

Policy instruments for managing EU road safety targets: carrots, sticks or sermons?

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R-2011-15

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An analysis and suggestions for the USA

Report documentation

Number: R-2011-15
Title: Policy instruments for managing EU road safety targets: carrots, sticks or sermons?
Subtitle: An analysis and suggestions for the USA
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Project number SWOV: C02.03
Contractor: Gordon Proctor & Associates, Inc.

Keywords: Traffic; safety; measurement; EU; policy; fatality; accident prevention; SWOV.

Contents of the project: This report investigates the EU policy on road safety targets and its strategies to achieve these targets. This was done in order to provide the Federal Highway Administration with ideas to adopt these strategies in the United States.

Number of pages: 32
Price: € 10,-
Published by: SWOV, Leidschendam, 2011

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Summary

This report investigates EU policy on road safety targets and the strategies used to achieve these targets. The outcome will be used to provide the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO) with ideas to adopt these strategies in the United States.

The FHWA and AASHTO desired a paper "that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members".

The present paper goes slightly beyond this. Because the road safety targets are set for the EU as a whole and are not binding for the individual Member States, this paper also examines which other policy instruments the EU uses to help Member States to implement the road safety policy.

The research questions answered in this report were as follows:

- Which policy instruments does the EU use to achieve its road safety targets?
- Are these policy instruments effective?
- How can these measures be translated into suggestions for the US to set and achieve national road safety targets?

Three types of policy instruments are used in the EU to achieve the road safety targets. In policy instrument theories, these three types of policy instruments are called regulation, economic instruments and information instruments, also referred to as sticks, carrots and sermons. The EU uses a mix of these instruments.

Regarding the regulation instruments, the EU has developed several directives on various road safety issues. Directives are EU legislation that does not have a direct effect in the Member States, but that the Member States are obliged to implement in their respective countries within a given time frame. In addition to official legislation, the EU also produces so-called soft law on road safety which comprises policy documents, action plans, policy targets, guidelines et cetera and is not binding for the Member States. Some important documents are the 2001 *White paper on European transport policy* which provided an EU road safety target of halving the number of casualties between 2001 and 2010, followed by the 2003 *Road Safety Action Programme*. More recent is the 2010 *Road Safety Action Programme* with a similar target for 2020 and the 2011 *White Paper on Transport* which even has the ambition to reach zero fatalities in 2050.

Regarding the economic instruments, the EU does finance many road safety research projects. A detailed indication of the amounts spent on road safety research is not available, although it is indicated that the EU has spent 500 million Euro on road safety research since 1994. Furthermore, the EU contributes to the funds of interest organisations.

Regarding the information instrument, the EU provides information on road safety data and measures through databases such as CARE, websites such as ERSO and through research projects. It also stimulates benchmarking between Member States through various instruments.

Decision-making on road safety and road safety targets

Proposals for directives and soft law such as the *White Papers on Transport* and the *Road Safety Action Programmes* are made by the Road Safety Unit of the European Commission. The proposals are discussed by the Ministers of Transport of the 27 Member States in the Council of Ministers and in the High Level Group Road Safety. The European Parliament (EP) must also approve the EC proposals. The EP often plays an encouraging role in road safety policy and sometimes takes parliamentary initiatives. Furthermore, interest groups such as the European Transport Safety Council (ETSC) and the Federation Internationale de l'Automobile (FIA), but also the automotive industry, influence the decision making. Nonetheless, interviews revealed an often long decision making process and Member States often seem to be reluctant to accept EU policy on road safety. Therefore, road safety targets are not binding and there are few directives on road safety.

Achieving the road safety target

Although the road safety target of 50% fewer road deaths in 2010 has not officially been met, an overall decrease of 43% in fatalities can be called a success for road safety in the European Union. Whether this decrease is the actual result of the EU road safety policy and the setting of road safety targets can not be scientifically answered in this paper, although certain studies suggest that a connection is plausible.

Four important elements of the EU approach

To conclude, four important elements in the EU approach on setting and achieving road safety targets have been observed in the above study. These four elements are:

1. Use a variety of policy instruments.
2. Build a broad network of road safety related organisations.
3. Do not underestimate the facilitating role.
4. Steer on effect, not on implementation.

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1. Introduction

In the past ten years, many US state transportation agencies have implemented performance-based approaches for their highway safety policies. These approaches include setting firm targets for the reduction of crashes, evaluating best practices to achieve those targets and continuously monitoring whether the road safety tactics were effective. Furthermore, the states have adopted a practice of "benchmarking", which in this context can be defined as the comparison of best practices among the various states. Another recent development is the setting up of a system for the accurate and detailed registration of crash data to analyse the underlying causes of crashes and to facilitate the benchmarking process.

The US Congress and the Federal Highway Administration (FHWA) aim at improving highway safety by promoting the adoption of a performance-based highway safety approach by all US states. The exact implementation of this plan is still to be decided on. In addition, the degree of liberty in adopting the firm road safety targets is still under consideration.

The Congress, the FHWA and the states through their national association, the American Association of State Highway and Transportation Officials (AASHTO), are investigating the possibilities for cooperation on the setting of bold federal road safety targets. In this, they aim at taking into account the diversity of the US states, which vary substantially in terms of their geography, population densities, traffic volumes, and their urban/rural travel patterns. By considering these variations, it can be prevented that unreasonable or ineffective requirements are imposed upon the individual states. To support this process, the FHWA and AASHTO would like to obtain a better understanding of the approach to the road safety target in the European Union (EU). In both the US and the European Union, a central authority promotes traffic safety while also respecting the autonomy of its member organisations. Therefore, EU experiences in the last ten years could possibly hold suggestions for the United States.

The Dutch Institute for Road Safety Research SWOV has been asked to provide an overview of the EU policy, implementation experiences and achievements of the EU road safety targets. This review is presented in the present report and is based on a review of scientific literature, national and EU policy documents and legislation as well as reports and websites from NGO's, private companies and other road safety stakeholders. In addition, four interviews were held; two with officials of the European Commission, one with the Managing Director of a research institute and one with the Programme Director of a European transport safety organisation:

- Frederik Jansen (European Commission, DG MOVE D.3 Road Safety & Dangerous Goods)
- Carla Hess (Until recently: European Commission, DG MOVE D.3 Road Safety & Dangerous Goods)
- Graziella Jost (Programme Director ETSC European Transport Safety Council)

- Fred Wegman (Managing Director Institute of Road Safety Research SWOV)

Information from these interviews has only been used when at least two interviewees shared the same vision, or when facts could be confirmed/validated by other sources.

