"SAFER TRANSPORT IN EUROPE: TOOLS FOR DECISION-MAKING"

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Introduction to the European Transport Safety Lecture

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I have great pleasure in introducing the second of our lecture series which was launched so successfully last year with the help of the Rt. Hon. Neil Kinnock, in his role then as EU Transport Commissioner. The first lecture in the series presented by Professor Kåre Rumar on "Transport safety visions strategies and targets: Beyond 2000" provided thoroughgoing analysis of how far we have come in realising the potential for transport crash reduction and the scientific principles which should underlie future directions in EU transport safety action.

Our aim in the European Transport Safety Lecture is to increase awareness of innovation and research-based solutions to important problems amongst senior levels of government, Parliament and the private sector. We want to stimulate a high level debate across the European Union, to exchange knowledge and experience and to help forge new commitment to efforts to reduce the risks and costs of transport crashes.

Professor Murray Mackay in “Safer transport in Europe: tools for decision-making” takes us a step further in his discussion of how safety is addressed in the different modes and the application of key measures to assist decision-making. Murray Mackay is Professor Emeritus of transport safety at the University of Birmingham. He speaks to us as a leading analyst in the transport safety field and one whose contribution to crash safety research towards the identification of scientifically-based safety policies has received wide international acclaim.

Transport and travel touch the lives of all EU citizens. Regrettably, we go forward into this new Millennium with road crashes as the principal cause of death for EU citizens up to 45 years of age and with individual transport tragedies at sea, in the air and on the track fresh in our minds. However, as Pam Cornelissen MEP observed during the launch of this lecture series, “Ladies and Gentlemen we can make the traffic system as safe as we like.” The gap between what we know to be good and effective policies, and what we actually accept and practice in many areas is still unnecessarily great. Those present this evening, by virtue of their responsibilities, can make a major contribution to shaping higher levels of transport safety in Europe.

Executive Summary

In the 43,000 transport deaths which occur annually in the European Union, 99 per cent are on the roads. Per distance travelled, the fatality risks on the roads are much higher than travelling by rail, ferry or air and per hour of exposure, road and air travel have about the same fatality risks. Motorcycling carries the highest risk of all – around 20 times more dangerous than car travel and 400 times more dangerous than rail travel over distance. Compared by either means with other activities, motorcycling is over 10 times more dangerous than most perceived risky recreational activities or sports.

Accident data in the EU are inadequate to satisfactorily document the extent of transport-related injuries and fatality and injury risk. This is mainly because of gross under-reporting of certain classes of casualties and the absence of adequate control data to assess exposure. More fundamentally, there is no structure for the majority of modes for reconciling national data sets to produce a coherent picture at EU level.

Across the 15 Member States of the EU, road fatality rates vary from around 8 in the UK and Sweden up to 38 in Spain, 44 in Portugal and 53 in Greece with an EU mean of 16 (deaths per billion veh. km).

The history of crash investigation in the four modes of travel illustrates a transition from simplistic conclusions that the cause of an accident was human error towards a greater understanding of system failures in which the operator is just one component. This has lead to the design of benign and failsafe systems, but that approach for road transport has yet to be widely understood or implemented.

New technologies are becoming available which offer pre-crash and crash recording of many parameters. The extension of recorders used in aviation for many years, adapted to the other modes of travel, will increase the objectivity and completeness of future crash investigations. Encouraging the development and use of such devices, especially for road transport, is a priority for EU action.

The administrative structures which control accident investigation and regulate safety vary within Member States and by mode of travel. There is a good case to be made for separating the accident investigation function from both the regulatory and operating aspects. A separate and independent accident investigation agency is proposed for each mode of travel within each Member State, with international collaboration, especially for aviation, marine and rail sectors.

In furthering transport safety in the EU, the underlying tools for decision making are discussed. The fundamental building block is a recognition that all transport accidents can be diminished in numbers by the application of known, science-based strategies. Data are fundamental to this approach and that leads to the development of a strategy of countermeasures in the five areas of:

- exposure control
- system design
- behavioural change
- injury investigation
- post-crash rescue and medical care

Evaluation of the effects using performance indicators is implicit and the adoption of explicit performance indicators across the EU is proposed.

