Vision Zero in Sweden: Streaming Through Problems, Politics, and Policies

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Abstract

In 1997, the Riksdag, the Swedish Parliament, adopted Vision Zero as a new goal and strategy for road safety in Sweden (Swedish Government 1997). In the more than 20 years since the Vision Zero policy was adopted, it has spread internationally as a model of a public road safety policy (OECD/ITF 2008, 2016; World Health Organization 2017). It is not only in the transport sector that Vision Zero has attracted interest; it has also spread and continues to spread to other sectors of

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Swedish society such as fire safety, patient safety, occupational accidents, and suicide (Kristianssen et al. 2018). Although, road safety policies and strategies can be developed and adopted by a variety of actors at different levels in the society in a democracy, parliaments have a special position, and it establishes an exclusive legitimacy in the society. According to the Swedish Constitution (Swedish Parliament 2016), all public power proceeds from the people, and the Riksdag (the Swedish Parliament) is the foremost representative of the people. Therefore, this chapter focuses on the Swedish Parliament and the Swedish Government and how road safety, as a public policy, finds its way into public agenda in a competing political environment. The decision to adopt Vision Zero in Sweden was a rather radical change (Belin et al. 2011) of that time safety policy. This chapter examines the political decision-making process that preceded the decision by the Swedish Parliament to adopt the Vision Zero policy in 1997 (Swedish Parliament 1997) and the decision to re-evaluate Vision Zero in 2004 (Swedish Parliament 2004).

Keywords

Road safety · Public policy · Implementation · Public policy process · Sweden · Garbage can

Introduction

In 1997, the Riksdag, the Swedish Parliament, adopted Vision Zero as a new goal and strategy for road safety in Sweden (Swedish Government 1997). In the more than 20 years since the Vision Zero policy was adopted, it has spread internationally as a model of a public road safety policy (OECD/ITF 2008, 2016; World Health Organization 2017). It is not only in the transport sector that Vision Zero has attracted interest; it has also spread and continues to spread to other sectors of Swedish society such as fire safety, patient safety, occupational accidents, and suicide (Kristianssen et al. 2018). Although, road safety policies and strategies can be developed and adopted by a variety of actors at different levels in the society in a democracy, parliaments have a special position, and it establishes an exclusive legitimacy in the society. According to the Swedish Constitution (Swedish Parliament 2016), all public power proceeds from the people, and the Riksdag (the Swedish Parliament) is the foremost representative of the people. Therefore, this chapter focuses on the Swedish Parliament and the Swedish Government and how road safety, as a public policy, finds its way into public agenda in a competing political environment. The decision to adopt Vision Zero in Sweden was a rather radical change (Belin et al. 2011) of that time safety policy. This chapter examines the political decision-making process that preceded the decision by the Swedish Parliament to adopt the Vision Zero policy in 1997 (Swedish Parliament 1997) and the decision to re-evaluate Vision Zero in 2004 (Swedish Parliament 2004).

Theoretical Considerations on Agenda Setting

Public health experts in general and road safety experts specifically by nature look favorably on a rational comprehensive approach to public policies and public policy processes (Sleet et al. 2003; Elvik et al. 2009; Bugeja et al. 2011), at least from a normative perspective. Therefore, based on this rational view, experts have a tendency to mistrust public policy process and see them more or less as irrational. On the other hand, practitioners often highlight policy processes as incremental to its nature. In contrast to the comprehensive approach, scholars such as Lindblom (1959, 1979) praise incrementalism both a good description of reality and something to strive for. In 1984, the first edition of Professor John W. Kingdon's famous book *Agendas, Alternatives, and Public Policies* (Kingdon 1995) was published. Its theoretical starting point challenged both the rational and the incremental approach to public policies. In this book, a policy stream model is described, which could be applied to analyze and explain public agenda setting in our society. According to Kingdon (1995, 2003), a public policy process in the society is rather chaotic in its nature, and the work of the governments could appear as organized anarchy, and by this statement he joined what was referred to as the "garbage can" perspective on public policies (Cohen et al. 1972). Kingdon (1995, 2003) emphasized *organized* because public policy processes are not only total chaos; on the contrary, it still has structure and patterns. Separate streams run, and each has a life of its own. Three major streams –problems, policies, and politics – are coupled at critical junctures and produce changes in agenda. First, according to the model, various problems capture the attention of people in and around the Government, and there are various different reasons how and why one set of problems rather than another comes to the attention of public officials. Secondly, there is a policy community with a wide range of people who each have their own ideas that they want to promote. Thirdly, the political stream is composed of factors like swings of national moods, public opinion, elections results, and changes of administration, which might result in shifts in partisan or ideological distribution. People, such as politicians, bureaucrats, experts, and those involved in interest groups or media businesses, among others, are all involved in the different processes and could both push for changes or work against changes. However, the policy entrepreneurs, advocates who are willing to invest time and efforts, play a crucial role both within different streams and also in moments of coupling. According to the model, the three different streams develop and operate largely independent of one another; however, sometimes these streams come tighter at critical times, and a window of opportunity opens. A problem is recognized, a solution is on the table, and the political climate makes the time right for change, and the constraints do not prevent things to happen. Based on the stream model, in this chapter, the problem-, politics-, and policy-stream and how they are joint together in two different Vision Zero cases (Fig. 1).

Fig. 1 Summary of actors and processes in a public policy process

Multiple Streams Leading to the Adoption of Vision Zero, Adopted by the Swedish Parliament in 1997

Sweden has a long-standing tradition of managing the public road safety with the support of overall goals rather than detailed instructions to public authorities and via governmental regulations (Belin et al. 2010, 2014). Already in 1982 the Swedish Parliament decided to adopt goals for road safety (Swedish Parliament 1982). These goals were in effect for 15 years, until they were replaced by Vision Zero (Swedish Parliament 1997); see Table 1.

The goals adopted in 1982 were largely based on a socioeconomic framework. The total number of people killed and injured indicates that an increased number of fatalities could, in theory, be compensated by a reduction of injured. In other words, these goals could lead to an emphasis on interventions that aim to reduce less complicated injuries rather than to interventions which could save a fewer lives. The last two goals were focused on vulnerable road users and were aiming at fair and equal safety among all different road users.

The Logic and Approach of Vision Zero

In order to identify, analyze, and explore different public road safety policies between countries, cities, sectors, and changes over time, one might need a method which uses a model for a schematic view over reality and where the real world complexity is reduced and made more comprehensible. In social science these models, the ideal type (or pure type) is closely associated with sociologist Max Weber (https://en.wikipedia.org/wiki/Ideal_type) and has been used in many different settings (e.g., Vedung 2021) but also to analyze Vision Zero (Belin 2011; Kristianssen 2018). Vision Zero differs from a traditional road safety policy in a number of ways. A more traditional approach to people killed and seriously injured as a consequence of road traffic accidents has been the utilitarian philosophical approach (Bowen 2012; Belin 2012). Utilitarianism, as it has come to be applied

Table 1 Road safety goals. (Adopted by the Swedish Parliament 1982, 1997)

	1982	1997
Overall goals	The total number of people killed and injured in traffic should steadily decline	No-one shall be killed or seriously injured as a consequence of accidents in road traffic. The design and function of the road transport system shall be adapted to meet the requirements that follow from Vision Zero
	The risk of being killed or injured in traffic should be steadily reduced for all categories of road users	
	The risk of being killed or injured in traffic should be reduced to a greater extent for vulnerable road users than for protected road users	
	Particular attention should be paid to the problems faced by children	

within the road traffic sector, means that safety has to be weighed against other types of benefits. In theory, and to a large extent in practice, this approach means that those killed and seriously injured are a price that society simply has to pay for the mobility of the road transport system and that there are an acceptable number of deaths and serious injuries. Safety is to be gradually improved, but only to the extent that is socioeconomically advantageous. In addition, to a large extent the traditional road safety work is based on the fact that people are willing to take risks and that it is simply part of human nature. The long-term objective of Vision Zero is to establish a road transport system in which nobody is killed or seriously injured as the result of a traffic accident. Thus, Vision Zero aims in the long term to create a safe road transport system.