The FHWA and AASHTO desired a paper "that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members" (American Trade Initiatives Inc., 2010).

The present paper covers a somewhat broader area. The reason for this is as follows. In 2001, the EU set an ambitious road safety target: having halved the number of victims by 2010 (BRON). In 2010, the target for 2020 was set at another 50% reduction of the number of casualties (European Commission, 2010d). However, these targets are set for the EU as a whole and are by no means binding for the individual Member States. The Member States are not obliged to adopt the targets in their national road safety policies and neither do they have to meet the target. This seems to make the EU targets into a policy instrument with hardly any (at least formal) power. Therefore, it is interesting to examine which other policy instruments the EU uses. The present report investigates policy instrument used by the EU to help Member States to implement the road safety policy and with that, to cooperate in reaching the target.

The research questions of this study are as follows:

1. Which policy instruments does the EU use to make Member States comply with the road safety policy and with that, cooperate in achieving the road safety target?
2. Are these policy instruments effective?
3. How can these measures be translated into suggestions for the US on setting and achieving national road safety target?

The content of the report is as follows: *Chapter 2* gives an overview of the theories regarding policy instruments and a short description of the EU organisation and its policy instruments in general. *Chapter 2* also provides a short list of relevant European organisations that focus on road safety. *Chapter 3* outlines EU policy and legislation on road safety, including the EU road safety targets and their implementation. The various policy instruments that were introduced in *Chapter 2* are discussed with special attention for road safety. The chapter also provides information on whether the 2010 road safety targets are achieved. *Chapter 4* summarises and concludes on the previously discussed knowledge. A detailed insight into the US policy setting on road safety is needed to answer the third research question. Such an insight is not available at SWOV at present. Therefore it was decided to describe four important elements in the EU approach in this final chapter.

2. Theories and background

2.1. Policy instruments: carrots, sticks and sermons

Governments in general, and the European Union in particular, have several types of policy instruments at their disposal. Traditionally, three main types of policy instruments are distinguished in the policy instrument theories (Bemelmans-Videc, Rist & Vedung, 2003): regulation instruments, economic policy instruments and information instruments. These instruments are also called sticks, carrots and sermons.

For the first type of policy instruments, Bemelmans-Videc, Rist and Vedung provide a practical definition of the concept regulation when they state that regulations are "measures taken by governmental units to influence people by means of formulated rules and directives which mandate receivers to act in accordance with what is ordered in these rules and directives" (Bemelmans-Videc, Rist & Vedung, 2003, p. 10). In contrast with common American definitions (Bemelmans-Videc, Rist & Vedung, 2003, p. 10), which understand regulation as governmental intervention in general, the definition of Bemelmans-Videc, Rist and Verdun stresses the authoritative relationship between the regulator and the intended subjects of the regulation. Examples of EU regulation are EU regulations (a specific type of regulation, explained in *Section 2.2.1*) and directives. Furthermore, "soft law", such as instructions, resolutions, guidelines, codes of behaviour et cetera, is generally categorised as a regulation policy instrument, although this type of policy instrument is not legally binding. Regulation instruments can involve fines, detention or other punishments if the regulation is not observed.

The second type of policy instruments, economic instruments, is described by Verdun as instruments "involving the handing out or the taking away of material resources while the addressees are not obligated to take the measurements involved" (Bemelmans-Videc, Rist & Vedung, 2003, p. 11). Subsidies and grants are examples of this type of instrument.

The third type of policy instruments, the information (or exhortation) instrument, seems to be growing in popularity in Western Europe. It is seen as a modern way of influencing people and an opportunity to discourage undesired behaviour and to encourage desired behaviour, mainly by providing understanding of the consequences of behaviour. Bemelmans-Videc, Rist and Vedung define these policy instruments as "attempts at influencing people through the transfer of knowledge, the communication of reasoned argument, and persuasion" (Bemelmans-Videc, Rist & Vedung, 2003, p. 11).

The above classification calls for a remark on the subject of (road safety) targets, the main subject of this report. In the policy administration theory, targets and policy instruments are strictly divided, with targets meant for goal setting and instruments for goal reaching. However, research (Allsop, Sze & Wong, 2011; Wong et al., 2006) has shown that the fact that targets have been set, can influence the number of road deaths. Therefore, targets can be regarded as goals as well as (regulation) policy instruments.

The choice for one or more of these three policy instruments is often based on four, sometimes competing, values which are used to evaluate public policy (Bemelmans-Vidéc, Rist & Vedung, 2003, p. 7-8): effectiveness, efficiency, legality and democracy. Furthermore, the choice of policy instruments is influenced by the specific policy context, such as the policy sector and the policy actors involved, but also by national characteristics such as the government-arrangements, history, physical environment and culture of a country.

In *Chapter 3*, the road safety policy of the European Union, with emphasis on policy concerning road safety targets, will be analysed using these three types of measures. It will be investigated whether the EU uses carrots, sticks or sermons as its policy instruments in setting and achieving the common road safety goals.

2.2. Decision-making processes and road safety regulation in the European Union

This section briefly explains the overall decision-making procedure in the European Union and then distinguishes several types of specific EU regulation.

The foundation for EU policy-making on road safety lies in the 1992 Maastricht treaty and is reconfirmed in the 2007 Lisbon Treaty (European Parliament, 2011a). In general, the EU promotes free movement of persons and goods within the EU to remove trade barriers between Member States; road safety plays a only limited role. Therefore, it is obvious that the tasks of the EU in relation with road safety are somewhat restricted. Furthermore, the EU has to take into account the subsidiarity principle. Mastenbroek (2007, p. 17) describes this principle as follows: "the subsidiarity principle of the EU (...) says that issues should be solved at the lowest possible governmental level. This principle, codified in the Treaty of Maastricht, is to be regarded as a political principle, expressing the concern of the Member States about the increasing activity of the EC and the loss of national sovereignty."

Without going into detail, the decision-making process can be described as follows. Regulations of all kinds are usually prepared by the European Commission (EC), the executive body of the European Union, which, in addition to proposing legislation, is also responsible for the implementation of EU decisions and for the general government of the European Union. The Commission consists of with 27 Commissioners, one per Member State, although they represent the interests of the EU as a whole. Road safety is part of the portfolio Transport, which currently (2011) is in the hands of the Estonian Siim Kallas. On the official level road safety policy is prepared by the Road Safety Unit of the EC.

