DRAGON
Driving automated vehicle growth on national roads

a research project of the
cross-border funded joint research programme

"CEDR Call 2014: Mobility and ITS"

1) Introduction

This trans-national research programme was launched by the Conference of European Directors of Roads (CEDR). CEDR is an organisation which brings together the road directors of 25 European countries. The funding partners of this cross-border funded Joint Research Programme are the National Road Administrations (NRA) of Finland, Germany, Norway, the Netherlands, Sweden, United Kingdom and Austria. As in previous collaborative research programmes, the participating members have established a Programme Executive Board (PEB) made up of experts in the topics to be covered. The research budget is jointly provided by the NRAs who provide participants to the PEB as listed above.

2) Project Facts

Duration:	01/09/2015 – 31/01/17
Budget:	EUR 343.895,--
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3) Project Description

The DRAGON project will deliver a step change in the knowledge and understanding of the potential impact of vehicle automation on European National Road Authority (NRA) networks and identify what the NRAs can do to realise and maximize those benefits.

This project focuses on the role of NRAs in supporting the movement towards high and full automation and realising the benefits and savings that come with it and will consider both the general case for NRAs in Europe as a whole, as well as focussing on the particular needs of individual case study NRAs.

The approach will be to understand the potential costs, benefits and implications of vehicle automation to support European NRAs in making decisions that will help to achieve the best outcomes. The project will cover all the steps from situations of no vehicle automation through to high and full vehicle automation, and from no NRA support to the deployment of vehicle automation through to NRAs providing support with policy, regulatory and infrastructure changes where relevant.

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This need for NRA support is expected to change over time as the mix of levels of vehicle automation on the road changes. In addition to pan-European co-ordination, there will be both commonality and differences in optimal approaches for each European country. These will depend on factors such as the strength of the economy, population distribution, traffic levels and composition, road infrastructure type, accident levels, communications facilities, typology, weather conditions etc. As such a road map will be produced that defines not only what NRA's need to do, but critically, when they need to act.

The success of automated vehicles ultimately hinges on how well they meet their users' needs and this will be influenced by the support of the NRAs. As such the NRAs have the ability to influence directly the impacts of these vehicles on their network.

Ultimately, there needs to be a business case for NRAs to take any supporting actions for automated vehicles and this project will put in place the framework for how the European NRAs can make that decision.

4) Expected Results

The outputs of the project will aim to support NRAs in understanding their obligations and needs so that they will be prepared for the use of automated vehicles on the strategic road network.

Various scenarios covering the short and medium term will be analysed in detail. These will generate the following outputs:

- A description of the different types of automation;

- A description of the current "state of the art" (i.e. what is currently being done);

- What developments are likely to arise over the next 3 to 5 years and beyond;

- Different views from industry stakeholders and NRAs;

- Impact analyses of different types of automation;

- Possible business plans for NRAs;

- Costs and benefits of different scenarios;

- An analysis of enablers, obligations and potential barriers; and

- An analysis of the impact on NRAs.

The ultimate deliverable for the DRAGON project, and the output most relevant for immediate implementation, is the roadmap for NRA activities, the development of which is covered in WP4. This will identify an approach to decision making that NRAs can use to realise the benefits offered by automation in their different countries and with different influencing factors. For the three case study NRAs, there will also be an action plan with recommendations for immediate actions to be implemented; as we recognise that such guidance for implementation is a major aspect of the objectives of the Call.

As such, the output of this project is directly transferable to other NRAs both within Europe and wider, on an international level. The case study NRAs will receive added value and will also provide valuable lessons learned for subsequent development of similar action plans by other NRAs in their own countries.

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