

D6.3 Dissemination, Exploitation, and Communication Plan, IPR management - Update

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Contributors	All partners	Reviewers	UniTS

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1. Executive summary

This report is the updated version of D6.1 and D6.2 of the WP6 “Dissemination, communication and exploitation”, Task 6.1 “Dissemination and communication of the project results”, Task 6.2 “IPR Management” and Task 6.3 “Stakeholder analysis and engagement strategy”.

WP6 has two main objectives:

- To enhance the awareness of the technologies proposed by V-ACCESS within the scientific community and other potential stakeholders through structured dissemination activities.
- To regularly update and improve the procedures for identifying, evaluating, and managing the intellectual property rights (IPR) generated during the project.

Deliverable D6.3 provides an updated overview of the dissemination activities and developments carried out between February 2025 – January 2026.

This deliverable has the following sections:

- Section 2 defines abbreviations and acronyms used in this report.
- Section 3 shows the updated situation of the project on dissemination.
- Section 4 provides an update on the project's main objectives.
- Section 5 provides an update on the project's target audience.
- Section 6 reviews the V-ACCESS dissemination strategy.
- Section 7 reports on the recent project's external communication activities.
- Section 8 reports the update on the IPR generated by the project and protection activities.
- Section 9 draws the conclusions.

2. Abbreviations and acronyms

Table 1 presents the abbreviations and acronyms used in this report.

Table 1. Abbreviations and acronyms

ESS	Energy storage system
GDPR	General Data Protection Regulation
HiL	Hardware in the loop
IPR	Intellectual property right
KPI	Key Performance Indicators
NDA	Non-disclosure agreement
SMES	Superconducting magnetic energy storage
TCO	Total cost of ownership
TRL	Technology readiness level
ZEWТ	Zero-emission waterborne transport

3. Updated situation of the project on dissemination

The SWOT analysis remains unchanged from the previous deliverables D6.1 and D6.2. However, it is presented here in Table 2 to help identify how best to address challenges and potential future obstacles related to the communication and dissemination of the project results.

Table 2. SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> Strong technical knowledge of consortium's partners in the proposed technologies with clear connection to the shipbuilding industry and ESS suppliers. Skills in modelling of electrical systems and control approaches (simulations, control HiL, power HiL) that facilitate the study of several use cases and customised solutions. Demonstration of the V-ACCESS technologies across the supply chain (ESS suppliers, shipbuilders, system integrators). 	<ul style="list-style-type: none"> Complexity of the new system due to additional ESS and integration on vessels subject to strict constraints and safety requirements. <i>This will be mitigated by the optimised battery design and longer lifetime that reduces the TCO of the storage system.</i> Potential substantial investment for the upscale of the technologies for a small market. <i>This will be mitigated by the introduction of more types of vessels profitable for electrification in comparison to battery-only vessels.</i>
Opportunities	Threats
<ul style="list-style-type: none"> The proposed research originates from an urgent policy requirement of introducing more zero-emission vessels and the industrial needs of building such vessels with reasonable investment and final cost for the end-users. Advances in the sectors of power systems, power electronics, and vessel integration provide opportunities for the application of supercapacitors and SMESs, leading to the acceleration of these technologies to meet the needs of end-users. 	<ul style="list-style-type: none"> New emerging technologies, competitive to supercapacitors and SMES. <i>V-ACCESS will use the existing supply chain (with the necessary modifications/additions), keeping investment costs low and exploiting internal know-how.</i> Competition from Asian countries. <i>Products made in the EU will ensure ethical and environmental responsibility, high quality. Specific advanced skills not available overseas.</i> Changes in regulations towards emissions for waterborne transport. <i>Disseminate the project widely to the general public and raise awareness of the importance of reducing pollution of the seas.</i>

4. Objectives – update

- The main objectives of the V-ACCESS dissemination strategy are presented here to highlight the updates made to each objective. All objectives have now progressed from “in progress” to “completed. Develop a project brand identity to allow an easy identification of the project, obtained with a logo including the key elements of the research (vessels and energy storage) and a clear differentiation from other ZEWT projects (M6) – **Completed.**
- Communicate the main impacts of V-ACCESS to specialised and non-specialised target audiences (M1-M40) – **Completed.**
- Communicate the competitive advantages of the project to selected target groups (M1-M40) – **Completed.**
- Disseminate and ensure public access to the non-confidential project’s results (M1-M40) – **Completed.**
- Facilitate the exploitation of the project’s results (M1-M40) - **Completed.**
- Provide up-to-date information about the project (M1-M40) – **Completed.**
- Translate the scientific results into messages for public outreach, accessible also to the non-technical audience and the general public to ensure the wider dissemination of the results (M1-M40) – **Completed.**
- Raise awareness of relevant stakeholders from the wider energy storage sector and the marine sector of the proposed technologies and results of the demonstrator (M1-M40) – **Completed.**

5. Target audience

As outlined in Deliverables D6.1 and D6.2, the selected target audiences for V-ACCESS remain unchanged and are presented here:

- Marine-sector stakeholders
- Scientific community
- General public

5.1. Marine-sector stakeholders

The marine-sector stakeholders identified for this project are:

- Shipbuilders
- Suppliers of power equipment
- Technology providers
- Systems integrators
- Shipowners and transport operators

5.2. Scientific community

Table 3 below provides an update on the published papers and scientific outputs generated from the project activities for the third year of the project (M24–M40).

