

## SHARING RESPONSIBILITIES FOR ROAD SAFETY

### Introduction

This briefing attempts to summarise how perceived and real responsibilities for road safety have changed over the last 30 years. In the 1970s a strong emphasis was placed on the individual road user to behave correctly at all times. Now there is recognition that accidents and injuries result from a combination of factors, road user error being only one of many. This has led to a systems approach, recognising that combinations of factors come together to cause accidents and injuries. Countermeasures, similarly, may well have to be applied in combinations and the hierarchy of effectiveness of countermeasures is quite separate and different from the analysis of causation. In parallel with that development has been the spread of responsibilities from Ministries of Transport to many other agencies and organisations at local, national, regional and EU levels.

Initiatives in several Member States where responsibilities have been shared vertically from national to local levels, and horizontally across private and public sectors and professional groups, illustrate how new divisions of responsibilities can create new and effective strategies for road accident reduction, illustrated by the Sustainable Road Safety programme in the Netherlands and Vision Zero in Sweden.

Some suggestions are put forward for building on those developments elsewhere in the EU, in terms of encouraging best practices and creating more rational, science based strategies.

### Historical Background

In trying to summarise and generalise about a complex subject such as road safety there are inevitably contradictions and omissions in what is said. This section takes

the last three decades and attempts to isolate some overall characteristics about the road safety sector in Europe.

1970s – The management of road safety was seen almost exclusively as a matter for the public sector, very predominantly within Ministries of Transport. Police collected the basic data but without a responsibility for conducting complete investigations, only addressing the more limited issue of whether a crime had been committed. Other than in general summary form these data were not generally or freely available to interested groups outside the ministries, and there was little research conducted other than within transport ministries themselves. Thus, there was largely a public sector monopoly in road safety research.

The health sector was almost totally absent on road safety issues. The management of road safety rested with the central government and regional and local authorities but without any coherent strategies at the national or local levels. At the international level there were (and are) co-operative programmes through OECD and the ESV activities, both largely government to government in structure. The WHO developed a very small activity on accident prevention. The first generation of EU Directives on vehicle design were formulated.

Great emphasis was placed on the individual responsibility of the road user to cope with the highway system. Retribution was seen as an effective road safety policy, generalised propaganda and driver training were emphasised, and highway authorities had no liability for sub-standard design.

In some countries there was a dawning recognition that the growing severity of the traffic injury problem was being inadequately addressed within the framework described above. Professional organisations such as national associations for traffic medicine and national road safety councils were becoming more important and were attempting to influence national policy. For example the DVR in Germany, constituted in 1969, brought together the public and private sectors covering a multiple range of activities from driving instructors, vehicle inspectorates, regional and national governments, insurance, manufacturers and several others.

1980s – The growth in vehicle ownership in Europe generated increasing numbers of traffic accidents and injuries and a general concern within the public and at the political levels nationally about road accidents. Seat belt use regulations and drink/driving laws demonstrably had major benefits; media and consumer group interest increased, and there was a rise in the plurality of research activities, notably at universities, in the insurance industry and with car manufacturers. Some governments began to separate the research and evaluation functions from the operational aspects of the highway agencies.

Target setting at the national level for specific reductions in casualties was adopted by some national governments. Specific local and regional programmes with dedicated road safety budgets and targets began to be introduced.

1990s – At the EU level there had been for some time harmonisation activities concerning hours of duty for coach and truck drivers, and vehicle safety design

standards as part of the development of the Single European Market. The Treaty of European Union in 1993 recognised a general duty in respect of safe transport for the EU, with powers to act whenever its actions could be shown to give added value over and above what Member States can achieve individually.

Target setting for casualty reductions became more widespread at the national level as it was shown to be demonstrably effective in raising political awareness and encouraging the introduction of science-based effective countermeasures. Private sector initiatives within the insurance and car industries, and co-operative private/public activities such as EuroNCAP developed. The Vision Zero aspiration was articulated in Sweden.

A Common Transport Policy was developed for the EU but whilst calling for a global approach to road safety, omitted to set any EU target for casualty reductions. ETSC produced a Road Safety Strategic Plan for the EU.

In general, the 1990s saw continuing diversity in research programmes and a shift towards cost-effective measures and criteria and the more scientific evaluation of road safety programmes at national and local levels. Some tentative efforts began to address the needs for better data, such as the CARE programme, but openness to data sources remained limited. Health sector involvement remained tentative.

## **The Current Situation**

From this rough and ready summary of the last 30 years what useful principles about Sharing Responsibilities for Road Safety can be deduced?

- Data Collection and Data Quality

Those who ignore history are condemned to repeat it. The same is true if you have inadequate data. Police data must not be considered as the only data source for adequate knowledge about the specifics of accident and injury causation, and the epidemiology of road accidents. Comparison studies of police and hospital records show gross under-reporting of several casualty classes. Police data by their very nature cannot provide the in-depth information necessary to evaluate highway design and behavioural causation issues, nor vehicle design and the biomechanics of injuries.

