PARTNERS

Engineering Service Provider / Project Coordinator

IDIADA Automotive Technology S.A.
www.applusidiada.com

Vehicle OEMs

Centro Ricerche Fiat S.C.p.A. www.crf.it
Fiat Chrysler Automobiles Italy S.p.A.
www.fcagroup.com
Toyota Motor Europe www.toyota-europe.com
Volvo Car Group www.volvocars.com

TIER 1 Suppliers

AGC Glass Europe www.agc-glass.eu
Denso Thermal System S.p.A. www.denso-ts.com
Faurecia Sièges d'Automobile www.faurecia.com
Faurecia Interieur Industrie www.faurecia.com
Hutchinson S.A. www.hutchinson.com
IEE International Electronics & Engineering S.A.
www.iee.lu

University and Research Institutes

Luxembourg Institute of Science and Technology
www.list.lu
Fraunhofer Institute for Structrual Durability and
System Reliability LBF www.lbf.fraunhofer.de
Coventry University www.coventry.ac.uk
Institute for Automotive Engineering, RWTH Aachen
University www.ika.rwth-aachen.de
Fundacion Tecnalia Research and Innovation
www.tecnalia.com
Kompetenzzentrum - Das Virtuelle Fahrzeug,
Forschungsgesellschaft m.b.H. www.v2c2.at

Management Service Supplier

Uniresearch BV www.uniresearch.com

KEY DATA

Acronym: DOMUS
Full name: Design OptiMisation for efficient EVs based on a USer-centric approach
Duration: 42 months
Start date: November 2017
Total budget: 9.0 M€ (100% EU Contribution)

This project has received funding from the European Union's Horizon2020 research and innovation programme under Grant Agreement no. 769902.

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DOMUS

Increasing EV's driving range through user-centric cabin design modifications, innovative solutions for comfort perception, efficient management, and advanced assessment methods.

www.domus-project.eu

OBJECTIVES

The overall objective of the **DOMUS** project is to reduce the overall energy consumption of future EVs in order to increase the electric range by 25% for different ambient conditions.

This will be achieved by an in depth understanding of comfort perception of EV users before developing reliable methodologies for designing and assessing the full vehicle context from a user-centric perspective, investigating radically new cabin designs and delivering innovative components, systems and control strategies to meet customer expectations.

RESULTS

- **DOMUS** will develop, integrate and demonstrate new components, systems and control strategies for EVs that are energy efficient, comfortable, safe, configurable and cost effective.
- **DOMUS** will achieve an increase of 25% of the electric drive range of EVs compared to their 2016 reference models.
- **DOMUS** will generate knowhow about user's perception of comfort and corresponding cabin requirements for future mass-market oriented efficient EVs.

IMPACT

The **DOMUS** project will contribute to a wider adoption of EVs by the general public and accelerated transition towards the production of low and zero emission vehicles, in particular, battery EV and (plug in) hybrid EVs.

www.domus-project.eu

* The Concept-i represents the vision of Toyota on future EV mobility. This concept is not directly related to the DOMUS-Project

11/2017 Project Start

04/2018 **Priority Factors** for estimating comfort

11/2018 **New Methodology** for novel EV cabin designs virtual assessment

03/2019 **Regulation Strategies** Unified cabin active comfort system

07/2020 **Low-Inertia Components** - Seats - Dashboard - Trim/body panels

07/2020 **Thermal Insulation Components** - PCM liner - Glazing

09/2020 **Cabin Mock-up** Physical demonstrator of energy-efficient EV cabin design

03/2021 **Results Validation** by demonstrator physical testing

03/2021 **Completion** Exploitation of project results

~ 2025

Industralization Steps

Supporting Measures (Infrastructure, Regulation, Standards)

New Research Direction