Table 3. Published papers and scientific outputs updates (M24-M40)

No.	Title	Authors	Partners
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Document name:	Dissemination, Exploitation, and Communication Plan, IPR management - update	Page:	5
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1.	Progress in MgB2 Wires Manufacturing at ASG Superconductors and Perspective for Applications IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY, VOL. 35, NO. 5, AUGUST 2025	M. Tropeano, L. Soldati, A. Ansaldo, CE Bruzek, G. Grasso, P. Mauceri, F. Mazzei, T. Spina, R. Tebano, A. Tumino	ASG
2.	Variable Submodule Voltage Control for Enhanced Efficiency in DAB-Integrated Modular Multilevel Converters MDPI Energies, 2025, 18 (15), art. no. 4096, DOI: 10.3390/en18154096	Barresi M., De Simone D., Ferri E., Piegari L.	POLIMI
3.	Pareto-Based Design Optimisation of Hybrid Energy Storage Systems for Full-Electric Vessels (2025) IET Power Electronics, 18 (1), art. no. e70027, DOI: 10.1049/pel2.70027	Barrera-Cardenas R.A., D'Arco S., Piegari L., Tricoli P.	POLIMI, UOB
4.	Multilevel Multiport Converter for Grid-Tied Dc Microgrids with Integrated PV and Storage 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM), Tallinn, Estonia, 2025, pp. 1-7, DOI: 10.1109/ICDCM63994.2025.11144675	M. Barresi, D. De Simone, E. Ferri and L. Piegari	POLIMI
5.	Assessment of the Impact of Energy Management Strategies on the Sizing of Energy Storage Systems in Hybrid Vessels 2025 IECON – 51st Annual Conference of the IEEE Industrial Electronics Society, 14-17 October 2025, Madrid	Rene A. Barrera-Cardenas , Pietro Tricoli, Luigi Piegari, Salvatore D'Arco	UOB, SINTEF, POLIMI
6.	Rule-Based Power Management Strategy for Hybrid Energy Storage Systems in Electrified Waterborne Transport” 2025 IEEE Electric Ship Technologies Symposium (ESTS); Old Town Alexandria, VA, USA; August 5–8, 2025	Mohammad Meraj, Rene Barrera-Cardenas, Salvatore D'Arco, Pietro Tricoli	UOB, SINTEF
7.	PPL Integration Employing SMES System on Naval Vessel: Modeling and Co-simulation IEEE ESARS-ITEC 2025, Naples, Nov 25-29, 2024	F. D'Agostino, P. Cepollini, D. Kaza, D. Roncagliolo, F. Silvestro, A. Chiarelli	UNIGE, Fincantieri
8.	A. Vicenzutti, D. Bosich, J. Gudex, R. Cuzner and G. Sulligoi, "Incorporating Fault Analysis into Early Stage Power System Design for All-Electric Naval Vessels," 2025 IEEE Electric Ship Technologies Symposium (ESTS), Alexandria, VA, USA, 2025, pp. 7-15.	A. Vicenzutti, D. Bosich, J. Gudex, R. Cuzner, G. Sulligoi	UniTS
9.	A. A. Tavagnutti, D. Bosich, M. D. Feste and G. Sulligoi, "On the Modeling of DC-DC Converters for Stability Assessment of DC Zeds on Ships," 2025 IEEE Electric Ship Technologies Symposium (ESTS), Alexandria, VA, USA, 2025, pp. 291-298.	A. A. Tavagnutti, D. Bosich, M. D. Feste, G. Sulligoi	UniTS

10.	A. Vicenzutti et al., "AI-Based Ship Concept-Design: Automated Ship Layout and Energy Storage Sizing Depending on Asymmetric Landing Strip Angle for a Drone Carrier," 2025 IEEE Electric Ship Technologies Symposium (ESTS), Alexandria, VA, USA, 2025, pp. 508-516.	A. Vicenzutti et al.	UniTS
11.	A. Vicenzutti, L. Braidotti, S. Utzeri, V. Bucci and G. Sulligoi, "Refitting a Cruise Ship with More Electric Power & Energy Systems: A Methodology to Evaluate the Impact on Fuel Efficiency," 2024 IEEE International Conference on Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles & International Transportation Electrification Conference (ESARS-ITEC), Naples, Italy, 2024, pp. 1-6. DOI: 10.1109/ESARS-ITEC60450.2024.10819905	A. Vicenzutti, L. Braidotti, S. Utzeri, V. Bucci, G. Sulligoi	UniTS
12.	A. A. Tavagnutti, D. Bosich and G. Sulligoi, "Analytical Approach to Define the Stability Boundaries in Controlled DC Microgrids," 2024 IEEE ESARS-ITEC, Naples, Italy, 2024, pp. 1-6. DOI: 10.1109/ESARS-ITEC60450.2024.10819866	A. A. Tavagnutti, D. Bosich, G. Sulligoi	UniTS
13.	A. A. Tavagnutti, D. Bosich, M. Chiandone, A. Vicenzutti and G. Sulligoi, "Preventive-Resilient Algorithm Based on Weighted Bandwidth Method for Stable Load Management in Zonal DC Shipboard Microgrids," IEEE Access, vol. 12, pp. 166031-166043, 2024. DOI: 10.1109/ACCESS.2024.3492161	A. A. Tavagnutti, D. Bosich, M. Chiandone, A. Vicenzutti, G. Sulligoi	UniTS
14.	A. A. Tavagnutti, H. L. Atchison, J. Chalfant, C. Chrissyostomidis, D. A. Wetz and G. Sulligoi, "Incorporating Energy Storage in the Design of an All-Electric Naval Vessel," IEEE Transactions on Transportation Electrification, vol. 10, no. 4, pp. 7907-7917, Dec. 2024. DOI: 10.1109/TTE.2024.3455896	A. A. Tavagnutti, H. L. Atchison, J. Chalfant, C. Chrissyostomidis, D. A. Wetz, G. Sulligoi	UniTS
15.	G. Trincas, L. Braidotti, A. Vicenzutti, A. A. Tavagnutti, C. M. Cooke, J. Chalfant, V. Bucci, C. Chrissyostomidis, G. Sulligoi, "Integration of the Power Corridor Concept in the Early-Phase Design of Electric Naval Ships using Mathematical Design Models," International Marine Design Conference (IMDC), 2024. DOI: 10.59490/imdc.2024.753	G. Trincas, L. Braidotti, A. Vicenzutti, A. A. Tavagnutti, C. M. Cooke, J. Chalfant, V. Bucci, C. Chrissyostomidis, G. Sulligoi	UniTS

5.3. General public

The targeting of the general public aims to increase awareness and provide accessible information about the project's progress, scientific outcomes, and activities. This is achieved by sharing updates on the project, research publications, events, and meetings through multiple channels, such as newsletters, social media platforms, and LinkedIn posts. The press release and LinkedIn post from last year have been updated continuously through the project's progress.

