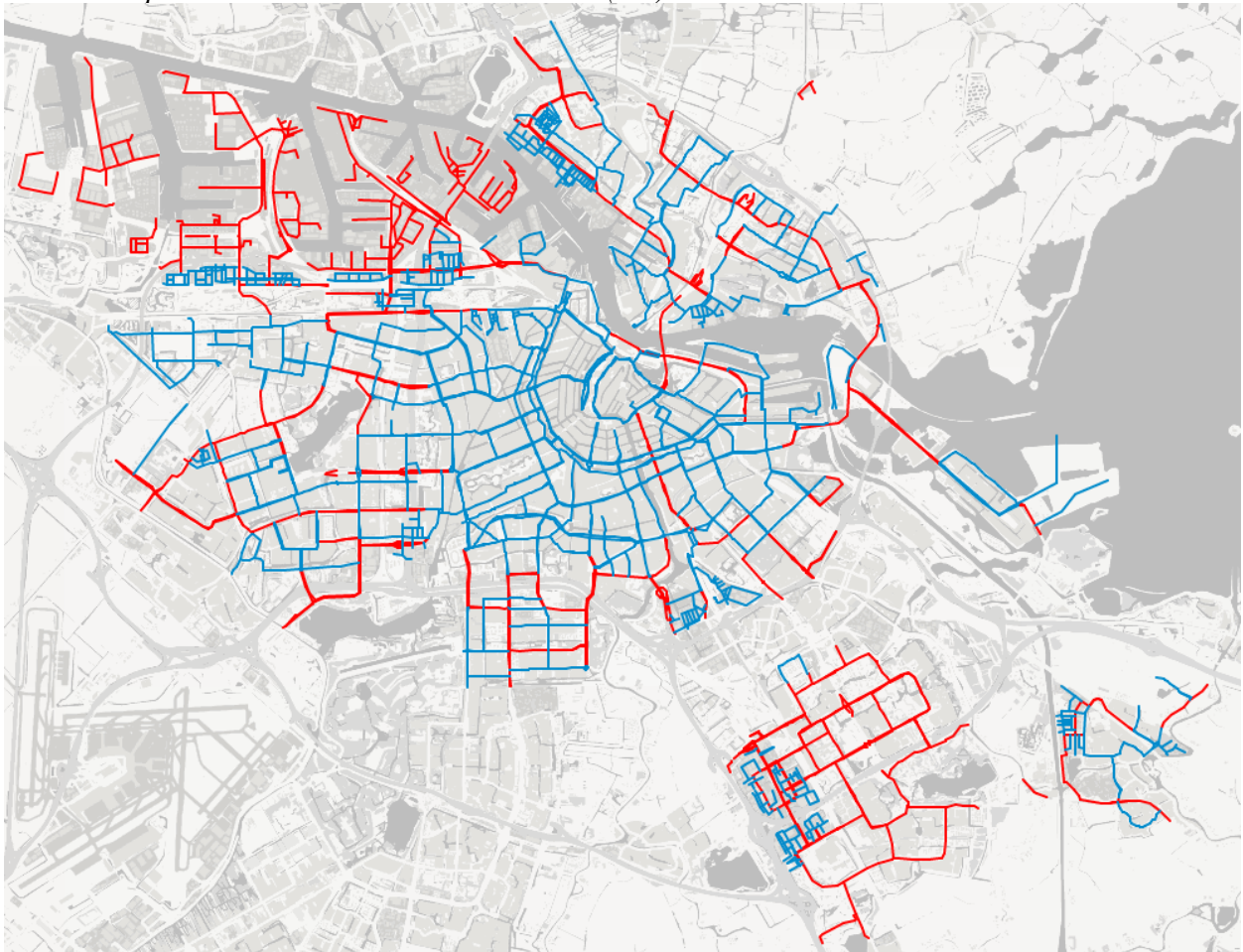
Pillar	Measures
1) Communication	Public awareness campaign, education strategy, informing stakeholders
2) Infrastructure	Speed sign placement, road markings, traffic light timing alterations, curb instalment next to tramways
3) Enforcement	Mobile speed camera instalment, section control, flexible police deployment
4) Vehicle intelligence	Pilot project on municipal vehicles

Source: Adapted from Municipality of Amsterdam, 2021b

The first step of the plan consisted of 4 main pillars (table 4.1), ranked from most to least important: communication, infrastructure, enforcement and vehicle intelligence. Communication

was put forward as the most important pillar of the policy. A communication campaign was set up that had the goal to inform people that 30 km/h would become the new default speed limit and was launched with advertisements in public spaces as well as through (social) media. Also part of this pillar was the creation of an educational program which primarily focussed on high school-going early and future drivers of 16-18 years old. According to project member 3 (2024), the communication strategy was successful: “We have analysed the communication strategy, and I believe that 9 out of 10 Amsterdam residents have seen our campaign.”

Figure 4.1. Roads where the speed limit would be reduced from 50 km/h to 30 km/h (blue) and where the speed limit would remain at 50 km/h (red)



Source: Municipality of Amsterdam. 2021a

For infrastructure, there were four ways in which this would be changed for the first step. Signage had to be updated: in total 4500 speed signs were (re)placed. Some of these are newly placed, because “it is financially and physically impossible to provide all roads in one go with the correct design. During implementation, we will adjust the signage and markings to increase the recognisability of the different road types” (Municipality of Amsterdam, 2021a, p. 28). Moreover, the timings had to be adjusted for 140 traffic light systems to accommodate the slower speeds (Project member 4, 2024).

The next pillar is enforcement of the new speed limit. The policy notes that especially locations where speeding violations and dangerous situations are more common had to be targeted, with a particular strong focus on using technology such as the usage of speeding cameras and section controls (Municipality of Amsterdam, 2021b).

Amsterdam also introduced new vehicle intelligence technology: ISA. This *Intelligent Speed Adaptation* technology alerts drivers when they are driving over the speed limit. The vast majority of cars are, however, currently unequipped with this technology, but for all newly sold cars in the EU from 2024 onwards it is mandatory that they are equipped with this technology, so the importance of this pillar might grow over time (Municipality of Amsterdam, 2021a). A pilot was put in place where this technology was installed on a section of the municipal vehicle fleet.