The justification for this absolute and uncompromising attitude is what moral philosophy would attribute to deontological ethics (Bowen 2012; Belin 2012), i.e., it should not be inevitable that anyone would be killed or seriously injured when moving via the transport system from Point A to Point B. Road transportation can be regarded as a type of transport production. The same as a society cannot accept people killing or seriously injuring themselves as a consequence of producing goods and services within industry, Vision Zero finds it unacceptable when transportation is produced. According to Vision Zero, mobility is therefore subordinate to safety, at least over the long term. If it is impossible to create a safe system, it should inexorably have consequences for mobility. Furthermore, Vision Zero is based on the fact that people do not want to die or be seriously injured as the result of a road traffic accident, and therefore each person has his or her own Vision Zero. Vision Zero and the traditional safety policy thus differ from each other when it comes to what is the long-term objective of the safety work and its normative ethical fundamentals.

Knowledge based on investigations of actual traffic accidents that answer questions about why accidents happen points sharply in the direction of the fact that it is

the individual transport user who is the missing link in the road transport system. To a significant extent, the traditional road safety activities are based on behavioral science research which draws the conclusion that 90% of all road traffic accidents can be explained by a human factor (Evans 2004). In the traditional safety work, the principal challenge is to prevent conscious and subconscious faulty human action. As a basic starting point, Vision Zero instead accepts that human beings make conscious and subconscious mistakes, which is why accidents occur, and that the safety work primarily must be directed at those factors which can prevent accidents leading to death or serious injury. Accidents in and of themselves can be accepted, but not their serious consequences.

According to Vision Zero, the principal cause as to why people die or are seriously injured is that the kinetic energy to which people are exposed in a traffic accident is excessive in relation to the energy that the human body can withstand. Vision Zero is based on among other things the research that the well-known American road safety expert William Haddon conducted in the 1960s (Haddon 1968, 1980). Knowledge about energy forces and tolerance has largely served as a basis for the development of the passive safety characteristics of vehicles and for the development of different protection systems such as child safety seats, helmets, seat belts, etc. One important consequence of the adoption of Vision Zero as a public policy is that scientific knowledge about kinetic energy, which has served as a very important basis for the development of a sub-component in the road transport system, namely, the vehicle, also has become a general principle for the entire road transport system and its components.

In the traditional safety work, ultimate responsibility for safety rests with the individual. According to the traditional view, it is the individual road user who ultimately controls and manages the risks that may occur when travelling on the road transport system. The regulations surrounding the road transport system are clear and unambiguous on this point. If a road traffic accident occurs, it is possible in most cases to hold a certain identifiable road user liable for the deficient observance of regulations. Even if, for example, a road authority has made a mistake in the design of a road, it is the responsibility of the road user, via the general requirements for caution that are built into the traffic legislation, to provide compensation via his/her behavior for such road deficits. According to Vision Zero, it is not the individual road user who has the ultimate responsibility, but rather that falls upon the system designers. The responsibility for safety is thus split between the road users and the system designers (i.e., infrastructure builders and administrators, the vehicle industry, the haulage sector, taxi companies, and all the organizations that use the road transport system professionally), on the basis of the principles that:

- The system designers have ultimate responsibility for the design, upkeep, and use of the road transport system and thus are responsible for the level of safety for the entire system
- As before, the road users are still responsible for showing consideration, judgment, and responsibility in traffic and for complying with the traffic regulations

- If the road users do not adequately assume their share of the responsibility, for example, due to a lack of knowledge or skill, or if personal injuries occur or risk occurring for other reasons, the system designers must take additional further measures to prevent people being killed or seriously injured

In Vision Zero, the responsibility for safety is a chain of responsibility that both begins and ends with the system designers.

To a large extent, traditional safety work is based on the notion that individuals and the society largely speaking do not ask for safety. There are other values that that are given a higher priority, such as accessibility. Traditional traffic safety strategies are thus based to a large extent on the "unwilling road user" who must be forced into giving consideration to safety. Vision Zero is instead based on individuals and society demanding and requiring safety. The basic starting point of this policy is that everyone has their own "personal vision zero." The fact that people sometimes act as though they do not need or require safety has, according to Vision Zero, rather more to do with inability, ignorance, and a lack of social support than a lack of will or need.

Problem Stream

In order to understand the context in which Vision Zero was originally developed from, we need to look back historically on the road traffic injury trends in Sweden. After World War II, Sweden experienced tremendous economic growth, along with fast motorization and urbanization. The popularity of the automobile took off, and the road transport system was developing rapidly. Unfortunately, there was also a negative side to this development: the greater the volume of motor traffic, the more people were killed and seriously injured in traffic accidents. In 1964, Sweden had 17 fatalities per 100,000 inhabitants annually on the roads. This is similar to the average number for what the whole world is facing nowadays: 18.3 fatalities per 100,000 inhabitants (according to the World Health Organization's estimations (WHO 2018)).

The situation during the 1950s and 1960s was unacceptable, and it correlated poorly with the modern welfare state that was beginning to take form and especially among the medical professionals; there was a growing frustration and a growing demand for measures to be taken. Parallel with this growing awareness of the need to do more to reduce road traffic injuries, the Swedish Government prepared a rather unique reform, namely, the transfer of the road traffic from left-hand traffic (LHT) to right-hand traffic (RHT) (1954 Års Kommitté för Utredning om Högertrafik 1954).

The rationale for this reform was that Sweden's Scandinavian neighbors were driving on the right side of the road as was most of Europe. Furthermore, most Swedish cars also had left-hand steering. However, there was a strong public opinion against this reform, and the public argued that a change from left-hand traffic to right-hand traffic could increase the number of road traffic injuries even more (1954

Års Kommitté för Utredning om Högertrafik 1954). However, the Swedish Government decided to adopt the reform (Swedish Parliament 1963), but in order to react on these public fears and to make sure that the reform could be carried out without increasing the number of road traffic injuries, the Government set up a special organization, "Högertrafik Kommissionen" (Commission to Study Right Hand Traffic) (Swedish Government 1963). This commission consisted of several experts within different areas of expertise such as road, human factor, and vehicle design. The commission planned and implemented massive informational campaigns before and during the change in 1967, and the reform was a great success. Figure 2 shows that the change was successful from a road safety perspective. Instead of increasing the road traffic deaths, which had been the worst fear among critics of the reform, the number of deaths in road traffic decreased the next year; however, in the years that followed, the number went up again.

However, during the middle of the 1960s, a seed had been sown for a comprehensive and systematic road safety work through Ralph Nader's book *Unsafe at Any Speed* (Nader 1965). In the United States, this book contributed to spur the passage of the National Traffic and Motor Vehicle Safety Act in 1966 and the creation of several predecessor agencies which would eventually become the NHTSA, the US National Highway Traffic Safety Administration (Graham 1989). This book played a similar role for the road safety movement as what Rachel Carson's book *Silent Spring* played for the environmental movement (Carson 1962).

