BATTwin

Flexible and scalable digital-twin platform for enhanced production efficiency and yield in battery cell production lines

BATTwin is a 42-month project, which receives funding from the European Climate, Infrastructure and Environment Executive Agency under grant agreement No. 101137954.

The objective of **BATTwin** is to support the high demand for battery manufacturing equipment in Europe, by developing a novel Multi-level Digital Twin platform towards Zero-Defect Manufacturing in battery production, that will reduce defect rates in battery production lines. The solution integrates four pillars, namely (i) a multi-sensor data acquisition and management layer, supported by data semantics through a Digital Battery Passport data model, (ii) process-level digital twins, modelling the critical stages of electrode manufacturing, cell assembly and conditioning through multi-physics, data-driven and hybrid approaches, (iii) system-level digital twins, based on simulation and analytical modelling, (iv) user-centric, goal-driven digital twin workflows, increasing the explainability of digital twins and driving the user in system design and control.

Project Partners

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