

Press release, 18 July 2023

## Not only a second life, but a second purpose for batteries: welcome to REBELION project!



*An EU-funded project – REBELION – has been launched to develop cutting-edge technologies to promote a circular model for lithium-ion batteries (LIBs) for electric mobility, enabling feasible industrial practices in the coming years to maximize second-life and recycling applications.*

The project, led by [Universitat Politècnica de València \(UPV\)](#) and [Nanophotonic Technology Center](#) (at the UPV), will provide a timely response to the battery waste problem triggered by increasing e-mobility. The used LIBs are, in fact, often suited for 2nd-life applications for an additional 10 years, representing an opportunity to diminish energy and raw materials dependencies in Europe, but technical hurdles are preventing the re-use and recycling of LIBs.

With a total budget of €5.14M and 9 partners from different countries in Europe, REBELION's novel labelling system supported with blockchain, digital battery passport and ecolabel technology will deliver key information to dismantlers, recyclers, re-manufacturers and users. The combination of 4



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research centres and 7 industrial partners in the consortium will ensure technology transfer from lab to industrial context.

The REBELION consortium held a meeting at the [University of Birmingham](#) on 11 and 12 July to launch the project. The University of Birmingham, in the project, is in the leader of automation and robotics for disassembly, with the aim to show how AI, computer vision, and autonomous robotics can be used to in a highly automated way to sort, assess state of health, deep discharge of energy and disassemble different models of LIBs. The meeting included a visit to the [Extreme Robotics Lab](#).

Fast forward to a more mature phase of the project, REBELION will promote two different circular schemes capable of providing feasible pathways to reuse electric vehicle and light electric vehicle LIBs into energy storage system (EES) utility and domestic applications respectively, and later recycling:

- The 1st circular chain designed for used EV batteries
- The 2nd circular chain emerging from REBELION will accommodate a sustainable pathway for the used LIBs obtained from Light Electric Vehicles

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