

HELIOS

High Energy Li-ion Storage Solutions

Motivation and Objectives

A large consortium including six car manufacturers, several laboratories and test institutes, one recycler and a battery manufacturer will combine their efforts to understand the causes behind the battery cells aging and safety behavior. The study is performed on large High Energy cells for Electric Vehicles, high e-range PHEV and Hybrid Heavy Duty trucks applications.

The objectives of the HELIOS project are to:

Propose updated specifications and test procedures for high energy battery cells used in European context.

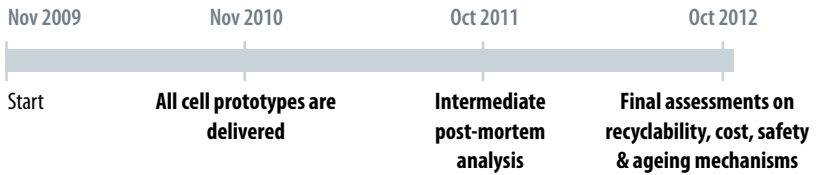
Perform the study on representative large cell formats (close to 40Ah cells) with identical design, using four different positive electrodes.

Have the new and aged cells samples analysed "post-mortem" after ageing to identify for each technology the aging and safety mechanisms.

Assess the impact of such results on the battery system/pack level: estimation of extra recycling needs and of the consequence of safety tests results on the battery pack concept. Consequent cost evaluation.

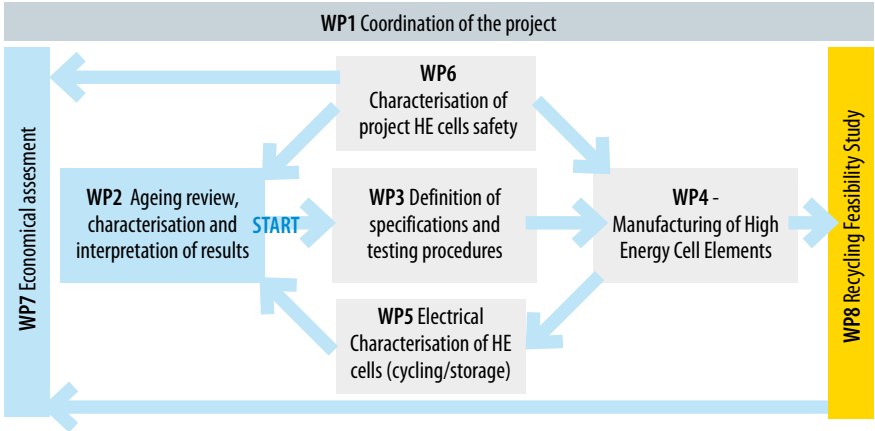
Project Planning & Deliverables

The project will start in November 2009. The main milestones are reported below.



Technical Approach & Expected Achievements

The figure conveniently summarizes the different steps divided into W, including their interaction.



Organisational Information

Budget	4.3 M€	Funding	2.80 M€
Duration	36 months	Start	November 2009
DG	Research	Priority Area	Renewable energies
Coordinator	Anna Teyssot, RENAULT	Contact	anna.teyssot@renault.com
Partners	18 partners including OPEL, FORD Aachen, PSA PEUGEOT CITROËN, CR FIAT, VOLVO, Saft, Johnson-Control, Umicore, EDF, ZSW, Ineris, LRCS, Uppsala University, ENEA, AIT, CEA, RWTH.		