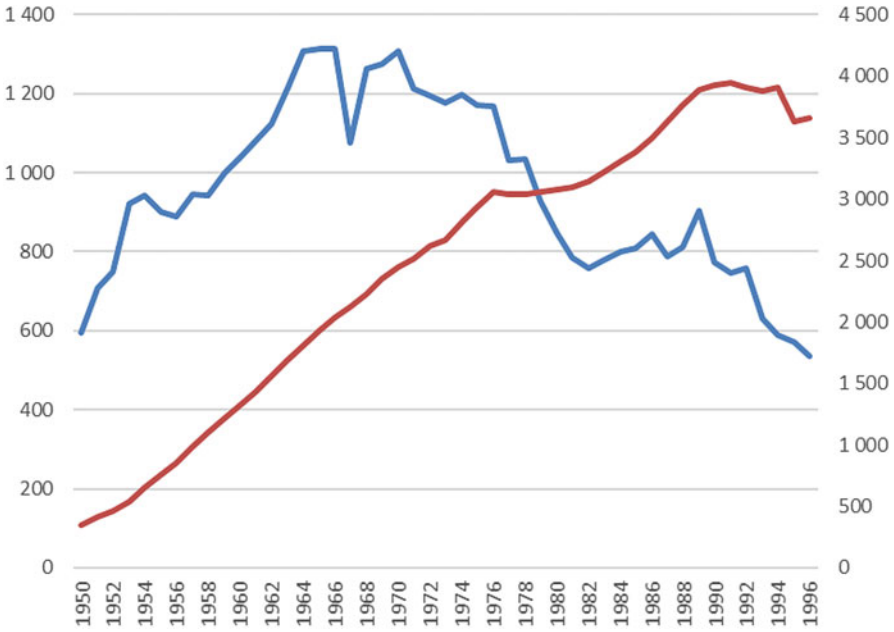

Fig. 2 The number of killed persons in road traffic accidents and the number of passenger cars per thousand inhabitants 1950–1996 in Sweden

Around the same time, a former Swedish Prime Minister, Olof Palme (https://en.wikipedia.org/wiki/Olof_Palme), who at the time was Minister of Communication, was deeply influenced by Ralph Nader and his book. He even arranged for the book to be translated into Swedish, and he also took the initiative, based on an American model, to set up a special authority for road safety issues, Statens Trafiksäkerhetsverk – the Swedish Road Safety Agency.

The establishment of the Road Safety Agency can be said to be the starting point for systematic road safety activities in Sweden. This work was successful during the 1970s, and the number of traffic fatalities people killed on the roads dropped from 17 fatalities killed per 100,000 inhabitants in 1964 to 9.1 killed per 100,000 inhabitants in 1982 – a decrease of over 40% (Transport Analysis 2020).

During the 1980s, the positive trend was broken, and traffic growth and road injury figures began to follow each other: the more car traffic, the more people were killed on the roads. In 1989, Sweden had 10.6 fatalities per 100,000 inhabitants, and Sweden was, once again, approaching four-figure numbers of road deaths. A sense of a loss of control was spreading in the society and together with political pressure to do something more radical – and this eventually (in 1993) led to the dismantling of the Swedish Road Safety Agency and to an enhanced role for Vägverket, the Swedish Road Administration (Swedish Parliament 1992).

Parallel with this process to change the institutional prerequisites for the national road safety work, Sweden was facing a severe economic recession in the first half of the 1990s. During the period 1990–1993, Swedish GDP fell by almost 5%, and the level of unemployment increased dramatically (Hassler 2010). From a road safety perspective, at least in the short run, we know that economic recessions might have a positive impact on safety, and this was also the case in the beginning of the 1990s (OECD/ITF 2015). The number of fatalities fell between 1989 and 1996 by more than 40%.

The trend in the beginning of the 1990s was therefore different from what Sweden had experienced in the late 1960s. The situation went from the negative alarming situation, which demanded a remedial response, to a more optimistic promising situation which signaled possibilities and future confidence.

Political Stream

Historically, the Swedish Social Democrat Party has a unique position in the five-party configuration party system of Sweden which emerged at the end of World War I. They were in power, by themselves or in coalition with other parties, from 1932 to 1976 (Vedung 1988; Östberg 2012). A systematic road safety work after World War II is therefore highly associated with the Social Democrats' political ambition to create a modern welfare state. Political road safety initiatives taken in the late 1960s and during 1970s were important from a road safety perspective and contributed to decoupling the trends with more traffic and road deaths. In 1976, the Social Democrats lost the Government office, and they were in opposition until 1982 when they came back into power. Several of the most obvious road safety interventions in that time were already in place, such as legislation concerning drink and

driving, the wearing of helmets and seat belts, speed limits, the driving license system, periodical inspection of motor vehicles, upgraded road infrastructure in both rural and urban areas, etc. Therefore most of the political discussions during the 1980s were about organization and working methods and efficient delivery methods, rather than new interventions (Swedish Standing Committee on Transport and Communications 1984; Trafiksäkerhetsutredningen 1991).

From a road safety perspective, the 1980s became the lost decade, and the Social Democrats started to distrust their lead agency on road safety. Further, although we cannot know for sure, Olof Palme, the main architect who was assassinated on a street in Stockholm 1986, was not around to defend his creation. In 1990, the Social Democratic Government appointed a commission of inquiry with the main task to change the government organization, and its directive pointed out rather clear that there was no need for a special road safety agency (Trafiksäkerhetsutredningen 1991). In 1991 the Social Democrats lost their power again to a moderate, center-right Government, and it was a transport minister from the Christian Democratic Party who carried the commission proposal further, and the Government decided to, from the end of 1992, close down the former Swedish Road Safety Agency and move all its tasks and responsibilities to the former Swedish Road Administration (Swedish Parliament 1992).

The underlying political argument to close down the former Swedish Road Safety Agency was to increase the effectiveness in the road safety work via a reduction of the number of stakeholders within the sector and extend the road authorities responsible, not only to build and maintain roads but also to an overall responsibility for safety in the whole system including vehicles and the use of the system (Swedish Government 1992). Perhaps a backward way of doing things, but first the Government decided on the organizational changes and then came the political direction of the road safety policy looking forward to the twenty-first century (Swedish Government 1993). According to the direction, the focus should be placed on the road users, and good road safety was ultimately a matter of individual road users' moral and attitudes. A fundamental concept that underpins this political direction was the thinking that both individual road users and the various decision-makers do not value safety sufficiently enough. In other words, a poor safety culture within the society is a major contributing cause to lack of improvements.

In October 1994, the Social Democrats came back into power. Mr. Ingvar Carlsson (https://en.wikipedia.org/wiki/Ingvar_Carlsson), now became Prime Minister, formed a Government of which for the first time half of the members were women (Swedish Parliament 1994). Ms. Ines Uusmann became Minister of Communication (https://en.wikipedia.org/wiki/Ines_Uusmann), and during a public speech in January 1995, she revealed three issues that she would prioritize during her term as Minister of Communication, namely, better environment, more use of information technology, and road safety (Lindberg 2002).

In 1996, the Government was reorganized, and Mr. Göran Persson (https://en.wikipedia.org/wiki/G%C3%B6ran_Persson) became the Prime Minister; however, he kept Ms. Ines Uusmann in the Cabinet as Minister of Communication and Transport.

