

## VISIONS, TARGETS & STRATEGIES JULY 1997

- SWEDEN PREPARES FOR VISION ZERO
  - Envisaging an unprecedented level of political commitment for road casualty reduction, the Swedish Ministry of Transport and Communications has proposed a radical Vision Zero road safety strategy.
  - As the proposal goes for Parliamentary approval this autumn, this first edition of Visions, Strategies and Targets provides in-depth analysis of this exciting new concept and the plans made so far for its application.
- EU COUNCIL OF MINISTERS DEBATE ROAD SAFETY
  - ETSC also reports in this edition on the EU Council of Minister's response to the new European Commission proposal for a road safety strategy.
- NATIONAL TARGET SETTING
  - First generation targets to the year 2000 have been reviewed recently by various Member States and further targets have been set or are planned.

### WHAT IS VISION ZERO ?

Vision Zero is a new proposal by the Swedish Government for a long term road safety strategy. It is conceived from the ethical base that it can never be acceptable that people are killed or seriously injured when moving within the road transport system. It centres around an explicit goal, and develops into a highly pragmatic and scientifically-based strategy which challenges the traditional approach to road safety.

### VISION ZERO: GOAL

- The long term goal is that no-one will be killed or seriously injured within the Swedish road transport system.

### A NEW APPROACH TO ROAD SAFETY

For many years, the emphasis in traffic safety work has been in trying to encourage the road user to respond, in an appropriate way, typically through licensing, testing, education, training and publicity to the many demands of a man-made and, increasingly, complex traffic system. Traditionally, the main responsibility for safety has been placed on the user to achieve this end rather than on the designers of the system.

The Vision Zero approach involves an entirely new way of looking at road safety and of the design and functioning of the road transport system. It involves altering the emphasis away from enhancing the ability of the individual road user to negotiate the system to concentrating on how the whole system can operate safely. Also, Vision Zero means moving the emphasis away from trying to reduce the number of accidents to eliminating the risk of chronic health impairment caused by road accident.

### VISION ZERO: STRATEGIC PRINCIPLES

- The traffic system has to adapt to take better account of the needs, mistakes

and vulnerabilities of road users.

- The level of violence that the human body can tolerate without being killed or seriously injured forms the basic parameter in the design of the road transport system.
- Vehicle speed is the most important regulating factor for a safe road traffic. It should be determined by the technical standard of both roads and vehicle so as not to exceed the level of violence that the human body can tolerate.

Vision Zero accepts that preventing all accidents is unrealistic. The aim is to manage them so they do not cause serious health impairments. The long term objective is to achieve a road transport system which allows for human error but without it leading to serious injury.

While the concept envisages responsibility for safety amongst the designers and users of the system, the designer has the final responsibility for 'fail-safe' measures:

#### VISION ZERO: SYSTEM DESIGNER HAS PRIMARY RESPONSIBILITY

- System designers are responsible for the design, operation and the use of the road transport system and are thereby responsible for the level of safety within the entire system.
- Road users are responsible for following the rules for using the road transport system set by the system designers.
- If the users fail to comply with these rules due to a lack of knowledge, acceptance or ability, the system designers are required to take the necessary further steps to counteract people being killed or injured.

Vision Zero sets out the operational principles which would need to be taken up by citizens, decision-makers, public authorities, the market and mass media if the strategy is to be effective.

#### VISION ZERO: OPERATIONAL PRINCIPLES

- at **political level** not allowing road traffic to produce more health risks than other means of transportation or other major technological systems;
- at **professional level** seeing serious health loss due to traffic accidents as an unacceptable quality problem of products and services connected with road transportation;
- at **individual level** viewing serious health loss as unacceptable, being aware of what it takes to create a safe system, and playing an active part in placing demands on society and manufacturers for safe road traffic.

Action in a variety of fields is needed to produce a safe road system:

#### VISION ZERO: ACTION STRATEGY

- to prevent accidents leading to serious injury
- to reduce the severity of injury in the event of an accident
- to ensure that the severity of injuries received is minimised through efficient rescue service, health care and rehabilitation

A result-based action programme for safe road traffic within the principles outlined above will be defined by the Swedish agencies for future road safety work which should lead to the realisation of Vision Zero in the long run.