The ‘big bang’ approach was, according to members of the project group, an effective and quick way to implement the speed limit changes. This comes because it allowed to cut bureaucratic corners and would speed up the planning process. An incremental approach would warrant that for each road where a speed limit reduction was desired a planning process had to be instantiated. Furthermore, for each road political approval for the legal traffic decision by the city council political had to be gained. The ‘big bang’ approach would, in contrast, combine these processes in one large project. If successful, this would be more efficient because the decision for a speed limit reduction on these roads would already be approved, and the possibility of the decision for a speed limit reduction bogging down in discussions is prevented. “[Then] you get the discussion for every street: ‘why does it have to be 30km/h here, it is 50km/h there’. Then you have to have the same conversation every time with the risk that the step is not taken.” (Former alderman, 2024). All these processes are generally slow, so having to do them once would majorly speed up the process. In fact, it is believed that “if this approach was not used, the plan would have failed” (project member 2, 2024). Moreover, the project’s goals to improve road safety and the urban liveability could be reached far quicker than if an incremental approach were to be used: if done well, the effects would be instant on the day of when the policy came into effect.

4.2.3. A break with the Sustainable Safety principle of self-explanatory design

The *big bang* implementation was, however, controversial. According to the employee of the Transport Region (2024), such an approach is a big contrast to the then common way of speed limit adjustments. Usually, an incremental approach where road design is the leading principle and speed limits are only changed once a road is redesigned to fit the standard created by the research and regulation institute on road construction and traffic management (CROW):

It might be useful to see what options are available when talking about introducing 30 km/h. There are a number of options that you have as a municipality. One is the Amsterdam method, where you do everything at the same time and only place signs. But CROW advises that you look at each road section to see whether it is necessary here and, based on the road function, decide whether it is suitable for a 30 km/h speed limit and adjust the design accordingly. That is the CROW method, so to speak. And of course, there are ways to find ways in between. For example, you can apply it per area or neighbourhood, but take more time to adapt the design to your goal. (Transport Region employee, 2024)

In the *30 km/h in the city* plan of Amsterdam, those road constructions were pushed back to the second, long term step of the plan. Road construction is an expensive endeavour and reconstructing all roads would have simply been too costly. The new speed limit is applied to 270 kilometres of roads, and the budget of 27 million euros only allowed for relatively small measures.

Yes, that is an important task in this project: we are not going to change the layout of the road so much, because that would cost a whole lot of money. It already costs 27 million to roll it out

throughout the city and to take small measures. Can you imagine what will happen if you redesign all the roads? Then we might be short of 20 billion euros. (Project member 1, 2024)

This led to a problem. On the roads where speed limits were planned to be reduced, the roadway design was not the leading factor anymore. For the last 30 years in Dutch road design, the Sustainable safety vision was leading. A core principle in this vision is that speed limits can be understood intuitively by motorists because of the roadway design. A wider street paved with asphalt rather than bricks, for instance, communicates that one is expected to drive 50 km/h. A redesign would be necessary to reduce the speed to 30 km/h. But this became impossible because of the choice to only implement small measures to roads and to not redesign them. In other words, the choice for a ‘big bang approach’ meant a break with one of the core principles of the Sustainable Safety vision of Dutch road design.

In order to make the plan to reduce speed limits without large scale reconstruction successful, the roadway standards had to be overhauled. There was already some progress in this regard. The knowledge institute CROW, that is concerned with setting road design standards, hinted in 2019 for the creation of a new roadway standard for urban throughfares with a lowered speed limit of 30 km/h (Dijkstra & van Petegem, 2019). In the national parliament, a proposal to set a default speed limit of 30 km/h on all urban roads was accepted (NOS, 2020), although this was put aside by the responsible minister (Ministry for Infrastructure and Water Management, 2023). The former Alderman pleaded together with the other G4⁴ cities of the Netherlands to the national government to update roadway standards such that restrictions to 30 km/h roads such as speedhumps are removed (NOS, 2021). In November of 2021, CROW published their assessment framework for a new roadway standard: the GOW30 (CROW, 2021). Guidelines for provisional designs of the GOW30 standard were published in 2023 (CROW, 2023), and Amsterdam’s planners were involved in the creation of these standards:

There is now a new guideline from CROW. So, you used to always see 2 road categories in the city. So, you had a local access road: a residential street with cobblestones at 30 km/h [ETW30]. And you have the area access road: (...) that is usually asphalt and usually 50 km/h [GOW50]. These were always the 2 guidelines that the Netherlands actually pioneered in the 1990s, where the Netherlands made enormous progress in the field of road safety at the time. And now that we have 30 km/h in the city, the CROW and Amsterdam have jointly created a new road category. That is the area access road 30 [GOW30]. (Project member 3, 2024)

Thus, implementing the 30 km/h city in one go would have been impossible without the creation of the GOW30 roadway standard. It would have meant that all designated roads had to be completely redesigned to meet the ETW30 standards. In that sense, the new GOW30 standard made it possible to avoid this problem. The GOW30 allows for some shortcuts because it is a hybrid between the desired ETW30 and the existing GOW50 that was already present on these roads. “The CROW guideline also simply states it is *not* mandatory that [GOW30] has cobblestones.” (Project member 3, 2024, emphasis added). The CROW guideline was submitted right before the plans were sent to the council. “So, I ran out on the last day to call to get the CROW draft guideline, because I wanted to have that as a base under the traffic decision so I could show that it's not full of hot air.” (Project member 2, 2024).

⁴ The 4 largest cities in the Netherlands: Amsterdam, Rotterdam, the Hague and Utrecht. According to project member 3 (2024), Eindhoven as the 5th largest city also got involved in some of the lobbying efforts.

Project member 1 stated that the planners were aware that the break with the Sustainable Safety principles might have led to a decrease in road safety in some instances, but that this was necessary to set a new standard such that 30 km/h could become the default standard throughout the city. Moreover, whether that risk was acceptable was seen as a political decision:

The moment you are faced with a road safety issue with a specific design, you think: yes, they [the old standards] all arose from extremely logical trains of thought, but at the same time, if you want to break the system by thinking in a different way, then you will also have to dare to let go of this. Because at times, you really make a choice and think yes, there may really be a risk in terms of road safety. Are we willing to take that risk? Well, I think that is ultimately a political decision, so you have to have a discussion about that. (Project member 1, 2024)

4.2.4. The relative late involvement of stakeholders

The project group initially worked on a ‘low profile basis’: “We stayed under the radar for a very long time. Also not to offend anyone” (Project member 2, 2024). It was decided that for the first phase of figuring out what policy alternatives would be available, the group would more or less stick to themselves and only reach out to other stakeholders once there was an initial workable concept.