Policy Stream

When the Swedish Road Safety Agency was dismantled, the Swedish Road Administration became the lead agency for road safety. The Swedish Road Administration was a complex multi-goal agency, and to ensure that road safety gained a strong position within the organization, the Government instructed the Swedish Road Administration to have a person employed as a Road Safety Director. With other word, a policy decision aimed at ensuring that road safety interests were represented at the highest management level. Professor Kåre Rumar was appointed as the first Director of Road Safety. Mr. Rumar (http://web.hku.hk/~hhecwsc/KaraRumar.htm) was a professor of psychology and had extensive experience in the field of road safety plus was a world-leading academic in the field of human behavior and road safety. One of his first tasks was to develop, together with his colleagues at the Swedish Road Administration, a new road safety strategy. Although this strategy acknowledges the need for safe roads and safe vehicles, its primary policy priority was human attitudes and behavior (Swedish Road Administration et al. 1994). According to this strategy and the followed road safety program, the greatest potential for road safety improvements was to change peoples' attitudes to risk and lower their level of acceptance to risks. This strong focus on human factors was to a large extent based on research about behavior adaptation (Rumar 1988; Wilde 1994; Evans 2004). In the late 1980s and in the beginning of the 1990s, probably due to the negative road safety trend experienced in many western countries, the road safety community started to question some of the general road safety strategies (OECD 1990). These strategies, which were primarily focused on increasing people's capability (e.g., road users' skills) to handle risk and via different technical solutions (e.g., vehicle and road improvements which were aimed at lowering the demands made on the individual), make it easier for people to handle a complex road environment. According to this research, the road safety effects of these interventions could be everything from less effective to even increase the risks because of people's value of risk. Some researchers (Wilde 1994; Adams 1995) even launched the idea that all road safety interventions are useless and ineffective due to risk homeostasis. In the early 1990s, the road safety strategies were very much based on this behavior adaption concept, and if we could change people's appreciation and social norms for a focus on increased safety, even those interventions already implemented would deliver more safety. A strong focus was made therefore on individuals' attitudes and social norms which also was, as already mentioned, supported politically.

In the autumn of 1994, Adjunct Professor Claes Tingvall (https://sv.wikipedia.org/wiki/Claes_Tingvall) was employed as a new director of road safety at the Swedish Road Administration. Before Mr. Tingvall took up his new position, he worked as a research leader at Folksam, a Swedish insurance company. Mr. Tingvall represents a long tradition of researchers with the focus on injuries, biomechanical and protection devices such as seat belts, child restraint system (Tingvall 1987), and overall vehicle safety performance which started with Professor Bertil Aldman (https://sv.wikipedia.org/wiki/Bertil_Aldman) (Kolbenstvedt et al. 2007), a famous

Swedish researcher who made groundbreaking research in the field. Fairly soon after he started his new job, Mr. Tingvall and his colleagues at the Swedish Road Administration developed a new strategy which was named "The Vision Zero: A Road Transport System Free from Serious Health Losses" (Swedish Road Administration 1996). Very much based on his experiences within biomechanics, there was an opportunity to adopt this for an entire system. This strategy was to a large extent a 180 degree reversal from the previous strategy led by Mr. Rumar. Instead of focusing on individual attitudes, the strategy changed instead to create a safe system (vehicles and roads, in both urban and rural areas) for all road users. Control of harmful energy becomes a core aspect in this strategy. People's attitudes vis-à-vis safety were not seen as a major problem. Rather, it was the opposite; everyone has their own Vision Zero for themselves and their loved ones, and Vision Zero was only a way to make that more explicit. Attitudes needed to change in the society and especially so among system designers rather than among individuals. It is not an overstatement to argue that Mr. Tingvall and his team suggested a paradigm shift in the way road safety as a problem in our society was framed and what appropriate strategies needed to be implemented along with what we should aim for – namely, to create a safe system without any fatalities or serious injuries. The former General Director, Per Anders Örtendahl https://sv.wikipedia.org/wiki/Per_Anders_%C3%96rtendahl), of the Swedish Road Administration was however skeptical. He was not in favor of this new idea, and the prospect that it would survive as a public policy under his leadership was rather non-existent. However due to a conflict with the new minister, Ms. Uusmann, Mr. Örtendahl resigned in early 1995. Mr. Örtendahl was a very colorful and strong leader, and when he resigned, the Swedish Road Administration was left in a state of vacuum, and the space to suggest new ideas increased substantially. Mr. Jan Brandborn replaced Örtendahl, and he initiated a major change of the organization, which commenced on 1 January 1996. General Director Jan Brandborn (https://sv.wikipedia.org/wiki/Jan_Brandborn) commissioned Mr. Tingvall to become responsible for a strategic road safety unit with approximately ten employees.

Policy Window Opens Up

During the spring of 1995, a delegate from the Ministry of Communication led by the new minister visited the Swedish Road Administration, and they were briefed about the administration and its various important areas of work. Professor Tingvall got the chance to promote his view on road safety, and he shared the idea about Vision Zero for the first time with a political level. Ms. Uusmann found this idea politically attractive, and soon thereafter the political part of the policy process was initiated. In August 1995, Ms. Uusmann launched Vision Zero for the first time to the public via a debate article (Uusmann 1995). During the autumn, an intergovernmental task force was established with civil servants from the Ministry of Communication, Ministry of Justice, and other ministries together with three experts from the Swedish Road Administration: Tingvall, Lars Eriksson (former Stenborg), and the

author of this chapter (Swedish Ministry of Communications 1996a). The task force's mission was to describe and explore Vision Zero and to formulate concrete recommendations based on Vision Zero approach. A list of 28 topics was identified within the task force relating to different policies. Some of these had been discussed previously, and some were new and due to Vision Zero. Most of the recommendations were investigated and prepared by the Swedish Road Administration and discussed in the Group for National Coordination (GNS group) . In 1993, the Swedish Road Administration had established a group for national coordination of road safety with participation from different stakeholders in the Swedish society which worked on and had a stake in road safety. This group played an important role to both identifying important interventions and anchoring various different recommendations before a political process. They also supported the organization of two open road safety seminars (Swedish Ministry of Communications 1996b) during the spring of 1996. These seminars played an important role for Ms. Uusmann to try Vision Zero publicly as a concept and some of the interventions which would follow of a policy such as Vision Zero. The feedback both from the general public and the news media coverage strengthened Ms. Uusmann and her desire to transform Vision Zero from an expert idea to public policy. Both Vision Zero and some of the policy recommendations were incorporated into a public document by civil servants at the Ministry of Communication. However, in order to obtain full support from the other ministries, the concrete recommendations were somewhat watered down. The public document was thereafter referred for comment to over 100 organizations in the Swedish society. The support for Vision Zero in general was overwhelming, except a few critical comments focusing primarily on costs, effectiveness, and realism. Based on this support, a draft proposal to the Parliament was developed. Due to the fact that most of the concrete recommendations were pushed into the future, the proposal was more of an overall long-term strategy, without concrete measures taken (Swedish Government 1997).

On 9 October 1997, the Swedish Parliament decided to adopt a new direction and a new long-term goal for safety in road traffic – Vision Zero.

> The Parliament supported the Government's decision to adopt a new direction for traffic safety based on the Vision Zero framework. The goal is that nobody will be killed or seriously injured as a consequence of accidents in road traffic. The design and function of the road transport system is to be adapted to meet the requirements that follow from Vision Zero. (Swedish Parliament 1997)

Five months earlier on 22 May 1997, the Social Democratic Government had submitted a Bill entitled "Vision Zero and a traffic-safe society" to the Swedish Parliament for processing. The Parliamentary Committee proceeding concerning the Government Bill did not lead to any changes, and all the parliamentary parties voted in support of it. On the other hand, the Green Party objected, in a reservation, to the decision to replace the traffic safety goal that was in effect at that time. The Green Party felt that Vision Zero should include specific sub-goals which, among other things, would focus on the problems faced by children in traffic. This reservation meant that the Parliament was forced to adopt a stance on two issues. Basically, all

Table 2 Vision zero as a long-term goal. Vote in the Swedish Parliament on the Committee's proposal against the Green Party reservation on 9 October 1997

Party	Yes	No	Refrain	Absent
The Social Democratic Party	137	0	0	24
The Moderate Party, Liberal Conservatism	66	0	0	14
The Centre Party, Centrism, Agrarianism, Social Liberalism	21	0	0	4
The Liberal People's Party, Social Liberalism	19	0	0	14
The Christian Democrats, Christian Democracy	9	0	0	6
The Left Party, Socialism, Feminism	19	0	0	3
The Green Party		15	0	3
Total	271	15		68

parties were in favor of Vision Zero; however, the Green Party wanted a general goal with sub-goals to be specified (Swedish Standing Committee on Transport and Communications 1997). Table 1 shows the outcome of the Parliamentary voting (Swedish Parliament 1997). The Parliament, with a substantial majority, adopted Vision Zero as a new long-term traffic safety goal, which entailed a new direction for the safety work involved (Table 2).