In the next ten years, it is estimated that it should be possible to reduce the number of fatalities by quarter to one third.

#### FIRST PROPOSALS FOR ACTION

The Swedish Ministry of Transport and Communications has recently presented some first proposals for action:

##### 1. Reducing speed limits in densely populated areas

At the core of the Vision Zero strategy is the principle that the level of violence that the human body can tolerate must be the basic design parameter for the traffic system.

For example, pedestrians run about an 80 per cent risk of being killed at a collision speed of 50 km/h as opposed to a 10 per cent risk at speeds of 30 km/h. At speeds of over 30 km/h, motorists, pedestrians and cyclists make mistakes the consequences of which are often fatal.

As a first step, municipalities would be given the authority to impose a 30 km/h speed limit anywhere within their area, as well as those parts of the main road network where pedestrians and cyclists interact with other traffic. Following evaluation a decision would be taken as to whether to set a new speed limit of 30 km/h in urban areas. It is recognised that civil engineering measures such as road humps will be necessary to assist drivers in complying with limits.

Research by the Swedish VTI indicates that reducing speed limits from 50 km/h to 30 km/h in densely populated areas would reduce fatalities by 70 per cent and injuries by 60 per cent in those areas. The corresponding increase in average travel time has been estimated at 2 minutes and 45 seconds from places outside Stockholm and 1 minute 30 seconds for trips within the city.

##### 2. Quality assurance systems for new drivers

Vision Zero would entail changes in the existing education system. Strict demands

would be being placed on the formal qualifications required for those who are professionally engaged in conveying knowledge and stimulating awareness about road accident risks to new drivers, who are the most exposed to high accident and injury risk in traffic.

The content and organisation of the educational programme for road driving instructors is currently underway. The prerequisites for introducing a step-by-step driver education programme that provides prospective drivers with the opportunity of acquiring driving experience under relatively safe conditions would be examined. International experience shows that such a programme can lead to a 5-23 per cent decrease in accidents involving younger drivers. Clarification would be sought if any of the changes deemed desirable required amendment of the EC driving licence directive.

The traditional view of driver education which focuses on acquiring the knowledge and the skills required to control the vehicle would be changed towards more focus on ability to assess danger and risk, to understand causes and effects, and to judge one's capabilities.

### 3. Quality assurance of road transport, official business trips & work-related trips

Vision Zero envisages that public authorities should take much greater responsibility for the quality assurance of their road transport from a road safety and environmental point of view. This would involve pressure being placed on government agencies and public companies which generate a certain level of traffic. Senior management in such organisations would be responsible for setting goals and establishing policy on quality assurance which could involve the assessing the need for road transport, the type of transport to be used, and vehicle, equipment and fuel choice.

The Swedish National Roads Administration has already initiated quality assurance for its own road transport operations and trips.

### 4. Public procurement of technology

A new organisation is envisaged to support the introduction of new technology and products that could make an effective short term and long term contribution to a safe road transport system. Of current interest are seat belt reminder systems and alcohol interlock technology.

The public procurement of technology is seen as a central part of the quality assurance of transport by public authorities.

### 5. Consumer information

Effective consumer information presenting the opportunity for different categories of road user to choose safe product is a key element of the Vision Zero strategy. An annual publication providing consumers with accessible information on cars and vehicle products is anticipated. In many cases there are large differences between the best and the worst car models and the best possible safety standard is judged in many cases to be much higher than that available in the products on the market.

## CONSUMER INFORMATION: PRIORITIES

- car crash worthiness
- in-car protective systems
- bicycle helmets
- bicycle lights and reflectors
- pedestrian reflectors
- driving safety of the car
- protective clothing for motorcyclists

### 6. New health index

To address the problems of under-reporting and inadequacies of reporting health impairment, especially long term health impairment, a new health index will be prepared for traffic injury cases which specifies the risk of fatal and disabling injuries.

### ETSC COMMENT

Vision Zero has come about following the use of casualty reduction targets and performance indicators for several years in Sweden which have contributed to its relatively good safety record. It has been made possible by the development of a safety culture for many years in this country.