After submitting the proposed legislation, the proposal is discussed and approved or rejected by the Council of the European Union (also called the Council of Ministers,) and the European Parliament. The decision-making usually takes two rounds of discussion, adaptation and approval.

The Council of the European Union represents the governments of Member States and consists of 27 national ministers. For each topic, the appropriate ministers of the 27 Member States are called together. For road safety, the ministers of Transport discuss proposals from the European Commission.

On the official level, the High Level Group Road Safety consists of directors Road Safety of Ministries of the Member States. This High Level Group discusses and negotiates on the content of the proposals of the EC twice a year, while the formal approval is given by the Council of Ministers. The most recent communication from the Council on road safety is the Council Conclusions on Road Safety in December 2010 (Council of the European Union, 2010).

The Council of the European Union should not be confused with two other organisations, bearing similar names: the European Council and the Council of Europe. The European Council refers to the regular meetings of the heads of state or of government in the European Union, discussing general EU policy. The Council of Europe is an international organisation which promotes cooperation between all countries of Europe (not only EU) on topics such as legal standards, human rights, democratic development, the rule of law and cultural co-operation. The Council of Europe has no legislating powers. The most well-known body of the Council of Europe is the European Court of Human Rights, which enforces the European Convention on Human Rights.

The European Parliament (EP) is the parliamentary institution of the European Union, which is directly elected by the citizens in the 27 Member States. The Parliament consists of 736 members. Interviews reveal that the EP has a boosting and active role on the topic of road safety. Several times, the EP has taken initiatives on the topic of road safety. Two recent examples are the European Parliament *Own Initiative Report on Road Safety*, which is an EP response to the EC *Policy Orientations*, and the European Parliament *Own Initiative Report on the Future of Transport*, a pro-active publication before the EC launched the *White Paper on Transport* (Committee on Transport and Tourism of the European Parliament, 2010; 2011). The EP has good connections with the EC and with research institutes, lobby organisations and NGO's on road safety.

The interviews revealed that the decision-making processes in the EU in general and those on road safety in particular often take a long time (sometimes up to 10 years) and that Member States are often reluctant to accept EU policy on road safety. Therefore, setting binding road safety targets has been politically unfeasible and developing obligatory road safety measures has often been impossible.

2.2.1. *Three types of legislation*

The EU distinguishes three types of legislation, in order of importance: regulations, directives and soft law.

Regulations

Mastenbroek (2007, p. 16) defines a regulation as follows: "A regulation is addressed to abstract categories of people. It is directly applicable within the Member States". This form of legislation is the highest form of legislation possible in the EU. It is not directed at specific categories of people, such as certain organizations or certain Member States, but to the entire EU population. The Member States do not have to take action on these regulations, they are directly applicable within every Member State and for

every single citizens of the EU. Hardly any road safety regulations exist in the EU.

Directives

Directives are defined as follows by Mastenbroek: "A directive is addressed to a definite number of Member States and is binding as to the result it specifies, while leaving discretion in the form of methods and transposition." (Mastenbroek, 2007, p. 17) This means that a directive prescribes the desired result to Member States, but that the Member States can use the form and methods of their choice to realize the result. Directives can be regarded as being in line with the subsidiarity principle of the EU. The desired result however, can be described very accurately. In general, directives are used to harmonize legislation to remove trade barriers in the EU. Member States have the obligation to implement the directive into their national legislation in a reasonable time span, specified as a deadline in the directive and mostly in the order of one and a half years (Mastenbroek, 2007, p. 20). The EC monitors this implementation and can ask the European Court of Justice to intervene with a fine or with the direct applicability of the directive in a certain Member State (article 226 EC, see also Europa decentraal, 2011a). Furthermore, the EC publishes lists of countries that have not yet implemented directives. These lists have an accelerating effect on the transposition of directives (an example is European Commission, 2011a).

Soft law

In addition to legislation, soft law contains European policies on road safety and communicates them to the Member States (Europa decentraal, 2011b), especially on topics that are not covered in regulations or directives for reasons of the subsidiarity principle. Soft law concerns legally non-binding stipulations, which, however, are in practice often followed by Member States. Often soft law takes shape of (action) programmes, instructions, policy goals or targets, conclusions, codes of behaviour, resolutions, guidelines, announcements or statements. The EC regularly publishes Green Books and White Papers on several policy areas. Green books are discussion documents to stimulate consultation and discussions on a particular topic. White papers are documents with proposals for community measures on a certain topic to solve existing problems. On transport, the EU launched a *White Paper on Transport* in 1992, 2001 and 2011 (European Commission, 1992; 2001b; 2011b). These White Papers describe the development of the EU transport policy and discuss interventions to improve the opening up of the transport market to competition.

2.3. **Organisations involved in the development of road safety policy in the EU**

Several organisations inside and outside the European Union influence the road safety policy of the EU and/or the implementation of this policy. Below, the most important organisations concerned with road safety in the EU are discussed in alphabetical order. The websites of the respective organisations have been used as the main sources of information.

For preparation of the most recent European Road Safety Action Plan (European Commission, 2010d), the EU held a public consultation including thematic workshops, internet consultation and a stakeholder conference (European Commission, 2009). Among the 550 respondents who

cooperated were public authorities, NGO's, research institutes and private companies. Important organisations that were mentioned explicitly by the interviewees are ETSC, UNECE, TISPOL, AIT, ERTRAC, FERSI; FIA, the automotive industry and consumer organisations. Furthermore, the media plays an important role according to the interviewees. The media can play an encouraging role in the adaptation of new road safety plans by the EC or the EP and in gaining public support for road safety measures. Also, media reports on road safety have been known to be reason for Members of Parliament in some Member States and in the EP to ask questions about road safety.

AIT

AIT (www.aitgva.ch), the Alliance Internationale de Tourisme is a non-profit, non-governmental organisation which represents the interests of national automobile associations and touring clubs. As such, they work closely together with a number of international organisations, amongst which the European Union, in the fields of road safety, technical development and harmonisation, customs matters, environmental protection and consumer protection.

