

PRIMA
Pro-Active Incident Management

Research project funded under the CEDR Transnational Road Research Programme
CEDR Call 2013: Traffic Management - Incident Management

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Details	
Acronym:	PRIMA
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Co-ordinator:	Philippe Nitsche, AIT, Austria
Contact:	philippe.nitsche@ait.ac.at
Partners:	VTI, Sweden TRL, UK TNO, Netherlands
PEB Project Manager:	Erik De Bisschop, Belgium, erik.debisschop@mow.vlaanderen.be
Website:	N/A

Project Summary:

The aim of the CEDR programme is to realise the benefit of implementing innovation in traffic management solutions for National Road Administrations (NRAs). In this context, PRIMA targets the enhancement of current state-of-the-art Traffic Incident Management (TIM) techniques by introducing the idea of Pro-Active Incident Management with the following essential features: Anticipate, Prepare, Respond, and Monitor - anticipate that something may happen, be prepared to respond efficiently when the situation requires it, and monitor developments to minimize secondary effects.

Non-recurrent events such as road accidents, vehicle breakdowns and extraordinary congestion – henceforth referred to as traffic incidents – affect travel times, safety, and the environment, and also generate costs associated with these impacts. Therefore, road administrations must manage incidents in a safe and efficient manner. Hence, in PRIMA, attention is given to the right balance of risks and costs in handling different types of incidents, which happen every day on the road. Every country has its own traffic incident management regulations and strategies, but there is a need for (harmonized and) practical guidance to achieving an optimal balance of cost and risk factors. Furthermore, increased mobility and promising developments in information and communication technologies (ICT) open up new possibilities for handling or even preventing incidents. Best practice must be considered not only under current conditions, but also as something that will evolve as technology evolves.

To this end, novel incident management methods are crucial to enable innovative technology to be used for this purpose. In addition to roadside-based techniques, probe or floating vehicle data (FVD) can be seen as a major driver in this field. Nomadic devices such as smartphones or on-board units (OBUs) allow ubiquitous and mobile sensing of traffic. Cooperative Intelligent Transport Systems (ITS) enable distributed systems and in-vehicle information and can improve road management and operation. The upcoming eCall (emergency call) and bCall (breakdown call) systems can bring significant improvements in response time. However, road administrations must know whether and how much to invest in such novel systems and data sources to find an optimal trade-off to conventional, stationary road-side infrastructure such as inductive loops or video cameras.

The project work builds upon previous regulations, specifications and assessment studies regarding TIM. The objectives can be summarized as follows:

1. Provide clear guidance and recommendations for handling incidents and monitoring management performance and benefits, based on the assessment of risks and costs
2. Assess the technical, economical and organisational feasibility of innovative incident management based on novel technologies
3. Provide implementable solutions to facilitate proactive incident management for motorways, primary and secondary roads, on a transnational level

This project will deliver practical and cost-efficient procedures on TIM for motorways, primary and secondary roads, involving conventional as well as novel and innovative techniques. Relevant stakeholders play an important role in the research activities and have been involved from the beginning.

In the longer term, the project outcomes will lead to:

- more efficient and automated strategies and cross-border activities for handling traffic incidents,
- reduced response and clearance time,
- Increased responder's safety,
- optimal integration of innovative and novel methods in existing and conventional environments, and
- fewer incidents due to preventative and proactive practices.