Well, look, you have an idea, and you have to test that idea against the outside world. As quickly as possible. The moment you think you have a workable idea; it is smart to test it in reality for feasibility in the world. And it's not just the technical feasibility: can it pass the test of all urban interests related to road transport? Then you suddenly make the circle of those involved a lot larger because you just want to have a good inventory of: what are the insights and interests that go with it? (Project member 2, 2024)

Results are unclear exactly when stakeholders were approached by the project group, but according to employees of the Transport Region and public transport agency GVB, this occurred after the project group made an internal decision that the *big bang* approach would be the go-to policy alternative. Only after this decision were other stakeholders involved, which frustrated them: “Yes, we got involved in this far too late. Actually, only after everything had already been decided to apply the big bang method” (Transport Region employee, 2024). Reaching out to other stakeholders once a workable concept has been worked out is not common in transportation planning in Amsterdam, said a member of the Transport Region. According to that employee, the Transport Region is usually involved from the initial start of transportation planning processes, but for this policy process, it was the Transport Region that had to intervene in the policy process because they were not approached by the project group:

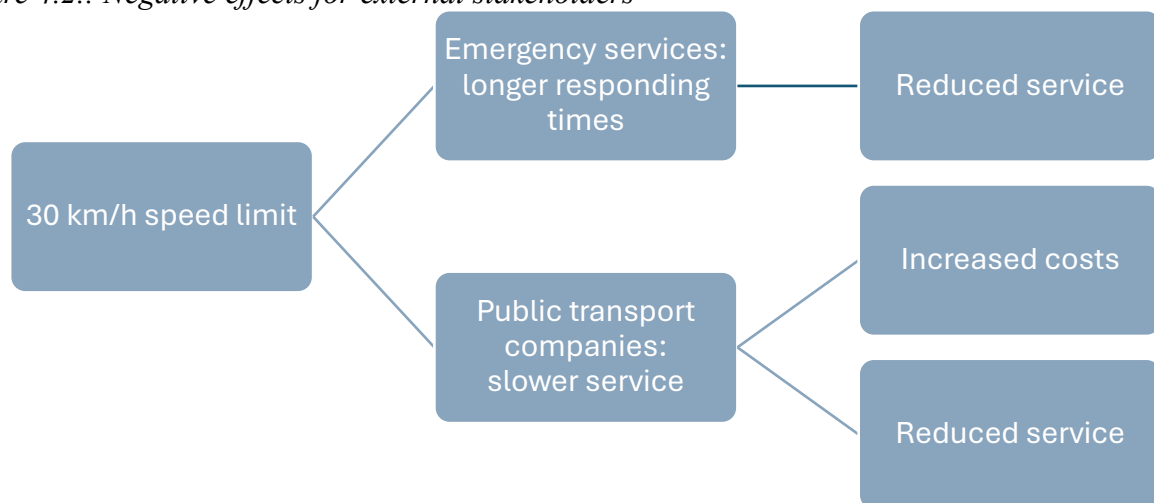
Then we found out: this could have a huge effect on public transport, and we want to find that out first. Because the negative side was not mentioned in the policy-making. It [The policy] only has positive effects, but the negative effects were simply not depicted. We intervened at the time through Amsterdam’s alderman, because in actuality Amsterdam’s alderman also chairs the Transport Region. We then stated: “It's nice and all what Amsterdam is doing, but this is going to have an effect on us, and we want to be involved.” (Transport Region employee, 2024)

A process was started to analyse the negative effects that a 30 km/h speed limit would have on these stakeholders. This was important for the GVB, because they could prove that the 30 km/h city policy had negative effects. Up until that point, it was felt by the GVB employee as if the planning group had not foreseen what the negative effects were for these stakeholders:

In our view, which was the biggest gain from the first phase: we had a shared problem. We had an impact that was not desired. The entirety of the 30 km/h in the city project was presented kind of as the goose that laid the golden eggs, but it included in fact also negative things, such as [the impact on] public transport. And the arrival times of emergency services, for example. (GVB employee, 2024)

The analysis of the negative effects that a 30 km/h speed limit had showed the impact on emergency services and public transport companies. Emergency services are by law allowed to only drive a maximum of 20 km/h above the designated speed limit in the Netherlands, so a 30 km/h speed limit meant that their response times took longer. For public transport companies, service would be slower. To meet the timetable, this would have resulted in an increase in operational costs of at least tens of millions of euros per year. All parties agreed that this was unacceptable and that the negative effects had to be reduced to, if possible, zero. Solutions had to be drafted that would do so, but according to the Transport Region employee (2024), this delayed the project's implementation with a year.

Figure 4.2.: Negative effects for external stakeholders



Source: Own work

The intent was to mitigate all negative effects that a reduced speed limit had on the emergency services and the public transport companies. For the public transport agencies, this meant that all timetable losses would have to be negated. Several measures were proposed. First, speed limits would remain the same as beforehand for light rail lines that have complete segregation from other traffic. Another measure was to create ‘speed differentiations’ on roads that feature dedicated bus/tram lanes (Municipality of Amsterdam, 2021b). While the speed limit is reduced from 50 to 30 km/h, this would only apply to the lanes that are not dedicated to public transportation vehicles. In other words, users of the public transport lanes could still drive at 50 km/h. Such speed differentiations could only be achieved if a raised edge of at least 15 cm wide were to be put in place between the public transport lanes and other traffic lanes. Emergency vehicles would also be allowed to use these ‘fast lanes’ and are allowed to drive up until 70 km/h on these lanes

(Municipality of Amsterdam, 2021b). In other words, the ‘speed differentiations’ measure would kill two birds with one stone: it would benefit the public transport companies as well as the emergency services. This required that curbs were installed on roads where public transport lanes are next to traffic lanes, such that cars would not be able to drive on the public transport lanes. “The tram simply runs at 50 km/h, (...) if it is properly separated from a roadway. That’s when there is a height difference or if there is a curb in-between.” (Transport Region employee, 2024). The trams and busses do, however, also mix with regular traffic lanes on part of the network, so this did not reduce all negative effects: losses would remain at 4.5 million euros for the GVB: “Well that speed differentiation is very important to us. And then there was still about 4.5 million euros left. That is the negative impact annually” (GVB employee, 2024). Another research agency was appointed to further reduce the negative effects by large infrastructural measures such as road cuttings, but it was soon believed that this was unfeasible: “In my opinion, there was far too little support for the ambitious plans that were being made there” (GVB employee, 2024). Especially after the disastrous cutting of the major arterial of Weesperstraat⁵, large interventions became a no-go: “That had such a bad backlash at a political and administrative level because the entire city was in turmoil, that the chance of implementing cuts or traffic filters afterwards became zero” (GVB employee, 2024). It has thus been unsuccessful to completely negate all negative effects for public transport companies.

