



Advanced lightweight battery systems optimized for fast charging, safety and second-life applications

Project Objectives



Modular concept scalable to different types of vehicles **aimed at creating advanced battery pack designs and systems.**



Innovative cooling technologies that deliver lower battery temperatures during operation and charging **to ensure an extended life-cycle.**



Lightweight modular solutions designed following an **eco-design approach to allow subsequent disassembly, recycling and reuse.**



Advanced remote control, maintenance and troubleshooting of each battery module through a **flexible advanced Battery Management System (BMS) that ensures safety** even at higher peak energy densities.

Expected Results



An **improvement of the Peak Energy Density** by around 50%.



A 15 to 20% **improvement over the full lifecycle.**



A 20% **weight reduction of the battery system.**



Allow for fast charging while maintaining or improving battery capacity and useful life.



A 25% **charging time reduction** with a 150 kW charger.



Extensive knowledge improvements in thermal management systems and second life / recycling.



Do you have concerns with battery range, cost, long-term reliability and excessive charging times?
ALBATROSS has a sustainable solution!



The proposed solutions will develop the next generation of battery packs for electric vehicles (EVs)



The technological developments will centre around a combination of smart battery modules along with lightweight multi-material structures, delivering an unprecedented level of safety and performance



The solutions will allow for a proper industrial integration and significant life-cycle improvements beyond existing solutions

Expected Impacts

Significant improvement in the performance of EVs



Bigger attractiveness of EVs with reduced charging times and extended battery life.



Overcome the uncertainty of range.

In line with Circular Economy goals.

Improved dismantling and reuse / recycling approaches.



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