



Vessel Advanced Clustered and Coordinated Energy Storage Systems

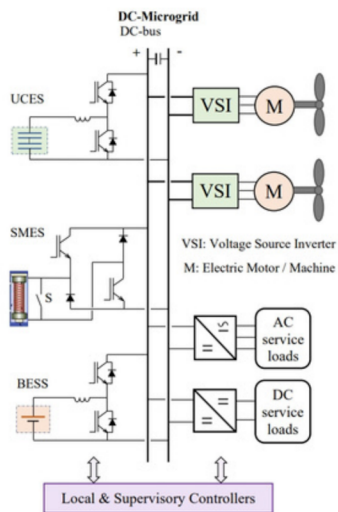
VESSEL ADVANCED CLUSTERED AND COORDINATED ENERGY STORAGE SYSTEMS

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 cases.
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.



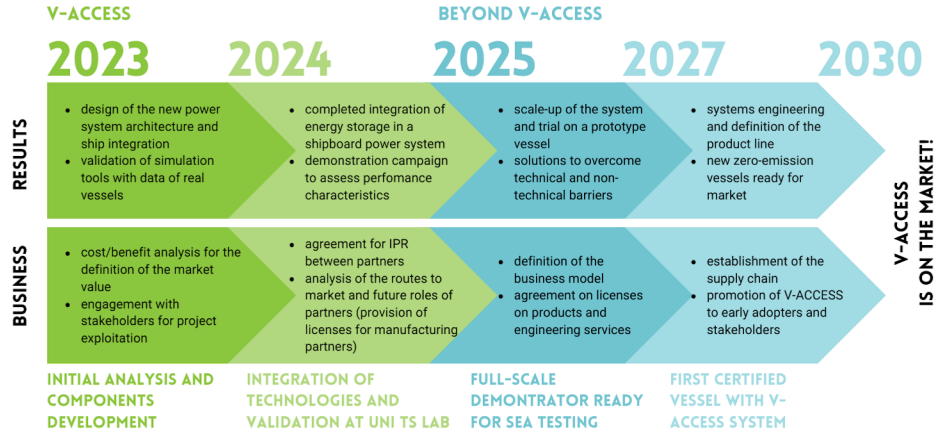
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V-ACCESS IS ON THE MARKET!

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.



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