There was frustration among the GVB and the Transport Region employees, whose backgrounds are in traffic engineering, about the planning process. Not only because of the aforementioned comparatively late involvement, but also on the planning groups ‘big bang’ approach and consequent break with Sustainable Safety principles. Moreover, it was perceived as if the planning group’s reasoning was backwards. As GVB employee (2024) put it:

What we found very annoying was that it was introduced very ruthlessly and in our view as an ill-thought-out plan. The thought was “we’re going to do it all, everywhere at the same time.” And only after that came the thought: “*how* are we going to do that?” And then an assessment framework was devised to justify why everything became 30. No consideration was given to traffic engineering principles: what are we going to make 30? What can we make 30 and what leads to a logical network? Because we are all proud of the Sustainable Safety traffic design principles. (GVB employee, 2024, emphasis added)

To summarize, Amsterdam’s 30 km/h policy is a continuation of its autoluw policies. The primary goal was to increase the road safety, while increasing the urban liveability was seen as a happy side-effect. Increasing road safety was seen as an important and urgent issue, so an ambitious plan had to be created. This was found in what got called the ‘big bang’: an overnight speed limit reduction on 270 kilometres of Amsterdam’s roads to 30 km/h. Doing so made it easier to set a new precedent that 30 km/h would become the default speed limit throughout the city. Changing the road design was not feasible money- and timewise. Instead, small infrastructural measures were taken, but they were not the most important aspect of this plan. Rather, a large communication campaign and the enforcement of the speed limit by speed cameras were seen as a way to make sure that people would adhere to the new speed limit. A consequence of this

⁵ Part of the Agenda Autoluw, the Weesperstraat was per experiment cut for 6 weeks in the summer of 2023. There was a lot of political stunts with this project and several problems got a lot of negative (media) attention. This all put enormous pressure on the alderman for traffic who narrowly survived a censure motion in the municipal council. Since then, cuttings became an unpopular and controversial intervention in Amsterdam (Niemantsverdiel, 2023).

implementation is on its relationship with the Sustainable Safety principles. The roads on which the speed limit was reduced have a design that does not match the – up until then present – ETW30 design. The GOW30 standard was created such that large physical alterations were not necessary, but the road design does not anymore directly explain to its users that this is a 30 km/h road. Rather, there is a reliance on speed signs, a communication strategy and enforcement by authorities. Finally, key stakeholders such as the Transport region and GVB were involved relatively late in the planning process, after the decision for a ‘big bang’ was made. While they did manage to influence the planning process such that speed differentiations were made possible so that they were excepted from the speed limit reduction on some roads, their overall influence was relatively small. Their views on how such a planning process ought to have been was different than how it turned out in practice.

4.3. The policy implementation process

The choices of the policy-making process to focus on a ‘big bang’ plan was a path dependent choice. The inability to do large infrastructural interventions and rather implement relatively small measures such as changing speed signs and applying road markings meant that other measures had to be implemented, such as a strong focus on communication (4.3.1) and on enforcement (4.3.2) They are presented here.

4.3.1. Promoting soft measures: the communication strategy

Changing speed limits by implementing only small infrastructural measures would not be sufficient in making sure that motorists would adhere to the new speed limit. Because there was no budget for larger infrastructural interventions, the focus was put on communicational measures. In fact, “Communication was the most important one” (Project member 3, 2024). The choice to prioritize communication was made to force a changing in Amsterdam’s motorists understanding that 30 km/h was the new default speed limit in the whole of Amsterdam, rather than the previous default speed limit of 50 km/h nationwide. The *big bang* implementation was seen as a way to set a new precedent for motorists, which would uphold that once you enter Amsterdam, you would have to drive 30 km/h, with only some exceptions on particular roads. It was argued that this precedent could only be set if the speed limit were to be reduced on the majority of the road network: “This large scale was chosen to make it clear to people. (...) When you drive into the city here, 30 km/h is the norm. And if you want to create a new norm, you have to do it big” (Project member 4, 2024). Only through communication, it was believed, could this precedent be set. The 30 km/h plan was seen as something different compared to other traffic-related policies: “The most important thing is that this is not a technical problem: ‘does this speed limit fit with this street?’ No. Instead, it is a behavioural problem. ‘Are you prepared to change your behaviour?’” (Former alderman, 2024). Changing peoples’ behaviour was an important goal, and using methods of communication and education were perceived as most effective to achieve such behavioural change. “Our idea is: we make it clear for the motorist. We are rolling it out on a large scale so that it applies to everyone who drives into Amsterdam” (Project member 4, 2024).

Within the wider department, the focus on communicational measures rather than infrastructural measures could sometimes lead to friction, especially to people coming from engineering backgrounds: “[In] such a large house with traffic engineers, traffic managers, people who are responsible for the traffic lights, people who are responsible for the design of the road, people who have an opinion about what a sign should look like.” (Project member 2). Sometimes it was rather difficult to bring others into the story. Some specialists from outside the planning

group initially did not believe that the results from the traffic analysis were accurate, or that people would not adhere to the new speed limit without physical alterations.

In sum, communication as a means to influence that drivers would adhere to a speed limit reduction became an important pillar because of the path-dependent choice for a ‘big bang’ implementation. Because no large-scale physical measures could be taken, it became more important to communicate to the public that this new speed limit was put in place. Various methods were chosen, and a large communication campaign was set up, which reached almost all Amsterdam’s citizens. Communicating alone would, however, not stop malice drivers. The next section is on the enforcement of the 30 km/h speed limit as planned in Amsterdam and its implementation.

4.3.2. How to enforce the 30 km/h city?

Within the planning group, doubts were present whether people would adhere to the speed limit now that the road design is not overhauled: “What I still find difficult about 30 km/h is that it is a very noble plan, but this stands or falls depending on whether people stick to it” (Project member 3, 2024). One way to get people to stick to the new speed limit is by having the police and Public Prosecution Service (OM) enforcing on the new speed limit and filing tickets for speeders. Although the pillar of enforcement was only the third pillar, it was seen as the capstone on the total policy. If the road design does not force people to drive more slowly because the street is originally designed for a 50 km/h speed, enforcement by police becomes the only way to force drivers to keep people to the speed limit.