CEDR

CEDR (www.cedr.fr), the Conference of Road Directors of Europe (not to be confused with the Directors of Road Safety of the Ministries of the Member States in the High Level Group Road Safety), is a non-profit organisation of directors general of the road divisions of the Ministries of Transport in a number of European countries. Members of CEDR are directors from Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovenia, Sweden, Switzerland, Spain and the United Kingdom. They aim at improving European cooperation in the road and road transport sector and facilitate the exchange of experience and information. Among others, their members develop and finance research programmes.

ECR

ECR (www.euro-contrôle-route.eu), Euro Contrôle Route, is a group of European Transport Inspection Services working together to enhance the quality of enforcement in order to improve road safety, compliance with road transport legislation and to promote fair competition. ECR's members are Belgium, the Netherlands, Luxembourg, France, Germany, the United Kingdom, Ireland, Spain, Poland, Austria, Romania, Bulgaria, Italy and Hungary. ECR organises common check weeks dealing with a specific theme, traineeships for inspectors, information exchange and stimulates common and harmonized interpretation of road transport regulations and involvement in different EU projects.

ERTRAC

ERTRAC (www.ertrac.org), the European Road Transport Research Advisory Council, aims at providing strategic visions and research agendas on road transport research. They expect this to stimulate investments in road transport research and contribute to the coordination between the European, national, regional public and private R&D activities on road transport. Within the EU, they promote European commitment to research. ERTRAC has more than 50 members including transport industry, European associations,

EU Member States, local authorities and European Commission services. ERTRAC has a separate working group for road safety.

ETSC

The ETSC (www.etsc.be), the European Transport Safety Council, is an independent non-profit organisation providing expert advice on transport safety matters to the European Commission, the European Parliament, and Member States. Members are organisations with transport safety interests, in particular research institutes in European countries. ETSC disseminates international scientific research and best practices through scientific reports, fact sheets, newsletters, conferences and proposals for directives.

FERSI

FERSI (www.fersi.org), the Forum of European Road Safety Research Institutes, aims at encouraging collaboration between European road safety research institutes. In their own words, they "provide support to the European Commission, national and inter-governmental bodies, in defining road safety research needs and solutions (...)". A large number of the road (safety) research institutes in the EU are members of FERSI.

FIA

FIA (www.fia.com), the Fédération Internationale de l'Automobile, is a non-profit association of 227 national motoring and sporting organisations from 132 countries on five continents. FIA Region I is responsible for Europe, Africa, and the Middle East. They represent the European member club interests towards the European Union institutions, for example on road safety, consumer protection, environmental protection and the promotion of sustainable motoring.

OECD

The OECD (www.oecd.org), the Organisation for Economic Co-operation and Development, promotes policies that will improve the economic and social well-being of people around the world, by providing governments a setting in which to discuss and develop economic and social policy. It does so using instruments like monitoring member countries, peer reviews, agreements, standards and recommendations and authoritative reports. Not only European countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom) are members of the OECD, but also other advanced and emerging countries such as Australia, Canada, Chile, Israel, Japan, Korea, New Zealand and the United States. Recent influential reports in the area of road safety, for example, are *Safety on Roads* (OECD, 2002) which identifies best practices on road safety programmes in OECD countries and *Towards Zero* (OECD, 2008) which reviews road safety performances in OECD countries over the last thirty years and proposes approaches to improve road safety in the short and longer term. The report stresses the need to develop long-term ambitious targets on road safety, using the Safe System Approach to achieve them.

PRI

PRI (www.lapri.org), La Prévention Routière Internationale, is an international road safety NGO with more than 55 members in over 45

countries. PRI has a consultative status with, among others, the European Conference of Ministers of Transport. The goal of the organisation is a zero tolerance policy for road victims and it stresses road safety being a shared responsibility of all citizens. Its main activities are knowledge transfer through conferences, traineeships, courses and consultancy activities, and lobbying.

TISPOL

The TISPOL Organisation (www.tispol.org) was established by the traffic police forces of Europe in order to improve road safety and law enforcement on the roads of Europe. Their main priority is to reduce the number of people being killed and seriously injured on Europe's roads. They try to achieve this by exchanging good practices, organising and co-ordinating pan-European enforcement operations and campaigns, initiating and supporting research on road safety and disseminating the results.

UNECE

UNECE (www.unece.org), the United Nations Economic Commission for Europe, is one of five regional commissions of the United Nations. It aims at promoting pan-European economic integration. UNECE consists of 56 countries in the European Union, non-EU Western and Eastern Europe, South-East Europe and Commonwealth of Independent States (CIS) and North America. UNECE covers various sectors, such as economic cooperation and integration, energy, environment, housing and land management, gender, population, statistics, timber, trade, and transport. It analyses, advises and assists governments, but also sets norms, standards and conventions to facilitate international cooperation. The Working Party on Road Safety aims at harmonizing traffic regulations for example through the 1949 Geneva Convention on Road Traffic and the 1968 Vienna Conventions on Road Traffic and on Road Signs and Signals, but also distributes best practices. The interviews revealed that, within the EU, their recommendations, especially those concerning vehicle safety topics, are regarded as very important and are generally followed through.

3. EU policy and legislation on road safety

This chapter outlines the EU policy and legislation on road safety. The relevance of the three types of policy instruments that were introduced in Chapter 2 is discussed for road safety.

Concerning the regulation instrument, soft law and directives are discussed. As a part of the soft law, the EU road safety targets and their implementation, included in the White paper on Transport from 2001 and the European Road Safety Action Programme of 2010, are mentioned. Regarding the information instrument, research funding and distribution is discussed as well as benchmarking between Member States. With regard to the economic instrument, EU subsidies are discussed. Not all policy instruments are binding for the EU Member States. The table below provides an overview of the three types of policy instruments, the degree to which they are binding and road safety examples.

Policy instrument	Binding?	Example
Regulation: soft law	No	White papers on Transport, Road Safety Action Programmes
Regulation: directives	Yes	Seat belt use (2005), blind spot mirrors (2007)
Information: research funding	No	EU funded projects on a broad range of road safety topics
Information: distribution	Sometimes	CARE, ERSO, best practices
Information: benchmarking	Sometimes	European Road Safety Charter, PIN reports
Economic: subsidies	No	EuroNCAP

Table 3.1. Overview of road safety policy instruments in the EU.

