



# Advancing Battery Innovation for a Sustainable Europe: Join the BATTERY2LIFE Webinar

Press Release-26 November 2024

The global demand for sustainable energy solutions is reshaping the way we think about battery technology. Six Horizon Europe projects—[BATTERY2LIFE](#), [BIG LEAP](#), [BATMAX](#), [NEXTBAT](#), [REINFORCE](#), [ENERGETIC](#)—are at the forefront of this transformation. These initiatives are taking advancements in battery management systems (BMS) and second-life applications for used batteries, addressing challenges in sustainability and energy efficiency.

On December 2, 2024, from 10:00 to 12:30 CET, the projects will host an engaging webinar titled **'Battery Innovations for a Sustainable Europe: Key Insights from six Horizon Europe Projects,'** to share insights, developments, and strategies. This event offers an opportunity to discover the latest developments in battery technology, hear from leading experts, and explore how these initiatives are improving sustainable energy storage solutions.

The webinar will highlight innovative approaches to battery technology, including advanced methods for extending battery life, optimizing performance, and repurposing batteries for second-life applications in stationary energy storage systems (ESS). Attendees will also gain a deeper understanding of how second-life batteries are being integrated into the energy grid, reducing waste while supporting the growing demand for renewable energy. The event is designed for a diverse audience, including researchers, policymakers, industry professionals, and anyone with an interest in sustainable energy solutions.

The press release will outline an engaging lineup of speakers and discussions on innovative battery technologies and sustainability projects during the event. Opening remarks will be delivered by Rocío García, moderator. The first presentation will feature *Dr. Angelos Amditis*, Research & Development Director at ICCS and Coordinator of the **BATTERY2LIFE project**, followed by *Costantino Laureanti*, Coordinator of the **BIG LEAP project**. The **NEXTBAT project** will then take center stage, presented by its coordinator *Mikko Pihlatie*, Research Professor at VTT. *Luís Oliveira*, Research Coordinator at INEGI and **REINFORCE project** leader, will discuss advancements in product life cycle intelligence and additive manufacturing. *Mikko Pihlatie* returns to present **the BATMAX project** and the final presentation by **ENERGETIC**, will be presented by *Ahmed Samet*, Research Professor at INSA Strasbourg. A Q&A session will follow every two projects. The event will conclude with closing remarks by moderator.

The webinar is free to attend and will be held online via Zoom. Registration is required to secure your spot. Visit [this link](#) for further details.

December 2, 2024, from 10:00 to 12:30 CET

[Register for free here](#)



### For more information contact :

Dr. Angelos Amditis, Research & Development Director at the Institute of Communication and Computer Systems (ICCS) and Coordinator of the **BATTERY2LIFE project** ([a.amditis@iccs.gr](mailto:a.amditis@iccs.gr))

## PROJECTS OVERVIEW

The vision of **BATTERY2LIFE** is to facilitate the smooth transition of batteries to 2nd life use, boost the innovation of the European Battery Industry by providing enablers to implement open adaptable smart Battery Management Systems (BMS) and improved system designs, as well as proposing methods for the efficient and reliable reconfiguration of used batteries.

The **BIG LEAP project** is a Horizon Europe initiative that enhances operation reliability of SLB by addressing interoperability in Battery Management Systems (BMS). It develops a three-layer BMS architecture for SLBs, integrates an adaptable Energy Storage System (ESS) design, and aims for safe and reliable operation from FL to SL-BESS. Testing in 2 physical and 1 virtual demo aims to validate innovations, contributing to market adoption and positive impacts on the European economy through the battery value chain. In the search for sustainable mobility and energy system transition solutions, batteries emerge as a fundamental technology for the advancement of electric cars, renewable energy storage, and the reduction of carbon emissions.

**REINFORCE** aims at creating a circular value chain for batteries, which promises to transform the life cycle of these products. Used, defective and unstable batteries pose new challenges along the supply chain and require new industrial processes, automated equipment, and tracking systems, as well as new strategies to prepare them for a second or third life, or even for the recycling of their components and materials.

**NEXTBAT** aims to develop the safest, most sustainable battery system by considering electrical, thermal, and mechanical safety. This effort includes digitalizing production, reducing the carbon footprint through recyclability, and enhancing performance with advanced battery management. NEXTBAT develops next-generation battery systems using beyond state of cells as well as novel architectures when it comes to module and pack designs including advanced sensing, cooling (liquid and immersion), Battery Management Systems (BMS) and safety measures by using a design by safe principles. The project also introduces innovative materials and processes to improve performance, safety, and recyclability, while working towards new industry standards for the European battery sector.

The project **BATMAX** sets out to pave the way for advanced next-generation data-based and adaptable battery management systems capable of fulfilling the needs and requirements of various mobile and stationary applications and use cases. Given the role of battery systems as a key enabling technology within the green shift in transport, mobility, and energy, it is evident that multiple combinations of requirements, use cases, duties, and businesses are placed upon battery systems.

**ENERGETIC** project aims to develop the next generation BMS for optimizing batteries' systems utilization in the first (transport) and the second life (stationary) in a path towards more reliable, powerful, and safer operations. ENERGETIC project contributes to the field of translational enhanced sensing technologies, exploiting multiple Artificial Intelligence models, supported by Edge and Cloud computing. ENERGETIC's vision not only encompasses monitoring and prognosis of the remaining useful life of a Li-ion battery with a digital twin, but also encompasses diagnosis by scrutinizing the reasons for degradation through investigating the explainable AI models.