Vision Zero: Continued Action for Road Safety, 1998–2004

In November 2004, 7 years after the Swedish Parliament adopted Vision Zero, it was time for a comprehensive discussion of the direction of public road safety work in Sweden and to reconsider Vision Zero as a long-term goal and strategy. Additionally to Vision Zero, the Swedish Parliament had also in 1998 adopted (Swedish Parliament 1998) an intermediate target for 2007 to halve the number of fatalities. Thus, this was a moment for the Swedish Parliament to reflect and to reconsider Vision Zero and the intermediate target for 2007. The decision could be summarized in one sentence: Vision Zero lies steady, and although it will be a great challenge, the intermediate target is fixed. In contrast to the decision in 1997, this proposal was also discussing, to a greater extent, concrete road safety measures (Swedish Government 2004; Swedish Standing Committee on Transport and Communications 2004; Swedish Parliament 2004).

According to the Government proposal, the work with Vision Zero should not be seen as a one-off effort but rather as an ongoing process. To be successful, road safety work must be integrated into the processes that affect the design and function of the road transport system. The Swedish Government made an assessment and stated that the work with Vision Zero had just begun and should now be deepened and intensified. Many of the measures taken since Vision Zero was adopted were long-term solutions. For example, extensive measures have been taken to improve safety in road environments and in vehicles. The new direction in road safety work entails, among other things, that the system designers take greater responsibility for safe road traffic. In-depth studies of fatal accidents and the OLA process (a planning model in order to include different stakeholders) are important instruments for coordinating the work of different system designers to improve road safety.

Although the Government felt that the long-term work was doing well, they were more worried about the results in the short term. According to the Government, in light of the past 10 years of the road safety work and the available knowledge, it will require great efforts by all stakeholders to achieve the goal in 2007. According to the Government, system designers always have the ultimate responsibility for the design, maintenance, and use of the road transport system. They together have an informal responsibility for the entire level of security of the system. The work to integrate safety in the road environment, in the quality assurance of transport, in the occupational health work, and in vehicle development must therefore continue and intensify. According to the Government, this would make a great contribution also to the short-term target.

However, this was, according to the Government, not enough. The road users also have a responsibility to follow traffic rules, and according to the Government, road users' compliance was going in the wrong direction especially when it comes to speeding and drink and driving. Therefore the Government suggested several new interventions with a focus on individual road users, such as automated speed enforcement, increased penalties, and the requirements for a driving license, among other things.

Problem Stream

After the severe recession in the beginning of 1990, the Swedish economy started to recover in the second half of this decade. The unemployment rate decreased from about 11% in 1997 to 6% in 2001 (www.ekonomifakta.se/Fakta/Arbetsmarknad/Arbetsloshet/Arbetsloshet/). During the same period, after some years of stagnation, road traffic grew by about 10% (Transport Analysis 2019). Once again, the strong relationship between general economic developments, especially in the short run, and road safety was shown again. turned out again. Despite the bold policy of Vision Zero to eliminate fatalities and serious injuries, the short-term trend showed no sign of progress but rather the opposite.

According to Kingdon (2003), it is not only how the society traces common indicators that play a role for agenda setting and the policy system but also spectacular rare events that can trigger public decision-making. Based on this, one event in 1998 and two events in 1999 need to be mentioned. In November 1998, a large bus went off a slippery road and started to burn, but as a miracle, all passengers survived. In January 1999 in one traffic collision, six children and two adults lost their life. In February 1999 in one traffic collision, seven children and two adults lost their life. Together, 13 children were killed in these 2 road accidents.

Political Stream

Ms. Uusmann retained her position as Minister for Communications until the autumn of 1998. After a new election and despite a large drop in voter support, the Social Democrats stayed in the Government with support from left and environment parties. Prime Minister Persson decided to reorganize the Government, and the

Ministry of Communication, Ministry of Industry, and Ministry of Employment were merged into one large Ministry of Enterprise. The idea was to create a strong ministry for economic growth. As a consequence, the most important political proponent of Vision Zero lost her political power. Mr. Björn Rosengren (https://en.wikipedia.org/wiki/Bj%C3%B6rn_Rosengren) became the first minister with overall responsibility for this new ministry. Mr. Rosengren was not a great enthusiast of Vision Zero. Mr. Rosengren saw Vision Zero as a utopian unrealistic goal which at best could serve as a benchmark to encourage the society to do its best (Hakelius and Rosengren 2016). Despite his doubt, it seems that Mr. Rosengren had no intention to start a process in order to replace Vision Zero, and he emphasized that the main focus was to achieve an intermediate target, less than 400 fatalities and 3,700 serious injuries in 2000. Soon after Mr. Rosengren took office, he was forced to deal with the events mentioned above. In April 1999, the Government together with the Swedish Road Administration launched an 11-point program (Swedish Ministry of Enterprise 1999) for road safety which turned out to be, when we look back, a very important document to go from Vision Zero as a policy to real action. Despite this effort, the number of fatalities did not drop, and Mr. Rosengren in August 2002 took another initiative to create a national coalition for road safety with focus on behavioral risk factors (Swedish Road Administration 2002).

In 2002, after the election, Mr. Persson managed to stay as prime minister for another term, and the Government was once again reorganized, and Ms. Ulrica Messing (https://sv.wikipedia.org/wiki/Ulrica_Messing) was appointed as new minister with responsibility for infrastructure in the Ministry of Industry, Employment, and Communications. In contrast to Mr. Rosengren, Messing was a clear advocate for Vision Zero and in this respect more in line with the previous minister Ms. Uusmann. Ms. Messing became responsible for the second comprehensive proposal on Vision Zero to the Parliament in 2004 when she asked the Parliament for continued action for safe roads (Swedish Government 2004).

Even though Mr. Persson reorganized the Government in 1998, the Swedish Parliament and its different committees were the same. The Standing Committee on Transport and Communications is responsible to process Government bills and to process other proposals from members of the Parliament on road safety. In the autumn of 1998, a process was commenced to manage the various different proposals from the members in the Parliament which were focused on road safety. This is a reoccurring process that arises about once a year. One important factor was that the chairperson at that time was Ms. Monica Öhman (https://sv.wikipedia.org/wiki/Monica_%C3%96hman). Ms. Öhman represented the Social Democratic Party and had been in that position from 1994 and thereby had been responsible for the parliamentary process to manage the Government's Vision Zero proposal and to follow its implementation over the years. Ms. Öhman was a strong advocate for road safety, and after her time as chairperson, she became Executive Director of an important road safety non-governmental organization in Sweden, the NTF, National Society for Road Safety. Ms. Öhman and the rest of the members in the Committee on Transport and Communications expressed great concern about the situation and sent a clear message to the Government. In a committee report (Swedish Standing

Committee on Transport and Communications 1999a), adopted by the Parliament in April 1999 (Swedish Parliament 1999), the committee unanimously stated that Vision Zero provides a firm ground, and this required a continuous reduction in the number of killed and injured in traffic, and this must not be abandoned. According to the committee, it was important that the Swedish Government paid special attention to Vision Zero, and they also wanted the Government to present its positions as soon as possible to the Parliament regarding the continued focus of road safety work. The committee further requested that the Government should also investigate and set up an independent road safety inspectorate. Even though these kinds of parliamentary requests are constitutionally non-binding however politically important, the request to set up a road safety inspectorate was delivered by Mr. Rosengren in 2002 (Trafikansvarsutredning 2000; Trafikinspektionsutredningen 2006), and, as mentioned before, it was Ms. Messing who delivered the re-reporting to the Swedish Parliament in 2004 (Swedish Government 2004).

