OBJECTIVES

- 500 km range
- Ultra-Fast charging (< 18 min)
- Ultimate safe battery system
- Long battery lifetime (> 300.000 km)
- Sustainability over entire life cycle of battery pack

PROJECT PARTNERS

ikerlan — MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

virtual vehicle

Valeo

FLANDERS MAKE — DRIVING INNOVATION IN MANUFACTURING

NXP

BRING

DIEHL Controls

ACCUREC® RECYCLING GMBH

CLEPA — European Association of Automotive Suppliers

HUTCHINSON®

Fraunhofer IISB

Mercedes-Benz

Mondragon Unibertsitatea — Faculty of Engineering

Infineon

PROJECT FACTS

Project Coordinator: Egoitz Martinez-Laserna
Institution: IKERLAN
Email: emartinez@ikerlan.es
Website: https://libertyproject.eu
Start: 01 Jun 2021
Duration: 42 Months
Total investment: 10.8 M€
Participating organisations: 16
Number of countries: 7

LIBERTY — LIGHTWEIGHT BATTERY SYSTEM FOR EXTENDED RANGE AT IMPROVED SAFETY

WHERE TO FIND US:

Website: https://libertyproject.eu/

Follow LIBERTY on **LinkedIn:**
https://www.linkedin.com/in/liberty-project-bbb27320a/

COLLABAT

ALBATROSS   HELIOS   LIBERTY   MARBEL

LIBERTY is part of **COLLABAT CLUSTER of H2020 Battery Projects** – find out more on LinkedIn:
https://www.linkedin.com/company/collabat-cluster/

POSTER SESSION

Eduardo Miguel / Egoitz Martinez-Laserna

LIBERTY: Lighweight Battery System for Extended Range at Improved Safety

HIGHLIGHTS

- The innovations within LIBERTY lead to a compact high-performance battery pack with advanced monitoring features and functionalities.
- In terms of consumer's values, it brings extended range, short charging times, safety, reliability, affordability and sustainability.

MAJOR OUTCOMES

- Innovative **battery pack** and battery management system **integrated in Demonstration vehicle** (TRL7)
- **Compact and safe** battery system based on high **energy density** cells and **lightweight materials** housing
- Versatile **Battery Management System**
- High accuracy **State Estimators (SOX)**
- (Semi-) Automated **battery dismantling** procedure
- Safety and performance related **test procedures**

LIBERTY — LIGHTWEIGHT BATTERY SYSTEM FOR EXTENDED RANGE AT IMPROVED SAFETY

Improved state estimators
Semiconductor-based battery main switch
Pressure sensor in cell arrangement
Novel materials for thermal runaway prevention
High voltage (800 V) system
IC for novel monitoring functions
Enriched communication interface functions
Battery Passport
Secure data storage
High energy density cells
Optimal cell arrangement
Light-weight fibre-reinforced housing
Material immersion cooling system

HOSTED AND ORGANISED BY:
ANI — AGÊNCIA NACIONAL DE INOVAÇÃO

CO-ORGANISED BY:
European Commission

IN COOPERATION WITH:
IMT — INSTITUTO DA MOBILIDADE E DOS TRANSPORTES, I.P.
CONSÓRCIO DE ESCOLAS DE engenharia
LNEC — LABORATÓRIO NACIONAL DE ENGENHARIA CIVIL
magellan — European Affairs Consultancy

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