NEWSLETTER #10 JULY 2026

Validating Battery Intelligence: From Research Results to Engineering Services

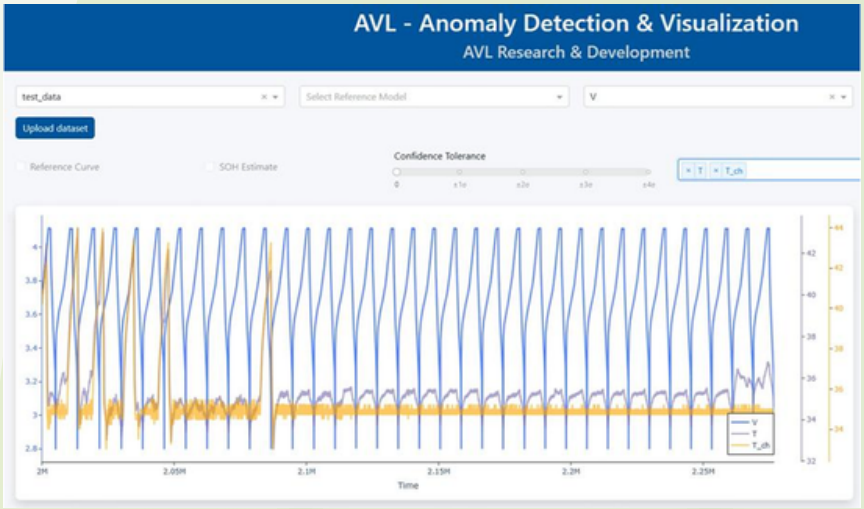
In automotive engineering, speed matters — but quality decides. A battery-related field failure can trigger safety concerns, warranty exposure, reputational damage, and recall costs that far exceed the effort required to prevent it. For battery systems, where degradation affects range, safety, residual value, and customer trust, the threshold for deployment is especially high.

This is the starting point for R3-MYDAS. A promising algorithm is not enough. To become relevant for automotive customers, a diagnostic method must be verified, validated, benchmarked, and embedded in a repeatable engineering process. It must prove that it can move from research evidence to reliable service delivery.

Verification and Validation: Building Trust

Verification and validation answer different questions — and both are essential if AI-supported diagnostics are to be trusted in an automotive environment. Verification asks whether the system was built correctly.

It checks whether a model, method, or software implementation conforms to its specification — for example, whether signal processing, thresholds, and software behavior are implemented as intended. Validation asks whether the right system was built. It tests whether the method solves the real world problem it is intended to address, using independent data, benchmark datasets, or operational evidence from the target application environment.



Anomaly Detection for Battery Cell Testing

AVL's anomaly-detection work has already been presented to the international battery community. At AABC Europe 2024, the R3-MYDAS-funded approach was introduced publicly through the presentation of AI-based Battery Digital Twin Anomaly Detection and Diagnostics for HV Battery Behavior and Performance.

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End-users perception and acceptance of the remanufacturing process

As technology continues to transform the way we work, communicate, and make decisions, understanding how people perceive and adopt new technologies has become increasingly important. This is why we place end-users and their perceptions at the center of our research activities.

Successful innovation depends not only on technical performance but also on users' willingness to embrace new solutions. Factors such as usefulness, trust, and ease of use often determine whether a technology achieves its intended impact.

To better understand these factors, we conduct tailored survey initiatives that capture the experiences, expectations, and concerns of specific user groups. The evidence collected directly from end-users helps inform both technology development and implementation strategies.

To support this work, the ICSA-HUA research group has developed a dedicated platform that ingests raw survey data and generates both quantitative acceptance metrics and qualitative, LLM-mediated insights.

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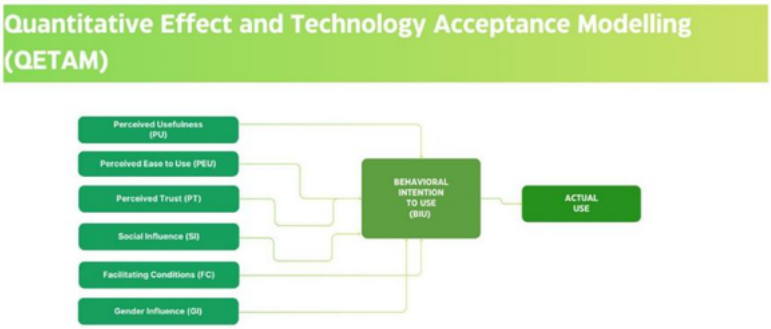

Exploitation Plans and IPR management for the R3-Mydas Project Results

- *What Exploitation and IPR mean in European Research?*
- *Exploitation strategies and IP protection in R3-Mydas*
- *Maximizing impact across the three demo cases and the marketplace*

The R3-Mydas Marketplace integrates all three demo cases into a single digital platform connecting remanufacturers, service providers, and industrial buyers through transparent traceability infrastructure and Digital Product Passport-compatible records directly supporting the EU's circular economy and digital sovereignty objectives.

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