Policy Stream

The adoption of a new strategy such as Vision Zero is a significant and huge accomplishment, but to also change how road safety measures are implemented in practice is a different thing. To go from policy to implementation has been shown, by some academic researchers, to be a complicated task (Sabatier and Mazmanian 1979; Hill and Hupe 2002; Vedung 1997). In this case it was not only a question of starting new activities based on Vision Zero however also dismantling ineffective activities which were not supported by the new policy. In parallel, when some parts of the Swedish Road Administration were fully occupied with delivering in line with the road safety program adopted in 1995, Director Claes Tingvall with his new road safety team (the road safety unit, an organizational part of the Swedish Road Administration with approximately 15 employees. Tingvall reported directly to the General Director) was primarily occupied with the task to develop new activities, communicate the new direction, and support the Ministry of Communication to develop new policies. A rather unique relationship was established between the Road Safety Unit and the Ministry of Communication. The 1995 road safety program, due to failure to produce road safety result, started to be dismantled around 1998 (Assum and Usterud Hanssen 1999). The road safety unit succeeded to establish in-depth studies of fatal crashes, together with some other international stakeholders; establish European New Car Assessment Program, Euro NCAP, a program to influence the public and private organizations to quality assure their transports in terms of environment and safety; promote urban safety among different municipalities in Sweden; support the largest non-governmental organization for road safety, NTF; reorient their efforts to Vision Zero; start a new system to collect injury data from hospitals; and link the environment with road safety via strategic collaboration, among other efforts. In other words, in the years between 1995 and 1998, several new activities were established, the focus of which was primarily on new processes to influence the various stakeholders in the society. This included the

move away from the traditional work to influence the individual road users' behavior to new efforts to influence the system designers. Despite the successful work of the Road Safety Unit in establishing new work processes and cooperation with new actors, the direct output in terms of safety improvements in the road transport system the results were meager. Vision Zero and its strongest representative, the Road Safety Unit, met strong opposition especially within its own organization, the Swedish Road Administration. Sweden had in that time a large state-owned network with 13-meter-wide roads which allowed 90–110 km/h as the maximum speed (Larsson et al. 2002). These had a high mobility; however, many of these were very dangerous and perceived among the public as death roads. Among road engineers, large motorways were regarded as being the best solution to strike appropriate balance between mobility and safety; however, at the same time they were very expensive. Among road safety experts, lowering the speed limits was considered a cost-effective solution but difficult to implement due to low public acceptance. In that context, a new road innovation, referred to as the "2+1 road" was discussed and promoted by the Road Safety Unit. The 2+1 road is probably the best example for how a new policy, a paradigm shift, materializes into a concrete action, but at the same time it challenged the old tradition of road planning and road design. However, Director Tingvall managed to convince the General Director Brandborn to build a pilot project (Larsson et al. 2002) despite strong resistance within the Swedish Road Administration. This was one of the last accomplishments by Director Tingvall before he moved, in the summer of 1998, to Australia and took up a position as the research director at Monash University. Professor Ulf Björnstig (https://www.researchgate.net/profile/Ulf_Bjoernstig), a medical doctor and researcher, replaced Claes as the third Director for Road Safety within the Swedish Road Administration. Within the Swedish Road Administration, efforts had commenced to develop a new national plan for the period 1998–2007 for the road transport system, which also included a special plan on road safety. In the work on the new plan, it became obvious that General Director Brandborn was about to give up the Government road safety target for 2000 and instead focus all efforts on the new target of a 50% reduction by the year 2007. It was not an easy position for the new Director Björnstig, he inherited and had to deal with both internal and external conflicts. In the recommended plan for infrastructure for the period 1998–2007, handed from the Swedish Road Administration to the Government before the end of the year, there was no special investment proposed for 2+1 roads. Director Björnstig developed to the best of his ability, along with staff at the road safety unit, the special road safety plan for the period 1998–2007. The referral edition of the plan was rather comprehensive with proposals such as support for pilot demo projects in urban areas; promoting road safety in procurement practices for transport and for new technology; consumer information such as Euro NCAP, information disseminated to road users especially in matters such as speed, alcohol, and the use of seat belts and bicycle helmets; partial speed limit reductions; winter speed limits; effective enforcement in general; automated speed control; more severe sanctions with speeding; heightened random breath controls; the introduction of ambulance helicopters; a new driving license system; mandatory winter tires; and the Government's intention to

make bicycle helmet use mandatory. Together with an earlier presented infrastructure plan, the Swedish Road Administration made the assessment that it was not able to meet the target for 2000 but that the 2007 target was attainable if the Government allocated sufficiently enough resources.

However, as mentioned above, based on the Swedish Road Administration's reports and recommendation and other initiatives, the 11-point program for road safety was developed. Among other things, what most worth of mention is the first point in the program, namely, investment in the most 100 dangerous national roads in Sweden. A second important thing was the announcement that the Government intended to set up a committee of inquiry to clarify and suggest a more formal responsibility for the system designers in line with the overall direction of responsibility, which is stipulated by Vision Zero. However the Government acted only partially in line with the committee's proposal to implement a formal responsibility (Belin 2012). The Government did not adopt any new legislation, but it rather instructed the Swedish Road Administration to incorporate a road safety inspectorate within their organization. The head for the inspectorate Mr. Lars Bergfalk was appointed directly by the Government and reported directly to the board of the Swedish Road Administration, not to the General Director for the Swedish Transport Administration. In 2001, Mr. Brandborn retired, and Mr. Ingemar Skogö (https://en.wikipedia.org/wiki/Ingemar_Skog%C3%B6) became the new General Director. In 2002, Mr. Björnstig resigned, and Mr. Tingvall returned to his former position. The Swedish Road Administration made a major reorganization of its head office in 2002, and the road safety unit was shut down. Soon after the inspectorate started their activities, it delivered harsh criticism particularly against the Swedish Road Administration for lack of a safety culture (Belin 2012).

Policy Window Opens Up

Despite the strong political support for Vision Zero and its strategies, soon after its adoption dark clouds began to appear in the sky. To go from words to action, e.g., measures for the implementation of Vision Zero, turned out to be more difficult than its proponents had originally expected. Both Ms. Uusmann, within the Swedish Government, and Mr. Tingvall, within the Swedish Road Administration, encountered strong resistance, and when both of them moved to other challenges in 1998, there was a great risk, or if one prefers, a great opportunity, that Vision Zero and its mandated action program would disappear, having flown out of the window or at least would be substantially watered down. However despite Mr. Rosengren's initial hesitation to Vision Zero, the bus crashes in November 1998 and the two crashes in January and February 1999 along with the huge media coverage forced Mr. Rosengren to act. He needed to show political leadership. Furthermore, despite that Ms. Uusmann had left the political scene, the Swedish Standing Committee on Transport and Communications with Ms. Öhman in the forefront was intact and a strong supervisor for Vision Zero and the intermediate target. When we look back in the mirror, it seems like a paradox that a political leader who was perhaps not against