As the final piece of that whole package, you need enforcement. Almost everyone I tell about what I do says: “Nice that you introduced this, but what are the chances of getting caught?” And if I’m being completely honest, it’s almost zero. And people apparently need a big stick to comply, so enforcement is really the final step. (Project member 4, 2024)

Enforcement is, however, not a municipal task. Rather, the police department and the OM are responsible for these tasks. Only they can decide whether to enforce speed controls or to place speeding cameras on particular roads. This is important, as this means that the project was reliant on external actors for the execution of one of the key pillars. The only option available for the project group was to lobby with these organisations for enforcement measures: “That is the difficult part, because enforcement is an important pillar in the implementation program, but we are not allowed to do the actual enforcement ourselves. We are actually very dependent on the conversation we have with the national government” (Project member 3, 2024). This dependency caused frustration when the OM was unwilling to place speed cameras.

For me that is frustrating because we do what we can. (...) We do what we can. Only the last part that we really need to complete the picture is enforcement. The fact that you don’t have this in your own hand is quite frustrating. As I said: we’re spending millions on this project. I believe a moveable speed camera like the one on our doorstep costs 50 or 60 thousand euros. I would really like to buy a few of those cameras if I could, but that is not allowed. That’s frustrating, yes. (Project member 4)

The lobbying conversations with the police department and the OM were difficult for the project group. Up until the date where Amsterdam’s speed limit reduction policy came in effect, enforcement of speed limits by technological measures did not occur on 30 km/h streets. This came

because all 30 km/h streets were designed according to the ETW30 standard, and the road design naturally enforces motorists to drive more slowly.

These lobbying efforts were difficult. The police department and the OM have a policy to not enforce on roads with a 30 km/h speed limit. They do so, because the Sustainable Safety principles of the CROW stated that up until the creation of the GOW30 standard, road design would enforce the speed limit on 30 km/h roads. The pavement type, the narrowness of the road width, and the low traffic volumes on ETW30 roads made it not necessary to put down speed cameras. The police department and the OM were used to the Sustainable Safety principles and did not comply with Amsterdam's vision of reducing speed limits without major road redesigns. Simply put, they thought Amsterdam's measures to put down updated road signs and markings were not enough, and rather wanted to see more physical alterations. In other words, the people who are responsible for speed limit enforcement wanted to have infrastructural measures to be the leading principle for the setting of speed limits, as has been the case in the Sustainable Safety vision for years. With Amsterdam breaking with this principle, lobbying efforts turned into a stalemate:

In our conversations, the standard answer I have received so far is: "just make sure the road design is in order." They actually think what we do is quite poor, those roadway markings, those signs, those traffic light timing alterations. In their experience, you should have a road with planters, and extra bends, and with cobblestone paving (...) because then you also make it clear to motorists that you have to drive more slowly. And our answer is: "We want that too, if a street is being redesigned, we also want to see if we can add more of those types of elements." But (...) we want to set a standard. We have 270 km and if we did that, we would have to overhaul the whole of Amsterdam. Our idea is: we make it clear for the motorist. We are rolling it out on a large scale so that for everyone who drives into Amsterdam: in principle it is 30 km/h and in some cases, you are allowed 50 km/h. If you do not embrace that principle (...) it will be a very difficult discussion. When you take that step as we have done, you cannot assume that we have completely organized the streets as the OM would prefer. So, we're both kind of stuck in our own trenches. (Project member 4, 2024)

Members of the project group felt as if the OM would eventually had to cave in and would have no other choice than to embrace the enforcement of speed limits on GOW30 roads as speed reductions would grow more popular:

They were a bit reluctant about this from the start, but more and more cities in the Netherlands are switching to 30, so the OM has to. In a few years, I think almost all major cities will have switched to 30. (Project member 3, 2024)

However, in May 2024, 6 months after the speed limit was reduced, it was announced that a pilot project would be initiated to put speeding cameras on some of the roads where the speed limit was reduced from 50 km/h to 30 km/h. In an interview with local news broadcaster AT5, the OM stated that the pilot will initially be of a small scale, because "we do not yet know how many violations this will result in. In addition, we do not know how many people will appeal and what grounds they put forward. It all has to be defensible in court." (Westerduin, 2024). In the article, the OM state that they are installing the speed cameras 6 months after the enactment of the speed limit to "give drivers time to adapt" (Westerduin, 2024), but this is in contrast to the discussions with and described by members of the project group, which stated that the OM were unwilling to cooperate with the project group because they viewed the implemented infrastructural measures

as too slim. As the OM refused to be interviewed for this research, their comments in the news cannot be validated.

In summary, the path dependent choice of a ‘big bang’ implementation and consequential slim margin to implement physical changes made the project more reliant on enforcement by the OM and the police force. At the same time, these last two actors desired more infrastructural measures to be implemented, caused conflicts and complicating discussions. After six months, a small pilot scheme was implemented, but at the time of writing, no large-scale enforcement is present for the new speed limit.

5. Conclusion & Discussion



(Own work, 2024)

Cities around the world are trying to transform the urban environment to make them more habitable and attractive spaces for their citizens. One aspect of this urban transformation movement is the creation of the 30 km/h city. By bringing speed limits down, cities are trying to reduce the negative effects that cars have had on road safety (e.g. Rosén & Sander, 2009) and urban liveability (e.g. Koster et al., 2023; Liang et al., 2022). At the same time, the 30 km/h city is a controversial and political dividing planning concept (e.g. Giuffrida, 2024). Nonetheless, the 30 km/h city is a phenomenon that is gaining more popularity. After other European cities have been implementing such measures, Dutch cities such as Amsterdam have been creating plans to bring this concept to their cities.

The 30 km/h city has in literature mostly been analysed through quantitative methods, focussing on the effects of plans regarding safety and urban liveability. Qualitative research that focusses on the planning and implementation of 30 km/h plans is, like for the majority of transport planning research, an under researched area (Marsden & Reardon, 2017). As the reduction of speed limits is a planning issue where the public, politicians and planners have dividing views and opinions on (Svensson et al., 2014), it is important to consider how such views and opinions influence the planning and implementation of such plans. The theory of planning cultures was used to analyse the impact of these factors, as this theory focusses on how cultural aspects such as shared values and beliefs impact planning (Knieling & Othengrafen, 2009; Othengrafen, 2023). The aim of this thesis was therefore to combine these givens to analyse how the planning culture impacted the planning and implementation of the 30 km/h city, and Amsterdam's 30 km/h in the city project was chosen as a case study. Empirical data was gathered using interviews with a political figure, members of the planning group, and external stakeholders. Moreover, policy documents have been analysed and theoretical information was gathered. Three sub questions were constructed to guide the thesis. The following section aims to answer these questions, as well as the central question of this research. Finally, section 6.2 discusses the recommendations for future research.

