

AID4SME Open Call #2

Application Title	BATTWISE — AI-assisted skill capturing and adaptive digital work instructions for defect handling in battery production
Application Acronym	BATTWISE
Application ID	2781295
Challenge	C3.3 Battery production digitalwork instructions & skill capturing
Phase	Expert Evaluation
Overall Score	12.30 (Threshold 9.00 out of 15.00)

Proposal Summary

BATTWISE addresses Challenge C3.3 — battery production digital work instructions and skill capturing. In battery pack manufacturing, automated inspection detects defects, but deciding the corrective action still depends on tacit operator expertise that is lost between shifts and staff turnover, causing variability in defect handling, higher scrap and unstable quality.

BATTWISE captures, structures and formalises this operator knowledge and turns it into adaptive digital work instructions (DWI). Every defect event (failed functional test, discard, end-of-line anomaly) automatically opens a structured defect case; operators record, in under 30 seconds, the checks performed, the corrective action and its outcome. The system links defect patterns to process conditions, actions and outcomes into a plant-grounded knowledge base, and serves it back as context-aware, skill-adaptive guidance whose level of detail matches each operator's measured experience — with full traceability of defect, decision and outcome in each unit's digital passport, anticipating the EU Battery Regulation.

The solution runs on a production platform already live at the industrial pilot (, a battery pack manufacturer), at TRL 6, with a working proof of concept. The project develops an AI recommender, a defect-photo classifier and the adaptive DWI engine, validated in a lab step and then in the industrial pilot up to TRL 8. KPIs target reduced scrap, faster defect response, lower defect recurrence and shorter operator onboarding.

Evaluation Summary Report

Criterion 1 - Novelty & Innovation

Score: **4.00** (Threshold 3.00 out of 5.00; Weight: 30%)

The BATTWISE proposal addressed challenge C3.3 Battery production digitalwork instructions & skill capturing.

The concept well advanced the state-of-the-art with clear objectives, expected outcomes, and a fourfold

differentiation strategy, though reference links to existing scientific publications were limited.

The technical description clearly detailed capabilities, limitations, and a TRL 6 status backed by a functional proof-of-concept, establishing a pathway toward TRL 8 despite third-party peer-reviewed validation being planned for later stages.

The proposed solution aligned well with the selected challenge by incorporating privacy-by-design, anticipating EU Battery Regulation obligations, and adhering to EU AI Act principles.

Criterion 2 - Impact

Score: **4.00** (Threshold 3.00 out of 5.00; Weight: 30%)

The project addressed the criterion well by demonstrating a clear contribution to the AID4SME ecosystem and strengthening industry competitiveness through well-quantified SME positioning and workforce reskilling estimates.

An exploitation plan and IPR arrangements were clearly specified with a defined consortium license duration, although the commercialization route was not fully decided between operating as a sole trader or establishing a new company.

The proposed solution presented well-defined SMART KPIs for green alignment, social impact, and environmental sustainability with concrete references and baselines.

Criterion 3 - Implementation

Score: **5.00** (Threshold 3.00 out of 5.00; Weight: 20%)

The work plan successfully addressed all relevant aspects of the criterion through a clear, well-structured implementation strategy featuring detailed deliverables, verifiable milestones, explicit key person risk mitigations, and a non-disruptive parallel run validation design.

The proposed budget was fully compliant with applicable rules and clearly justified, featuring an internally consistent person-month rate breakdown aligned with role seniority and direct personnel contracting.

Criterion 4 - Team

Score: **3.50** (Threshold 3.00 out of 5.00; Weight: 20%)

The proposed core team demonstrated well-differentiated, complementary technical expertise and relevant experience to execute the project, although gender balance was limited to one administrative role.

The application broadly demonstrated operational capacity and commitment through a defined single-applicant structure, a supportive pilot partner with a real production line, and active technical involvement from key personnel.