3.1. Sticks: Regulation

3.1.1. Soft law

As mentioned in the previous chapter, soft law consists of non-binding stipulations, such as policy documents, action programmes et cetera. Below, the various policy documents such as the White Papers on Transport and the Road Safety Action Programmes are discussed. The 2001 road safety target is given in the 2001 White Paper on Transport, the recent 2010 road safety targets is published in the 2010 Road Safety Action Programme.

Over the years, the EU has developed several publications on road safety that can be classified as soft law. In 2001, the second white paper entitled *White paper European transport policy for 2010: time to decide* (European Commission, 2001b) set guidelines for road safety policy. The first EU white paper on transport had been published in 1992 (European Commission,

1992) and was aimed at opening up the transport market. Overall, its objectives had been achieved. The second white paper had different objectives. It aimed at handling problems such as the unequal growth in the different modes of transport, congestion on road, rail and air routes and harmful effects of transport on the environment and public health, including road crashes. Concerning road crashes, the white paper proposed a target of halving the number of casualties by 2010. However, it also stressed the fact that Member States are reluctant to follow EU policies on road safety. Therefore, the European Commission emphasized the exchange of good practices until 2005.

In 2003, the European Road Safety Action Programme entitled *Halving the number of road crash victims in the European Union by 2010: A shared responsibility* (Commission of the European Communities, 2003) was published. The paper described the number of crashes and injuries in the European Union and their direct and indirect costs and drew the conclusion that "the situation is still unacceptable". It also mentioned that, despite the existing road safety targets, Member States are reluctant to develop road safety measures at the Community level. The paper sketched an outline of the responsibilities of all actors involved in road safety and proposed the development of a European Road Safety Charter. The various possible policy instruments available to the European Union were described, such as legislation (under article 71 of the EC treaty), financial means, the establishment and dissemination of best practices, the collection and analysis of data on crashes, research, fiscal incentives and safety requirements in public service contracts. Not all policy instruments were used at the time of writing and the Commission proposed to examine the extension of their use. The EC also named several main areas of action, such as road behaviour, vehicle safety, road infrastructure, safe transport of goods and passengers, (emergency) care for road casualties and crash data collection. Several, more detailed, measures were proposed, although the proposals for actual realisation and implementation were often vague.

In 2010, the EU issued an update of the European Road Safety Action Programme entitled *Towards a European road safety area: policy orientations on road safety 2011-2020* (European Commission, 2010d). The paper presents a governance framework and road safety targets for the period between 2010 and 2020. It stresses that actions to achieve these targets should be taken at the most appropriate level, meaning that actions are not only required from the EU, but also from Member States, regional and local bodies and civil society. The target for road safety is to halve the overall number of road deaths in the EU by 2020 compared to 2010. This target is not mandatory for Member States: they are "encouraged to contribute". In addition, general measures are not imposed on the Member States, but they should "concentrate on their efforts in areas where their performance is lowest". No target has been set for severely injured road casualties. During the decision-making process, ETSC and other road safety stakeholders repeatedly advocated the continuation of the EU road safety targets (ETSC, 2008b; 2010a; 2010b). The European Commission mentions a number of strategic objectives, for example, improving education and training of road users, increasing enforcement of road rules, the development of safer road infrastructure and safer vehicles, the promotion of the use of modern technology, the protection of vulnerable road users and the improvement of emergency and post-injury services. Few concrete

actions are mentioned, but several intentions for new projects are described. The emphasis is not so much on developing new directives and other forms of EU law, but on the enforcement of the existing EU laws, on structuring the cooperation between Member States and the EC, on new research and on the distribution of best practices and crash data. The Council of the European Union has endorsed the most important points from the Action Programme, and has even increased the ambition level of the targets by aiming at the long term Vision Zero (Council of the European Union, 2010).

The 2011 update of the EU *White Paper on Transport* (European Commission, 2011b) elaborates on the same issues as the previous white paper, but is supplemented with issues such as the consequences of the decrease of traditional energy sources for transport. The European Commission presents a number of objectives in its vision of a competitive and sustainable transport system. In addition to objectives on environmental issues, on shifts in modes of transport, on improving transport networks and on developing transport information management systems, it launches two new objectives on road safety: a mid-term objective and a long-term objective. The EC aims at moving close to zero fatalities in road transport by 2050 and having halved the number of road casualties by 2020. Their ambition is to be a world leader in transport safety in all modes of transport. Concrete actions mentioned are in line with the Road Safety Action Programme 2010, for instance harmonising road safety technology, developing a strategy on road injuries and emergency services, training and educating road users, with a focus on vulnerable road users in particular.

The interviews indicate that the EU road safety targets are an important instrument for Member States to keep road safety on the national agenda. This is especially (but not only) applicable for the relatively new Member States in Middle and Eastern Europe. The interviewees stated that new Member States take special pride in keeping up with the EU target, to show their commitment to the EU. However, not only new Member States found the EU road safety targets inspiring. France, Spain and Portugal also included national road safety targets in their road safety plans based on the EU targets, and took measures to achieve the EU targets (ANSR, 2009; Ministerio del Interior, 2004; The Ministry of Ecology and Sustainable Planning and Development, 2007). President Chirac even declared road safety one of his top priorities in his Bastille speech in 2002 at the beginning of his second term as President of France (see for example McMahon & Ward, 2006). However, not all Member States have adapted their policy plans to the EU road safety targets. For example, the Netherlands have not included these targets in their national road safety policy plan, but have opted for its own, less ambitious, target (Ministry of Transport, 2006).

In addition to these policy documents, the EC has published some recommendations on more specific road safety topics, for instance recommendations on consistent enforcement of laws against speeding, drinking and driving and driving without a seat belt (European Commission, 2004a). Furthermore, the EC published recommendations on the maximum permitted blood alcohol content (BAC) for drivers of motorized vehicles (European Commission, 2001a).

3.1.2. Directives

In the past decade, the EU adopted several directives on road safety (European Union, 2009). A directive describes the desired result to the Member States. The Member States must implement the directive within a given timeframe, but can use the form and method of their own choice. In chronological order, some important directives list as follows:

2002: The EU launches a directive to regulate the driving time of professional drivers in cross-border transport (European Commission, 2002). Maximum driving hours and mandatory breaks are determined.

2003: The EU harmonizes the frequency of medical checks and the periodic training for professional drivers (European Commission, 2003).

2004: A directive is published to set minimum safety requirements for tunnels, including regulations on preventing and handling tunnel accidents (European Commission, 2004b).