5.1. Responding to the research questions

5.1.1. Sub question 1: What is the planning culture of the 30 km/h city?

The first sub question in this thesis was on the planning culture that was present in the planning of Amsterdam's *30 km/h in the city* policy. The results show that culture-wise, there were different views on the 30 km/h city between the political leaders and members of the planning group on the one hand, and key stakeholders such as the Transport Region, GVB, and the OM, on the other. While the goals of the plans to improve road safety and urban liveability were shared by all, there were different views on the planning and implementation of this project.

The 30 km/h in the city project was spearheaded because of a motion in the city council that demanded that a plan was created such that the vast majority of roads would become 30 km/h, and thus had political backing. The councilmembers' motion particularly stressed that the plan should attain an increase in road safety and urban liveability. The interviews with members of the planning group revealed that they felt an urge among politicians and civil servants to quickly realize this. This is partially in line with the findings of Svensson et al. (2014), who found that planners tended to value safety highly, but did not find such views among politicians. Instead, they found that politicians' views of prioritizing throughput for economic gains, but such views have not been found in this research. Planning cultures are however known to be dependent to the local circumstances (Knieling & Othengrafen, 2009), so that could explain this discrepancy.

A reason for this is that a speed limit reduction to 30 km/h could mitigate the negative effects caused by cars such that road safety and urban liveability would be quickly improved. There was

a great sense of urgency to quickly mitigate the negative effects of car related harm. It was unacceptable for members of the project group that people were – in their views – unnecessarily getting killed and injured because people need to drive quickly through the city. Doing nothing or progressing slowly to resolve this issue was not an option for the project group. It was important to move quickly, such that the desired effects of less car related harm could be achieved on a short term. A precedent had to be set such that 30 km/h would become the default speed limit. According to members of the project group, this could only be achieved if a quick, city-wide implementation were introduced.

The key stakeholders had different views on the planning and implementation of the plans, as they expected that the 30 km/h in the city project would have been along the historically usual way of planning. This means a planning process based on the polder method as a governance method. The Polder method as a governance method is part of the Dutch planning culture and is based on cultural factors such as consensus-building and equality among stakeholders. All stakeholders expect to be involved early in the planning process to provide their views and insights on the planning issues, such that they have the opportunity to secure their interests at an early stage. Moreover, the key stakeholders expected the 30 km/h city to be planned based on the principles of the Sustainable Safety vision of the SWOV and the guidelines of the CROW, which has formed the basis of Dutch road planning for over two decades. This vision states among other things that the road design should be the leading principle in speed limit setting and that the speed limit needs to be self explanatory to drivers because of the road design. Although Amsterdam's plans complied to the new GOW30 roadway standard, it did not meet the stakeholders' historical expectation that the speed limit follows as self-explanatory from the roadway designs. In their view, a speed limit reduction could thus only be realized if the road designs would be drastically overhauled.

5.1.2. Sub question 2: What did the policy-making process look like for the 30 km/h city?

The second sub question of this thesis was on the policy-making process. In the initial planning phase, several stakeholders were not involved in the planning process of Amsterdam's *30 km/h in the city* project. This was contrary to the common way of planning and contrasted with the more open and cooperative planning nature that characterizes the usual Dutch planning culture. During this initial phase of the planning phase, a path-dependent choice was made to go for a quick and city-wide implementation that got internally called the *big bang* approach. This approach was preferred by the planners for a couple of reasons; primarily that it was foreseen as an implementation that could achieve a reduction of fatal and non-fatal accidents, as well as realizing the side benefits of increased urban liveability on a short-term basis. Another reason was that a city-wide speed limit reduction to 30 km/h on the vast majority of roads would help in setting the 30 km/h speed limit as a new precedent for drivers. The approach, it was argued, made it clear to drivers that they were expected to drive 30 km/h on all streets in Amsterdam. Lastly, a 'big bang' implementation meant that the planning process could be sped up. By combining the speed limit reduction on all roads meant that in essence only one legal traffic decision had to be approved by the city council, rather than that for each road a new legal process had to be undertaken.

Key stakeholders such as the Transport region, GVB and the OM were involved in the planning process after the *big bang* approach was chosen as a starting point. This caused some frustration among those working for these agencies, as this was in contrast to the usual way of planning where key stakeholders are involved at an earlier stage of the planning process. Their influence on the plan's implementation was therefore reduced. Still, they managed to make some alterations such

that speed differentiations for public transport and emergency vehicles could be incorporated, but it was impossible to negate all negative effects. The problematic implementation of the Weesperstraat cutting also reduced political will to implement drastic infrastructural measures, further complicating the possibility of negating the negative effects.

5.1.3. Sub question 3: What did the policy implementation process look like for the 30 km/h city?

The final sub question is on the policy-implementation process. The path-dependent choice for a “everything everywhere at the same time” approach had far-reaching consequences. While the 30 km/h speed limit was going to be applied on the vast majority of Amsterdam’s roads, there were no funds to reconstruct these roads such that cars would be slowed down by the road design. In other words, Amsterdam’s 30 km/h in the city plans broke with the traditional Sustainable Safety principles. There was already momentum at SWOV and CROW to design a new roadway standard that would fit in between the up until then common ETW30 and GOW50 standards, and so, Amsterdam’s planners collaborated with the CROW to create this new GOW30 standard. This new standard would form the basis for the speed limit reductions, but this new standard did not require major road reconstruction and the installation of speed reduction measures. Because the road design was not the leading factor anymore in the determination of the speed limit, the importance of infrastructural measures was reduced. Instead, communication and enforcement became the most important factors that had to make sure that drivers adhered to the newly reduced speed limit.

A lot of effort was spent on the communication campaign. Citizens were informed via billboard campaigns and other media outlets, and nearly all Amsterdam’s citizens have seen the campaign. Moreover, efforts were put on teaching new drivers and highschoolers that 30 km/h was becoming the default speed limit in the city. Furthermore, visiting drivers were informed when entering the city. Thus, drivers must have been fully aware of the new speed limit.