6. Dissemination strategy

All project partners have actively contributed to the dissemination strategy by identifying and

reaching out to potential stakeholders to enhance engagement and increase the visibility of V-ACCESS. Furthermore, partners have provided valuable input for content development, technical materials, newsletter updates, and other informative resources, which helps the dissemination activities remain both relevant and engaging for the target audiences.

6.1. Timeline of dissemination activities

Table 4 presents the communication and dissemination activities updates for the third year of the project (M24–M40).

Table 4. Communication and dissemination activities updates (M24-M40)

ID	Partner	Activity	Date(s)	Place	Link
1.	ASG	SEAFUTURE 2025	29 Sept – 2 Oct 2025	La Spezia, IT	https://seafuture.it/
2.	ASG	EUCAS 2025 European Conference on Applied Superconductivity Talk: MgB wires and tapes at ASG Superconductors: state of the art and future perspectives	21-25 Sept 2025	Porto, PT	https://eucas2025.esas.org/
3.	ASG	Frontiers of Energy Storage 2025 Invited talk: MgB2 technology for the energy transition: update on SMEs and superconducting power cable projects	5-6 Nov 2025	Roma, IT	https://www.supercap.org/index.html
4.	ASG	ASC 2024 Applied Superconductivity Conference Invited talk: Progress in MgB2 Wires Manufacturing at ASG Superconductors and Perspective for Applications	1-6 Sept 2024	Salt Lake City, USA	https://www.appliedsuperconductivity.org/asc2024/
5.	ASG	IEEE MELECON 2024 Mediterranean Electrotechnical Conference Talk: MgB wires and tapes at ASG Superconductors: state of the art and future perspectives	25-27 June 2024	Porto, PT	IEEE MELECON 2024 – IEEE MELECON 2024
6.	UOB, SINTEF, POLIMI	2025 IECON – 51st Annual Conference of the IEEE Industrial Electronics Society	14-17 Oct 2025	Madrid, ES	2025 IECON Annual Conference of the IEEE Industrial Electronics Society
7.	RSE	ICEER 2024: 2024 The 11th International Conference on Energy and Environment Research (ICEER 2024)	24-26 July 2024	Coimbra, PT	ICEER 2026-Porto, Portugal
8.	RSE	Convegno Associazione Rete Italiana LCA	19-20-21 March 2025	Cortina, IT	https://www.convegnoretelca.it/
9.	UniTS, POLIMI, UOB, SINTEF, ASG, UNIGE,	EU Projects Clustering Meeting - Round Table Discussion Joint event with AENEAS, POSEIDON, NEMOSHIP projects: presentations of project results and round table on maritime	28 November 2024	Conference Center, Naples, IT	

	Fincantieri, RSE, VARD	energy storage technologies. Organised by V-ACCESS (UniTS).			
10.	UniTS, POLIMI, UOB, SINTEF, ASG, UNIGE, Fincantieri, RSE, VARD	Electric Ship Super Storage Event : Evening event: public round table 'Electric Ship Super Storage Event' with invited journalists, institutional representatives (CINEA), industry (Fincantieri, Wartsila/ASG, Regione FVG) and researchers. Including visit to ETEF Facility (Wartsila, San Dorligo della Valle, 3 Dec 2025). Press release issued Dec 2025.	2-3 December 2025	Stazione Rogers, Trieste, IT	
11.	UNITS	ESARS-ITEC 2024	25–29 November 2024	Naples, Italy	https://www.esars.info/esars2025/
12.	UNITS	IMDC 2024 - International Marine Design Conference	2-6 June 2024	Marine Etablissement Amsterdam (MEA), Amsterdam, Paesi Bassi	https://proceedings.open.tudelft.nl/imdc24/issue/view/13
13.	UNITS	ESTS 2025- IEEE Electric Ship Technologies Symposium	5-8 August 2025	Old Town Alexandria, VA, USA	https://ests.mit.edu/
14.	UniTS, POLIMI, UOB, SINTEF, ASG, UNIGE, Fincantieri, RSE, VARD	EU Projects Clustering Meeting - Round Table Discussion Joint event with AENEAS, POSEIDON, NEMOSHIP projects: presentations of project results and round table on maritime energy storage technologies. Organised by V-ACCESS (UniTS).	28 May 2026	Bruxelles, BE	

6.2. Evaluation of dissemination activities

The evaluation of dissemination activities follows the strategy defined in D6.1 and is provided here in Table 5 for convenient reference.

Table 5. Evaluation of dissemination activities

Initiation and preparation	
Budgeting	Factor in the cost to participate in workshops, conferences, etc.
Stakeholder analysis	Identify the key stakeholders to engage at the event.
Terms of reference	Consider the expectations and needs of stakeholders, especially language, format of the report (written, video, etc.), other products to be developed (PPT, pamphlet, etc.), and involvement in stakeholder/dissemination workshops.
Management	
Data collection	Collect the main data for the creation of the knowledge product and generate the results.
Report writing	Organise the results in a legible way and appropriate for the selected target audience.
Follow-up and use	

Management response	The team leader of each partner will evaluate the knowledge product within 4 weeks of the finalisation of the report. During this time, it will be identified the event where the knowledge product will be disseminated.
Finalisation and implementation	The dissemination strategy should be coordinated and agreed upon between the partners and then implemented. This includes attendance at the selected events or the organisation of the dissemination workshops, the collection of information of new stakeholders, and the generation of new ideas with other academic institutions and industry.