Specific areas for EU actions are:

- improved data systems throughout the Member States and the development of databases for all modes at the EU level (as initiated with the CARE database and the STAIRS protocol);
- target setting for death and casualty reductions especially in road crashes, for both Member States and the EU as a whole;
- establish performance indicators for Member States and the EU so that comparisons can be made and changes over time monitored;
- encourage the establishment of independent crash investigation agencies in all modes;
- promulgate new EU directives in those areas where the EU has exclusive responsibilities notably in vehicle safety design and where EU action adds value;
- encourage knowledge transfer and best practices to level the great variations in transport injury risks across Member States;
- specifically encourage the new technologies of Vehicle Data Recorders;
- seek to encourage national science-based strategic thinking for transport safety programmes in all modes of travel by making transport injury reduction a major priority. This can only be done by applying resources commensurate to the problems and thus closing the gap between what is known to be good and effective and what is actually accepted and tolerated. The political will to make such changes will follow from a comprehensive science-based common transport safety policy for the EU.

Introduction

Fundamental to national policy-making is a basic numerical understanding of the extent, the causes and the consequences of transport deaths, injuries and risks for the 375 million inhabitants of the European Union. In Europe, we are living through a period of great constitutional, commercial and social change, where national practices and attitudes are being shaken in a European kaleidoscope into new forms. Transport is a major component in this process. It is my aim to show that the safety component of transport should be absolutely fundamental in the development of new European policies on transport.

With the enlargement of the European Union high on the political agenda, the challenges in transport safety become greater, and to meet these challenges we need to develop an explicit common transport safety policy. To be credible, such a policy must be based on sound data, must have a business plan of proven strategies and must have explicit performance indicators to evaluate the implementation of such strategies.

Thirty years ago, transport policy was driven largely by the need to increase mobility; increasing travel in almost all modes led to huge investments in infrastructure and major growth in vehicle fleets, particularly on the road and in the air. Safety and environmental implications were secondary, and programmes to reduce deaths and injuries were basically reactive to the huge expansion in mobility. Over the last decade, however, the limits to growth have become apparent with the impact of congestion and environmental side effects all too obvious on the roads, in the air and to a degree in European coastal waters. The safety aspects of transport and the attendant risks of travel by the various modes have yet to be fully incorporated into transport policy decision making. But what we now have are four important developments.

First we have somewhat better data. We can quantify and to some extent compare risks and we can predict the safety consequences of various policy choices. Secondly, we have the tools available in the form of administrative and legislative procedures and co-operative programmes across the European Union to implement best practices and strategic planning to diminish transport risks. Thirdly, we have a growing awareness by both politicians and the general public of transport risks, the enormous burden that transport deaths and injuries put on us all, and a growing realisation at national and European level of the gap between what we know to be good and effective policies and what we actually accept and operate in reality. And fourthly, we have an array of new technologies which offer enormous benefits if applied appropriately.