However, given that major road redesigns were not a possibility because of the choice for an overnight city-wide implementation, nothing was physically stopping drivers from speeding. Therefore, enforcement was a crucial part of the plan to make sure that drivers adhered to the new default speed limit. As speed limit enforcement is not a municipal task, the project group relied on other stakeholders to execute this important section of the plan, being the OM and the police force. This reliance would have been no problem if these actors agreed with the plan, but this proved to be difficult, as the OM expected that, per Sustainable Safety principles, the road design would have been majorly redesigned before a speed limit reduction was to be put in place. This unequal relationship meant that members of the project group could do little more than trying to convince the OM and the police enforce the speed limit, as there was no possibility for the municipality to take this fundamental piece of the 30 km/h in the city policy in its own hands. Ultimately it was six months after the new speed limits went live that a small-scale pilot project was to be set up such that speeding cameras were going to be placed on roads with a reduced speed limit. Although this pilot was a step in favour of the plan’s goals, it remains to be seen how much impact this pilot will have on the effectiveness of the new speed limit.

The choice for an approach light on infrastructural measures does not match with quantitative research on the 30 km/h city. Literature has shown that applying small infrastructural measures is not an effective way to reduce driving speeds, because people can relatively easily ignore the speed limit (Anderson et al., 2022; Fitzpatrick et al., 2001; Godley et al., 2004; SWOV, 2018b). As the policy has not been reviewed at the time of writing, it remains to be seen how effective Amsterdam’s policy has been in achieving its goals.

5.1.4. Central question: How does the planning culture shape the policy of the 30 km/h city, from plan-making to implementation?

This thesis has been concerned with the relationship between planning culture, plan-making and implementation of the 30 km/h city, and Amsterdam's 30 km/h in the city plan was used as a case study. The central question was the following: **How does the planning culture shape the policy of the 30 km/h city, from plan-making to implementation?** The following paragraphs are dedicated to discussing this question.

In Amsterdam, this project was initialised by a motion of three councilmembers in January 2020 and finished with the speed limit going live on 270 kilometres through the city in December 2023. The fact that this process took little under 4 years to complete is a remarkable achievement. The planning culture that was present in the planning organization is one of the reasons why this succeeded. The results have shown that members of the planning group, the alderman and the political members all shared the views and opinions that the problems caused by car-related harm such as injuries, killings, pollution, and space requirements are not only problematic, but also so urgent that it was important to act quickly. The views that car-related harm is a big problem that needed to be dealt with was already present in the planning organization and the political leadership of the municipality of Amsterdam, but these views have been strengthened during the planning process. This is in line with Wolff's (2020) findings in their research on planning cultures, as, according to them, the culture harmonizes during the planning process such that actors share the same basic principles.

At the same time, however, the culture did not harmonize with external actors. The results show that such stakeholders did not share the same visions and beliefs as the planning organization. While these external actors agreed that road safety and urban liveability were problems that needed to be addressed, they did not share the urgency of the planning organization and the political actors such that drastic planning measures had to be taken, and preferred to stick with the planning culture as it used to exist before this project. The difficulties that arose in the discussions between planners and stakeholders relate back to these differences in the views that the people representing these parties have had on the planning culture of this planning issue. Hanssen's (2011) finding that a cultural divide can either cut off or bring actors together if they do not have a shared culture are a better fit with the findings of this thesis, but as the plan succeeded and external stakeholders agreed with the plans in the end, we cannot say that they were cut off completely. The cultural divide between these actors did not bring them together but caused them to dig trenches and defend their own views.

The planning culture has had a big influence on the decisions that were made during the planning phase of Amsterdam's 30 km/h in the city policy, foremost on the implementation choice. Because the issue was perceived as an urgent matter that needed to be addressed quickly, a large-scale implementation in a short period of time was seen as the go-to policy. In contrast to an incremental implementation that followed the usual way of reducing speed limits once a road was redesigned, the quick, large-scale implementation meant that, if successful, the benefits could be achieved as soon as the new speed limit was put in place. On the contrary, it would have taken decades before which the results of an incremental approach would have been visible. The implementation choice thus made full sense based on the outlook of the planning group.

On the other hand, since the external stakeholders only were involved in the planning after the key decision on this implementation choice was already made, an opportunity to take in different outlooks on this issue was missed. Including these actors relatively late contrasts with the common way of planning in the Netherlands which is built on ideas of cooperation. Although in a later stage

these actors were able to assert their thoughts and needs on the project, their impact was smaller compared to a more traditional method of planning where these actors would be engaged earlier in the process. This, again, shows how the different planning cultures have influenced the planning choices.

It is impossible to conclude based on the findings whether the choice to involve the external stakeholders relatively late was deliberately made to reduce their impact on the planning process. However, the friction that this caused is still part of the planning culture, as it hampered the planning process. Moreover, whether the choice to engage the external stakeholders in a later stage of the planning process was deliberate or not, it shows that, in line with the findings of Vigar (2017), transportation planning issues such as the 30 km/h city are still dominated by more top-down approaches rather than cooperative planning methods.

The impact of the planning culture on the implementation process is difficult to determine. The implementation process of Amsterdam's 30 km/h in the city policy was predominantly determined by the policy choices that were made in the planning process. The choice for a *big bang* approach shifted the implementation's priority from an approach based on infrastructure measures to make the speed limit 'self-explanatory' to its users because of road redesigns towards an approach based on an extensive communication strategy and reliant on the enforcement by police and the public prosecution service. Contrasting views on the implementation showed up in this process, with the OM and planning group not sharing the same planning visions. Whereas that during the discussions with the Transport region and GVB, it was the planning group that held most power, the public prosecution service had most leverage over the discussions whether to enforce the new speed limit and the installation of speed cameras, because they are the only body that legally is allowed to enforce the speed limits. Although the OM, Transport region and GVB all shared the same views that speed limit reductions should follow after a road design change based on Sustainable Safety principles, it was only in the discussions with the OM that the planning group could not continue as planned. This comes because of the different power dynamics between these actors, and they show that the planning culture impacts not only the planning but also the implementation process.

Despite the difficulties in their discussions to convince the OM, the planners' task to create a plan to realize a quick implementation, such that a 30 km/h speed limit became the default speed limit and 50 km/h the exception, was realized in a short timeframe. Although the culture did not harmonize among all involved stakeholders, it was the outlook that a speed limit reduction was an urgent matter that needed to be solved quickly was the most successful view in the planning culture. It was this view that was shared among the planning group members that has shaped how the planning process and implementation came to be, and it can be argued that if this view was not dominant, certain planning- and implementation choices would not have been taken.