7. External communication

The external communication activities of the V-ACCESS project have been implemented effectively across multiple channels. Project identity has been consistently maintained, with all partners using the project logo, templates for presentations, lectures, and posters during public events and stakeholder meetings, ensuring a professional image. Promotional materials have been made available to all partners, including templates for presentations and posters. All reports and deliverables have been formatted according to the project template to ensure uniformity in dissemination. Project banners and leaflets were used in dissemination events throughout the project and will continue to be used in future to maintain the project's visibility. The project webpage (www.v-access.eu) is fully operational, with deliverable reports uploaded and available for download for the public. Furthermore, for sharing the documents among partners, a private online storage system with access rights configured to protect the IPR.

In terms of social media, the V-ACCESS dissemination strategy focuses primarily on reaching professional stakeholders, industry experts, and institutional partners. Analysis showed that our target audience is most active and engaged on LinkedIn. Therefore, we decided not to activate an X (Twitter) channel to avoid dispersing resources on a platform with lower relevance for our specific professional goals. LinkedIn continues to provide regular project updates and news to enhance engagement and visibility.

7.1. LinkedIn

The updated news and developments from the project shared via LinkedIn from M24 to M40 are presented below. The project can be searched using the following hashtags.

#vaccess #netzerovessels #decarbonisation #smes #maritime #waterborne #supercapacitors #electrification #shipping #mgb2 #superconductivity #energystorage #HorizonEU, #ZEWT, #EUTransportResearch and #investEUresearch.

V-ACCESS
160 followers
11mo • 🌐

🚢 Innovation and Sustainability in Electric Maritime Transport ⚡ 📄

On November 28, 2024, the 7th edition of the ESARS Conference in Naples ...more

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📅 V-ACCESS: General Assembly Meeting at ESARS Conference, Naples 🌐

On November 29th, the V-ACCESS team gathered for the General Assembly ...more

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At the 2024 Applied Superconductivity Conference in Salt Lake City, ASG presented the latest updates on MgB₂ wire technology.
During the presentation a special focus was about Superconducting ...more

ASG Superconductors S.p.A.
10,724 followers
10mo • Edited • 🌐

The best solution to implement superconductivity in different applications: High-Power and High-Current Transmission Cables, Magnets and Healthcare Diagnostics, Magnets for Accelerators and Beam Lines, SMES. ...more

asc • 1 page

Progress in MgB₂ Wires Manufacturing at ASG Superconductors and Perspective for Applications

Abstract—The MgB₂ wire manufacturing process at ASG Superconductors has reached a high level of maturity in terms of reproducibility and homogeneity of long length superconducting wires and tapes, available with different size and layout configurations in single and length up to 5.2 km. Due to the good mechanical properties, found by the selection of the materials used as sheaths, and by the final heat treatment parameters, the reacted wires are well suitable for magnet winding and cable manufacturing using industrial machinery. Thanks to these characteristics, MgB₂ technology covers a wide range of potential applications: magnets for MRI systems, accelerators and detectors, as well as cable for transmission-distribution network and bus-bars for industrial or fusion applications. Furthermore, the affordable cost and the possibility to use liquid helium as coolant make MgB₂ wires, the most suitable solution to implement superconductivity as a mean to address low carbon and energy transition challenges. In this report, the status of the MgB₂ wire manufacturing will be presented, giving an overview of the available wire characteristics

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📄 V-ACCESS Project Update – WP3: Functional Electrical Integration
WP3 focuses on enabling robust and safe integration of Energy Storage Systems (ESS) in marine environments, with an emphasis on DC grid architectures ...more

FUNCTIONAL ELECTRICAL INTEGRATION

- POWER ARCHITECTURE & SAFETY: Identified robust ESS integration solutions using DC grids and marine-grade protections.
- CONVERTERS & CONTROL SYSTEMS: Selected and controlled high-efficiency converters with advanced supervisory logic.
- ENSURES SAFE AND RESILIENT ELECTRICAL ARCHITECTURE FOR VESSEL APPLICATIONS
- ENABLES DYNAMIC AND RELIABLE INTERACTION BETWEEN ESS AND ONBOARD POWER SYSTEMS
- SIMULATION & VALIDATION: Ran HIL simulations to replicate vessel conditions and validate ESS performance.
- HYBRID STORAGE EVALUATION: Compared supercapacitors and SMES to assess benefits of hybrid storage setups.
- CONFIRMS REAL-TIME RESPONSIVENESS AND SYSTEM BEHAVIOR UNDER OPERATIONAL LOADS
- FULL-SCALE TESTS AT ETEF WILL PROVIDE KEY INSIGHTS FOR FUTURE MARINE DEPLOYMENT.

WP 3

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V-ACCESS Update – WP5: Advancing TRL for ESS Integration
WP5 focuses on the steps needed to increase the **Technology Readiness Level (TRL)** of energy storage systems (ESS) for marine use. ...more

The infographic details the steps required to increase the TRL of ESS technologies. It is structured into four main quadrants:

- SCALABILITY & COST EFFICIENCY:** Identified barriers like supply chain complexity and energy demand. Scaling up could cut supercapacitor costs by 5x without EU dependency.
- INTEGRATION & STANDARDS:** Defined EMC integration guidelines and a HAZOP risk workflow. Specified converter needs and EMS interface requirements.
- SKILLS & OPERATIONS:** Mapped ESS-specific skills for crew, technicians, and managers. Covers both routine and emergency procedures.
- INCREASING TRL:** Outlined steps to raise TRL through design, training, and completion.