2005: The EU regulates the mandatory use of seatbelts in all vehicles, for drivers and for passenger in all seats fitted with them (European Commission, 2005).

2006: The EU harmonizes moped permits and minimum age requirements for mopeds (European Commission, 2006).

2007: A directive makes the retrofitting of old trucks with blind spot mirrors compulsory (European Commission, 2007).

2008: The EU harmonizes the safety management of the roads belonging to the Trans-European Networks (TEN), prescribing instruments such as safety audits at the design stage and regular safety inspections of the network (European Commission, 2008b). Furthermore, a directive is launched on making daytime running lights compulsory for all new cars and small delivery vans in the EU in 2011 and for trucks and buses by mid 2012 (European Commission, 2008a).

2010: The EU makes inspection at regular intervals compulsory for all vehicles and trailers, to ensure that they are in a roadworthy condition and meet the safety standards (European Commission, 2010b; 2010c).

3.2. Sermons: Information policy instruments

A very important and often used EU policy instrument to improve road safety in the individual Member States is the creation and dissemination of information. The information policy instrument has multiple objectives. The first objective is to provide new knowledge on road safety. The second goal is to make existing knowledge of individual Member States available to other Member States, by creating websites with information for professionals, such as ERSO (see below), and by publishing best practices. This way, Member States can learn from each other and road safety professionals on all organisational levels of the Member States can get acquainted with each other. By publishing mortality rates every year, as well as other benchmark

data (see below), the third goal is to inspire less performing countries to improve their performance up to the level of the best performing countries.

3.2.1. *Research funding: generating new knowledge*

In the last 10 to 20 years, the EU has funded a vast number of research projects, including studies on behaviour, enforcement, education, vehicles, and infrastructure. The ERSO website presents topics such as accidentology, driving under the influence, fitness to drive, policy assessment and tools, road and tunnel infrastructure, rules and enforcement, training, education and campaigns and various topics on vehicle technology such as active and passive safety, periodic technical inspection and vehicle emissions. Furthermore, two recent papers provide an overview of recent road safety research (European Commission, 2010a; Helmreich, 2010). Because funding is divided among various departments of the EC, and statistics on funding for road safety research is not registered separately, it is not possible to give an overview of the amount of money spent on road safety research in the European Union. One of the previously mentioned papers gives a not very detailed figure of a total of 500 million Euro since 1994 (Helmreich, 2010, p. 6).

3.2.2. *Information distribution: unlocking existing knowledge*

Two important initiatives in information distribution are the CARE database and the ERSO website. Furthermore, the EU regularly publishes best practice reports on road safety policy in general or on specific road safety topics.

CARE

The CARE database is a European Community database with detailed data on individual road crashes resulting in death or injury. CARE is used to identify and quantify road safety problems in Europe, to evaluate road safety measures and to facilitate information exchange on road safety. The database was set up by the European Council in 1993. Participation in the data collection and data sharing is compulsory for all EU members.

ERSO

The European Road Safety Observatory (ERSO) is an EU financed website with a vast amount of European road safety data, knowledge and links. The website provides information for citizens as well as for road safety professionals, and provides professionals with the opportunity to join in the information gathering. It provides overviews of road safety directives, road safety research projects and developments in road safety crash statistics.

Best practices

Several EU research projects are aimed at formulating best practices on road safety policy in general or on specific topics. The objective of these best practices is to inspire less performing Member States to adopt road safety strategies that have proved to be effective in other countries. Some recent examples are the SUPREME handbook (Van Schagen & Machata, 2010), which provides a summary of best practices in road safety measures in general and the ROSA handbook (Pérez Rubio et al., 2011) which provides best practices on the safety of powered-two-wheelers. Furthermore, the RIPCORDER handbook (Sørensen & Elvik, 2008) on best

practices on blackspot management and safety analysis of road networks is an example of a best practice handbook.

3.2.3. *Benchmarking: inspiring countries*

The EU uses several tools to enable the Member States to compare their achievements in road safety to those of other Member States. Interviews revealed that benchmarking is a powerful tool in achieving the EU road safety targets. The interviewees indicated that the European Parliament as well as national Parliaments use the benchmarking instruments to formulate questions on road safety. In particular new Member States use benchmarking to raise attention to the topic in their own national governments. In addition to the CARE database, already described above, a number of other benchmarking instruments is listed below.

Road Safety Quick Indicator

Since 1988, the Road Safety Quick Indicator has provided recent trends on basic road crash indicators such as the number of injury crashes, road fatalities and injuries. The tool is based on provisional data and has been established to assist decision-makers in comparing their national situation with that in other Member States. Every month the provisional data is compared with the provisional data of that same month in the previous year.

Statistical pocketbook

Every year, the EC also publishes a statistical pocketbook, which covers the most recent and important annual energy- and transport-related statistics in Europe. It includes figures on the European Union, the 27 Member States, EU candidate countries as well as Iceland, Norway and Switzerland. On road safety, not only road fatalities are mentioned, but also country rankings, fatalities per user and vehicle type and crash rates. In addition, Eurostat, the statistical office of the European Union, provides similar types of data on their website.

Annual leaflet

The EC publishes an annual leaflet called *Road safety, How is your country doing*, with a short overview of the road safety performances since 2011 of all Member States and the EU as a whole. Just like the previously mentioned publications, it makes a comparison between Member States possible in order to encourage them to improve their performance.

European Road Safety Charter

The European Road Safety Charter is a European participatory road safety platform whose members include enterprises, associations, research institutes, public authorities and civil society. The members commit themselves to carrying out concrete actions and share their results to improve road safety in their daily environment. Members have made commitments to actions in user behaviour, vehicle safety, infrastructure, professional transport and accidentology. The Charter currently has more than 2.000 member organisations.

PIN reports and PIN awards

Not belonging to the official EU policy tools, but nevertheless an influential benchmarking instrument are ETSC's PIN reports and PIN awards. The Road Safety Performance Index (PIN) compares the road safety

performances of Member States. The yearly PIN reports were first published in 2006. The Index measures several areas of road safety, among which road user behaviour, infrastructure and vehicles, as well as general road safety policymaking. Thirty countries and their research organisations participate in the PIN project. In addition to the annual reports, ETSC yearly awards the PIN Award to a high level policymaker responsible for the best performing country's road safety policy (for example ETSC, 2008a).