This research has shown that planning cultures have shaped the planning process as well as the implementation of the 30 km/h city in Amsterdam. In line with literature on planning cultures, this research has showed that it is not only the legal planning methods and rational thinking that decides how a plan is created and implemented, but also the views, opinions, informal agreements and power dynamics decide how the planning process pencils out.

While this research has been concerned with the planning culture and how this has influenced Amsterdam's 30 km/h in the city policy and the policy decisions that were taken in the planning of this project, we cannot say whether this plan has been successful or not. Amsterdam's plan has taken some, for Dutch standards, unorthodox measures, such as the step away from an approach where infrastructure is leading. The planning choice to focus instead on communication strategies and enforcement – with the latter only getting implemented on a small scale after the speed limit was put in place for 6 months – have, at the moment of writing, not yet been analysed. Thus, we

don't know whether this different approach has been successful in achieving the desired reduction in traffic speeds, injury rates as well as improving the urban liveability. If they are, there is a lot of potential to attain relatively cheap, simple and quick a speed limit reduction in many more cities. The alternative is that it might be better to keep with the common way of planning and only update speed limits after a road is redesigned.

5.2. Further research

One important group of actors has not been involved in this research, being the citizens of Amsterdam. Although their responses have been taken into account by the planning group via the means of a public consultation process, it is unknown how they have perceived the planning process and in what way they have been part of the planning culture. As the 30 km/h city is being implemented in more cities each year, an analysis of citizens roles within the planning culture can bring new insights into the research on 30 km/h cities.

Another avenue for future research would be to analyse in what way citizens are involved in planning of the 30 km/h city. The case of Amsterdam has shown that at least citizens have been able to give their opinions on the plans via the public consultation process, but since scholars such as Vigar (2017) have criticized the transportation profession as a planning field that is still dominated by top down planning and called for more cooperative planning methods to be used in transportation planning, it would be of interest to see whether this is also the case for the planning of the 30 km/h city.

Another suggestion is to analyse how spatial context has an impact on the planning cultures. This could be achieved by comparing multiple case studies on the planning of the 30 km/h city in different contexts. Knieling & Othengrafen (2009) state planning culture has, similar to other cultures, a spatial dimension. This research has only been concerned with a single case study. It would, however, be of great interest to see whether, and if so, in what way, planning cultures differ on a spatial basis.

6. References



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Appendix A: Interview guide

Introduction

Hello, thank you for participating in this interview. The interview focuses on the development of the '30 km/h in the city' policy that you contributed to. To begin with, I would like to inform you that this interview is without obligation, and if desired you can opt out of the interview at any time. If you wish, your answers can be anonymized. Do you agree that the interview will be recorded? The recording will not be listened to by anyone other than myself, and only serves the transcription process. If you agree, I will start the recording.

Part 1: Practical information

- 1) To start, would you please describe your role in the development of the '30 km/h in the city' policy?
- 2) How did you get involved in the development of the policy?

Part 2: Planning culture

- 3) What are the primary goals of the policy?
 - a. Did all actors share these goals? Right from the start?
 - b. How did the discussions on this took place?
- 4) Could you describe how the '30 km/h in the city' policy came about?
 - a. Which actors and organizations were involved in the planning process?
 - b. How were citizens involved in the planning process?
 - c. How did the planning process take place?
 - d. What were points of agreement and disagreement?
 - e. How were decisions taken?
 - f. How are different opinions accommodated?
- 5) Can you describe the power dynamic within the planning organization?
 - a. How did the organization deal with actors in this respect?

Part 3: Political context

- 6) What were the positions of the different political parties?
 - a. How did they attempt and managed to influence the process?
- 7) Speed reductions can be a politically controversial subject (also parliamentary questions from NSC, PVV, DENK, VVD). How did your team deal with that?
- 8) A point of criticism from politicians is that Amsterdam has chosen to adjust the speed once, without necessarily thoroughly redesigning roads. What do you think of this criticism?
- 9) Why is it that Amsterdam, unlike other European cities, is quite late in choosing 30 km/h?

Part 4: Worldviews and opinions

- 10) How do you see the role of the planner in a planning process?
 - a. How should a planner weigh the different needs of all stakeholders?
- 11) How do you personally view the role of the car in the city?
 - a. Has your view on the role of the car in the city changed during this project?
 - b. How have this view influenced the decision-making process?

Appendix B: Coding scheme

- Planning culture
 - Individual values
 - Cars have a negative influence on the city
 - Cars have a positive influence on the city
 - Cars are here to stay
 - Dealing with opposing views
 - Prioritization of other mobility modes
 - Role of planner
 - Safety and liveability should be prioritized
 - Difficulties during the planning process
 - Negative impacts were not foreseen
 - Results were doubted
 - Slow decision-making
 - Learning & Cooperating
 - Cooperating with other cities
 - Learning from mistakes
 - Planning organisation
 - Discussion within planning group
 - Group structure
 - Shared values
 - Working method
 - Politics
 - Bargaining for support
 - Importance of enforcement
 - Motion from council
 - No opposition
 - Support from green parties
 - Power & Influence
 - Disagreements over goals
 - Granting power as a value judgement
 - Negative feedback from (social) media
 - Public Transport & emergency services gaining importance
 - Sharing goals
 - Supra-regional importance of certain stakeholders
 - Surprised by amount of media attention
 - Unexpected positive media attention
 - Stakeholders
 - Compensating & mitigating negative effects
 - Does not match with previous road guidelines
 - Key stakeholders were involved relatively late
 - Proposed solutions were not feasible
 - Stakeholder management

- The project
 - Goals and effects
 - Change behaviour and set a new standard
 - Increase road safety
 - Increase urban liveability
 - Keep it possible to retain cars in the city
 - Reduce car usage
 - Urgency
 - Implementation
 - Reasons for a big bang implementation
 - Implementation choices
 - Informing politicians and stakeholders
 - Pillar 1: Communication
 - Pillar 2: Infrastructure
 - Pillar 3: Enforcement
 - Pillar 4: Intelligent Speed Adaptation
 - Part of a transition movement
 - Problems
 - Analysing negative effects delayed the project
 - Delayed work due to weather
 - Dependency on other actors
 - Different viewpoints make lobbying difficult
 - Weesperstraat cutting
 - Regulation and guidelines are outdated
 - Road guidelines
 - (No) support
 - Hasty policy
 - Non-credible
 - Not based on traffic-engineering principles
 - Not well thought through
 - Positive reactions
 - Responses were expected
 - Unfounded criticisms