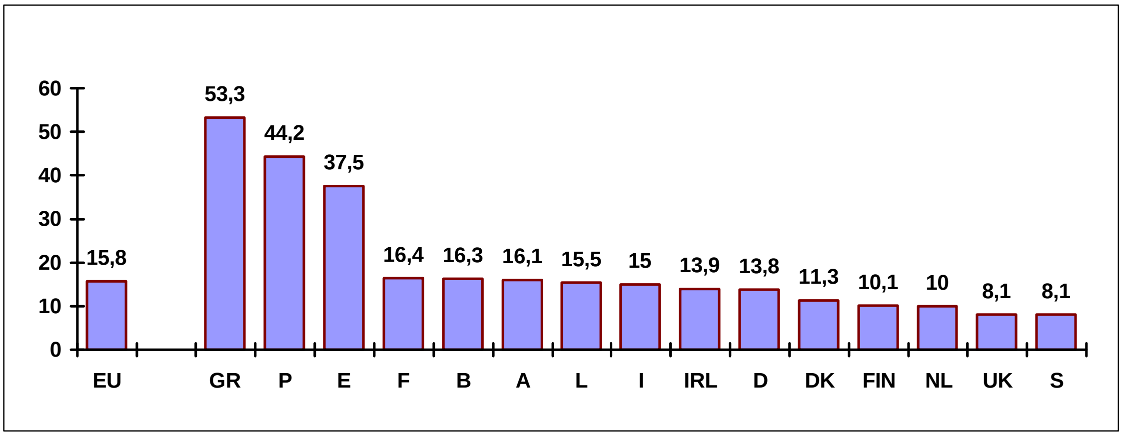
Comparisons between transport modes

<u>The Current Situation</u> - If you step back and look at transport death and injury as a disease, which it is, we have an imperfect view of its extent and its

characteristics across the European Union. A conventional disease which kills 43,000 annually, generates at least 600,000 hospital admissions and produces costs to society of 160 billion euro, a figure twice the EU budget for all of its activities, a disease which uses up about 10 per cent of all health care resources, it would receive equivalent scrutiny to other major endemic disorders. Yet, the epidemiology of transport crashes is not well documented, risk factors are not widely understood across the EU, control data are patchy, and under-reporting of major classes of crashes is substantial. As a result, coherent implementation of scientifically based, proven countermeasures is still a subject of controversy; folklore and wishful thinking abound.

Some EU Member States have moved beyond this condition and have set national targets, implemented science-based strategies and raised transport safety higher up their political agenda. But with for example fatality rates varying from 8.1 to 53.3 around an EU mean of 15.8 (road deaths per billion vehicle km), the epidemiology of transport deaths is poorly appreciated beyond the specialists and for most politicians it has a low priority (Figure 1).

Figure 1. EU road fatality rates per billion veh km
(Source: IRTAD/SWOV 1998/9)



The European Parliament has declared that transport safety should be a top priority issue at the European Union level. The necessary common transport safety policies need to be structured to implement such a declaration, with the application of resources commensurate to the problem. As an aspiration it is useful to say that transport safety should have a high priority. The reality is that the EU safety budget for all transport modes is 8 million euro. Using conventional costing methods this sum equals 8 road fatalities. For a credible policy to be implemented, the EU needs to give more attention to this issue.

Table 1 gives the basic numbers of reported passenger transport deaths by mode of travel within the EU, the mortality rates per 100,000 people and the total number of passenger kilometres travelled annually in each mode. The overwhelming preponderance of road transport deaths is obvious (ETSC, 1999a).

Table 1

Mode	EU Fatalities	Mortality Rate (per 100,000 people)	Billion km.
Road	42,500	11.3	3,860
Rail	108	0.029	270
Ferry	100	0.027	30
Air	109	0.051	240

Fatality risks can be assessed either on the basis of the distances travelled or the time spent in a particular mode. Table 2 shows these fatality risks. Again, the high risks for road transport are apparent. Such statements, seemingly simple, are based on estimates of exposure which in reality across the EU involve some heroic assumptions, and illustrate a fundamental gap in our knowledge of the transport system.

Table 2 Fatality risks by mode of travel

Mode	per 10^8 person km	per 10^8 person hours
Road	1.1	33
Rail	0.04	2
Ferry	0.33	10.5
Air	0.08	36.5

Table 3 Deaths per 100 million hours of activity

Activity	Deaths per 100 million hours of activity
Racing in the TT races (Isle of Man)	±60,000
Rock climbing (while on rock face)	4,000
Motorcycling (incl. mopeds)	500
Air Sports (GA, hang gliding, parasailing)	200
Skiing	±130
Cycling	90
Mountaineering	±45
Motor Sports	40
Air Passenger transport	37
Car occupant travel	30
Pedestrian travel	30
Boating/sailing	20
Working on off-shore oil/gas rigs	20
Swimming	12
Ferry travel	10.5
Horse riding	10
Bus and Coach travel	2
Rail travel	2
Accidents in the home	1.5

It is instructive to compare how we take risks in other activities than transport. Table 3 looks at the fatality risks per time spent on that activity. It is striking that travelling by motorcycle on our highways is substantially more dangerous than a number of recreational activities which are perceived as relatively dangerous. Other forms of transport are noticeably less risky (ETSC, 1999a; Roberts, 1995; Ball, 1999).