3.3. Carrots: Economic policy instruments

The funding of research projects, discussed above as being an information policy instrument, can also be seen as an economic policy instrument.

Besides subsidizing these research projects and information dissemination projects, the EU financially supports a number of interest organisations on road safety. One of these organisations that has not yet been discussed is the European New Car Assessment Programme EuroNCAP. This programme assesses popular new car models in crash tests, to evaluate the protection they offer for drivers, passengers and pedestrians (Van Schagen & Machata, 2010). EuroNCAP was originally developed by the British Transport Research Laboratory for their Ministry of Transport, following the New Car Assessment Program created by the US National Highway Traffic Safety Administration. Nowadays, several countries, transport and traffic safety organisations, insurance companies and consumer organisations have joined EuroNCAP. The European Commission is an observing member on EuroNCAP's board. EuroNCAP is independent of the automotive industry.

The economic policy instrument is also used in granting funds for new infrastructure to Member States, through for example the Cohesion Fund and the European Regional Development Fund (ERDF). To make use of these funds, Member States have to follow communitarian legislation, among which the directives on infrastructure safety (source: European Parliament, 2011b and interviews).

3.4. Achieving the road safety target: which policy instruments helped?

Did the EU achieve its road safety target and if so, did its policy contribute to this? The road safety target as formulated in the 2001 *White paper on transport* (European Commission, 2001b) was to have halved the number of road crash casualties in the European Union between 2001 and 2010. *Figure 3.1* presents the change in road deaths between 2001 and 2010 for the individual EU Member States and for the EU as a whole.

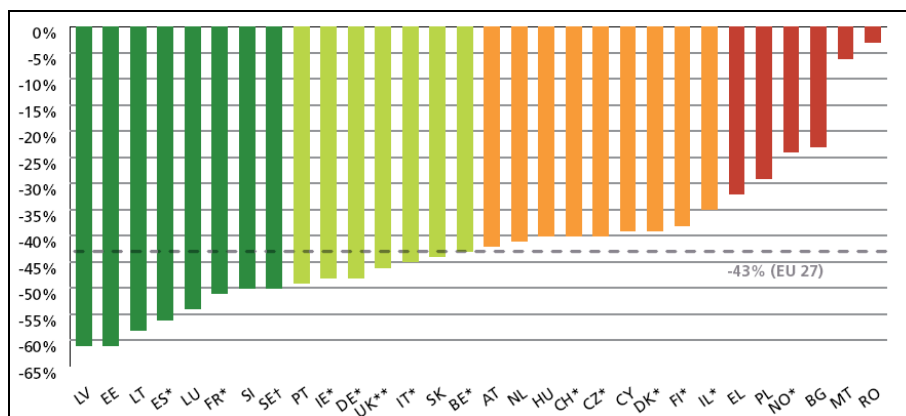


Figure 3.1. Percentage change in road deaths between 2001 and 2010 (ETSC, 2011). * Provisional estimates were used for 2010 as final figures for 2010 were not yet available at the time of going to print. **UK 2010: ETSC estimate for the UK based on EC CARE Quick Indicator. †Sweden 2010: the definition of road deaths has changed and suicides are now excluded. The time series was adjusted so that figures for previous years exclude suicides as well.

Figure 3.1 shows a 43% decrease in the number of people killed in road crashes between 2001 and 2010 in the EU as a whole. Although the road safety target has not officially been met, the decrease is so large that it can be considered a success for road safety in the European Union.

Is this success due to the EU policy on road safety in general and on setting the target in particular? This question cannot be scientifically answered in this short research report. A thorough analysis of policy and policy effects is required to formulate a scientifically sound conclusion to this question. Recently, Allsop, Sze and Wong have investigated the effect of setting road safety targets on road safety performances (Allsop, Sze & Wong, 2011). Their research shows a positive association between setting a quantified road safety target and road safety fatality reduction within 3 years. Bosetti et al. (2010) evaluated the EU Road Safety Action Programme 2003 using mostly qualitative methods and concluded that the impact of the Programme varied strongly per evaluated measure. Stakeholders in their study valued the impact of the measures as medium to high. Thus, it can be concluded from this study and from the crash figures that it is at least plausible that the EU road safety policy has to some extent contributed to achieving the road safety target. As a matter of fact, some European countries have taken up the challenge to meet the road safety target and strongly promote the target in their own country. For example, France, Spain and Portugal, but also new Member States like the Baltic States, have put road safety high on the national agenda and achieve major reductions.

Despite the lack of scientifically sound research on the success factors of the setting and achieving of the EU road safety targets, a general picture arises from the interviews and the literature review. There seem to be three conditions which may have been helpful in achieving the EU road safety target. Firstly, the EU has a coherent mix of a policy instruments at its disposal, such as legislation, soft law, economic stimuli and information gathering, sharing and comparing. Secondly, the existence of a solid official

and administrative structure within the EU to develop and discuss road safety issues as well as the extended network of NGO's is a firm basis for EU road safety policy and for support in the individual Member States. Lastly, creating a sense of urgency to develop road safety policy and to meet the road safety target seems to be important for prompting Member States to take road safety measures to achieve the EU target. The EU tries to create such a sense of urgency through her policy of financing, informing, stimulating and –to some extent– regulating road safety measures. A strong leader within the EU or in individual Member States who indicates road safety as an important issue, such as was the case in France, can have a positive influence on the agenda setting of road safety.

4. Summary and conclusions

This report investigates the EU policy on road safety targets and its strategies to achieve these targets, in order to provide the FHWA with ideas to adopt these strategies in the United States.

The FHWA and AASHTO desired a paper "that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members" (American Trade Initiatives Inc., 2010).

The present paper stretches somewhat beyond this question. Because the road safety targets are set for the EU as a whole and are not binding for the individual Member States, this paper also examines which other policy instruments the EU uses to help Member States to implement the road safety policy.

The research questions answered in this report are:

1. Which policy instruments does the EU use to achieve its road safety targets?
2. Are these policy instruments effective?
3. How can these measures be translated into suggestions for the US to set and achieve national road safety targets?

This fourth chapter contains a summary of the policy instruments that are used in the EU, the decision making on road safety in the EU and the achievements in reaching the EU road safety targets. As mentioned in *Chapter 3*, the second research question, whether the EU policy instruments have been effective, cannot be answered due to a lack of scientifically sound research on this topic. To answer the third research question, how to translate EU policy on road safety targets into possible suggestions for the US, insight into the US policy setting on road safety is needed. Chapter 1 mentioned that such an insight is not available at SWOV at present. Therefore, the choice was made to describe four important elements in the EU approach in this chapter.

