



# FASTEST



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## About:

The FASTEST project aims to develop and validate a fast-track testing platform able to deliver a strategy based on Design of Experiments (DoE) and robust testing results, combining multi-scale and multi-physics virtual and physical testing. This will enable an accelerated battery system R&D and more reliable, safer and long-lasting battery system designs.

The project's prototype of a fast track hybrid testing platform aims for a new holistic and interconnected approach. From a global test facility perspective, additional services like smart DoE algorithms, virtualised benches, and DT data are incorporated into the daily facility operation to reach a new level of efficiency.



# FASTEST

- 1** To develop and test a fast-track hybrid testing platform.
- 2** To lay down the pathway for results' exploitation and dissemination.
- 3** To develop and validate physics-based and data-driven models for simulating and substituting critical physical characterisation experiments.
- 4** To set up a Digital Twin (DT) information management architecture.
- 5** To stocktake and propose efficient DoE strategies.

# IMPACT

**20%**  
**LESS OPERATING TIME**

**40%**  
**SAFETY, RELIABILITY AND  
PERFORMANCE  
VIRTUALIZATION RATIO**

**3**  
**DIGITAL TWIN  
DEMONSTRATORS**

**50MS**  
**FASTER  
COMPUTATIONAL TIME**



# IMPLEMENTATION

DESIGN OF EXPERIMENTS & BOUNDARY CONDITIONS

SPECIFICATIONS AND USE CASE DEFINITIONS

ADVANCED  
BATTERY AGEING  
AND  
PERFORMANCE  
MODELING

BATTERY SAFETY  
AND RELIABILITY  
AI-POWERED  
TOOLCHAIN

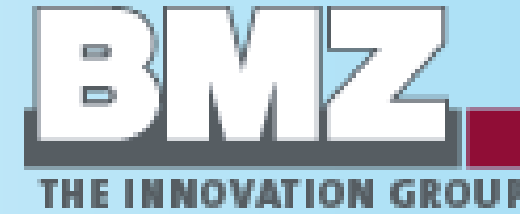
DIGITAL TWINS  
FOR HYBRID TEST  
IN  
BATTERY  
DEVELOPMENT

DEVELOPMENT OF HYBRID TESTING PLATFORM



FEV

COMAU



Sustainable  
INNOVATIONS®

Univerza v Ljubljani



VTT



UNIVERSITY OF  
SURREY



# Get Connected



**WEB**

**WWW.FASTESTPROJECT.EU**



**LINKEDIN**

**FASTEST-PROJECT**



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# Thank You!

