

Renewable methanol production for the shipping industry

M²ARE aims at producing a new grade of low-cost and low-carbon methanol, based on biogenic CO2 and renewable H₂

Switching from conventional fossil-based maritime fuels to methanol based on current technologies will already decrease GHG emissions significantly, with up to 70% of savings.

Today, marine transportation is primarly driven by diesel engines

Of total EU GHG emissions 3% are represented by shipping

13%

Of the transport sector EU GHG emissions are represented by shipping



The overall **ambition** is to deliver a TRL 7 European methanol synthesis process by 2027, to support the needs of the global shipping sector in reducing its CO₂ emissions.

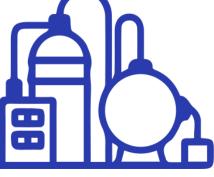




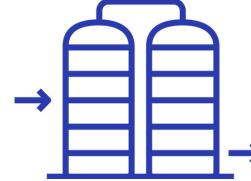
Mapping bio-CO₂ feedstocks for its conversion into maritime methanol

MeOH

Demonstrating a 1st generation of maritime methanol synthesis from CO₂ feedstocks



Development of a new reactor (GEN2) for methanol synthesis



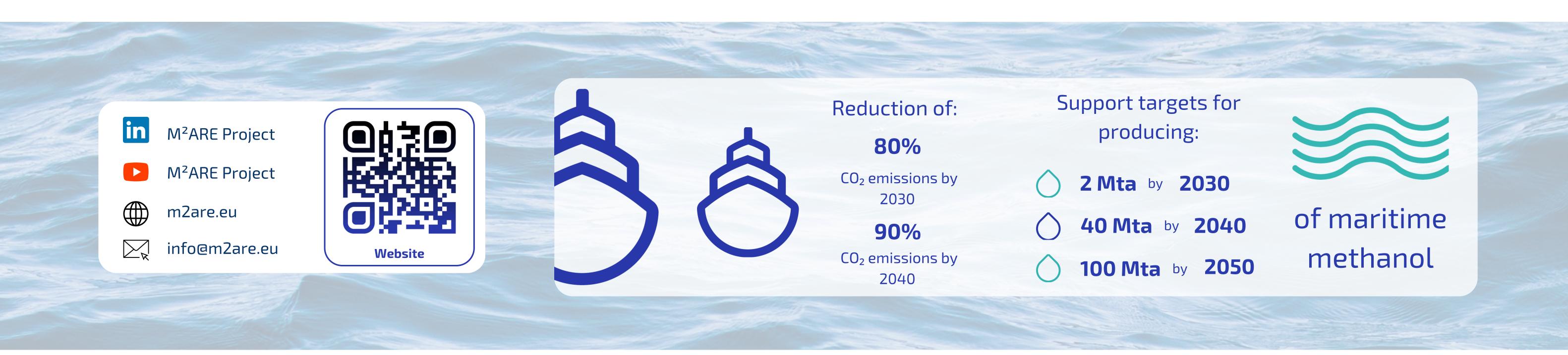
Methanol purification: developing a fuel with improved product properties



Engine test: validation of the new maritime methanol in marine engines



Deployment roadmap and scale-up for the production of maritime methanol





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