PROJECT

CEVOLVER

Connected Electric Vehicle Optimized for Life, Value, Efficiency and Range

Funding: European (Horizon 2020)

Duration: Nov 2018 - Apr 2022

Status: Ongoing

Total project cost: €6,222,160

EU contribution: €4,999,700

CORDIS RCN : 218295

Background & policy context:

The current generation of electric vehicles have made significant progress during the recent years; however, they have still not achieved the user acceptance needed to support broader main-stream market uptake. These vehicles are generally still too expensive and limited in range to be used as the first car for a typical family.

Objectives:

Long charging times and uncertainties in range prediction are common as further barriers to broader market success. For this reason, the CEVOLVER project takes a user-centric approach to create battery-electric vehicles that are usable for comfortable long day trips whilst the installed battery is dimensioned for affordability. Furthermore, the vehicles will be designed to take advantage of future improvements in the fast-charging infrastructure that many countries are now planning.

Methodology:

CEVOLVER tackles the challenge by making improvements in the vehicle itself to reduce energy consumption as well as maximizing the usage of connectivity for further optimization of both component and system design, as well as control and operating strategies. This will encompass measures that range from the on-board thermal management and vehicle energy management systems, to connectivity that supports range-prediction as a key element for eco-driving and eco-routing driver assistance. Within the project it will be demonstrated that long-trip are achievable even without further increases in battery size that would lead to higher cost. The driver is guided to fast-charging infrastructure along the route that ensures sufficient charging power is available along the route in order to complete the trip with only minimal additional time needed for the overall trip. The efficient transferability of the results to further vehicles is ensured by adopting a methodology that proves the benefit with an early assessment approach before implementation in OEM demonstrator vehicles.

Parent Programmes:

H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: LC-GV-01-2018 Integrated, brand-independent architectures, components and systems for next generation electrified vehicles optimised for the infrastructure

Lead Organisation:

Fev Europe Gmbh

Address:

Neuenhofstrasse 181
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EU Contribution: €510,650

Partner Organisations:

Robert Bosch Gmbh

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Organisation Website:
http://www.bosch.com

EU Contribution: €718,506

Volvo Personvagnar Ab

Address:
Avd 50090 Hb3S
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EU Contribution: €687,605

Rheinisch-Westfaelische Technische Hochschule Aachen

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http://www.rwth-aachen.de

EU Contribution: €524,575

Robert Bosch Ag

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GOLLNERGASSE 15-17
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Austria

EU Contribution: €256,703

Vrije Universiteit Brussel

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Belgium

Organisation Website:
http://www.vub.ac.be

EU Contribution: €399,956

Ford Werke Gmbh

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Organisation Website:
http://www.ford.de

EU Contribution: €1,114,109

Uniresearch

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Organisation Website:
http://www.uniresearch.nl

EU Contribution: €139,475

I2M Unternehmensentwicklung Gmbh

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Austria

EU Contribution: €112,963

Ifp Energies Nouvelles

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92500 RUEIL MALMAISON
France

Organisation Website:
http://www.ifp.fr

EU Contribution: €535,159

Technologies:

EV support technologies
On-demand range-extending service for EVs

Development phase: Validation

STRIA Roadmaps: Transport electrification

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects, Decarbonisation

Geo-spatial type: Other