

PROJECT

EMERALD

Energy Management and Recharging for efficient electric car Driving

Funding: European (7th RTD Framework Programme)

Duration: Oct 2012 - Jun 2016

Status: Complete

Total project cost: €4,663,764

EU contribution: €3,150,000



Call for proposal: FP7-2012-ICT-GC

[CORDIS RCN : 104152](#)

Objectives:

EMERALD focuses on energy use optimisation and on the seamless integration of the FEV into the transport and energy infrastructure, by delivering clear advances over the state-of-the-art. The goal is to assist the FEV in becoming a successful commercial product.

To this end, EMERALD will innovate a range of novel ICT solutions, each one seamlessly integrated with the others, providing a multifaceted and comprehensive approach on these issues. EMERALD will introduce Integrated in-vehicle energy management, comprising:

- Dynamic energy-driven management of FEV auxiliaries, tightly integrated with consumption prediction functionality, enabling pre-emptive energy conservation measures.
- Energy-efficient long-range route planning and optimisation, enabling extension of FEV's driving range and automatic scheduling of recharging stops en route.
- Performance-centric machine learning for consumption prediction, introducing optimization and cooperative training of machine learning functions targeted for energy consumption and traffic prediction based on experience.
- Driver profiling functionalities, through monitoring of acceleration/braking patterns, for the enhancement of route consumption prediction functionality.
- User-centric charge and discharge management, enabling automatically-generated, optimal for the user, charge and discharge schedules, accessible both on-board and on his mobile phone.
- EMERALD will also introduce: Enhanced FEV-related power demand prediction and power flow management support, taking advantage of consumption patterns as shared in a cooperative manner by the FEVs themselves, as well as from FEVs' recharging bookings; Cooperative FEV fleet management, though holistic and dynamic, multi-parameter, fleet control optimization, taking into account energy and recharging limitations; and FEV-specific driver training for energy efficiency.

Parent Programmes:

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

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Softeco Sismat S.p.a.

Address:

VIA DE MARINI 1
16149 GENOVA
Italy

Organisation Website:

<http://www.softeco.it>

EU Contribution: €666,375

Partner Organisations:**Comarth Engineering SI****Address:**

Carill De Alejandrigo 79
30579 Beniajan
Spain

EU Contribution: €157,960

Instytut Transportu Samochodowego**Address:**

Jagiellonska
03N/A301 Warsaw
Poland

Organisation Website:

<http://www.its.home.pl/nsite/>

EU Contribution: €240,300

Hi Iberia Ingenieria Y Proyectos SI**Address:**

Bolivia
28016 Madrid
Spain

Organisation Website:

<http://www.hi-iberia.es>

EU Contribution: €345,900

Public Power Corporation**Address:**

30,Chalkokondili Street 32
10432 ATHENS
Greece

Organisation Website:

<http://www.dei.gr>

EU Contribution: €16,345

Kapsch Trafficcom Arce Sistemas**Address:**

Plaza Euskadi 5 5A
48012 Bilbao Bizkaia
Spain

EU Contribution: €227,820

Fundacion Tecnalía Research & Innovation

Address:

PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA PASEO MIKELETEGI 2
20009 DONOSTIA/SAN SEBASTIAN (GIPUZKOA)
Spain

Organisation Website:

<http://www.tecnalia.com>

EU Contribution: €368,400

Cosmote Kinites Tilepikoinonies Ae**Address:**

Kifissias 99
15124 Athens
Greece

EU Contribution: €152,400

Ptv Planung Transport Verkehr Ag**Address:**

Stumpfstrasse 1
76131 KARLSRUHE
Germany

Organisation Website:

<http://www.ptv.de>

EU Contribution: €0

Pininfarina Spa**Address:**

Via Bruno Buozzi
10100 Turin
Italy

Organisation Website:

<http://www.pininfarina.it>

EU Contribution: €0

Comune Di Lucca**Address:**

Via Santa Giustina 6
55100 Lucca
Italy

EU Contribution: €65,520

Solaris Bus & Coach Spolka Akcyjna**Address:**

Obornicka 46
62005 Bolechowo-Osiedle, Owińska
Poland

Organisation Website:

<http://www.solarisbus.com>

EU Contribution: €215,000

Temsa Global Sanayi Ve Ticaret A.s.**Address:**

Mersin Yolu Uzeri 10.km Seyhan
1323 Adana
Turkey

EU Contribution: €0**Micro-Vett Spa****Address:**

Via Gambellara
40026 Imola
Italy

Organisation Website:

<http://www.micro-vett.it>

EU Contribution: €0**Nissan Motor Iberica Sa****Address:**

Zona Franca Sector B Calle 3 77/111
8040 Barcelona
Spain

EU Contribution: €0**Institute Of Communication And Computer Systems****Address:**

Patission
10682 Athens
Greece

Organisation Website:

<http://www.iccs.gr>

EU Contribution: €572,700**Lucca-Centro Servizi Per L'economia Societa' Consortile A Responsabilita' Limitata****Address:**

Via Della Chiesa Xxxii Trav I 231 Frazione Sorbano Del Giudi
55100 Lucca
Italy

EU Contribution: €121,280**Technologies:**

Information systems
Eco-Drive app

Development phase: Research/Invention**STRIA Roadmaps:**

Transport electrification, Network and traffic management systems, Smart mobility and services

Transport mode: Road transport**Transport sectors:** Passenger transport**Transport policies:** Digitalisation, Decarbonisation, Environmental/Emissions aspects

Geo-spatial type: Other