A number of EU Member States have inadequate national data collection systems even for police data.

Good data are fundamental to science-based strategies and their evaluation. Building EU level, basic data collection systems would aid the evolution of an EU Common Transport Safety Strategy. It would be based on police data but limited to those data elements which are simple and objective. Beyond that, longer-term programmes based on sampling of specific accident types, modelled on the US FARS and NASS/CDS systems are necessary. This would involve sharing

responsibilities between health and transport sectors and developing public/private partnerships in in-depth crash investigation.

- Knowledge-Based Strategies

Transport safety is demonstrably a science. Effective policies whether at EU, national or local levels involve the use of the four strategies of:

- exposure control
- crash prevention
- injury control
- post-crash management

Within this framework sharing of responsibilities will vary between public and private organisations.

- The Systems Approach

At present, we are seeing a shift in thinking about road traffic accidents which is of fundamental importance. It has long been accepted in other activities such as industrial safety, the railways and aviation, that the operator (be he pilot, driver or skipper) is only one part of a dynamic system, with his specific limitations as to performance over time, with the effects of fatigue and alcohol, and predictable error rates. Therefore the other parts of the system, in this case the highway, the vehicle and the traffic management components, must be designed with a recognition of the limitations of road users. This is contrary to the historical view that road users through training, supervision and retribution can cope with the demands of traditional highways without causing accidents. From that view it follows that when accidents do occur, they are the responsibility of the individual road user. The systems approach on the other hand recognises the variability of road users and their intrinsic limitations and seeks to minimise the consequences by failsafe design and operation.

This systems approach for road transport has been articulated in policy terms most clearly in Sweden, but is inherent in the current programmes of a number of other Member States such as the Netherlands and Finland. It is that those who build and operate the highway system, together with vehicle manufacturers, those who write rules and regulations and those who use the system professionally, exert a substantial influence on road safety.

“In order to achieve a safe road transport system, there must be a change in our views concerning responsibility, to the extent that system designers are given clearly defined responsibility for designing the road system on the basis of actual human capabilities, thereby preventing the occurrence of those cases of death and serious injury that are possible to predict and prevent” (Committee of Inquiry into Road Traffic Responsibility, Stockholm, 2000).

- Costs and Effectiveness

As a subset of the more scientific approach, cost-effective analyses are increasingly being used for justifying expenditure on road safety countermeasures. Within the European Commission's programme of action for-

1997 – 2001, a level of one million euros is proposed for the criterion for an activity which will prevent one fatality. Whilst one can debate whether that number realistically reflects the social costs of a fatality and the associated other levels of trauma which came with each accident in which there is a fatality and the other accidents which occur proportionally with each fatality, nevertheless cost-effective evaluations are a useful tool in examining where best, within the system, solutions can be applied and who therefore is responsible for applying them.

- A Philosophy for Shared Responsibility  
Within the view of a systems approach and the application of a rational, target-based strategy for road accident reduction, it is clear that responsibilities extend much further than the historical approach of the individual road user and the Ministry of Transport. The new approach seeks to create linkages between private and public organisations at EU, national, regional and local levels. There are already many such activities, for example EuroNCAP - a powerful stimulant of market forces to improve road safety, the Finnish insurance companies initiative in providing an accident investigation and accident database through VALT, the Folksam Insurance ratings of vehicle crash performance in accidents, and many private/public partnerships at the local level to address specific problems.

The challenge at the EU level is to encourage such activities.

- Accountability  
Implicit in sharing responsibilities for road safety is accountability. Many years ago, when giving evidence in court, a well known traffic engineer in England, John Leeming, noted that when a driver was found guilty of defective driving he was fined and sometimes sent to jail - should not a county highway engineer if responsible for a defective junction design receive similar treatment? At the time that was considered highly subversive. This point illustrates some of the consequences of the shared approach but it logically follows from the recognition that the driver is only one element in an interactive system. Used correctly, accountability can be a great incentive for the introduction of best practice procedures as it strengthens the hand of the professional engineer or designer. Thus local authorities, hospitals, police and all other organisations with an interest in road safety should define explicitly and accept what their responsibilities are. In principle, it places the onus on such organisations to use current best practices.

A number of ways are being explored to make explicit where the various responsibilities lie. Contracts between national and local governments are one such approach; auditing of performance over time is another. In Sweden a specific Road Traffic Inspectorate is being set up which will apply quality assurance assessments to traffic safety.

## **How to Initiate Sharing of Responsibilities – Specific Opportunities**

Questions of Scale – In developing an effective systems approach and creating the linkages between the various entities the issues of scale are fundamental. At the

level of a community of say 20,000 people a vision zero target (zero fatalities per year) is a practical objective in the near term. It is one local leaders, politicians, company executives, health and education professionals and traffic managers can promote, and with appropriate countermeasures enacted, expect a good success rate.

