



# E-VOLVE

## EV for Life, Value, Efficiency

# E-VOLVE Cluster Newsletter

## The E-VOLVE Cluster is here!

The virtual E-VOLVE (Electric Vehicle Optimized for Life, Value and Efficiency) Cluster is realizing and monitoring synergies between six projects from the GV-01 Horizon 2020 call to execute joint dissemination, exploitation and standardization activities.

### **The Concept**

The purpose of the Cluster is to execute joint dissemination and exploitation activities.

In order to connect parallel R&D activities in complementary areas and to implement a higher potential produced by intersectoral cooperation, the E-VOLVE virtual Cluster has been set up. The Cluster will produce greater impact acknowledging the importance of connecting parallel R&D activities funded on complementary areas, as stated by the European Commission. The

member projects in the E-VOLVE Cluster have decided to prove the higher potential of synergies between projects. As a result, E-VOLVE Coordinators trust that together as a virtual cluster they will produce a greater impact by delivering innovations that cover a wide range of EVs components, designed especially for the new (3rd) generation of EVs to meet the future mobility needs in both urban environment and inter-city trips, while meeting as well the requirements in energy efficiency, usability and cost that the market demands.

The E-VOLVE virtual Cluster focuses on developing groups of components that, working all together in synergy, can meet the future requirements in energy efficiency, fast charging and increased driving range.

### **The Project Members**

#### **ACHILES**

The objective of ACHILES is to develop Advanced Architectures CHassis/Traction concept for Future Electric vehicLES.

ACHILES will enhance new parts and functionalities in a new E/E system architecture by developing and further integrating four technological concepts. Each of the four concepts are a technological paradigm shift and breakthrough on their own, but together they will significantly reduce weight, system complexity, and cost while increasing reliability, and user comfort and safety/security.

#### **SELFIE**

SELFIE, a European research and innovation project, aims to develop a novel self-sustained compact battery system for next generation electrified vehicles (EVs).

A significant increase of user acceptance of EVs by enabling



fast-charging, cost reductions and elimination of range anxiety compared to other propulsion technologies will be the user benefits of SELFIE.

## FITGEN

FITGEN aims at developing a functionally integrated e-axle ready for implementation in third generation electric vehicles. It is delivered at TRL and MRL 7 in all its components and demonstrated on an electric vehicle platform designed for the European market (A-segment reference platform). The e-axle is composed of a latest generation Buried-Permanent-Magnet Synchronous Machine, driven by a SiC-inverter and coupled with a high-speed transmission. It is complemented by a DC/DC-converter for high voltage operation of the motor in traction and for enabling super-fast charging of the 40kWh battery (120 kW-peak) plus an integrated AC/DC on-board charger. The e-axle also includes a breakthrough cooling system which combines the water motor/inverter circuit with transmission oil.

## CEVOLVER

CEVOLVER takes a user-centric approach for optimizing the development and operation of electric vehicles and uses cutting edge technologies, components and systems for achieving the

ambitious targets of the call topic. In both cases, the project exploits opportunities of connectivity to computational capabilities of big data.

## SYS2WHEEL

Would you like clean air in the city? How can we get rid of noise and exhausts from delivery vans in the city? Addressing the issues of urbanisation, transportation, and rising greenhouse gas emissions is one of the biggest challenges of the future. In particular, the electrification of road transport is high on the political agenda of all major world economies.

In sys2WHEEL give answers to these questions by developing sustainable city logistics and improving mobility and quality of life of European citizens.

## EVC1000

The Electric Vehicle Components for 1000km daily trips (EVC 1000) project brings together ten participants from industrial and academic backgrounds to provide innovative and mass-production optimised components enabling the efficient integration of powertrain and chassis systems, which will increase Electric Vehicles (EV) range and user acceptance. Given the recent progress related to in-wheel motors technology, and the benefits of in-wheel architectures

in terms of active safety, packaging and drivability, EVC1000 focuses on in-wheel drivetrain layouts, as well as a wheel-centric integrated propulsion system and EV manager.



## Exciting News!

E-VOLVE is proud to announce that it will be presented at the [GHOST and iModBatt Workshop](#), October 18<sup>th</sup> at Cidetec offices in San Sebastián, Spain.

E-VOLVE has been invited for a five-minute presentation and to participate in the Poster Section!

Connect with us and stay tuned!

