

PROJECT

## DEMOBASE

### DEsign and MOdelling for improved BAttery Safety and Efficiency

**Funding:** European (Horizon 2020)

**Duration:** Oct 2017 - Nov 2020

**Status:** Complete

**Total project cost:** €7,451,520

**EU contribution:** €7,451,520



[CORDIS RCN : 211938](#)

#### Objectives:

Electric mobility is a reality we can experience on our roads and cities. Electromobility is moving forward, driven by drastic cost reductions, higher performances and improved availability to support new business models of autonomous driving passenger cars and new vehicle fleets.

DEMOBASE falls within this context with the main objectives to cut down development and testing efforts for e-drivetrains at least by a factor 2 and to improve their efficiency by 20%. Safety will be fully managed and new concepts developed for fleet applications.

DEMOBASE is composed of 11 leading European partners with activities ranging from cells to vehicles to recycling. The main gain at vehicle level will come from global optimization taking into account interaction of the different specialties.

Objectives at battery level will be achieved by massive digitalization, substituting the today sequential cell development then battery system development by a parallelization of these activities. This new process can be achieved only using enhanced cells models including safety features to define the cell conception for manufacturing and realizing in the same time frame battery management.

Objectives at vehicle level will be achieved with a novel approach to design light-weight chassis. It will be demonstrated on a urban demo vehicle that will integrate the advanced battery pack and novels wheel-tyre systems with low suspension mass and low rolling resistance.

To secure project deliveries and reinforce collaborations which are an innovation key factor, DEMOBASE will be an original closed-loop project. In a first loop of the EV development, building blocks and their integration processes will be investigated and their efficiency assessed using Key Performance Indicators. Then the most efficient bricks and processes will demonstrate their added value in a second step in a 6-month run starting from new high performances cells to operational EV. The DEMOBASE EV will be then evaluated on tracks.

#### 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)

#### Lead Organisation:

**Saft**

**Address:**

Rue Sadi Carnot 12  
93170 Bagnolet  
France

**Organisation Website:**

<http://www.saftbatteries.com>

**EU Contribution:** €1,271,114

**Partner Organisations:****Interactive Fully Electrical Vehicles Srl****Address:**

Via Carle  
12048 Sommariva Del Bosco Cn  
Italy

**Organisation Website:**

<http://www.ifevs.com>

**EU Contribution:** €1,122,500

**Forschungszentrum Juelich Gmbh****Address:**

Leo-Brandt-Strasse  
52425 JUELICH  
Germany

**Organisation Website:**

<http://www.fz-juelich.de>

**EU Contribution:** €650,250

**Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.v.****Address:**

HANSASTRASSE 27C  
80686 MUNCHEN  
Germany

**Organisation Website:**

<http://www.fraunhofer.de>

**EU Contribution:** €697,459

**Fundacion Instituto Tecnologico Para El Desarrollo De Las Industrias Maritimas****Address:**

Calle Basilica 17  
28020 Madrid  
Spain

**EU Contribution:** €246,419

**K & S Gmbh Projektmanagement****Address:**

Purweider Winkel 52  
52070 Aachen  
Germany

**EU Contribution:** €194,625

**Imarine Deniz Teknolojileri Ve Arastirmalari Sanayi Ve Ticaret Anonimsirketi**

**Address:**

GOZTEPE MAH. GOKSU EVLERI MENEKSE SOK. B237B ANADO EYKOZ  
34815 ISTANBUL  
Turkey

**Organisation Website:**

<http://www.infineon.com>

**EU Contribution:** €1,023,049

**Accurec-Recycling GmbH****Address:**

BATAVERSTR 21  
47809 KREFELD  
Germany

**Organisation Website:**

<http://www.accurec.de>

**EU Contribution:** €516,875

**Ma Spa****Address:**

Via Montelungo Comprensorio Sata  
85020 Melfi  
Italy

**EU Contribution:** €408,750

**Modelon Ab****Address:**

Ideon Science Park  
22370 Lund  
Sweden

**EU Contribution:** €488,250

**Ifp Energies Nouvelles****Address:**

1et 4 avenue de Bois-Préau  
92500 RUEIL MALMAISON  
France

**Organisation Website:**

<http://www.ifp.fr>

**EU Contribution:** €832,230

**Technologies:**

Electric vehicle batteries (and energy management)  
Battery cells and digitalisation of the cell development process

**Development phase:** Research/Invention

Computer-aided design and engineering  
Four-seater small lightweight EV

**Development phase:** Research/Invention

Transport  
**STRIA Roadmaps:** electrification

**Transport mode:** Road transport

**Transport sectors:** Passenger transport, Freight transport

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

**Geo-spatial type:** Other