

RE

BE

LI

ON

REBELION

Not just a second life, but a second purpose for batteries

REBELION aims to address the **waste management challenges** posed by lithium-ion batteries (LIBs) used for **electric mobility**. This is possible through **automation** for battery sorting, **diagnosis**, and **disassembly**.

Impacts



Achieving **circular economy** goals



Creating a **recycling** value chain



Improve **safety**, through automatisisation



Boosting European competitiveness

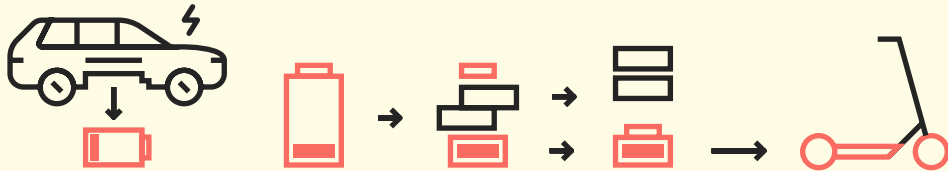


Sustainability and improved LCA

Lithium-Ion Evolution: Smart Diagnostics for Recycling & Second Life.

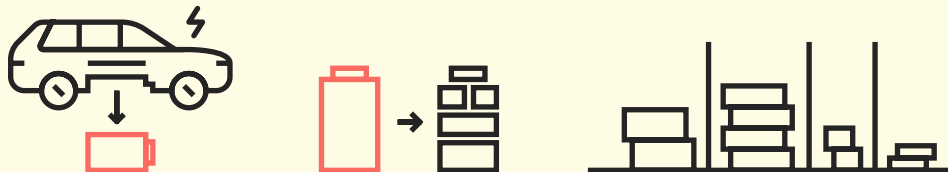
The project will obtain **diagnostic protocol** and a corresponding device for li-ion cells and modules. This protocol will **distinguish** between cells/modules suitable for a **second life** and those at the end of their life, requiring **disassembly for recycling**.

Giving a second life to used batteries



Safety is another factor that adds cost to reuse. REBELION will develop technologies so that safety is increased while **associated costs are reduced**. This will maximise second-life applications and **improve recycling efficiency**.

Un-reuseable battery dismantling and recycling



Validating two sustainable circular schemes

The project will validate two different **circular schemes** - enabled by a disruptive **fast battery testing** based on **electronic noise analysis**. In **the first circular scheme**, unsuitable modules undergo automated sub-cell dismantling, eliminating mechanical and pyrolysis processes. **The second scheme** ensures a sustainable pathway for used LIBs from light electric vehicles, with modules **sorted, tested, and separated** for reuse or recycling.

With automation, the project will transform second life into a profitable and sustainable activity.

Consortium



RE

BE

LI

ON



Discover more at:

> REBELION-PROJECT.EU



Funded by the European Union.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.