Supporting actions include:

- Supports cost reduction and climate alignment.
- Ensures technical compatibility and safety.
- Prepares personnel for safe ESS use onboard.
- Enables the way for real-world ESS deployment in marine settings.

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4mo •

V-ACCESS Update – WP4: Techno-Economic & Environmental Assessment
WP4 evaluates hybrid Energy Storage Systems (ESS) against traditional batteries in marine applications, focusing on cost, efficiency, environmental impact, and ...more

The infographic details the techno-economic and environmental assessment against BESS. It is structured into four main quadrants:

- OBJECTIVES:** Compared hybrid ESS with traditional BESS in terms of cost, efficiency, feasibility, and environmental impact.
- LCA & KEY INSIGHTS:** Performed the first full Life Cycle Assessment on SMES+BESS and SC+BESS hybrid systems.
- TECHNICAL CHALLENGES:** Identified cooling issues with SMES and explored alternatives like liquid hydrogen.
- PATH TO INTEGRATION:** Established a regulatory roadmap and feasibility framework for marine deployment.

Supporting actions include:

- Supports informed decisions for energy storage adoption in maritime settings.
- Revealed trade-offs between cost, volume, and energy losses in marine ESS design.
- Highlighted maturity of supercaps and need for SMES manufacturing standardization.
- Lays groundwork for future standardization and real-world ESS integration on vessels.

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V-ACCESS
160 followers
2mo •

We're pleased to share that a paper co-authored by **Pietro Tricoli** and **Mohammad Meraj** from the **University of Birmingham**, based on research carried out within the EU-funded V-Access project, was recently presented at the Electric Ship ...more

The photograph shows a presentation slide titled "Introduction" with the following text:

Energy storage systems (ESS) have been studied to increase battery density, reduce the size and weight of the battery and high frequency of the cycle for another energy storage. The paper investigates supercapacitors.

Reducing the ESS's energy storage density, the battery size can be reduced, resulting in savings and higher efficiency.

Over the lifecycle, energy storage systems can be replaced, resulting in higher efficiency.

The number of cycles with current charge to keep the same voltage and cover the intended operations of the battery system increases, so higher power losses.

The proposed system increases the usage of the battery in the load zones of the vessel, increasing the ESS's energy storage density.

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Grant agreement ID: 101096831

V-ACCESS
160 followers
1mo • Edited •

V-ACCESS at SEAFUTURE 2025
We are proud to present V-ACCESS – Vessel Advanced Clustered and Coordinated Energy Storage Systems – at SEAFUTURE 2025, the international exhibition ...more

The photograph shows the V-ACCESS booth at SEAFUTURE 2025. The booth features a large blue display board with the V-ACCESS logo and project information. Several people are standing in front of the booth, and the background shows other exhibition stands, including one for "ASG Superconductors".

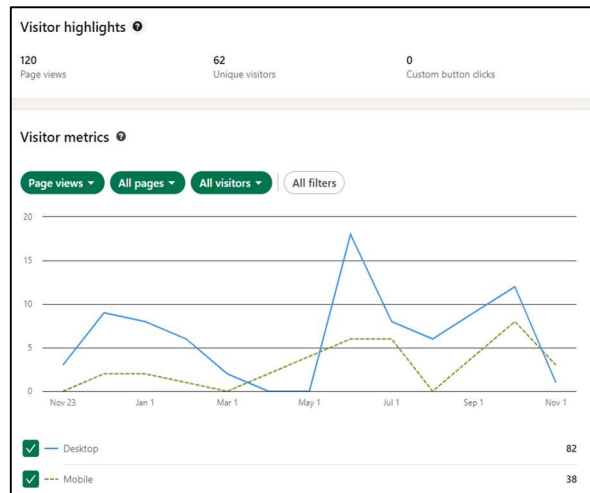
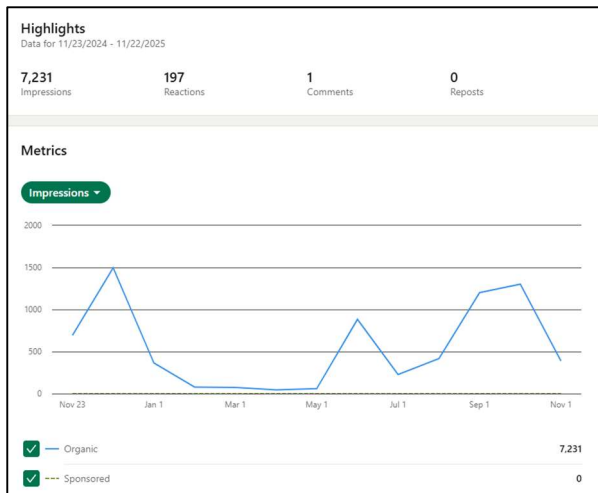
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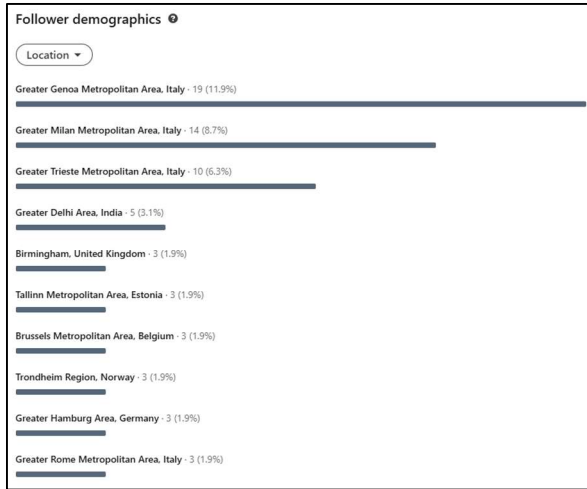
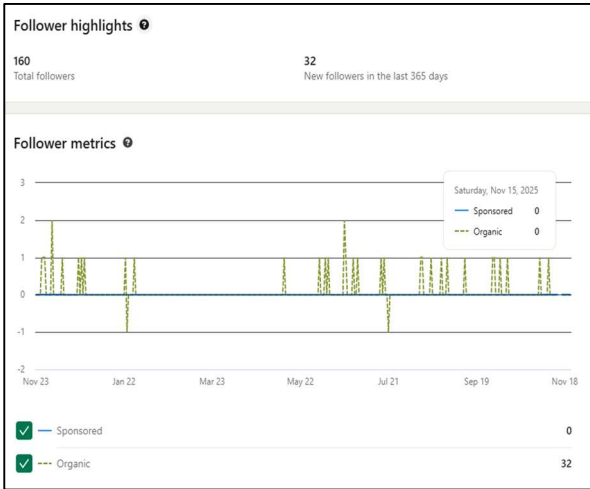