In larger communities and at the Member State level competing claims from other social issues; unemployment, crime, social deprivation and education mean that road safety initiatives seem harder to launch. It is at this level that demonstration projects are important to illustrate what can be done by a new division of responsibilities.

ETSC through its series of “Best in Europe” road safety conferences has provided a forum for the presentation of some of the successful initiatives in which shared responsibilities has led to effective programmes. Those activities could well be expanded at the EU level to encourage their replication elsewhere.

At community level the problems of adequate data discussed above illustrate opportunities for new structures to be created with shared responsibilities between different interests. In particular opening up contacts between police and the health sector and the users of accident data, and bringing in the private sector interests of the insurance industry and others could provide the basis for more adequate information about accidents and traffic injuries across Europe, with the establishment of medium term databases.

The Sustainable Road Safety Programme in the Netherlands illustrates a changing balance between local and national government, with responsibilities being shared in a new way. The success of that approach needs to be examined and promoted across the EU. Likewise the involvement of new entities from commercial, professional and community organisations in Sweden implicit in the execution of the road safety strategy for that country hold lessons for all of the EU.

With a traffic safety strategy from now to 2010 formulated at the EU level by the Commission, there is an excellent opportunity for an aspirational EU target in casualty reduction to be set. Such a target will be met by Member States exercising their shared responsibilities in terms of each meeting its contribution towards an EU target. Beyond that there will be the added value from the EU contribution of reductions in casualties from specific EU programmes such as vehicle design Directives. In turn, within each Member State there should be a plan of countermeasures to be introduced, with clarity at national and local levels as to which organisation has responsibility for each component part of the programme. With such a structured “business plan” and an appropriate set of countermeasures, meeting a realistic target of doing significantly better than just carrying on as at present, becomes more than mere wishful thinking. Clarity in responsibilities is the key.

At the professional and academic level issues of shared responsibilities need to be examined. For example road engineering measures need to be more compatible with vehicle characteristics and vice versa. Road surface and tyre characteristics need to be more compatible, vehicle design and roadside barriers need to be co-ordinated

better. The ways in which road user behaviour is influenced by road design and appearance needs to be examined. The relationships between accident risk, mobility and land use are poorly understood. The role of the systems engineer in accident investigation in the context of aviation is well established, in the road environment there is a need to build a body of knowledge which will apply the same principles to road traffic.

Such an approach whether at EU, regional, national or local levels will inevitably lead to demands for further funding from both public and private sectors. For such demands to be creditable and to compete with other demands from mobility and environmental sectors for example, transport safety requirements need to be articulated with the clarity of a business plan. If specific resources are applied effectively, then deaths and injuries will demonstrably be reduced. For that to happen successfully the various players in both public and private sectors need to have their responsibilities defined and accepted, with resources to introduce the best, science based countermeasures appropriate to the specific sectors involved.

## **Conclusions**

At present there is no single organisational framework which can be identified which designates how responsibilities can best be shared between all of the players. Indeed who the players are varies according to the level at which road safety issues are addressed, whether at local, regional, national or EU levels. What can be said is that effective strategies for dealing with traffic accidents at whatever level requires the involvement of all those who carry some responsibility for road safety whether they currently realise and accept that or not. The list is long:

- Land use planners
- Those involved in the design, management and maintenance of roads
- Shops, factories, residences, schools whose sites are affected by traffic
- Vehicle manufacturers
- Vehicle insurers
- Fleet operators
- Employers
- Those who educate, train and advise road users
- Consumer information providers
- Those who make laws and regulations governing the road systems
- Those who enforce such laws and regulations
- The emergency services
- The medical profession who deal with traffic injuries
- Those who deal with rehabilitation
- Crash investigators
- Transport safety research workers

How such constituencies and organisations can contribute varies according to the level at which action is aimed. The public sector has to lead in defining visions,

strategies and targets strategies at local, national and international level and by legislating to ensure public safety. The private sector, in some areas has fundamental responsibilities and its actions can add value in many ways. The stimulation of market forces to speed up take up or to improve on legislative requirements is but one example. What is clear, however, is that a systems approach involving private and public sectors at every level is the likely way forward.

At the EU level knowledge transfer, the encouragement of best practice procedures and the development of a Common Transport Safety Policy to complement the Common Transport Policy is required. Some specific issues can only be addressed at the EU level such as vehicle safety design. Others require new EU initiatives – for example the development of better databases, the co-ordination of data from different Member States and guidance on best practice.

The setting of an EU target for casualty and fatality reductions by 2010 represents a good opportunity for the shared responsibilities for road safety to be clarified at EU, Member State and local levels and could provide a great incentive for a new and rational systems approach to road safety countermeasures to be applied throughout the EU.

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