



SafetyNet Workshop
March 27th 2007, Brussels

**Independent In-depth
Road Accident Investigation in the EU**

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Reinhold Maier

Jean-Paul Repussard (EC, Secretary)

EC Expert Group on Accidents in the Transport Sector
Road Sector Working Group - ROSAT

CONTENTS

- **EC Expert Group on Accident Investigation in the Transport Sector, background and mandate**
- **Levels and independence of accident investigations:**
Types of investigations, definition of "independence", difference between "guilt" and technical investigations
- **Accident investigations at national level:**
Examples from Sweden, Germany, Great Britain, France, Finland, The Netherlands and Norway
- **The European perspective:**
CARE database, SafetyNet, EU-Directives, Agency
- **Main conclusions and recommendations**

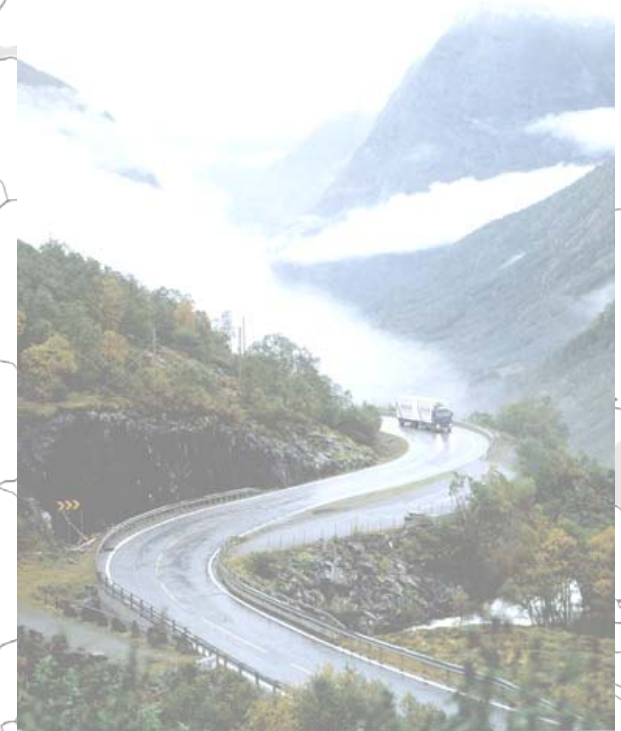
ANNEX: METHODOLOGY WG MAIN CONCLUSIONS



CONTENTS

- **EC Expert Group on Accident Investigation in the Transport Sector, background and mandate**
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CARE database, SafetyNet, EU Directives, Agency
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ANNEX: METHODOLOGY WG MAIN CONCLUSIONS



Background and mandate



Background:

- Based on the experience of the existing legislation on independent accident investigation in air transport, the Commission wants to extend it to all modes of transport, including the transport of energy.
- The investigations are an important means to improve safety by identifying the causes of accidents and thereby preventing them from occurring.
- Such investigations are not linked to compensation for damages or determination of liability, and are therefore separate from investigations conducted by the judicial authorities, insurance companies and industry.

Mandate:

- 1) Take it as its objective to improve safety and security with regard to all modes of transport, including the transport of energy (oil and gas pipelines), excluding occupational health and safety aspects;
 - 2) Advise the Commission on its strategy as well as on draft legislation the Commission might propose in the field of independent investigation (causes and prevention of accidents or incidents);
 - 3) Examine methods, frameworks & policies on accident/incident investigations and, if appropriate, advise the EC on the need to carry out benchmarking studies or to centralise investigations;
 - 4) Advise the Commission on the formulation of common European methodological elements for independent accident and incident investigations
- Commission Decision 2003/425/EC, OJ L 144 of 12.6.2003

European Commission's Expert Group on Transport Accident Investigation 2004-2006

TRANSP. AREA	NAME	COUNTRY	ORGANISATION
CHAIRMAN	PETER FAROSS		EU COMMISSION
AVIATION	KEN SMART	UK	DOT – AIR ACC. INVESTIG.
	PAUL-LOUIS ARSLANIAN	FRANCE	MDT - BEA
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ROAD	JESUS MONCLUS	SPAIN	FITSA
	LARS GÖRAN LOWENADLER	SWEDEN	VOLVO TRUCK CORP.
	REINHOLD MAIER	GERMANY	VTIV-GDV
PIPELINES	SERVIE SIMONS	UK	SHELL UK EXPL. AND PROD.



