

PROJECT

## ECODRIVER

### Supporting the driver in conserving energy and reducing emissions

**Funding:** European (7th RTD Framework Programme)

**Duration:** Oct 2011 - Mar 2016

**Status:** Complete

**Total project cost:** €14,628,285

**EU contribution:** €10,700,000



**Call for proposal:** FP7-ICT-2011-7

[CORDIS RCN : 100771](#)

#### Background & policy context:

Environmentally friendly driving, or eco-driving, is becoming an increasingly important topic among the intelligent transport systems community because carbon emissions need to be curbed in the context of climate change mitigation policies.

Drivers are often not aware they have a major influence on their car's fuel consumption, potentially leading to significant unnecessary emissions. The goal of eco-driving is to correct drivers' behaviour in order to maximise energy efficiency and improve traffic flows - without compromising safety.

#### Objectives:

The target of ecoDriver is to deliver a 20% improvement in energy efficiency by autonomous means alone, which opens up the possibility of greater than 20% savings in combination with cooperative systems.

The defined objectives of ecoDrivers are:

1. Achieve a 20% reduction of CO<sub>2</sub> emissions and fuel consumption in road transport by delivering effective green driving advice and feedback
2. Maximise system effectiveness and acceptance by adapting the eco-driving human-machine interfaces (HMI - graphical interfaces, haptics, voice messages) to the driving style (e.g. relaxed vs sportive), traffic conditions (fluid vs heavy traffic), powertrain (conventional, hybrid, electrical), and vehicle type (passenger cars, vans, trucks, buses, etc.)
3. Test and compare the effectiveness of nomadic and built-in navigation systems in encouraging green driving
4. Maintain or even enhance driver safety while providing eco-driving support
5. Scale-up the results obtained from test trials to Europe, and carry out a social cost-benefit analysis to assess the economic feasibility of a potential market deployment of the ecoDriver system
6. Explore how eco-driving related CO<sub>2</sub> reductions might be affected by different future technological, political, and lifestyle scenarios

#### Methodology:

ecoDriver addresses the need to consider the human element when encouraging green driving, since driver behaviour is a critical element in energy efficiency. The focus of the project is on technology working with the driver. The project aims to deliver the most effective feedback to drivers on green driving by optimising the driver-powertrain-environment feedback loop. It will carry out a substantial programme of work to investigate how best to win the support of the driver to obtain the most energy-efficient driving style for best energy use. Feedback coverage will include preview of the upcoming situation, optimising the current driving situation as well as post-drive feedback and learning.

The project will address this across a wide range of vehicles e.g. cars, light trucks and vans, medium and heavy trucks and buses covering both individual and collective transport, and will optimise feedback to drivers for both nomadic devices and built-in systems and compare the effectiveness of

each. The project will evaluate HMIs and feedback to drivers via both nomadic devices and built-in systems and compare the effectiveness of each. In each case a range of HMIs and feedback styles will be assessed.

The project aims to examine driving not only with current and near-term powertrains but also with a full range of future vehicles, including various types of hybrid and plug-in electric vehicles. A comprehensive evaluation will be carried out both in the laboratory (a variety of driving simulators) and in real world driving in both the private and fleet contexts. Scenarios will be developed to assess the implications for the future effectiveness of green driving support.

### **Parent Programmes:**

[FP7-ICT - Information and Communication Technologies](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

### **Lead Organisation:**

#### **University Of Leeds**

**Address:**

Institute For Transport Studies, University Of Leeds, 41 University Road  
Leeds  
LS2 9JT  
United Kingdom

**Organisation Website:**

<http://www.leeds.ac.uk>

**EU Contribution:** €1,961,139

### **Partner Organisations:**

#### **Bmw Forschung Und Technik Gmbh**

**Address:**

HANAUER STRASSE 46  
80992 MUENCHEN  
Germany

**EU Contribution:** €477,683

#### **Centro Ricerche Fiat - Societa Consortile Per Azioni**

**Address:**

Strada Torino, 50  
10043 ORBASSANO (TO)  
Italy

**Organisation Website:**

<http://www.crf.it>

**EU Contribution:** €538,630

#### **Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek Tno**

**Address:**

ANNA VAN BUERENPLEIN 1  
2595 DA DEN HAAG  
Netherlands

**Organisation Website:**

<http://www.tno.nl>

**EU Contribution:** €2,154,344

**Rheinisch-Westfaelische Technische Hochschule Aachen**

**Address:**

Templergraben  
52062 Aachen  
Germany

**Organisation Website:**

<http://www.rwth-aachen.de>

**EU Contribution:** €673,950

**Statens Geotekniska Institut**

**Address:**

Olaus Magnus Vag 35  
58193 Linkoping  
Sweden

**Organisation Website:**

<http://www.vti.se>

**EU Contribution:** €1,291,359

**Fundacion Para La Promocion De La Innovacion, Investigacion Y Desarrollo Tecnologico En La Industria De La Automocion De Galicia**

**Address:**

Poligono Industrial A Granxa 249  
36400 PORRINO PONTEVEDRA  
Spain

**Organisation Website:**

<http://www.ctag.com>

**EU Contribution:** €990,442

**Tom Tom Telematics B.v.**

**Address:**

De Rui Jterkade 154  
1011 Amsterdam  
Netherlands

**EU Contribution:** €112,511

**Daimler Ag**

**Address:**

Mercedesstrasse  
70327 Stuttgart  
Germany

**Organisation Website:**

<http://www.daimler.com>

**EU Contribution:** €724,662

**Carrierweb Ireland Limited**

**Address:**

Lower Baggot Street 132  
2  
Dublin  
Ireland

**EU Contribution:** €0

**Tomtom International Bv****Address:**

DE RUIJTERKADE 154  
1011 AC AMSTERDAM  
Netherlands

**Organisation Website:**

<http://www.tomtom.com>

**EU Contribution:** €291,153

**Reich Franz****Address:**

WURZSTRASSE 3  
81371 MUNCHEN  
Germany

**EU Contribution:** €122,940

**Here Global B.v.****Address:**

KENNEDYPLEIN 222  
5611 ZT EINDHOVEN  
Netherlands

**EU Contribution:** €7,385

**Association Of European Railway Industries****Address:**

avenue Louise 221/11  
1050 BRUSSELS  
Belgium

**Organisation Website:**

<http://suzanne.lami@unife.org>

**EU Contribution:** €603,528

**Institut Francais Des Sciences Et Technologies Des Transports, De L'amenagement Et Des Reseaux****Address:**

BOULEVARD ISAAC NEWTON 14 CITE DESCARTES 14-20  
77447 MARNE LA VALLEE CEDEX 2  
France

**Organisation Website:**

<http://www.ifsttar.fr>

**EU Contribution:** €750,274

**Bayerische Motoren Werke Ag****Address:**

Petuelring 130  
80809 MUNICH  
Germany

**Organisation Website:**

<http://www.bmwgroup.de>

**EU Contribution:** €0

**Technologies:**

Information systems  
Eco-Drive app

**Development phase:** Validation

**STRIA Roadmaps:** Cooperative, connected and automated transport

**Transport mode:** Road transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Decarbonisation

**Geo-spatial type:** Other