Fatalities in fact represent only a small part of the overall transport injury picture. In terms of socio-economic costs fatalities account for less than one third of total road crash costs. In addressing non-fatal injuries however across the EU Member States, there are gross variations of definition of injury categories and severe under-reporting. Consider the data in Table 4 which shows the ratios of fatal to serious and to slight casualties for EU countries. Given that broadly speaking the definition of a serious casualty is hospital admission, then their data show both serious classification problems and major under-reporting in some countries (ETSC, 1997a).

Table 4 Road Fatalities (1990) and ratios of serious and slight casualties

Country	Fatalities 1990 (1)	ratio serious/fatal (2)	ratio slight/fatal (3)
Austria (A)	1,558	7.9	31.9
Belgium (B)	1,976	7.4	31.1
Denmark (DK)	634	8.4	6.5
Finland (SF)	649	4.2	12.2
France (F)	11,215	3.9	13.0
Germany (D)	11,046	11.6	33.1
Greece (GR)	1,998	1.6	13.4
Italy (I)	7,151	7.8	23.2
Ireland (IRL)	478	5.4	15.2
Luxembourg (L)	70	7.3	14.2
Netherlands (NL)	1,376	8.4	26.3
Portugal (P)	3,017	3.9	18.2
Spain (E)	9,033	4.7	8.9
Sweden (S)	772	6.5	18.1
United Kingdom (UK)	5,402	8.7	49.3
EU	56,375	6.9	22.8

For the other travel modes, the ratios of fatal to serious injuries are much lower, being 1.3 for ferries, 0.5 for passenger aircraft and 2 for train travel.

<u>Concepts of Causation</u> - Considering the four modes of travel, maritime accidents have by far the longest history; ever since Odysseus' ship was dismasted and he finished up on the island of Drepane. The ancient Greeks however did not appear to take accident investigation seriously, although navigation in the eastern Mediterranean was greatly improved with the

construction of many lighthouses. Historically, marine accidents have been dominated by navigational difficulties and bad weather, but this century technology has vastly improved navigation and many of the recent maritime accidents have centred around ship design issues and "human error".

The rise of the railways in the 19th century generated an altogether new type of transport crash. Until the train, man's experience of speed was limited to that of the galloping horse, but with the ironhorse speeds of 60 mph to 80 mph became possible. As railway networks expanded, signalling systems became a vital part of the whole operation, and there was an early recognition of the need to recognise human fallibility. Some early systems lacked a clear appreciation of human factors engineering. For example, in Daniel Gooch's Regulations of 1840 is this description (Rolt, 1966):

> "A Signal Ball will be seen at the entrance
> to Reading Station when the line is right for
> the Train to go in. If the Ball is not
> visible the Train must not pass it."

But broadly speaking the history of safety on railways is based on an evolving recognition of error being inherent in human performance and thus the solutions were engineering ones, which aimed to minimise the consequences of human error. Thus the automatic vacuum brake, the block system, facing point locks, track circuiting and now automatic train control.

With a much shorter history, aviation safety has followed a similar evolution to that of the railways. With the advent of passenger carrying flights, government regulation and separate agencies empowered to conduct accident investigations became early features of the airline industry.

