PROJECT PARTNERS

AIT Austrian Institute of Technology

BOSCH Invented for life

TNO innovation for life

EDF

VUB Efficient Power Electronics, Powertrain & Energy Solutions Research Group

NXP

Univerza v Ljubljani

TOFAŞ Türk Otomobil Fabrikası A.Ş.

UNIRESEARCH

AVL

CONTACT

Coordinators:
Hansjörg Kapeller (Project)
Dragan Simic (Technical)

AIT Austrian Institute of Technology GmbH

Project manager/ dissemination
Arjo Roersch van der Hoogte
Uniresearch

Visit out website!
www.nextbms.eu

https://www.linkedin.com/company/nextbms/

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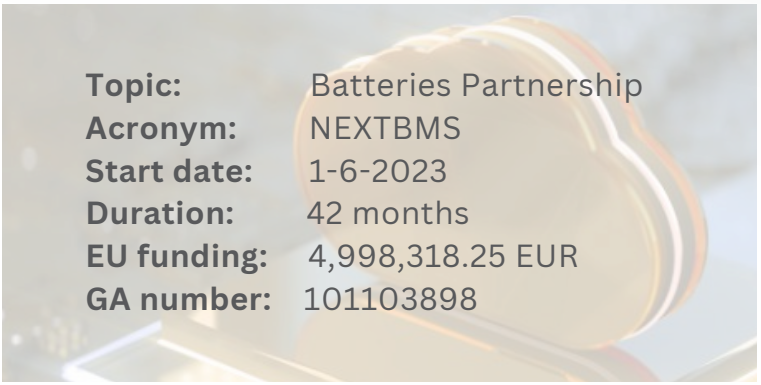
NEXTBMS

NEXT-generation physics and data-based Battery Management Systems for optimised battery utilisation

GENERAL INFORMATION



Topic: Batteries Partnership
Acronym: NEXTBMS
Start date: 1-6-2023
Duration: 42 months
EU funding: 4,998,318.25 EUR
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OVERALL OBJECTIVE AND AMBITION

The core objective of NEXTBMS is to achieve a **best-in-class advanced BMS HW- and SW solution** concerning technical performance, adaptiveness, cost, first life perspective and EOL (2nd life) management (including recycling).

The ambition of NEXTBMS is to efficiently **enhance the electric and lifetime** performance of **today's** and **future battery systems** by innovative physics- and data-based approaches, to support the technical transformation process in direction of smaller environmental footprints and optimal usage of battery systems for mobile and stationary energy storage applications.

This enables the following:

- increased battery utilization/lifetime (increasing the usable SoC window, the full equivalent cycles, enabling fast charging)
- shortened **time-to-market** for new battery packs, operating with new and **novel battery chemistries**,
- maintaining the **high level of safety and reliability** status of battery systems especially in enhanced operation conditions and during EOL (2nd life) management
- **enhanced BMS performance** via a single battery module with complete functionality (demonstration).

NEXTBMS

TECHINICAL OBJECTIVES

NEXTBMS will realize this by means of the following scientific and technical objectives (TO).

- **TO1:** Advanced physics-based and adaptable battery models
- **TO2:** Advanced data acquisition combining sensor-based solutions at battery system/module level and model generated values
- **TO3:** New control algorithms with advanced state estimators and data-based algorithms to increase utilisation while ensuring safety and reliability of the advanced BMS system