

Vision Zero as a new way of thinking

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Introduction

Vision Zero

Sweden has a long tradition of systematic road safety work and to consider road traffic injuries as a public problem that must be addressed by the national government. This attitude culminated in the Swedish parliament in October 1997 formally adopting Vision Zero as a new long-term goal and direction in road traffic safety work:

“The goal is that 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” (Swedish Government 1997).

Vision Zero aims to not only influence directly the concrete work on road safety, but also – more indirectly – the institutional preconditions and approaches, which in turn also have an impact on the actions of various players so that they take action to increase the safety of the road transport system. Vision Zero differs in several critical respects from a traditional road safety policy. According to Rogers (2003) classical theory on how innovations are disseminated; an innovation can be defined as an idea, a practice or a product that is experienced as being new by those individuals or other players who adopt it. The fact that those experts who developed the Vision Zero concept experienced it as being something new is perhaps not really so strange, but the thing that makes Vision Zero unique is that Parliament also considered it to be something new. In this way, Vision Zero can be regarded as public policy innovation.

Vision Zero differs from a traditional road safety policy in a number of ways (Belin 2011). 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 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 has to pay for the mobility of the road transport system, and that there are an acceptable non-zero number of deaths and serious injuries. Safety shall be gradually improved, but only to the extent that is socioeconomically advantageous. In addition, the traditional road safety work

is based to a large extent on the fact that people are willing to take risks and that it is part of human nature.

The long-term objective of Vision Zero is to create 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 philosophers would attribute to deontological ethics (Bowen 2012, Belin 2012), i.e. nobody should need to 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 production. Just as little as society can accept people killing or seriously injuring themselves as a consequence of producing goods and services within an industry can Vision Zero accept it when transportation is produced. According to Vision Zero, mobility is therefore subordinate to safety, at least in the long term. If it is impossible to otherwise 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 a traditional safety policy thus differ from each other when it comes to the long-term objective of the safety work.

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. The traditional road safety activities are to a significant extent based on behavioural science research which draws the conclusion that 90% of all road traffic accidents can be explained by the human factor. In the traditional safety work, the principal challenge is to prevent conscious and subconscious faulty human action (Swedish government 1940). Vision Zero accepts instead, as a basic starting point, that human-beings make conscious and subconscious mistakes, which is why accidents occur, and that the safety work must in the first instance be directed at those factors which can prevent accidents leading to death and serious injury. Accidents in themselves can be accepted, but not their serious consequences.

According to Vision Zero, the principal cause as to why people die and are seriously injured is that the energy to which people are exposed in a traffic accident is

excessive in relation to the energy that the human frame can withstand. Vision Zero is based among other things on the research that the famous American road safety expert William Haddon conducted in the 1960s (Haddon 1968, 1970, 1972, 1973, 1980). Knowledge on energy and tolerance has to a great extent served as a basis for the development we have seen 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 Vision Zero as general policy for safety work is that the view of knowledge that has served as a basis for the development of a sub-component in the road transport system, namely the vehicle, has also become a general principle for the entire road transport system.

In the traditional safety work, ultimate responsibility for safety rests with the individual. According to a 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 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, through the general requirements for caution that are built into the traffic legislation, to at the same time provide compensation through his/her behaviour for such shortfalls. According to Vision Zero, it is not the individual road-user who has the ultimate responsibility but rather the so-called system designers. The responsibility for safety is thus split between the motorists and the system designers (i.e. infrastructure builders and administrators, the vehicle industry, the haulage sector, taxi companies and all the organisations 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 are thus responsible for the safety level of the entire system;
- as before, the road-users are still responsible for showing consideration, judgment and responsibility in traffic and for following the traffic regulations;
- if the road-users do not take their share of the responsibility, for example due to a lack of knowledge or competence, or if personal injuries occur or risk occurring for other reasons, the system designers must take 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 (Belin 2016).

Traditional safety work is based to a large extent on the notion that individuals and society largely speaking do not ask for safety. There are other values that are given a higher priority, such as accessibility and personal freedom.

Traditional traffic safety strategies are thus based to a large extent on the “unwilling road-user” and society who must be forced into giving consideration to safety (Johnston et al 2014). Vision Zero is instead based on individuals and society demanding 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 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.

The four factors described above (long-term objective, view of reasons for road traffic safety problems, notion of responsibility and people’s requirement for safety) are of great importance for how the safety work can be most suitably conducted. A fifth difference between the traditional safety activities and Vision Zero concerns which safety activity should be given priority first. In the traditional activities it is primarily the safety work directed at adjusting the behaviour of road-users. After this, training and information directed against the users of the system play an important role in the aim of spreading knowledge of the existing traffic regulations.

In order to ensure the observance of regulations by road-users, monitoring and sanctions play an important role. A form of safety work based on Vision Zero shifts the focus from the individual road-user to safe roads, vehicles and traffic environment as well as to a good safety culture (a safe road transport system). Even the kind of problems that we have traditionally experienced as being the behavioural problems of individuals, for example drunken driving, is defined in a Vision Zero perspective as a system problem whose solution lies in strong standards in society and technology in vehicles that prevent drunken driving.

Vision Zero as a policy is sometimes misinterpreted as being a policy that concerns exclusively technical solutions. Vision Zero presupposes behavioural changes for the purpose of creating a safe system, but the most important group to influence is the system designers. Regulations, information, financial incentives, education and training, monitoring, and supervision are all important control measures for bringing about changes in behaviour among system designers. One significant difference in relation to a traditional approach is that considerably greater efforts must be directed at the system designers. Important players in the work on Vision Zero are therefore legislators, road operators, the vehicle industry, professional users of the road transport system as well as citizens and consumers as requirement specifies.

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Addressing key global agendas of road safety and climate change: synergies and conflicts

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Introduction

The latest report by the Intergovernmental Panel on Climate Change identifies, with 95% certainty, that human activities are the dominant cause of observed global warming since the mid-20th century (IPCC, 2014a). The international political response to climate change began at the Rio Earth Summit in 1992, where the UN Framework Convention on Climate Change (UNFCCC) was adopted. Now the UNFCCC has membership of 195 parties, and the annual Conference of Parties (COP) aims to review the Convention's implementation. At the 21st COP in December 2015, Parties to the UNFCCC made a universal agreement (the Paris Agreement), which requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to report regularly on their emissions and on their implementation efforts, while also assisting developing countries to address climate change. Non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other sub-national authorities were also requested to scale up their efforts. These movements draw stronger attention and resources for climate change globally.

Similarly, delivery of road safety is being increasingly recognised as an urgent global priority, as marked by key events, including the establishment of the United Nations (UN) Decade of Action for Road Safety and the development of the UN *Global Plan for the Decade of Action for Road Safety 2011 – 2020* (UNRSC, 2011). The year 2015 saw the Global Status Report on Road Safety (WHO, 2015), the inclusion of road safety in the Sustainable Development Goals (SDGs), the adoption of the Brasilia Declaration at the 2nd Global High-Level Conference on Road Safety, and the appointment of Mr. Jean Todt as the UN Special Envoy for Road Safety. In 2016, the UN general assembly voted to create a UN fund for road safety. Road safety practitioners worldwide have the task of achieving the particularly ambitious SDG of halving the number of global deaths and injuries from road traffic crashes by 2020. These events and global targets call for scaled up global action and resources for road safety. While high income jurisdictions must continue to drive down the number of deaths and injuries on their roads ultimately to zero, greatly increased investment dedicated to road safety in low and middle income countries, who account for 90% of the global road deaths (WHO, 2015), is critical to drive the number of deaths and injuries down globally.