At the operational level many early aircraft crash investigations were closed with the conclusions that the crash was caused by “pilot error”. Given the absence of some airframe or engine failure then that conclusion is axiomatic, but gives little insight into why such an error was made. Professor Ken Mason, an eminent aviation pathologist noted that “The Concept of Pilot Error has set Crash Investigation back by a Generation”. What has now evolved across all modes except the roads, is a much greater understanding of system failures where the operator is part of a system and good design of that system recognises the limitations of the operator and introduces failsafe procedures which limit the consequences of pilot or operator error (Maurino, 1995).

With road crashes the concepts of causation are still poorly understood and ill defined even for many professionals. The traditional view has been focused on road user behaviour with such descriptions of the "cause" of a crash being "driving too fast", "inattention" or "failing to obey a signal". Such conclusions to a crash investigation give little insight into the reasons why such behaviours occurred nor do they recognise the underlying system design shortcomings which lead to such failures. There is still widespread but scientifically unjustified belief in traditional behavioural change programmes and much money is wasted on ineffective campaigns. Behavioural change is certainly possible but research over the last two decades has shown repeatedly that to be successful such programmes must be specifically targeted and linked to police enforcement activity with easily perceived penalties for aberrant behaviour. Examples of successes in this area are speed control and red light cameras, random or targeted breath testing and compulsory use of headlights in daytime by motorcyclists (ETSC, 1997b).

Crash Investigation Technology – The last thirty years has seen great changes in the actual techniques of crash investigation and analysis. For example, it was not until 1969 that Newton's Laws of Motion were recognised by the Courts of Law in many countries, with the analysis of speed from skidmarks being accepted over eye witnesses estimates of speed. Now we have an array of technologies, which offer detailed objective knowledge about a crash and the immediate pre-crash circumstances. This technology is most advanced in aviation with Flight Data Recorders (FDRs) and Cockpit Voice Recorders (CVRs), which have been a requirement on commercial aircraft for a number of years.

By 2002 aviation FDRs with 88 parameters will be required, together with dual CVRs using solid state recording (more crash resistant than tape). Analogous systems are now available covering marine and railway modes. Their worth has been established repeatedly in the world of aviation, moves are in place within marine and railways jurisdictions to introduce them. The problems are not so much technical as institutional, with resistance from some operators and concerns about privacy and their use in civil and criminal trials. This is an area of new technology where Europe has a great opportunity to advance safety in these modes.

With road crashes the application of similar technology would increase our knowledge of crash circumstances enormously and replace guesswork and supposition with clarity and specific facts. In the short run we know that fatigue is a major factor, particularly in long distance truck operations. A digital, tamper-proof tachograph with a computerised log and GPS would likely lead to major improvements and such technology is now both feasible and cheap. It is commonplace for a lorry to have a cargo worth a million euros and to transport it from say Manchester to Istanbul or from Warsaw to Barcelona. The safe and efficient passage of such a cargo would be substantially enhanced with an appropriate vehicle data recorder (VDR).

The next generation of VDRs can offer much more information particularly concerning immediate pre-crash circumstances and the crash itself. Speed over the road at impact, brake application, light and direction indicator use in the crash, seat belt use, airbag time to fire and steering inputs can all be recorded objectively. With such knowledge the investigation of road crashes would be more objective and complete, and subsequent liabilities assigned with much greater clarity than is the case at present.

Administrative structures – There are five elements to the administrative structures which represent each mode of travel. These are a government department or ministry, a regulatory body, a crash investigation organisation, the operators and the travelling public. Within each transport mode and within each Member States of the European Union, these five elements have varying relationships with each other and are often combined together.

Many countries have had independent air accident investigation agencies since the early days reporting directly to government, and there are now EU requirements in this field. Regulation (of safety as well as operations) is vested either in a government department or in a separate regulatory authority, whilst the actual operation of the system is now mainly through private companies.

Some countries now have independent railway accident investigation bodies, whereas others do not. Not all the new railway operators will be in a position to carry out high-quality accident investigation, so independent bodies will be more necessary in future.

Marine travel also has lead to much international collaboration but the accident investigation element is not clear cut nor in many instances separated from the function of the operators or the regulatory agencies.