Vision Zero, however, at the least, not a proponent, has most likely become the most important minister when it comes to investments for safety. Instead of approximately SEK 300 million on average per year for the period 1996–1999, the investment increased to an average of SEK 1,888 million per year for 2000–2005. However, most of the interventions in the 11-point program were of long-term nature such as road improvements and initiative of institutional character such as change system designers' responsibility and set up a road safety inspectorate. The 11-point program did not solve the problem. The number of fatalities did not decrease at the rate which is stipulated of the 2007 intermediate target. The road safety inspectorate was not late to point out the lack of progress, and due to media attention and political initiative from the Swedish Standing Committee on Transport and Communications, the Government was forced to act. It was time for a more comprehensive assessment of Vision Zero and its implementation and a discussion about the future direction of the road safety work. Mostly, based on information from the Swedish Road Administration, the Government was confident with Vision Zero and its long-term direction and saw no reason to change its overall policy. However, the Government was more worried about the intermediate target for 2007 and recommended several interventions in order to strengthen the work in order to achieve the intermediate targets such as lower speed limits and increased road user compliance with traffic regulations, especially with automated speed enforcements. The majority in the Swedish Standing Committee on Transport and Communications supported the proposal from the Government; however, the opposition was critical. They were still in favor of Vision Zero as a long-term goal; however, they had strong views on the ways and means to achieve Vision Zero and its short-term targets. Therefore, the unanimous political support for Vision Zero was replaced with a political conflict between a coalition of the Social Democratic Party, Left Party, and Green Party against the Moderate Party, Centre Party, Liberal People's Party, and Christian Democrats. The right wing coalition made a joint reservation and what they were primarily critical about, as they perceived it, was the Government's lack of understanding of the seriousness of the problem and the urgent need for actions. They were especially critical of the Government's failure to develop different financing mechanism such as public and private partnerships. According to the opposition, the probability to reach the 2007 target was non-existent; they recommended therefore that an evaluation should be set up in order to assess the target and the existing road safety work and suggest a new target. The opposition highlighted the need for a mobilization and particular focus also on the individual road users. Although the opposition was unanimous in most of their reservations, some differences could also be discerned – for example, the Moderate Party (Swedish Standing Committee on Transport and Communications 2004) was not too happy about Vision Zero, and they were not in favor of automated speed enforcement in contrast to the Centre Party (Swedish Standing Committee on Transport and Communications 2004). In summary, it was still a great political support for Vision Zero as a long-term goal; however, there were significant political differences of opinion in the appropriate way to move forward (Swedish Government 2004; Swedish Standing Committee on Transport and Communications 2004; Swedish Parliament 2004) (Table 3).

Table 3 Continued action for safe roads. Vote in the Swedish Parliament on the Committee's proposal against the Moderate, Centre, Liberal, and Christian Parties' reservation on 25 November 2004

Party	Yes	No	Refrain	Absent
The Social Democratic Party	115	0	0	29
The Moderate Party, Liberal Conservatism	0	42	0	13
The Centre Party, Centrism, Agrarianism, Social Liberalism	0	18	0	4
The Liberal People's Party, Social Liberalism	0	34	0	14
The Christian Democrats, Christian Democracy	0	26	0	7
The Left Party, Socialism, Feminism	24	0	0	6
The Green Party	14	0	0	3
Total	153	120		76

Discussion

In this chapter, Kingdon's (2003) multiple stream model has been applied to two different decision processes about Vision Zero. The long-term development of the road safety problem in Sweden spoke in favor of adopting a Vision Zero policy. Politically one could argue if this trend continues in the future eventually, we will reach zero. Would it be possible to argue in the same way if the trend was more stable or even going in the opposite direction? Probably not, and that might be the reason why other countries were more reluctant to use the word Vision Zero. A safe system, Toward Zero, might be an easier concept to sell politically. However, it might not just be the number itself which is important politically. Vision Zero signals also another ethical attitude towards the problem. Instead of focusing on an aggregated number, Vision Zero is focused on every single human being affected by road trauma. Everyone has the right to safe mobility.

In Sweden, road safety in general and Vision Zero in particular are largely attached to the post-war project to create a modern welfare state and thereby to the Social Democratic Party. Vision Zero is an example of a policy that strives for everyone to have an equal right and access to safety along with governmental responsibility to ensure that all citizens have the same access to and possibility of safe mobility. Even though Vision Zero was proposed by the Social Democratic Party, it generally has substantial support also among the other political parties in the Swedish society, as there is a general agreement for our welfare state. However even though most parties are in favor of and support Vision Zero, it is more uncertain if any another political party would have pursued Vision Zero so strongly as new public policy.

Vision Zero as a concept is very much associated with Professor Tingvall and his expert fellows. However, without political support, his ideas would probably have ended up on a bookshelf. According to Kingdon, basically a window opens because of a change in the political stream or because a new problem captures the attention of governmental officials. It seems that both the political and the problem stream

supported the opening of the policy window for Vision Zero. Minister Uusmann's announcement already in January 1995 opened a formal path to develop a new road safety policy, and the positive road safety trend made it possible to discuss Vision Zero rather than simply just seeking to improve the situation. Although both Professor Claes and Ms. Uusmann played key leading roles, it must be noted that they were supported or worked closely with a few policy entrepreneurs within both the Ministry and the public administration to ensure that their ideas were developed and written out. Despite a fast and smooth process and decreasing of controversial proposals, Vision Zero was almost stopped in the last minute in 1997 because of an internal discussion within the Government about Vision Zero and its realism. However, the Government decided to pursue the proposal due to the fact that Vision Zero had already been mentioned in an earlier proposal to the Parliament on road investment. In that proposal, the Government promised to come back and describe Vision Zero in more detail.

Eventually most of the principles that underpin Vision Zero found their way to the final decision in the Parliament, and a new phase in the Vision Zero policy process has begun to transfer overall principles to concrete actions. In line with was predicted by road safety experts, when Sweden started to recover from its economic recession and get back to a normal economic growth, the number of fatalities flattened out and started to increase. Although some activities, mainly of a process character, had been started, the implementation of Vision Zero was not an easy task either politically or among the most important implementation agency, the Swedish Road Administration. The policy window slowly began to close, however was suddenly widely opened due to some tragic events. If this window had opened earlier before the adoption of Vision Zero, the recommendations would have almost certainly only been focused on how to improve the road users' capability to handle minibuses and slippery roads. As a matter of fact, the only recommendation the road safety lead agency, the Swedish Road Administration, suggested was new licensing requirements for driving a minibus (TT 1999). However when the 11-point program on road safety was present in April 1999, the first action point was dedicated to road safety investment on the state road network. The policy initiative was moved from the lead agency to the highest political level, and the recommendation came from the outside. Even an insurance company, Folksam, pushed for more investment in the 2+1 roads (TT 1999). Most of the recommendations in the 11-point program were of long-term nature, and despite significant amounts of micro-successes where a middle barrier was put up, it was still a small part of the network in the beginning of 2000. Therefore, due to the problem stream and political pressure from the Swedish Standing Committee on Transport and Communications, road safety stayed as a topic on the agenda and forced the Government to ask the Swedish Parliament for new trust in Vision Zero and its stipulated way to eventually achieve a safe road transport system. Even though the Government still had a strong political support for Vision Zero as a long-term goal, there was less political support how this long-term goal should be achieved and if and what interventions are needed to be put in place in order to attain the intermediate target for 2007. Thus, it seems that road safety politics is not about goals but rather more about how these goals and intermediate

targets should be accomplished. Despite some differences in nuance, all political parties agreed upon a stronger focus on individual road user behavior in order to achieve Vision Zero and short-term targets. This is a potential challenge to one of the core aspects of Vision Zero, namely, it is the system designers who are overall responsible for road safety. The biggest difference between the different parties seemed to be how important speed interventions are, compared to investment in infrastructure. The Government with support of the Left Party and the Green Party seems to be more in favor of speed reduction intervention. The right wing parties would instead like to see more investments. It seems that the road safety measures that the political parties prefer and prioritize have a strong correlation with other transport policy priorities. If the political parties put more emphasis on environment, there is a tendency to assign a higher priority to speed reduction interventions. If the political parties give more priority to mobility, primarily for motorized traffic, it is a tendency to prefer investments. Based on these analyses of two political decision processes, it could be concluded that there is a strong political consensus about Vision Zero; however, the path forward is highly sensitive, at least in the short run, and what route to choose depends very much on other transport policy goals. Therefore it is a risk that safety becomes a pseudo argument for something else. For example, motorways are comparatively safe however also good from a mobility perspective. However they are very expensive, and the same safety level could be reach with the 2+1 roads. Increasing the compliance of speed limits will improve the safety and also improve the air quality; however, this solution might not be a solution for a safe system without any health losses in the long run. The ongoing Vision Zero policy process is summarized in Fig. 3.