The page has 160 organic followers.

The following analytics for the period Nov 2024 – Nov 2025:

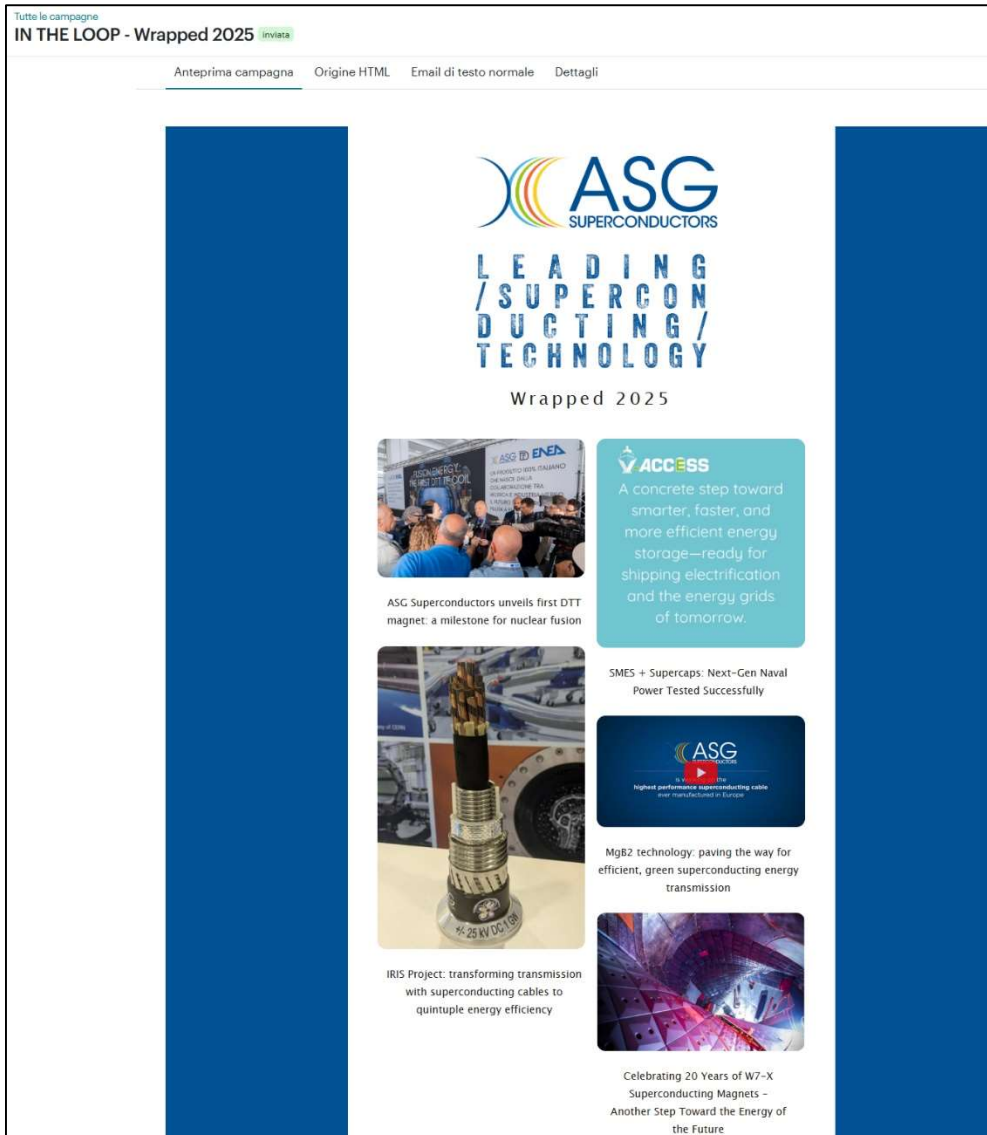


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7.2. Project newsletter

The project has been disseminated through the ASG Superconductors newsletter “In the Loop”, reaching about 2500 international and technical audiences. The warped version of the project news is released.



7.3. Press Release

The second project press release was issued in December 2025 to announce the successful completion of the supercapacitor and SMES testing phase, achieving wide circulation via European media outlets and the official social media channels of both the project and its partners.



NAVAL ELECTRIC APPLICATIONS: TEST OF SUPERCONDUCTORS AND SUPERCAPACITORS FROM THE V-ACCESS PROJECT WERE SUCCESSFULLY COMPLETED IN TRIESTE.

Trieste, 03 december 2025 - The two-day "ELECTRIC SHIP SUPER STORAGE EVENT" of the V-ACCESS project concluded today in Trieste. The event focused on ship electrification through the use of innovative technologies - specifically superconductors and supercapacitors - for energy storage.