With road transport both crash investigation and regulation of safety issues are not clear-cut. Crash investigation is split between the police, national departments of transport and local authorities. The regulation of safety is similarly split between the police, local authorities and several national agencies which deal with highways, vehicles and operations of the system. Often at the national level the safety sector is integrated into much larger government departments of transport which can lead to safety having a low priority within government.

What appears to give greater transparency and a higher priority to safety issues is when the crash investigation function is conducted by an independent agency which reports either to Parliament or to a government department but is independent of that department. Similarly, the regulation of safety is perhaps best conducted by a separate agency not directly concerned with day-to-day operations nor responsible for other conflicting aspects of that transport mode.

Some countries have put under one administrative body the authority to investigate across the modes. This may well lead to some technical synergies and also to greater independence and transparency in the crash investigation process.

Since 1993, the European Union has had general powers to carry out measures to improve transport safety. Some very specific aspects of transport safety are the direct responsibility of the European Union rather than Member States. Given increasing cross border traffic, EU enlargement and the globalisation of transport generally it must follow that an EU Common Transport Safety Policy should evolve with appropriate administrative structures for its effective implementation and monitoring.

Tools for decision making

What then are the fundamental building blocks necessary for the formulation and implementation of a Common Transport Safety Policy for the European Union? There are five such tools which apply to all the transport modes.

A Philosophy - This basic foundation is a recognition that transport crashes can be greatly diminished in number and severity by the application of effective, science-based strategies. This is recognised increasingly in those modes where a systems approach has been applied, but with road transport there is still much folklore, ignorance and fatalism. "Road accidents like the poor will always be with us", it is said, and by implication we should not invest in countermeasures.

In reality, there is almost no other area of public expenditure where the returns for money spent on effective countermeasures is as great as with road injury reduction.

A thread in this philosophy is that transport safety must be an equal partner with the other elements which come together in formulating transport policy. Safety issues should not be treated in merely a reactive way after the other parts of transport policy are decided.

This leads further to cross-modal comparisons. It need not always be that the road travel is the most dangerous part of any multi-mode journey. One must conclude that resources need to be available commensurate to the scale of the problems and the cost-effectiveness of the countermeasures.

Data – The current quality of transport death and injury data for the European Union barely describe the state of transport safety and its associated risks. Figure 2 outlines the different types of data at various levels necessary to provide the ongoing knowledge base that is fundamental to all national policies and their evaluation.

More complete data particularly on injuries of all severities, not just fatalities, are vital and the barriers between police and hospital databases need to be broken down. Control and exposure data are fragmentary especially in the road transport area. Near-miss data hardly exist outside of aviation. Those who ignore history are condemned to repeat it. The same applies if you have no data.

In particular for road crashes, Europe has no equivalent to the FARS (Fatal Accident Recording System) and NASS (National Automobile Sampling System) databases of the United States. These in-depth crash investigation programmes, maintained and on-going since the 1970s are a profoundly useful source of new knowledge and means of monitoring the effectiveness of regulation of vehicle safety design. While in-depth information has been generated by studies in several Member States, the absence of such a system for the EU as a whole has limited understanding of the detailed characteristics European road crashes and monitoring of the effectiveness of countermeasures.

Figure 2. Why collect data?

Basic Census Databases
Basic Epidemiology National Accident Data
National Differences, EU performance
Comparisons between Modes of Travel
Changes over Time
Injury Data (definitions, under-reporting)
CARE protocols FARS
Exposure Data

Sample Studies
Before/After Studies
Monitoring effectiveness of Countermeasures
Regional Trials
Exposure Measurements

In-depth Studies
Specific Crash Investigations
Study of System Failures
Defect Investigations
Evaluation of New Technology
Detailed Epidemiology NASS, CCIS, HMS

Near Miss Studies
Rail-passing danger signals
Air-near miss incidents
Road-Damage only analysis
Exposure studies

Knowledge Based Strategies – Transport Safety is a science. Each transport mode has a knowledge base and a history of successes and failures of safety countermeasures. The best practice in each transport mode rests on sound research, and the application of countermeasures across five areas:

- Exposure Control
- System Design
- Behavioural Change
- Injury Mitigation
- Post-crash rescue and medical care

This five pronged approach leads to an overall strategy in which accident and risk reduction targets are set, and a logical "business plan" of known effective countermeasures developed to meet these targets within a defined timeframe.

