



EcoShipYard

EcoShipYard is a research and innovation project that promotes sustainable shipbuilding practices and material circularity in the European Union.

EcoShipYard addresses the negative environmental impact of shipyards by increasing their energy efficiency and by optimizing their operation, particularly during vessel newbuild, retrofit and scrapping operations.

This will be achieved through the assessment of the circularity and environmental impact of each stage of a ship's lifecycle, and the establishment of an integrated system for sustainability assessment, which includes various tools and services to support decisionmakers during shipyard operations.

The project will integrate advanced digital technologies to create an energy management system that monitors and optimizes energy usage across shipyard operations. It will gain expertise on the integration of renewable energy sources, such as solar and wind, into shipyard operations. The project also aims to create a collaborative framework involving shipyards, suppliers, and energy providers to foster innovation and share best practices. Additionally, it will develop and implement robust business models, incentivizing energy efficiency and renewable energy use.

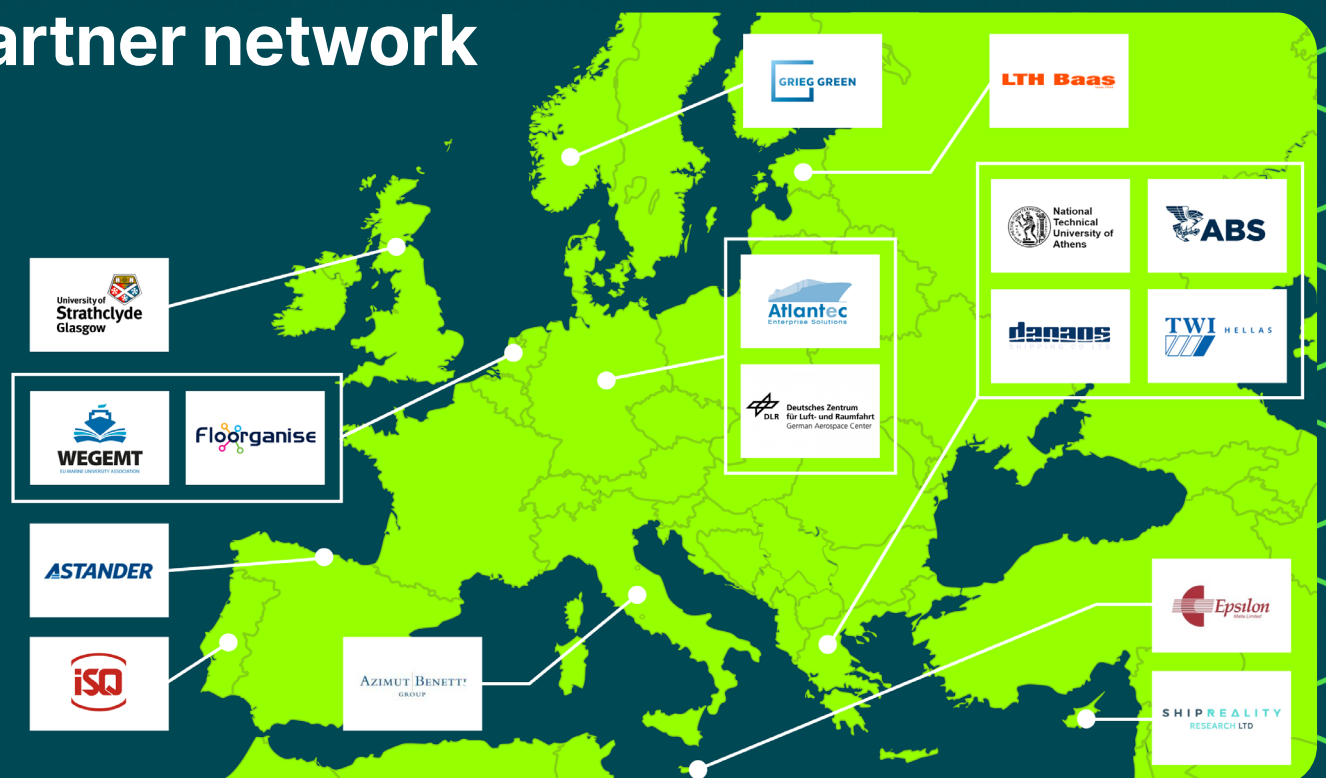
EcoShipYard's challenges:

- 1 GHG emissions of total shipping have increased from 977 million tonnes in 2012 to 1,076 million tonnes in 2018 (9.6%), mostly due to a continuous increase of global maritime trade.
- 2 At EU level, maritime transport represents 3 to 4% of the EU's total CO₂ emissions, or over 124 million tonnes of CO₂ in 2021.
- 3 In some cases, the contribution of the shipbuilding industry can even reach to more than 50% of the cradle-to-grave CO₂ footprint.
- 4 The shipbuilding industry is under close regulatory scrutiny and faces compliance requirements related to hazardous wastes, wastewater, stormwater, and air emissions generated by vessel construction, maintenance and repair.
- 5 To meet the zero-emission shipping industry, a broader, holistic, systematic, and "cradle to grave" approach considering the lifespan of the ship from the design stage to scrapping is necessary.

Our goal

1. Design/Implement a digital twin shipyard model for energy, emissions control, and waste management
2. Develop a Shipyard Environmental Performance Index and relevant KPIs that measure and assess the environmental performance of shipyards
3. Enhance environmental awareness, technical, organizational and training guidelines for shipyards
4. Create an EU-Material Passport for waterborne transport assets
5. Foster a Living Lab cluster where stakeholders can test and validate sustainable, real-world shipbuilding and shipping solutions.

Partner network



To learn more about EcoShipYard project visit our website at ecoshipyard.eu or scanning the QR code next to it. For any information, please feel free to contact us at info@ecoshipyard.eu



Co-funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no. 101138730. UK participation in EcoShipYard Project is funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe guarantee [grant-number 10120898].