

PROJECT

## ICT-EMISSIONS

### Development of a methodology and tool to evaluate the impact of ICT measures on road transport emissions

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

**Duration:** Oct 2011 - Mar 2015

**Status:** Complete

**Total project cost:** €4,698,791

**EU contribution:** €2,899,810



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

[CORDIS RCN : 100769](#)

#### Background & policy context:

The innovative combination of traffic, driver, and emission models will produce a toolbox that can simulate the impact on energy and CO<sub>2</sub> of infrastructure measures (traffic management, dynamic traffic signs, etc.), driver assistance systems and ecosolutions (speed/cruise control, start/stop systems, etc.) or a combination of measures (cooperative systems). Following the research carried on in the projects, guidelines and recommendations will be produced on the efficiency of ICT in road transport to reduce CO<sub>2</sub> emissions.

#### Objectives:

ICT-EMISSIONS aims at developing a methodology for assessing the impact of advanced ICT in energy efficiency and CO<sub>2</sub> reduction, and in instantaneous emission models which take into account driver behaviour, that can be used by transport planning, local authorities, and automotive OEMs and suppliers, but also more generally, to quantify the impact of ICT measures on energy consumption and CO emissions.

#### Methodology:

The proposed methodology combines traffic and emission modelling at micro and macro scales. These will be linked with interfaces and submodules which will be specifically designed and developed. A number of sources are available to the consortium to obtain the necessary input data. Also, experimental campaigns are offered to fill in gaps of information in traffic and emission patterns. The application of the methodology will be demonstrated using commercially available software. However, the methodology is developed in such a way as to enable its implementation by a variety of emission and traffic models. Particular emphasis is given to:

1. the correct estimation of driver behaviour, as a result of traffic-related ICT measures
2. the coverage of a large number of current vehicle technologies, including ICT systems
3. near future technologies such as hybrid, plug-in hybrids, and electric vehicles

The innovative combination of traffic, driver, and emission models produces a versatile toolbox that can simulate the impact on energy and CO<sub>2</sub> of infrastructure measures (traffic management, dynamic traffic signs, etc.), driver assistance systems and ecosolutions (speed/cruise control, start/stop systems, etc.) or a combination of measures (cooperative systems). The methodology will be validated by application in the Turin, Madrid, and Roma areas. The consortium incorporates all required competences to deliver the project objectives, i.e. a balanced mix of experienced traffic simulation/management experts, vehicle energy emission modellers, ICT solution providers, and end users.

#### Parent Programmes:

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

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Lead Organisation:**

**Aristotelio Panepistimio Thessalonikis**

**Address:**

KEDEA BUILDING, TRITIS SEPTEMVRIOU, ARISTOTLE UNIV CAMPUS  
54636 THESSALONIKI  
Greece

**Organisation Website:**

<http://www.auth.gr>

**EU Contribution:** €899,053

**Partner Organisations:**

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

**Address:**

Strada Torino, 50  
10043 ORBASSANO (TO)  
Italy

**Organisation Website:**

<http://www.crf.it>

**EU Contribution:** €258,275

**5T S.r.l.**

**Address:**

Via Bertola 34  
10122 TORINO  
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**EU Contribution:** €100,800

**Iveco S.p.a.**

**Address:**

Via Puglia 35  
10156 Torino  
Italy

**Organisation Website:**

<http://www.iveco.com>

**EU Contribution:** €471,339

**Roma Servizi Per La Mobilita Srl**

**Address:**

Via Di Vigna Murata 60  
143 Roma  
Italy

**EU Contribution:** €27,960

**Madrid Calle 30, S.a.**

**Address:**

Mendez Alvaro, Centro Control Túnel M-30 95  
28053 Madrid  
Spain

**EU Contribution:** €59,000

**Polis - Promotion Of Operational Links With Integrated Services, Association Internationale**

**Address:**

rue du Trône 98  
1050 BRUXELLES  
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**Organisation Website:**

<http://www.polis-online.org>

**EU Contribution:** €158,760

**Assystem Germany Gmbh**

**Address:**

Erwin-Von-Kreibig-Str. 3  
80807 Munich  
Germany

**Organisation Website:**

<http://www.berner-mattner.com>

**EU Contribution:** €164,900

**Avl List Gmbh**

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Hans-List-Platz  
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Austria

**Organisation Website:**

<http://www.avl.com>

**EU Contribution:** €322,863

**Universidad Politécnica De Madrid**

**Address:**

Avda. Ramiro de Maeztu, 3  
28040 MADRID  
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**Organisation Website:**

<http://www.upm.es>

**EU Contribution:** €436,860

**European Commission - Joint Research Centre (Brussels)**

**Address:**

Rue de la Loi 200  
1049 BRUXELLES  
Belgium

**Organisation Website:**

[Organisation Website](#)

**EU Contribution:** €0

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**Technologies:**

Electric vehicle batteries (and energy management)  
Vehicle energy management systems

**Development phase:** Research/Invention

**STRIA Roadmaps:** Network and traffic management systems

**Transport mode:** Road transport

**Transport sectors:** Passenger transport

**Transport policies:** Decarbonisation, Environmental/Emissions aspects

**Geo-spatial type:** Urban