The event, which consisted of a project presentation at the Stazione Rogers in Trieste and a guided tour of the test facility and technologies at the ETEF center, was attended by all partner companies and university research centres involved in the project.

The V-ACCESS project, which has successfully completed its testing phase in recent days, is dedicated to developing a next-generation Hybrid Energy Storage System (HESS). This system combines:

- SMES Technology: Superconducting Magnetic Energy Storage based on Magnesium Diboride (MgB2).
- Supercapacitors: High-power electrostatic storage devices.

Combining these two technologies to support traditional batteries allows for significant innovation in terms of both performance and reliability for energy storage and the release of strong energy pulses.

The unique characteristics of this solution represent the core strength of a technology destined for application not only in shipping and ship electrification but also in energy-intensive industrial sectors. Furthermore, innovation in storage systems will play a fundamental role in power systems and is essential for balancing energy production and consumption in electrical grids, in response to the growing integration of renewable sources and Green Deal requirements.

The solution studied by the V-Access project is funded by European funds totaling €5,000,000 and is optimized to integrate with on-board battery systems. Its advantage lies in the hybrid



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101096831.

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management of a superconducting SMES storage system in MgB2 designed and built by ASG Superconductors and a supercapacitors designed and built by Skeleton.

SMES is ideal for short-term, high-power energy storage, making it perfect for power modulation and instantaneous voltage stabilization.
 Supercapacitors offer very rapid power delivery/absorption (high power density) and an extremely long service life (millions of cycles).
 Hybrid Interaction when used in synergy with traditional batteries, extends the battery life cycle, enables innovative load management, and reduces CO2 emissions.
 The project partnership includes Fincantieri, VARD, RINA, RSE, SINTEF, the Universities of Trieste, Genoa, and Birmingham, and the Polytechnic of Milan.


Tests for the ASG Superconductors SMES system and Skeleton supercapacitors took place at ETEF (Electric TEst Facility). This is a technology demonstrator for marine electrical energy systems, created through a partnership between the University of Trieste, Wärtsilä, and Fincantieri within the national scientific and technological research programs of the General Secretariat of Defence.

Prof. Giorgio Sulligoi (University of Trieste): *"ETEF is the flagship of Trieste's experimental facilities, a hub where academic and industrial researchers work together to define the future of electric ships. The synergy between companies and the university world in the V-ACCESS project has already made tangible strides towards a hybrid electrification technology that will be useful and necessary not only in shipping but in all applications requiring large and rapid energy pulses."*

Prof. Tricoli (University of Birmingham & Project Technology Coordinator): *"The proof-of-concept demonstrator for the supercapacitor and superconducting SMES was tested in a highly realistic operating environment. We are aiming for a Technology Readiness Level (TRL) of 5, a preparatory step for future developments related to development projects and the installation of this technology on board ships."*

Gianluca Bertossi (Managing Director, Wärtsilä Italia): *"The ETEF technology demonstrator represents an important infrastructure for research and technological de-risking for on-board electrical systems of future naval units. It allows us to pursue similar objectives for land-based applications that share similar requirements for Power Quality, Quality of Service, and reliability. There is no system in Europe with comparable performance in terms of installed power, technological characteristics, performance, and testing capacity."*



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Marco Nassi (CEO, ASG Superconductors): *"It was challenging to work on the V-ACCESS project together with such relevant partners, whom we thank for operating as a united front to bring our SMES to success during the testing phase at a high-value facility like ETEF. We believe that superconducting storage is a high-tech proposal ideal for responding to the needs for innovation and resilience in grids."*

V-ACCESS: key data

- Academic and Research Institutions: University of Trieste, Polytechnic of Milan, University of Genoa, University of Birmingham, SINTEF, Ricerca sul Sistema Energetico - RSE S.p.A.
- Shipyards and System Suppliers: FINCANTIERI, VARD.
- Technology and Component Suppliers: ASG Superconductors S.p.A., Skeleton Technologies.
- Naval Classification Society: RINA.
- Funded Project Value: €5 million.

Discover more on the project website: <https://v-access.eu/>

Get in touch with the project team: v-access@units.it



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6.3. Public Engagement Event – Electric Ship Super Storage Event, Trieste

On 2 December 2025, V-ACCESS organised a public-facing round table in Trieste as part of the 4th General Assembly Meeting. The event — **Electric Ship Super Storage Event** — was held at **Stazione Rogers** (Riva Grumula 14, Trieste) and brought together invited journalists, institutional representatives, and industry leaders to discuss the role of advanced energy storage technologies in the decarbonisation of maritime transport.

The round table featured presentations of the supercapacitor and SMES technologies developed within V-ACCESS, followed by a panel discussion with invited speakers from academia (Prof. Giorgio Sulligoi, UniTS; Prof. Pietro Tricoli, University of Birmingham), industry (Ing. Roberto Pelaschiar, Fincantieri; Ing. Paolo Pierdomenico, Wärtsilä; Dott. Matteo Tropeano, ASG Superconductors), and regional institutions (Dott.ssa Ketty Segatti, Regione Friuli Venezia Giulia). Participants also visited the ETEF (Digital Energy Transformation & Electrification Facility) at Wärtsilä Italia S.p.A. on 3 December 2025. A project press release was issued following the event, reaching European media outlets and the project’s social media channels.

8. Clustering Activities

V-ACCESS has actively participated in inter-project clustering activities, fostering collaboration with the three other Horizon Europe-funded projects operating under the same call (HORIZON-CL5-2022-D5-01-02 – *Innovative energy storage systems on-board vessels, ZEWTP Partnership*): **AENEAS** (*innovAtive ENERgy storage systems onboArd vessels*), **NEMOSHIP** (*NEw MOdular electrical architecture & digital platform to optimise large battery systems on SHIPs*), and **POSEIDON** (*POwer StoragE In D Ocean*). Together, these four projects represent a combined EU investment of over €20 million and cover complementary approaches to maritime energy storage, from solid-state batteries and modular battery architectures to supercapacitors, flywheels, and superconducting magnetic energy storage (SMES).

