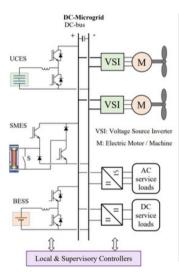


MARITIME EMISSIONS IN THE EU ACCOUNTS FOR 13% OF ALL TRANSPORT MODE

A SUBSTANTIAL CO2 SAVINGS CAN BE ACHIEVED BY INTEGRATING SOME FORMS OF ELECTRIFICATIONS WITH BATTERIES CHARGED BY SHORE POWER (POSSIBLY FROM RENEWABLE POWER SOURCES).

EFFICIENCY AND MITIGATION OF BATTERY DEGRADATION:

- ESS OPTIMIZATION
- INNOVATIVE DC POWER DISTRIBUTION





USE CASES AND SHIP DESIGN

Optimise the energy storage system(s) for specific use

Define the impact on ship design and compliance with regulatory standards.



POWER DISTRIBUTION SYSTEM

Develop an innovative shipboard power distribution system with increased use of higher voltage DC networks to optimise the efficiency of innovative energy storage.



EFFICIENCY AND BATTERY LIFE

Demonstrate and validate the effectiveness of short-term energy storage devices for marine usage.



ENVIRONMENTAL IMPACT AND CARBON NEUTRALITY

Establish robust safety principles to mitigate hazards. Prepare the ground for the subsequent demonstration at full-scale on a real vessel by 2027.













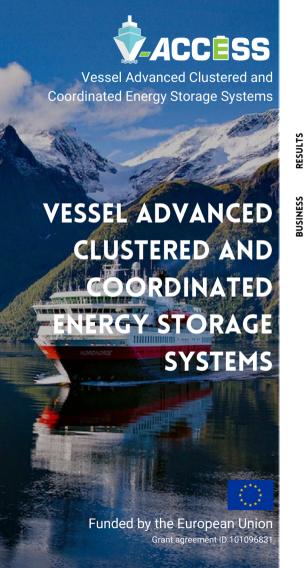












V-ACCESS

BEYOND V-ACCESS

2024

2025

2030

· design of the new power system architecture and ship integration

- validation of simulation tools with data of real vessels
- · completed integration of energy storage in a shipboard power system demonstration campaign to assess perfomance
 - solutions to overcome technical and non-

· definition of the

business model

on products and

agreement on licenses

engineering services

- · scale-up of the system · systems engineering and trial on a prototype and definition of the product line
 - new zero-emission vessels ready for technical barriers market

ON THE MARKET! V-ACCESS

RESULTS

· cost/benefit analysis for the definition of the market

· engagement with stakeholders for project exploitation INITIAL ANALYSIS AND

COMPONENTS

DEVELOPMENT

licenses for manufacturing partners) INTEGRATION OF

TECHNOLOGIES AND

characteristics

agreement for IPR

between partners

analysis of the routes to

partners (provision of

market and future roles of

FULL-SCALE DEMONTRATOR READY VALIDATION AT UNI TS LAB FOR SEA TESTING

VESSEL WITH V-ACCESS SYSTEM

· establishment of the

promotion of V-ACCESS

to early adopters and

supply chain

stakeholders

Superconductivity is a well-established technology solution where high magnetic field, or high current carrying capability is needed.

It already plays a fundamental role in many sectors: medical devices, HEP, Fusion energy, where it has been fully implemented, together with cryogenics.

SUPERCONDUCTIVITY CAN PLAY A ROLE ALSO IN MARINE ENVIRONMENT.

















DEGLI STUD