Hearings held with the following experts:

- Dietmar Otte, Medical University of Hannover, Germany
- Gilles Vallet, INRETS, France
- Lars Bergfalk, Road Inspectorate, Sweden
- Pete Thomas, University of Loughborough, United Kingdom,
- Yves Bonduelle, Bureau d'Enquêtes sur les Accidents Transports Terrestre, France
- Pieter van Vollenhoven and the staff of the Dutch Safety Board, The Netherlands
- Knut Rygh, Accident Investigation Board Norway (also Group of Experts)
- Pirjo Valkama-Joutsen, Finnish Accident Investigation Board (also Group of Experts)

ROAD ACCIDENT INVESTIGATION IN THE EUROPEAN UNION REVIEW AND RECOMMENDATIONS



Expert Group on Accidents in the Transport Sector
Report from the Road Sector Working Group
May 11th, 2006

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ANNEX: METHODOLOGY WG MAIN CONCLUSIONS



Categories/levels of transport accident investigations

Level	Definition	Examples
Statistical data collection	Collection of anonymous accident data elements that are used mainly for monitoring trends and priority identification.	-National statistics -CARE database at EU level
Intermediate level	Medium-level investigations between the statistical and the in-depth, suitable for black-spot management	•Qualified police reports •Insurance reports
In-depth investigations (independent as well as non-independent)	Detailed multidisciplinary investigations with a high number of variables (the number of variables usually varies from a few hundreds to more than a thousand). The aim is to prevent the recurrence of serious accidents by discovering structural failures and proposing corrective measures.	•CCIS in the UK •GIDAS in Germany
Special accident investigations	Multidisciplinary investigations with case-tailored methodologies. The aim is to prevent similar serious accidents by discovering structural failures and proposing corrective measures.	•Investigations conducted after the Montblanc fire in 1999 •A bus accident with 11 fatalities occurring on 11th June 2004 near Poitiers (France)



Definition of "independent investigation"

Conditions for the independence of accident investigations (from the "Methodology Working Group"):

- The accident investigation authority shall be set up permanently and carry out its tasks impartially. Its functional, financial and legal independence from any other public bodies or third parties shall be guaranteed, and in particular from any national authorities responsible for the establishment or the enforcement of safety requirements imposed on the transport sector.
- The independence and impartiality of all safety investigators need to be assured.
- Appropriate measures shall apply to the accident investigation authority's workforce

RO-SAT definition of "independence" in accident investigations:

- "The structural (*separation from authorities and clear legal status*) and financial (*yearly stability of funds*) ability to decide WHAT and HOW to investigate, and to PUBLISH THE RESULTS of the investigations".



Relationship between judicial and technical investigations

Example of the Memorandum of Understanding (MoU) between the Crown Prosecution Service and the Air Accidents Investigation Branch, Marine Accident Investigation Branch, and Rail Accident Investigation Branch in the UK (signed in September 2005)

- All evidence and information, except where there are specific legal bars, can be disclosed between the accident investigation boards and the Crown Prosecution Service.
- The public interest requires that safety considerations are of paramount importance, the consequence of which may mean that the interests of an accident investigation board investigation have to take precedence over the criminal investigation.
- Accident investigation boards will provide a pre-publication copy of the finalised report to the Crown Prosecution Service if it is made aware of a Crown Prosecution Service interest. The Crown Prosecution Service may make comments to the accident investigation board about the report before publication.
- The ability of witnesses to talk openly to an accident investigator is fundamental to the operation of the accident investigation boards.

The practical impact of the MoU in the UK is that the AIB's will have the lead in all transport accident investigations except those where there is early and clear evidence of serious criminality (sabotage, for instance).

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Accident investigations at national level

The Netherlands:

- The Dutch Safety Board – OVV

Great Britain:

- CCIS – Co-operative Crash Injury Study
- OTS – On The Spot Study (VSRC, TRL)
- Police Fatal Accident Investigations
- Truck/Bus Crash Injury Study

France:

- Bureau d'Enquêtes sur les Accidents de Transport Terrestre – BEA-TT
- EPCA – Local intermediate investigations
- INRETS – Dep't of Accident Mechanisms

Norway:

- Accident Investigation Board Norway – AIBN
- Norwegian Public Road Administration - NPRA

Finland:

- Accident Investigation Board (AIB)
- Road Accident Investigation Delegation
- The Finnish Motor Insurers' Centre - VALT

Sweden:

- Statens haverikommision – SHK
- Vägtrafikinspektionen – VI
- Vägverket - VV

Germany:

- GIDAS – German In-Depth Accident Study (Hannover & Dresden)

Traffic accident investigations in the Swedish model

Level 1: Independent investigations initiated and performed by the Swedish Accident Investigation Board (SAIB). Fatal accidents with more than 5 victims or with principal system problems involved and all transport modes are covered.

