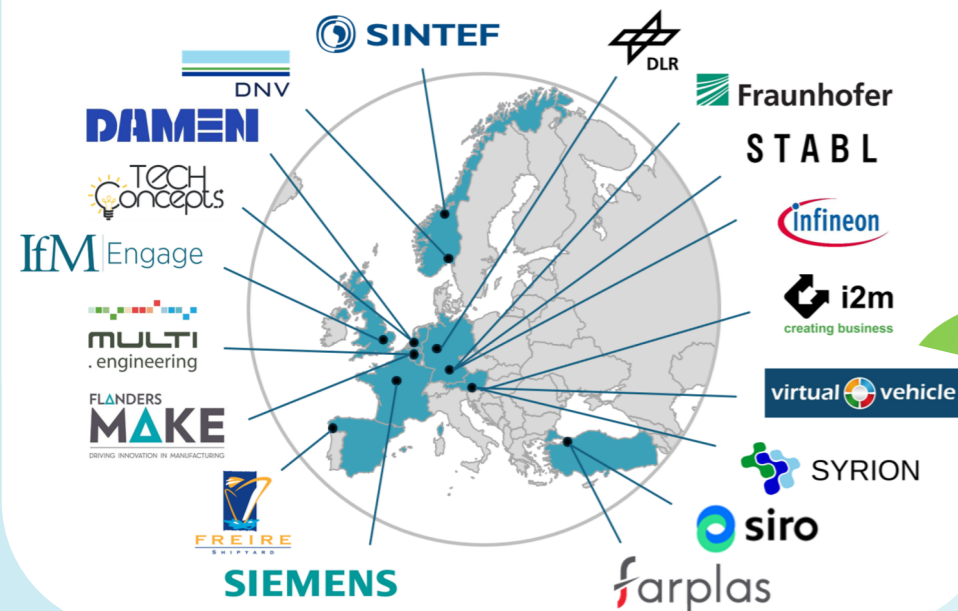


## Consortium



## Facts and Figures



48 months  
Started 1-2-2025



EU contribution  
€ 7.494.184,50



18 Partners  
from 9 countries

## Contact Information

contact our eWAVE coordination team: [ewave@i2m.at](mailto:ewave@i2m.at)

## Powering the Future for Electric Shipping



Efficient HV-electric modular battery  
and distribution systems for  
sustainable Waterborne VEssels



[ewave-project.eu](http://ewave-project.eu)



eWAVE project



Funded by  
the European Union

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## Project Main Demonstrators

### Real-Life Demonstration on the Research Vessel of DLR

Novel HV Battery System



Safety Concepts



SoC, SOH, SoS



Sustainability



### Digital Twin Assessment



RoRo / RoPax Ferry



Inland shipping



Offshore Supply Vessel



Harbour Tug

## Project Objectives

✓ 20% weight reduction of battery module housing

✓ System energy density  $> 185 \text{ Wh/dm}^3$

✓ HV system at 1500 VDC

✓ Safe and Long-life

✓ Reliable operational life

✓ Modular concept scalable to far beyond 1MWh

✓ Enhanced circularity

## Project Methodology

Requirements Definition

### Battery System Development

#### Modular Base Unit “MBU”

- ✓ 75 – 100 VDC
- ✓ NMC 955 cells
- ✓ Lightweight housing
- ✓ Modular Multilevel Converter
- ✓ Real-time monitoring

#### Battery System “BS”

- ✓ 1500 VDC
- ✓ Series of MBUs
- ✓ Wire-bound and wireless BMS

Demonstration on a Research Vessel

Digital Twin assessment on other scenarios

New Standards and Certification Procedures

Cross-Cutting Research

Battery Safety Concepts & Advanced State Estimation

Battery Passport & Second-Life applications

Concepts for integration of the modular Battery System into different grids and use-case scenarios

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