First Clustering Meeting – Naples, 28 November 2024 The first joint clustering event was held at the Aula Magna of the Federico II Conference Center (Via Partenope 36, Naples), organised by V-ACCESS (UniTS). Each project presented its key technical results: AENEAS focused on solid-state batteries and hybrid SSB–supercapacitor systems validated on Hardware-in-the-Loop test benches; POSEIDON showcased progress on SMES, flywheel, and supercapacitor prototypes developed with CERN-derived magnet technology; NEMOSHIP presented its modular 1 MWh battery system and cloud-based digital platform for energy management, demonstrated on the vessel *Le Commandant Charcot*; and V-ACCESS reported on the integration of SMES and supercapacitors in hybrid ESS configurations, including lifecycle assessment and DC power distribution results. A structured round table followed, addressing cross-cutting themes: ESS technology readiness for zero-emission vessels, challenges in large-scale storage integration, power electronics advancements, regulatory and standardisation needs, and lessons transferable from road and rail electrification. Participants agreed on the importance of organising further clustering meetings focused on specific technical topics, and on building a permanent collaborative network to maximise impact beyond individual project lifetimes.

Second Clustering Event – Brussels, 28 May 2026 The second clustering event was held at NH Carrefour de l'Europe (Rue du Marché aux Herbes 110, Brussels), in conjunction with the 5th General Assembly Meeting of V-ACCESS. The programme included individual presentations of each project's main results, followed by a high-level panel discussion on "Advanced Energy Storage Systems for Zero-Emission Waterborne Transport", open to EU policymakers, representatives from DG ENER, DG MOVE and DG RTD, industry stakeholders, shipowners, port operators, and classification societies. The event presented the collective outcomes of over €20 million in EU-funded research, contribute directly to the ZEWT Strategic Research and Innovation Agenda, and established a permanent clustering network among the four projects as a replicable model for future Horizon Europe initiatives in the maritime sector.

9. IP register

THE IP register has been updated, as reported in Table 6 below.

Table 6. V-ACCESS IP register at M40.

No.	Name of Intellectual Property (IP)	Brief Description	Ownership (%)	Background IP	Ownership of Background IP	Potential Stakeholders	Potential for Exploitation	Status of Protection	Next Actions
Background IP - Existing IP at the beginning of project									
1	ETEF test facility	Plant layout, control design, hardware and software, operating system software, digital signal processing software, measurements solutions	UniTS (100%)	-	UniTS (100%)				
2	D-ETEF laboratory	Components/sub-systems libraries in offline simulations, components/sub-systems libraries in HIL emulations, real-time platform for digital twin, platform/approach/solution for Software-HIL/Control-HIL/Power-HIL studies	UniTS (100%)	-	UniTS (100%)				
3	Ship design	General ship design technical background such as general arrangements and technical space arrangements.	VE (100%)	-	VE (100%)				
4	Electrical systems on vessels	Design of electrical systems on vessels including single-line-diagrams (SLD) for AC/DC-grids and ESS.	VE (100%)	-	VE (100%)				
5	RINA rules	RINA public rules and guidelines related to the scope of Project	RGER (100%)	-	RGER (100%)				
6	SHL facility	System architecture, control design, hardware and software, I/O signal processing system, power system modelling, CHL and PHL system infrastructure.	UniGE (100%)	-	UniGE (100%)				
New IP generated during the project									
1	Electromechanical model of a propulsion system for electric vessels	Model of a propeller driven simultaneously by an internal combustion engine and an electric motor. The electric motor is fed by supercapacitors	UoB (100%)	Model of a frequency drive with field-oriented control	UoB (100%)	Shipbuilders, End-users, Naval architects	New research projects, commercial projects, consultancy	Not started	Use the model for case studies, disseminate expertise to stakeholders
2	RINA rules	RINA Rules for the Classification of Ships, 2024 Edition	RGER (100%)	RINA rules	RGER (100%)	Shipbuilders, ship owners, ship operators	Commercial projects	Already protected	None
3	Tuning technique for primary and secondary DC bu voltage regulation with power sharing requirements	A coordinated hierarchical control architecture with parameters tuning technique for Hybrid Energy Storage Systems (HESSs), where High-Power ESSs (SCESS or SMESS) handle primary regulation and High-Energy ESSs (BESS) handle secondary regulation, with proper bandwidth separation to ensure power splitting requirements as per optimal design.	UniGE (25%) SE (25%) VE (25%) UoB (25%)	Control strategies requirements, sizing requirements, performance requirements.	UniGE (25%) SE (25%) VE (25%) UoB (25%)	System integrators, ESS manufacturers	New research project, commercial project, consultancy	Draft paper is in progress	Potential publication

10. Conclusions

This report represents an updated version of D6.1 and D6.2, reflecting the progress of WP6: Dissemination, Communication, and Exploitation. This deliverable, D6.3, highlights the progress of the updated communication and dissemination activities of V-ACCESS, ensuring alignment with the original plan outlined in D6.1.

All project partners have actively participated in these efforts, contributing to the effective dissemination of project results and maximising the impact of the innovative technologies developed within the project. The consortium has maintained regular updates of all materials shared with stakeholders. The communication team has actively reached out to various target audiences through the project website, LinkedIn posts, and newsletters. Several scientific papers have been published to further enhance the project's visibility within the scientific and professional community.

The effectiveness of communication and dissemination activities has been continuously monitored in accordance with the evaluation methods defined in D6.1.

Overall, the analysis demonstrates that the communication strategy of the project has been effective, which has raised interest in the maritime sector.