Level 2: OLA (Orsak-Lösning-Avsikt) studies of facts, solutions and intentions for preventive measures. These cases are selected among fatal accidents by staff members of the Swedish National Road Administration (SNRA) together with Regional Road Administration (RRA) offices, and the studies are decided by the Director General of SNRA together with the Director of the region.

Level 3: In-depth studies of all fatal accidents initiated and performed by staff members of the Regional Road Administration offices according to the ordinance with instructions to SNRA.



Foto: NILKAS HENRIKZON



Accident investigation and data collection in Great Britain

- **Basic statistical details are collected by the police officers using the STATS19 forms.**
- **The Co-operative Crash Injury Study (CCIS) is now in its seventh-phase and has been running for 22 years. Its funding is mixed: public (Department for Transport) and private (Ford, Autoliv, Toyota, Nissan, Visteon, Renault and Citroën). It consists in retrospective crash examinations, completed with hospital and coroners re-ports. CCIS crash investigation teams are based at Loughborough and Birmingham Universities, as well as in the Vehicle Inspectorate Executive Agency.**
- **The On-The-Spot (OTS) study is funded by the Department of Transport and investigates vehicle, road and human factors in accident causation in direct support of UK casualty reduction target. OTS is now in its fifth year and there are currently two crash investigators teams (VSRC in Loughborough University and TRL).**
- **The Truck Crash Injury Study (running for about six years).**
- **Special Accident Investigations (covering any crash of interest and triggered by the Department for Transport).**
- **EU research projects such as PENDANT or SAFETYNET...**



Accident investigation and data collection in France

- **Basic (statistical) data collection in France is coordinated by the National Road Safety Observatory, which is part of the Ministry of Equipment and Transports.**
- **The local prefect may decide on conducting intermediate investigations at the local level (EPCA, ex REAGIR investigation programme). EPCA has no nationwide cooperation.**
- **The Institut National de Recherche sur les Transports et leur Sécurité also conducts in-depth road accident investigations mainly for research purposes.**
- **The Decree of 26 January 2004, published pursuant to the “Mont Blanc Tunnel” Act, officially founded the Bureau d’Enquêtes sur les Accidents de Transport Terrestre BEA-TT. The BEA-TT is a body with competency over the whole of France and is lodged with the Conseil Général des Ponts et Chaussées - CGPC. Around 30 cases (all transport modes) are being investigated every year by the BEA-TT.**
- **BEA-TT deals with all technical investigations for land transport, the other transport modes are covered by the BEAair dealing with aeronautics accidents and the BEAmer with maritime accidents.**



The Dutch Safety Board

- The Dutch Safety Board (DSB), reached its current shape in February 2005, replacing the Dutch Transport Safety Board, the Temporary Accident Investigation Committee of the Ministry of Defense and ad-hoc committees.
- The DSB is a statutorily established autonomous agency responsible for the independent investigation of the causes and consequences of disasters, serious accidents and incidents in a broad range of sectors. The Board conducts investigation and issues recommendations.
- The goal is to learn as much as possible from the investigated accidents and incidents so that measures can be taken to prevent accident or, when this is not possible, to mitigate their effects. The Dutch Safety Board is autonomous and has no links with legal and damage procedures.
- The Safety Board covers accidents and safety issues in transport, defense, industry + trade, crisis management and aid provision, healthcare, nature and environment and large-scale fires and explosions.
- The Dutch Safety Board is steered by a Board with five permanent members. For specialist knowledge, the Board members can enlist the assistance of special Board members organised in Sector
- Committees for each of the sectors The Board is assisted by a professional bureau consisting of several departments staffed by 50 fulltime employees.



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CARE – Community Database on Road Accidents

- CARE is a Community database on road accidents resulting in death or injury (no statistics on damage - only accidents). CARE was set by the European Council on 30 November 1993.
- National data sets should be integrated into the CARE database in their original national structure and definitions, with confidential data blanked out. Subsequently, the Commission provided a framework of transformation rules so that CARE provides compatible data.
- This structure allows for maximum flexibility and potential with regard to analysing the information contained in the system and opens up a whole set of possibilities in the field of accident analysis.
- Access to CARE database is restricted to two “users” per country.



SafetyNet Project (FP6, running 2004-2008)

Background:

SAFETYNET ("the European Road Safety Observatory – an information system to support road safety policy in Europe") is an ongoing Integrated Project (6th Framework Research Programme).

SAFETYNET aims at helping the EC in defining the future European Road Safety Observatory (the EC expressed the demand for a "Road Safety Observatory" in its 2001 White Paper and other documents).

