



Press Release

Ilika and Comau successfully complete a scale-up study for All-Solid-State Battery Technology and its future production for EV manufacturers

- The study validated the machines and processes required to bring solid-state batteries to industrial production levels
- The two companies, in their respective fields, are pioneering the solid-state battery technologies and have developed a roadmap to scale the production to 2 MWh per year by the end of 2023
- Ilika's Goliath all-solid-state battery (ASSB) technology for electric vehicles has the potential to improve pack-level energy and power density
- Comau's experts in Global Competence Center for battery cells, located in Turin, and Comau UK partnered with Ilika to achieve the project's result in a 12-month period

ROMSEY and TURIN, May 25, 2022 – Ilika Technologies Ltd, pioneers in ASSB technology for electric vehicles, and Comau - part of Stellantis - global leader in industrial automation at the forefront of development of solid-state battery technology, have successfully completed a 1-year UK Government-funded study into the machines and processes required to manufacture oxide electrolyte-based solid state technology at an approximate scale of 100 MWh per year. Comau supported Ilika in developing both a lab scale and industrial manufacturing process with a specific focus in utilizing existing technologies and machines, already available, that require small customization – and reduced investment – for the customers. For technologies not available, Comau developed some concepts of processes and machines to be industrialized in a second phase of the project.

The study identified that the majority (2/3) of all-solid-state cell production steps can be achieved on standard or lightly customised machines equipment currently used in the production of conventional liquid electrolyte-based lithium-ion batteries and other markets. The study went on to identifying a small number of process steps where specific ASSB machine development is required. The project kicked off by Ilika falls right into Comau's long term strategy and plan for solid-state battery production validating a series of manufacturing steps that Comau has plans for in the future.

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Comau and Ilika collaborated with their respective knowledge of products and processes over the course of the project. The study phase was finalized and now the 2 companies have defined a flexible roadmap to achieve the target outlined in the Ilika's perspectives, towards mass production levels. Comau will support Ilika in the future with all aspects intended to develop in battery industrialization.

Ilika's production scale-up will be in three stages. The first step, currently underway, will be to scale to 2 MWh per year by the end of 2023: this will be achieved by enlarging its current facility in Hampshire, UK, using funds from a 2021 raise. The Ilika-Comau funded-study focused on an 100 MWh-level capability and the continuation of this work between the two companies will feed into Ilika's second scale-up step. The third step, at GWh or "Gigascale", will take place once the 100 MWh facility has been exercised.

llika's Goliath ASSB technology for electric vehicles has the potential to improve pack-level energy and power density, enabling fast charging below 20 minutes and operation to higher temperatures than conventional lithium-ion batteries.

Automotive Transformation Director at the Advanced Propulsion Centre (APC), Julian Hetherington said: "The UK has a long legacy of automotive manufacturing success and the industry now needs to scale up, at pace, to net-zero emission technologies. We are delighted that the funding awarded to Ilika and Comau through the Automotive Transformation Fund (ATF) has successfully supported collaborative product and manufacturing process development that can unlock routes to subsequent investment in scaled-up facilities."

John Coombes, Managing Director of Comau UK stated: "This project represented an integral part of the Comau Journey in Electrification, developed with a joint team of the internal Battery Cells Global Competence Center, in Turin, and Comau UK. We are proud of the collaboration we have had with Ilika and the APC, and also the ability to demonstrate the value our capabilities can contribute in this field."

Graeme Purdy, Ilika CEO, stated: "This project has successfully validated Ilika's scale-up plans for its Goliath technology, highlighting some important cost-saving benefits at higher volume production levels which pave the way to gigawatt scale manufacturing. Working with Comau, one of the world's leading designers of innovative engineering solutions, has delivered a robust plan to scale-up Ilika's manufacturing capability for Goliath solid state batteries to the next level."

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Caption: Render of the pilot line - 50MWh







ABOUT ILIKA

Ilika plc (LON: IKA) is a pioneer in All Solid State Battery (ASSB) technology with their innovative Stereax micro batteries designed for Industrial IoT and MedTech markets, and their Goliath large format batteries for the electric vehicle and consumer electronics markets. Stereax customisable solid state batteries can be miniaturised at mm-scale for powering next-generation Active Implanted Medical Devices (AIMD) or Industrial IoT sensors. Goliath solid state cells are a safe alternative to the present electric vehicle batteries with the potential to achieve extended range and faster charging that will enable electric transportation to move to the next level.

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ABOUT COMAU

Comau, a member of Stellantis, is a worldwide leader in delivering advanced industrial automation products and systems. Its portfolio includes technology and systems for electric, hybrid and traditional vehicle manufacturing, industrial robots, collaborative and wearable robotics, autonomous logistics, dedicated machining centers and interconnected digital services and products able to transmit, elaborate and analyze machine and process data. With over 45 years of experience and a strong presence within every major industrial country, Comau is helping manufacturers of all sizes in almost any industry experience higher quality, increased productivity, faster time-to-market and lower overall costs. The company's offering also extends to project management and consultancy, as well as maintenance and training for a wide range of industrial segments. Headquartered in Turin, Italy, Comau has an international network of 6 innovation centers, 5 digital hubs, 9 manufacturing plants that span 13 countries and employ 4,000 people. A global network of distributors and partners allows the company to respond quickly to the needs of customers, no matter where they are located throughout the world. Through the training activities organized by its Academy, Comau is also committed to developing the technical and managerial knowledge necessary for companies to face the challenges and opportunities of Industry 4.0.

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