

Waygate Technologies and its partners among winners of Faraday Battery Challenge funding competition in the United Kingdom

HUERTH, Germany, January 26, 2023 – Waygate Technologies, a Baker Hughes business, and its partners, the UK Battery Industrialisation Centre (UKBIC) and PXL-ICE, are among the winners of the [most recent round of the Faraday Battery Challenge funding competition](#) led by UK Research and Innovation (UKRI), a public body sponsored by the British Department for Business, Energy and Industrial Strategy (BEIS). The consortium funding is for a feasibility study to look at ways of potentially increasing the yield and productivity of UK gigafactories with data based on advanced industrial computed tomography systems. If successful, this could eventually lead to the development of a digital twin* at UKBIC.

“We are very proud to have been granted this important funding and to contribute as a strategic partner in this pioneering and important project to the UK’s development of battery technology as we advance towards a net-zero future”, said Ben Linke, Vice President of Waygate Technologies.

“This funding announcement for a feasibility study is welcome news. The goal of creating a digital twin could help boost the the yield and productivity of UK gigafactories considerably,” added Russ Burke, UKBIC’s Head of Quality.

The Faraday Battery Challenge invests in research and innovation projects, & facilities in the UK to drive the growth of a strong battery business in the UK. Established in 2017, the recently extended programme aims to steer the development of battery technologies that are cost-effective, high performing, longer range, faster charging, long-lasting, safe and sustainable. The total amount of this latest funding round is 27.6 million British pounds allocated to 17 different projects.

Speeding up battery production with digital twins

One of the largest challenges for scaling up battery cell throughput production is the pace to achieve high quality batteries to meet the demand for Electric Vehicles (EV), as well as other applications, such as marine, aerospace, off-highway vehicles, and static energy storage. The other is the ability to increase the yield, whilst maintaining quality and limiting waste.

Last year, Waygate Technologies signed a [Memorandum of Understanding](#) (MoU) with UKBIC, the national battery industrialisation facility, to look at developing a solution that could significantly improve the yield and productivity of future battery gigafactories. Waygate Technologies and UKBIC have also partnered on the availability and use of an open access and industrial X-Ray computed tomography (CT) digital solution, which should also contribute to significantly reducing battery waste in future battery gigafactories. According to UKRI, a one percent yield improvement in a 20 GWh battery gigafactory can already save over £21 million a year and reduce the waste of raw materials, including rare earth minerals.

The feasibility approach in the awarded project is intended to lead to the creation of a framework for a digital twin of UKBIC battery cell samples. It is also to explore and leverage the effectiveness of CT scanning as an advanced analytical tool. Quality defects could, should the project get the go ahead, be identified, analysed and resolved much faster and more accurately through digital twinning. This approach will enable a faster process development in the factory, and will ensure greater quality. Waygate Technologies' ambition is to leverage the data from the inspection processes across the lifecycle of batteries, reduce waste, and ensure greater safety.

One example of AI is Waygate Technologies', InspectionWorks, a platform built on machine learning which helps to characterise failures and quality issues without human intervention. This platform is agnostic to the inspection data and allows integration with factory planning systems, to provide feedback in designing a better production of battery cells.

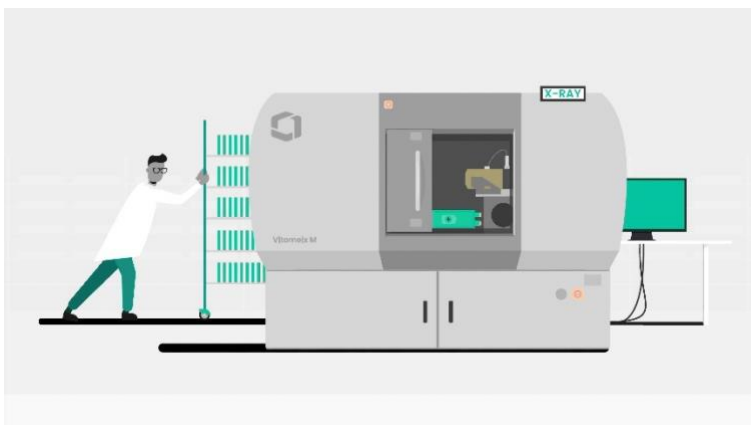
For Waygate Technologies, the agreement seals another milestone in the business' strategy to strengthen its leading position in battery inspection and drive innovation that aims to enhance electric vehicle safety, productivity and competitiveness for its customers. As part of Baker Hughes, an energy technology company, the mission of Waygate Technologies' inspection solutions is to make electric mobility safer and more efficient for people and the planet by reducing resource waste.

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**Digital twin* - This relates to the potential creation of a virtual replica of the facility connected to a physical asset, which could help develop, design and improve manufacturing and process efficiencies.

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Images



Caption: Waygate Technologies and its partners have been awarded with a dedicated grant for its feasibility study to further develop a digital twin of electric vehicle batteries with data based on advanced industrial computed tomography systems.



Caption: By creating a framework for a digital twin, quality defects can be identified, analysed and resolved much faster and more accurately than with any traditional inspection method.



Caption: The awarded solution aims to significantly improve the yield and productivity of future battery gigafactories.

About Waygate Technologies

Waygate Technologies, a Baker Hughes business, is an industrial inspection solutions provider and the world leader in nondestructive testing (NDT) ensuring safety, quality and productivity. We combine more than 125 years of experience and a collection of heritage brands including Krautkrämer, phoenix|x-ray, Seifert, Everest and Agfa NDT. Today, hundreds of brands in the automotive, aviation, space exploration, electronics, energy, battery and additive industries trust our technologies. We drive digital transformation through a broad portfolio of award-winning hardware and software solutions in industrial radiography and computed tomography (CT), remote visual inspection (RVI), ultrasound (UT), eddy current, robotic inspection, and data management. Headquartered in Germany, Waygate Technologies is part of the Industrial & Energy Technology segment of Baker Hughes (NASDAQ: BKR). Inspection starts here: [waygate-tech.com](https://www.waygate-tech.com).

About UK Battery Industrialisation Centre (UKBIC)

The UK Battery Industrialisation Centre (UKBIC) is the UK's national manufacturing battery development facility, where businesses can develop their battery manufacturing processes at the scale they need to move to industrial production. Opened in July 2021 by the then British Prime Minister, the £130 million Coventry-based facility which opened three years ahead of its nearest European competition, provides the link between battery research and successful mass production. Based in Coventry, the publicly-funded battery product development facility welcomes manufacturers, entrepreneurs, researchers and educators, and can be accessed by any organisation with existing or new battery technology – if that technology will bring green jobs and prosperity to the UK. The pioneering facility is a key part of the UK Government funded Faraday Battery Challenge, which has been delivered by Innovate UK on behalf of UK Research and Innovation, with the aim of building a high-tech, high-value, high-skill battery industry in the UK. Learn more about UKBIC: www.ukbic.co.uk.

About PXL-ICE

PXL ICE is a company focused on development of engineering software tools that can support both technical teams and high-level management decision makers. Based in South Wales, the company draws experience from Manufacturing, Design and Software engineering disciplines. This allows for an understanding of end user needs combined with programming capabilities to deliver impactful CAM (Computer Aided Manufacturing) tools. Combining simulation and modeling technologies with industry 4.0 & IoT technology; developing the tools to create all-encompassing digital twins. With its software, PXL ICE aims to deliver a step change in UK capability while reducing the barriers to entry for manufacturing simulation & monitoring. www.pxl-ice.com

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