Objectives:

1. Further enhancement and exploitation of Care including extension to the 10 new member states;
2. A new methodology to gather risk/exposure data;
3. The design and implementation of a Europe-wide network for periodical measurements of Safety Performance Indicators;
4. Recommendations for independent road accident investigation;
5. A new fatal accident database at intermediate level and an in-depth accident causation database
6. Provision of a Safety Information System as a gateway for the complete set of information gathered
7. Validation and analysis of the data



EU legislation on accident investigations in the transport sector

- Council Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil **aviation** accidents and incidents
- Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil **aviation**
- Directive 2004/49/EC of the European Parliament and of the Council of 20 April 2004 on safety on the Community's railways (**Railway Safety Directive**)
- IMO Assembly Resolution A.849 (2.0). Code for the Investigation of **Marine** Casualties and Incidents



For the time being, pipelines (gas and oil) and the road transport are not covered by “basic or strong” legislation

A European "Road Safety Agency"?

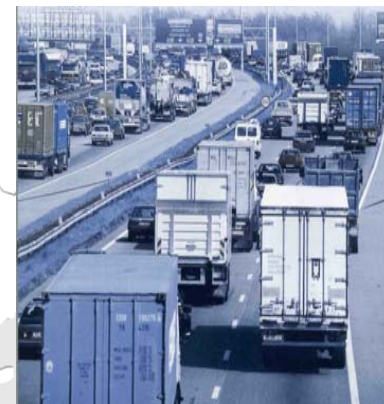
Background:

- In 2002, the European Aviation Safety Agency (EASA) became operational was created through the adoption by the European Parliament and the Council of Regulation (EC) 1592/2002, on 15 July 2002.
- In 2002, Regulation (EC) N° 1406/2002 set the European Maritime Safety Agency's legal basis, and established the objectives and tasks, the internal structure and functioning and the financial requirements..
- The European Railway Agency established in 2004 by Regulation n° 881/2004.

The main justification in those cases is the need to support European regulation regarding interoperability, transport operations and the approval of transport vehicle (aircrafts, railway stock, vessels...). The set up of a transport agency involves a lengthy process and a series of political and technical decisions. It also involves the mobilization of considerable resources.

The RO-SAT Working Group does not explicitly support the creation of a European Road Safety Agency to combat road carnage but, at the same time, the RO-SAT WG calls for the continuation of debates on the possible tasks that such an organization could perform:

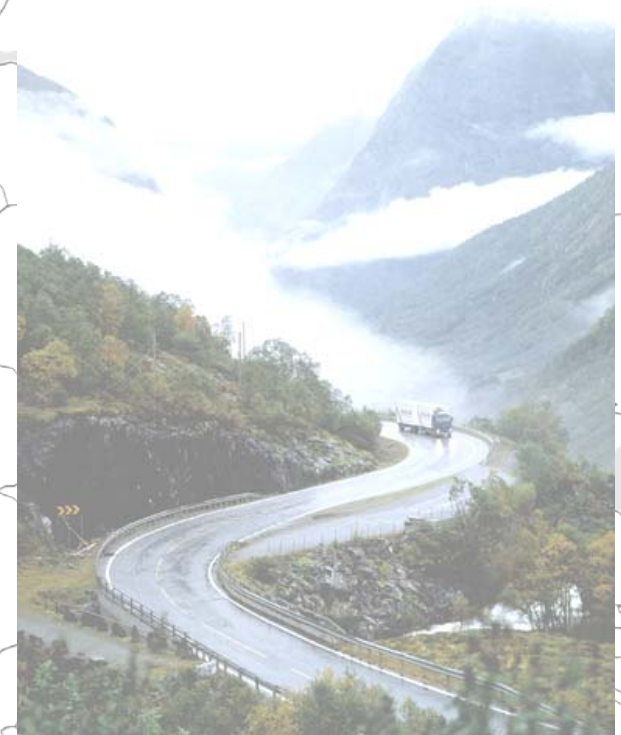
- Development of future European legislation on goods and passenger road transport.
- Safety quality assurance of road traffic commercial organizations: leasing, public transport...
- Cross-border issues (such as cross border enforcement).
- Support to in-depth technical road accident investigations in Europe.
- Coordination/hosting of the European Road Safety Observatory.
- Road safety measures best practice monitoring and exchange at EU level.