While no time goal is set to achieve the long term objective of Vision Zero, ETSC believes that the principles laid down in this exciting new strategy indicate that Sweden clearly continues to mean business in its future road safety work.

Central to the success of the strategy is the innovative principle that speed management to human injury tolerance levels should be the determining factor for a safe road transport system. This clear and scientifically based principle when applied through a results-based action plan will undoubtedly lead to substantial reductions in road accident injuries. The further development of the action plan with performance indicators is now awaited with interest.

### EU COUNCIL OF MINISTERS DEBATE ROAD SAFETY

It is clear that Vision Zero for EU road safety work as a whole is a long way off, with the EU Transport Council of Ministers failing to countenance even a short term casualty reduction target to demonstrate that political will for effective action exists, despite the encouragement given by the recent Dutch Presidency.

In June, the Council held a road safety debate based on a new communication from the Commission (April 1997) 'Promoting road safety in the European Union: the programme for 1997-2001'. The general concept of the programme is a 'scenario' to be reached if sufficient political will exists to achieve a level of fatalities of no more than 18,000 by the year 2010 using the '1 million ecu rule' and by a range of specific measures.

The Council concluded that this would provide for joint initiatives for defining an integrated approach to road safety to reduce the excessive human and socio-economic

cost of road accidents. Their resolution emphasised the need for European, national, regional and local authorities to carry out their road safety responsibilities in accordance with the subsidiarity principle. ETSC highlights the following points of the Council resolution.

#### EU TRANSPORT COUNCIL RESOLUTION POINTS:

- cost effectiveness could be one factor in selecting road safety measures;
- the setting up and management by the Commission of an integrated information system on all aspects of road safety is supported;
- the Commission in collaboration with Member States should take initiatives to reduce exposure to the risk of accidents;
- significant improvements in road safety can be achieved by reducing the severity of accidents from initiatives such as:
  - support to be given to the new European New Car Assessment Programme, Euro- NCAP, which provides consumer information on the crash performance of cars in certain tests;
  - improving the front, side and rear protection of heavy goods vehicles
  - improving the frontal design of cars for pedestrian and pedal cyclist protection
  - standards for safety equipment e.g. child seats and the extension of their use
  - coach construction standards
- particular attention should be paid to road safety research and road safety should be integrated into the Fifth Framework Programme
- the Commission should produce a report on progress no later than 31st December 2002

The European Parliament is expected to form its opinion on the Commission's plans in the autumn.

#### NATIONAL TARGET SETTING

In Europe, target setting has been carried out in Britain, Denmark, Finland, Netherlands, and Sweden; at regional level, in Schleswig-Holstein in Germany and at local level in Norway. Experience has shown that targets produce more effective programmes, and lead to better use of public funds.

First generation targets to the year 2000 have been reviewed recently by various Member States and further targets have been set or are planned .

- DENMARK

Denmark's target set in 1988 to reduce injuries by at least 40% by the year 2000 has led to the filtering out of ineffective measures, and to the sharpening and re-assessment of priorities. The Roads Directorate acknowledge that the target remains ambitious, but believe it is still attainable having worked on a second action plan to reinforce the earlier activity.

- UNITED KINGDOM

Apart from minor injuries, a 37 per cent reduction in serious and fatal injuries has been achieved after setting a target in 1987 to reduce injuries by one third by the year 2000. The target has not been reached for minor injuries. Much of this has been achieved by a reduction in motorcycle casualties due to a fall in use. The scope of a new target is currently under review.

- THE NETHERLANDS

The original Dutch target, (25 percent reduction by the year 2000) has been increased and extended with an ambitious target to reduce fatalities and serious injuries by 50 per cent by the year 2010. The first target for the year 2000 is now within reach for fatalities although serious injuries are posing a challenge.. An agreement between the Dutch Department of Transport and the Unions of Local Authorities was made in July to start a programme for 'sustainable safety' to meet the 2010 targets. ETSC plans to look at this programme in depth in its next edition of Visions Targets and Strategies in early 1998.