Epilogue

The target for 2007 to halve the number of fatalities from 1998 was missed by more than 200 fatalities, compared to what the target stipulated. In 2006, the Social Democrat Party was voted out of office, and Mr. Fredrik Reinfeldt (https://en.wikipedia.org/wiki/Fredrik_Reinfeldt), leader of the Moderate Party, becomes Prime Minister, and for the first time since 1991, a center-right wing Government was set up. Ms. Åsa Torstensson (https://en.wikipedia.org/wiki/%C3%85sa_Torstensson), from the Centre Party, became Minister for Infrastructure. The road safety work was evaluated thoroughly (Breen et al. 2007; Swedish Road Administration 2008) however politically, even with the new center-right wing Government who when they were in the opposition had been critical of the former Government and its policies, retained Vision Zero as a long-term goal and they concluded, among other things, that Sweden is in the 'establishment' phase of its journey towards Vision Zero. The next challenge, in view of Sweden's highly ambitious goal, is to achieve rapid 'growth' in the delivery of accountable, well-orchestrated, and effective Vision Zero activity. In addition a new intermediate target for 2020 was adopted – a 50% reduction which meant no more than 270 fatalities per year by 2020. Despite the failure to attain the intermediate 2007 target, from 2002 until about 2013, Sweden

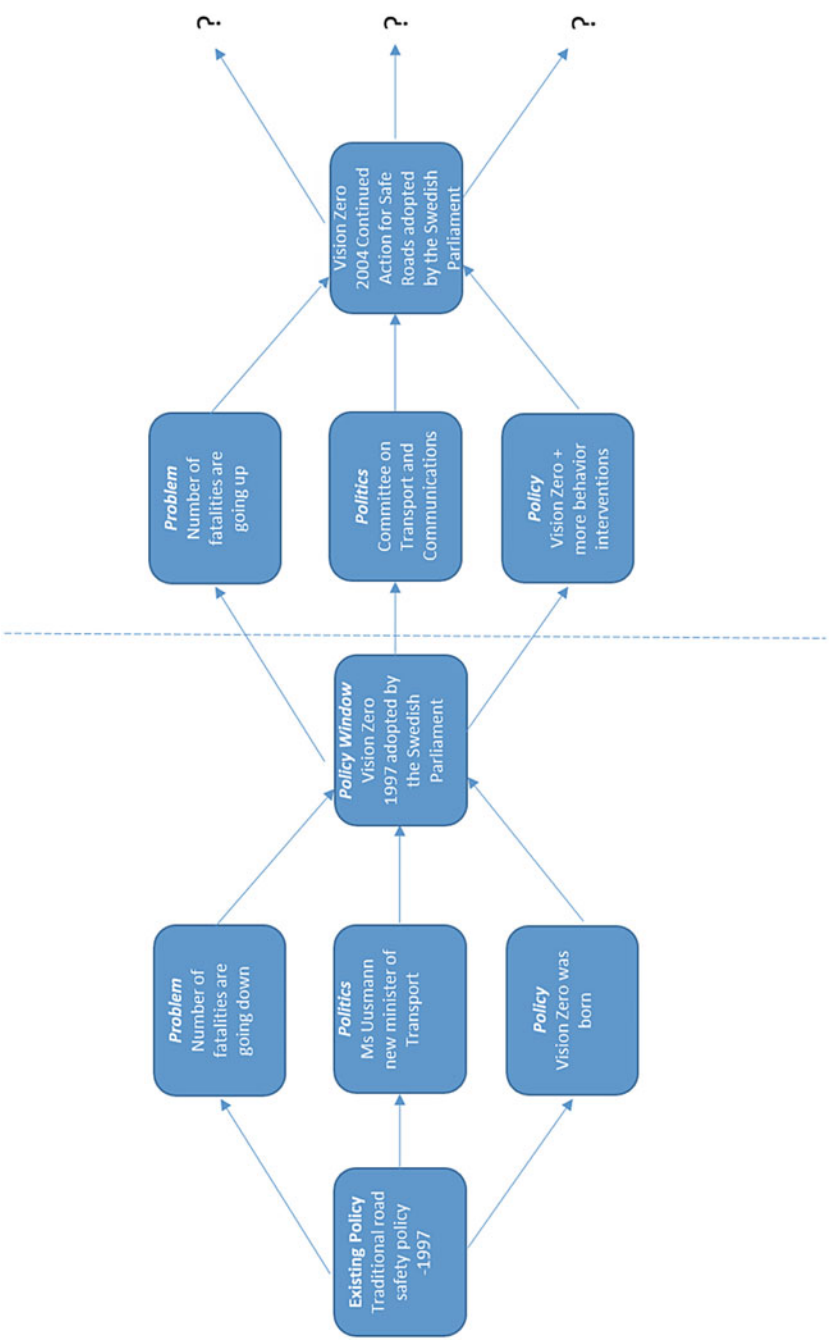

Fig. 3 Vision Zero a continuous public policy process

experienced a downward trend, and the number of fatalities was reduced by more than 50%. Investment in the 2+1 roads, automated traffic safety cameras, lower speed limits, and safer vehicles, together with other interventions, contributed to this downgoing trend (Fridtjof and Vadeby 2007; Strandroth 2015). However, even though Sweden was affected to a lesser extent by international standards, the economic crisis of 2008 and adjustment of the official statistics to separately report suicides in 2010 also contributed to this positive trend. Fairly immediately after the new Government took office in 2006, they initiated a large organizational reform work in the transport sector. This work seems to be guided on at least three important principles, integrated transport system, strict Government mandate, and market-driven production (Swedish Transport Administration 2015). First out was the formation of the Swedish Transport Agency responsible for regulation and inspection activities of all transport modes. The Swedish Transport Administration responsible for planning of the whole transport system and building and maintaining road and railway infrastructure was set up in 2010. Probably due to the fact that road safety was continuously improved, Vision Zero and how to organize an effective institutional arrangement for safety were not on the reform agenda. Even the road safety inspectorate, which was a fairly new organization, was dissolved. No lead agency for safety was designated or pointed out by the Government. In 2014, the Social Democratic Party returned to power however this time together in a Government collaboration relying on the Green Party. This new Government had a rather weak position within the Parliament, and when the whole opposition was united they could topple the Government. Since 2010, there was a tendency that the steady downward trend was plateauing, and the new Government decided to draft a new policy document, renewing their commitment to Vision Zero. In 2016, the Government announced its decision to re-launch Vision Zero (Swedish Government 2016), an intensified initiative for transport safety in Sweden. Based on this policy document, they also commissioned the Swedish Transport Administration to leading the road safety collaboration to achieve Vision Zero. This is the first more comprehensive discussion about Vision Zero and its direction from the Government since 2004. However this new policy document was never directly formulated into a Governmental proposal and sent to the Parliament for consideration. The reason for this might be that the Government would like to avoid the risk that this strategy would end up as a political discussion in the Parliament which they could lose. In any event, this is an important step in an ongoing policy process in the shaping of Vision Zero as a public policy and its implementation.

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