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Main conclusions and recommendations (1/3)

1. The Commission shall launch a wide consultation process at different levels (political, technical...) on the options for action at European level, including legislation.
 - Statistics are not enough; police or other intermediate-level investigations are not enough. In-depth independent technical multidisciplinary investigations should be a core ingredient of road traffic safety policies.
4. It is necessary to promote special ad-hoc safety investigations into accidents of European-wide importance because of the large number of casualties or the specific lessons to be learned thereof.



Main conclusions and recommendations (2/3)

- **All countries should have a system in place for the technical independent investigation of road accidents. Independence is defined as “the structural (separation from authorities and clear legal status) and financial (yearly stability of funds) ability to decide WHAT and HOW to investigate, and to PUBLISH THE RESULTS of the investigations”.**
- 5. **A Safety Investigation Authorities for road accidents shall be set up in each of the Member States, charge at least with the task of in-depth safety investigation and/or special safety investigations of the most severe road accidents and incidents.**
- **It is recognised that whether such an independent organisation should deal only with road accidents or with all kinds of transport accidents shall be left to the decision of Member State based on available resources and past experience in investigating transport accidents.**



Main conclusions and recommendations (2/3)

- **An interesting solution to coordinate technical and judicial accident investigations is represented by the Memorandum of Understanding (MoU) between the Crown Prosecution Service and the Air Accidents Investigation Branch, Marine Accident Investigation Branch, and Rail Accident Investigation Branch in the UK (signed in September 2005).**
- 6. **Furthermore the European Commission is advised to launch a broad debate in order to establish mechanisms and tools for exchange of best practice on road safety investigation. For that purpose it shall carefully examine the opportunities for continuing and expanding the work of the research project SafetyNet.**



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ANNEX: European Methodology for Safety Investigation of Accidents and Incidents in the Transport Sector

- (1) Definition of an transport accident and incident
- (2) The Safety Investigation Authority
- (3) Independence of the Safety Investigation Authority
- (4) Relationship between the safety investigations of accidents and criminal or other public investigations
- (5) Collaboration between different Safety Investigation Authorities
- (6) Investigation powers
- (7) Selection of the safety investigations
- (8) Investigative process
- (9) Protection of evidence
- (10) Treatment of workers involved in transport accidents or incidents
- (11) Safety reports and safety recommendations
- (12) Access to results
- (13) Collaboration
- (14) The EU dimension

3 July 2006



**Group of Experts to advise the Commission
on a strategy to deal with accidents in the
transport sector**

**EUROPEAN METHODOLOGY FOR SAFETY INVESTIGATION OF ACCIDENTS
AND INCIDENTS IN THE TRANSPORT SECTOR**



ANNEX: European Methodology for Safety Investigation of Accidents and Incidents in the Transport Sector

2. THE SAFETY INVESTIGATION AUTHORITY*

Member States shall designate one or more Safety Investigation Authorities, charged with the investigation of accidents or incidents in all transport sectors in order to determine their circumstances and causes and issue safety recommendations, or draw up any other relevant conclusions aiming at improving transport safety.

Independence

The Safety Investigation Authority shall be set up permanently and shall carry out its tasks impartially. Its functional, financial and legal independence from any other public bodies or third parties shall be guaranteed. The Safety Investigation Authority shall especially be independent from those authorities responsible for the establishment or enforcement of safety requirements that are imposed on the transport sector. The Safety

ANNEX: European Methodology for Safety Investigation of Accidents and Incidents in the Transport Sector

7. SELECTION OF THE SAFETY INVESTIGATIONS

As a general principal the Safety Investigation Authority shall be free to select which accidents and incidents it will investigate and the extent to which it will do so, in order to best fulfil its duties.

With the exception of legal obligations or recommendations under international law or, where justified, under national law, the Safety Investigation Authority shall be free to determine whether or not it proceeds to investigate. The main criterion for selection shall be its assessment of the extent to which lessons and safety recommendations may be drawn from studying the accident or incident concerned, and the degree by which, in its opinion, transport safety can be improved. Safety investigations of accidents or incidents potentially involving systemic safety failures shall be given priority.

ANNEX: European Methodology for Safety Investigation of Accidents and Incidents in the Transport Sector

12. ACCESS TO RESULTS

The safety report, conclusions and eventual safety recommendations of each safety investigation shall be made public. The final report shall contain a summary in English. Wherever possible, such translation shall be provided for the full final report.

14. THE EU DIMENSION

Safety investigation authorities within the EU shall establish a list of tasks for which the assistance of European institutions, possibly the European Commission or the European transport safety agencies, is necessary. Particular concern shall be granted to issues such as institutionalised exchange of views and regular meetings, a common database, training standards, standardised conditions for cooperation and possible cooperation fees.

THANK YOU
FOR YOUR ATTENTION !