Performance Indicators – Implicit in this approach is the need to set numerical targets for death and injury reduction. Once appropriate strategies are put in place to meet these targets then performance indicators over time need to be used to monitor the effectiveness of those strategies. Similarly performance indicators are needed across the Member States to compare relative performance and thus generate a basis for the introduction of the appropriate solutions.

Research: A Commitment to Change – Beyond the application of known solutions, research and advancing technology will continue to offer new means of diminishing transport risks in all the modes. This requires a recognition that existing procedures, techniques and behavioural patterns will change, as will the associated administrative structures.

Areas for European Union action

With these tools for decision making, it follows that there are a number of areas where EU action is especially appropriate. Some are in place or being developed; some need to be applied across other transport modes and some still need to be advanced from general principles into specific policy actions. The following suggestions are not intended to outline comprehensively the most attractive specific countermeasures for each mode, to do so would result in excessively long lists. Rather my aim is to touch on some general issues which under-pin the rational development of an effective common transport safety policy for the European Union.

Data Needs – For all transport modes, there is a major need to establish or improve EU fatality and casualty databases.

Associated with such data is the need to develop exposure measurements. Only with such data can rational policies for managing exposure to risk be developed. Census data across the EU are only one level of the necessary information, which is needed to set policy. In-depth crash investigation for road transport crashes has proved to be a major source of new knowledge and an effective means of monitoring safety legislation and evolving technology. Such data are vital for the evaluation of the current situation and for the development of new solutions.

Already some EU programmes such as CARE and STAIRS are showing the way forward, but because good data at every level are vital, this is an area of high priority.

Target Setting – The experience of individual states is that targets for death and casualty reduction over a specified time period are beneficial for the creation of logical, science based strategies. This principle should be applied to the EU as a whole for road transport, with the concomitant developments of a strategic road safety plan for Europe.

Performance Indicators – Allied to setting targets for casualty reduction is the development of performance indicators at EU and Member States level to establish a basis for evaluating change and establishing particular areas of under performance.

Independent Accident Investigation – In rail, maritime and road transport there is a need for Member States to establish independent crash investigation agencies. Legislation at EU level already requires Member States to introduce arrangements for independent air accident investigation which could be extended to other modes. The EU can also act as a catalyst in encouraging best practices for such agencies.

EU Legislative Actions – Within each mode but especially with aviation and road transport there is a substantial list of recommendations for EU directives, based on soundly researched known countermeasures. These need to be realised. (See ETSC 1994-9f).

Encourage Best Practices – Through information exchange and performance indicators much can be done by the EU to encourage the application of known effective countermeasures. This is particularly the case with road transport where variations between Member States are great. The more obvious solutions relating to speed control, roadside design, seat belt use, diminishing motorcycle use and drinking and driving would have immediate gains.

Vehicle Data Recorders – The potential of the evolving technologies which apply to both pre-crash and crash conditions is enormous both in terms of improving our knowledge of crash circumstances but also in providing clarity and objectiveness in accident data. The EU should encourage the development and implementation of such recorders in all transport modes.

Strategic Thinking – More broadly the EU can lead in developing transport safety strategies across all modes of transport and develop guidelines for Member States. The tools for decision making have been outlined above. Thirty years of research now offers a whole range of known countermeasures. The EU should use all the community instruments of legislation, information exchange, financial support and research to advance effective policies. This requires the political will to raise transport safety to a higher level than it currently occupies, and to provide the finance commensurate with the problems of transport death and injury. Only then will the potential gains which we know can be achieved become a reality.

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