

Manufacturing and assembly of modular and reusable Electric Vehicle battery for environment-friendly and lightweight mobility.

The MARBEL project is manufacturing the next generation of lightweight battery packs with the objective to accelerate the mass market takeup of electric and hybrid vehicles.

MARBEL focuses on the need for fastcharging and long-lasting batteries to boost end-user demands, while applying high modularity and easy assembly and developing novel testing methodologies.

The project aims at designing, developing and demonstrating **new** modular, compact, lightweight and high-performance battery packs, together with flexible and robust Battery Management Systems, for battery Electric Vehicles and plugin hybrids, while maintaining safety levels, allowing fast, high-quality and cost-effective large-scale production by following eco-design principles.



Design-for-Assembly & Disassembly Advanced battery packs using a Design-for-Assembly and Disassembly methodology.



Ligthweighting the battery package Reducing the weight of the metallic parts.



2nd life reuse

Solutions and processes for parts' sustainable dismantling and 2nd life.



Advanced BMS

Flexible advanced Battery Management Systems (BMS).



Ultra-fast charging

Ultra-fast charging strategies and enhanced thermal management for an extended useful battery life.



Performance & safety

Procedures for characterisation and validation of future performance and safety.

The project aims at fostering the acceptance and use of Electric Vehicles by solving two of the main critical points in consumer's decision-making: limited vehicle autonomy and charging time, enabling to travel longer distances.

Consortium:



















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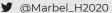
















funding from the European Commission's Horizon 2020 programme.





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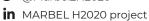






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