4.1. EU policy instruments

Three types of policy instruments are used in the EU to achieve the road safety targets. In policy instrument theories, these three types of policy instruments are called regulation, economic instruments and information instruments, also indicated as sticks, carrots and sermons. The EU uses a mix of these instruments.

Regarding the regulation instruments, the EU has developed several directives on various road safety issues. Directives are EU legislation that does not have a direct effect in the Member States, but that the Member States are obliged to implement in their respective countries within a given time frame. Many of these directives are directed at measures concerning professional drivers, vehicles or trans-European roads. The topic choice is inspired by the principle of the single EU market (the road safety measures

enable fair competition), but is at the same time limited by the subsidiarity principle, which comprises the pursuit to solve issues at the lowest level possible.

In addition to official legislation, the EU also produces so-called 'soft law' on road safety which comprises policy documents, action plans, policy targets, guidelines et cetera and is not binding for the Member States. Some important documents are the *White paper on European transport policy* (European Commission, 2001b) which set an EU road safety target of halving the number of casualties between 2001 and 2010, followed by the *2003 Road Safety Action Programme* (Commission of the European Communities, 2003). More recent is the *2010 Road Safety Action Programme* (European Commission, 2010d) with a similar target for 2020 and the *2011 White Paper on Transport* (European Commission, 2011b) which even strives for zero fatalities in 2050.

Regarding the economic instruments, it may be concluded that the EU does not use this instrument to a large extent. Having said that, the EU does finance many research projects that focus entirely or partly on road safety. An indication of the amount of funds spent on road safety research is not available. Furthermore, the EU contributes to the funds of EuroNCAP and stipulates conditions for the use of EU development funds such as the Cohesion Fund and the ERDF.

Regarding the information instrument, the EU has introduced a large number of measures in this category. Not only does the EU provide information on road safety data and measures through databases such as CARE and websites such as ERSO, they also stimulate benchmarking between Member States through the Road Safety Quick Indicator, statistical pocketbooks, leaflets, Eurostat and the European Road Safety Charter. In addition, the ETSC developed the Road Safety Performance Index PIN to compare Member States on several road safety indicators. Also, the research projects financed by the EU provide a large amount of information and distribute this information to the Member States. Within the EU, the information instrument can be seen as the most important policy instrument to stimulate road safety policies in general and the road safety targets in particular.

4.2. **Decision-making on road safety and road safety targets**

Proposals for directives and soft law such as the *White Papers on Transport* and the *Road Safety Action Programmes* are made by the Road Safety Unit of the European Commission and discussed by the ministers of the 27 Member States in the Council of Ministers and in the High Level Group Road Safety. Also, the European Parliament has to approve the EC proposals. The EP often plays an encouraging role in road safety policy and sometimes takes parliamentary initiatives. Furthermore, interest groups such as the ETSC and the PRI influence the decision making. For the last Road Safety Action Programme, an extensive stakeholder consultation was held amongst the public, public authorities, NGO's research institutes and private companies. In addition to the target in the Road Safety Action Programme 2010, the Council of Ministers has even increased the ambition level of the target by setting the objective at zero fatalities. Despite this, however, interviews revealed an often long decision-making process and Member

States often seem to be reluctant to accept EU actions on road safety. Therefore, road safety targets are not binding and there are few directives on road safety.

4.3. **Achieving the road safety target**

Although the road safety target of 50% less road deaths has not officially been met, an overall decrease of 43% can be called a success for road safety in the European Union. Whether this decrease is the actual result of the EU road safety policy and the setting of road safety targets can not be scientifically answered in this paper, although some studies (Bosetti et al., 2010) suggest that a connection is plausible.

4.4. **Conclusions: the EU approach**

To conclude, four important elements in the EU approach on setting and achieving road safety targets can be indicated from the above study. These noticeable elements may also be applicable in the United States, although obviously the circumstances in the United States regarding political situation, administration, geography et cetera are rather different from those in Europe (see also Transportation Research Board TRB, 2010). The four elements are discussed below.

1. Use a variety of policy instruments.

The first point worth noting concerning EU policy on road safety targets is that the EU does not restrict itself to one type of policy instrument, but uses a mix of types. It has developed financial instruments as well as information instruments and has used regulation to create a sense of urgency and to stimulate Member States to develop measures to achieve the road safety target. Using a variety of policy types not only limits the risk that the chosen strategy type does not work, the various types of policy instruments are also likely to have a cumulative effect.

2. Build a broad network of road safety related organisations.

Over the years, an extensive network of NGO's, research institutes, business companies and governance organisations has been built in the EU. Each organisation promotes road safety from its own interests and contributes to the EU road safety policy by taking measures and raising funds within its own circle of influence. For instance, in addition to national governments, NGO's, businesses and individual citizens have contributed to the stakeholder consultation for the EU Road Safety Action Programme 2011. The influence and pressure of many different organisations help to keep road safety targets on the agenda of both the European Union and the individual states.

3. Do not underestimate the facilitating role.

A large part of the EU policy on setting and achieving the road safety target is devoted to the facilitating role of the EU in stimulating Member States to take actions of their own. The facilitating role is illustrated in knowledge generating activities such as financing research projects, in distributing knowledge through websites and publications, but also in facilitating a mild form of 'competition' through benchmarking and creating a sense of urgency through agenda setting. In general, the EU uses a bottom-up approach in its facilitating role. It stimulates

researchers and policy makers of individual Member States to meet, share knowledge and ambitions and translate this information to their own situation when back in their own country.

4. Steer on effect, not on implementation.

By using the directive instrument and soft law rather than direct working legislation that works in the Member States without transposition, the EU tends to steer on effect rather than on implementation. While the goals and effects of the measure are clear to all, it allows the Member States to fill in their own implementation details. This way, it decreases resistance to measures and increases support. However, to achieve the desired effect, it is necessary to set conditions for the implementation. The most important is the timing of the implementation: Member States should not delay the implementation. Setting a clear term for implementation and formulating workable consequences when the implementation fails, helps Member States to make implementation a priority. In the EU, consequences of not implementing directives in time are a direct applicability of the directive in the Member State and ultimately a sanction.

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