University of Michigan Expands Decade-Long Voltaiq Collaboration into Battery Prototype Manufacturing

The Battery Lab expands the use of Voltaiq to improve prototype build repeatability, equipment reliability and customer transparency

ANN ARBOR, MI AND SAN FRANCISCO, CA, UNITED STATES, September 24, 2026 /EINPresswire.com/ -- The University of Michigan Battery Lab and Voltaiq, the leader in Battery AI software, today announced an expansion of their decade-long collaboration, extending the use of Voltaiq from battery test data and analytics into the Lab's cell prototype manufacturing operations.

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>
> *Greg Less, Director of the Battery Lab at the University of Michigan*

The University of Michigan Battery Lab performs a vital function in fostering a domestic battery supply chain by providing academic and industrial customers with the equipment and expertise needed to build, scale and test new battery technologies. Customers can bring new materials or battery designs to the Lab and work with University of Michigan experts to turn them into prototype cells, accelerating development without requiring their own dedicated prototyping infrastructure.

The relationship began in 2014, when the Battery Lab adopted Voltaiq to automatically collect battery test data and securely share results with its customers. The latest expansion brings data from the prototype build itself into Voltaiq, including materials, recipes, equipment settings and process parameters. The result is a digital record connecting what was built, how it was built and how the resulting battery performed.

"We've relied on Voltaiq for more than a decade to help us manage and share battery test data", said Greg Less, Director of the Battery Lab at the University of Michigan. "Now we're extending that visibility into the prototype build itself. We want to be able to look back at any cell and immediately understand what we built, exactly how we built it, and to be able to share that information seamlessly with our users."

Creating an AI-Ready Data Foundation for Prototype Manufacturing

Working with the Battery Lab team, Voltaiq battery engineers mapped the Lab's prototype manufacturing equipment and processes into its battery data ontology in a single afternoon. The resulting data foundation enables the Battery Lab to retrieve the recipe and process conditions from an earlier prototype build, reproduce it for a returning customer, and use statistical process control dashboards and AI agents to monitor whether the new build remains within the same process window.

This data can also help engineers identify relationships between materials, operating conditions and equipment performance. In one example, a customer's slurry formulation was associated with repeated failures of pumps used during electrode coating. By bringing slurry characteristics, pump settings and other process data together, the Battery Lab can proactively identify the conditions associated with equipment problems to better manage future builds and schedule preventative maintenance.

Extending Transparency from Testing to Prototype Manufacturing

The expanded deployment also extends the customer transparency that has been central to the University of Michigan–Voltaiq relationship. Voltaiq already enables Battery Lab customers to securely access and analyze their own battery test data. Now they also get a digital record of how their prototype cells were built — materials, recipes and process conditions — that they can carry forward as they scale the design in their own facilities.

"As the domestic battery industry has grown and matured, we've seen our customers become more sophisticated in what metrics they track during the cell build and how they correlate that data to final cell performance. Our customers want confidence that their cells were built the way they asked us to build them," said Less. "This gives us transparency in both directions—we can show exactly what happened during the build, and our customers have the data to investigate it themselves. The expansion of the Voltaiq platform is the easiest, best way we've found to share Battery Lab cell data, from mixing to end-of-line, with our users."

"One of the university's most important contributions to the domestic battery supply chain is giving industry partners a place to validate new ideas quickly and transparently," said Alan Taub, U-M EV Center Director. "Connecting the full record of how a prototype cell was built to how it performed gives engineers a clearer path from concept to commercialization, and our expanded work with Voltaiq is a strong example of that investment."

"Over the past decade, our work with the University of Michigan has grown from helping manage battery test data to connecting that performance with the process that created the battery," said Tal Sholklapper, CEO and co-founder of Voltaiq. "That connection between materials, process and performance gives engineers the foundation they need to learn faster from every prototype they build."

About the University of Michigan Battery Lab
The University of Michigan Battery Lab is where battery ideas take shape. As an open-access, IP-neutral facility, we help industry, government, and academic users prototype, test, and scale energy storage technologies – with expert guidance every step of the way. For more information, visit our webpage: https://umbatterylab.engin.umich.edu.

About Voltaiq
Voltaiq is the leading Enterprise Battery AI platform, providing agentic battery engineering and reporting workflows, data management, and analytics that span the full battery lifecycle — from product development and cell manufacturing through system production and in-field operations. Voltaiq's platform is used by leading enterprises across automotive, cell manufacturing, energy storage, and other sectors to ship battery products faster and ensure quality, safety, and performance. Learn more at www.voltaiq.com.

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