



GENERAL PROJECT PRESENTATION

POSEIDON - GA NUMBER 101117616

18.06.2024



Funded by
the European Union

THE POSEIDON PROJECT



Coordinator: Research institute EIFER based in Karlsruhe, Germany



POSEIDON long project name: Propulsion Of Ships with E-methanol
In favour of the Decarbonisation Of Naval transport

Total budget: 12,6 M€

Funding: The European Commission is co-funding the project. Swiss partner WinGD receives funding from the the Swiss State Secretariat for Education, Research and Innovation



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48 months from September 2023 to August 2027



19 partners from France, Germany, Greece, Italy, Spain, Sweden and Switzerland



The project is co-funded with nearly **€10 million** by the European Commission



2 pilot sites in Valencia and Thessaloniki to demonstrate the value chains based on e-methanol as fuel for shipping

POSEIDON PARTNERS



8 industrial partners: EDF, ICODOS, Fincantieri, Isotta Fraschini Motori - IFM, Winterthur Gas & Diesel - WinGD, Global Omnium, Inventors, CAO Hellas

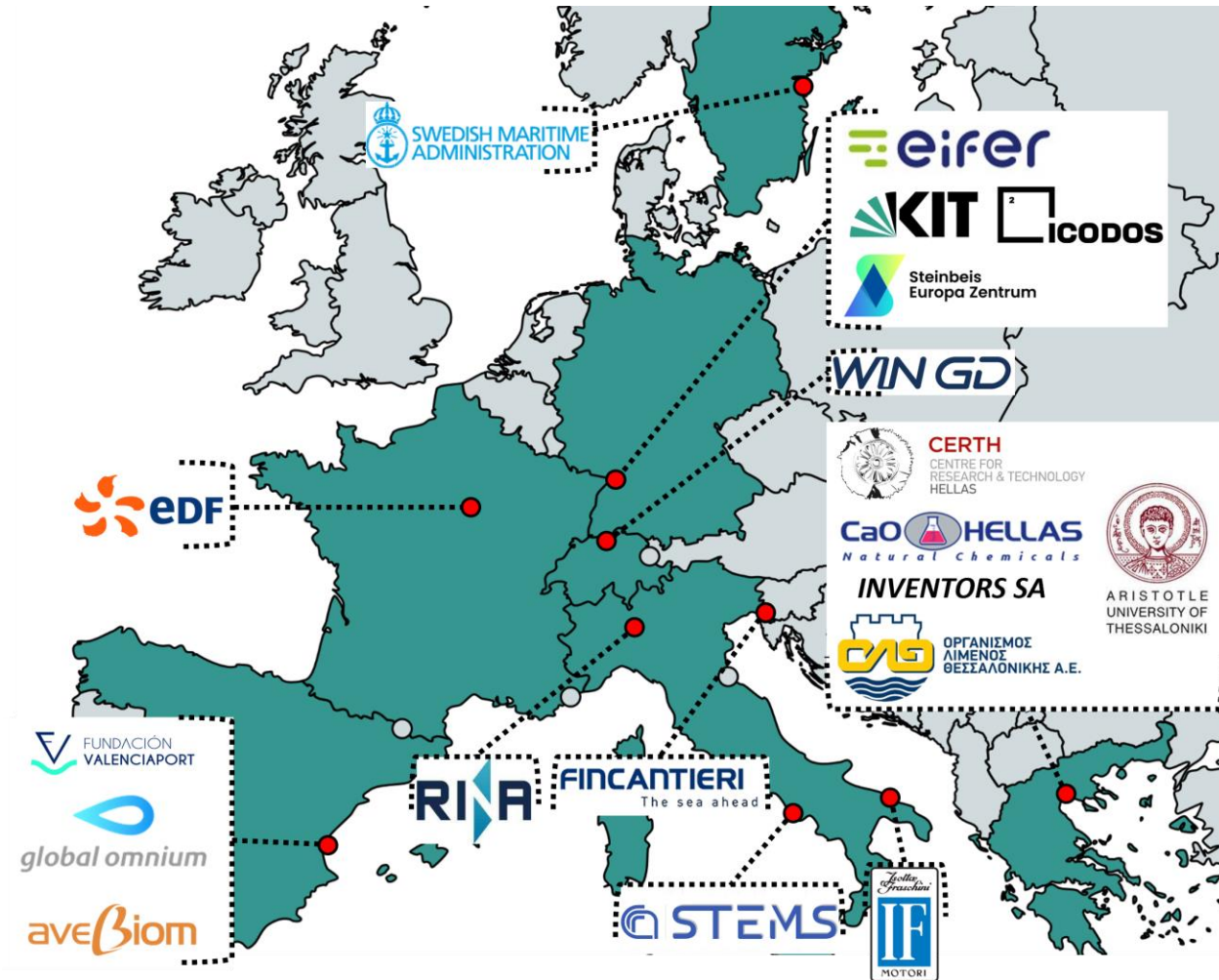
5 research partners: EIFER, KIT, Aristotle University of Thessaloniki, CERTH, CNR-STEMS

2 ports: Fundación Valenciaport, Port of Thessaloniki – ThPA S.A.

2 business support organisations: RINA, Steinbeis Innovation gGmbH

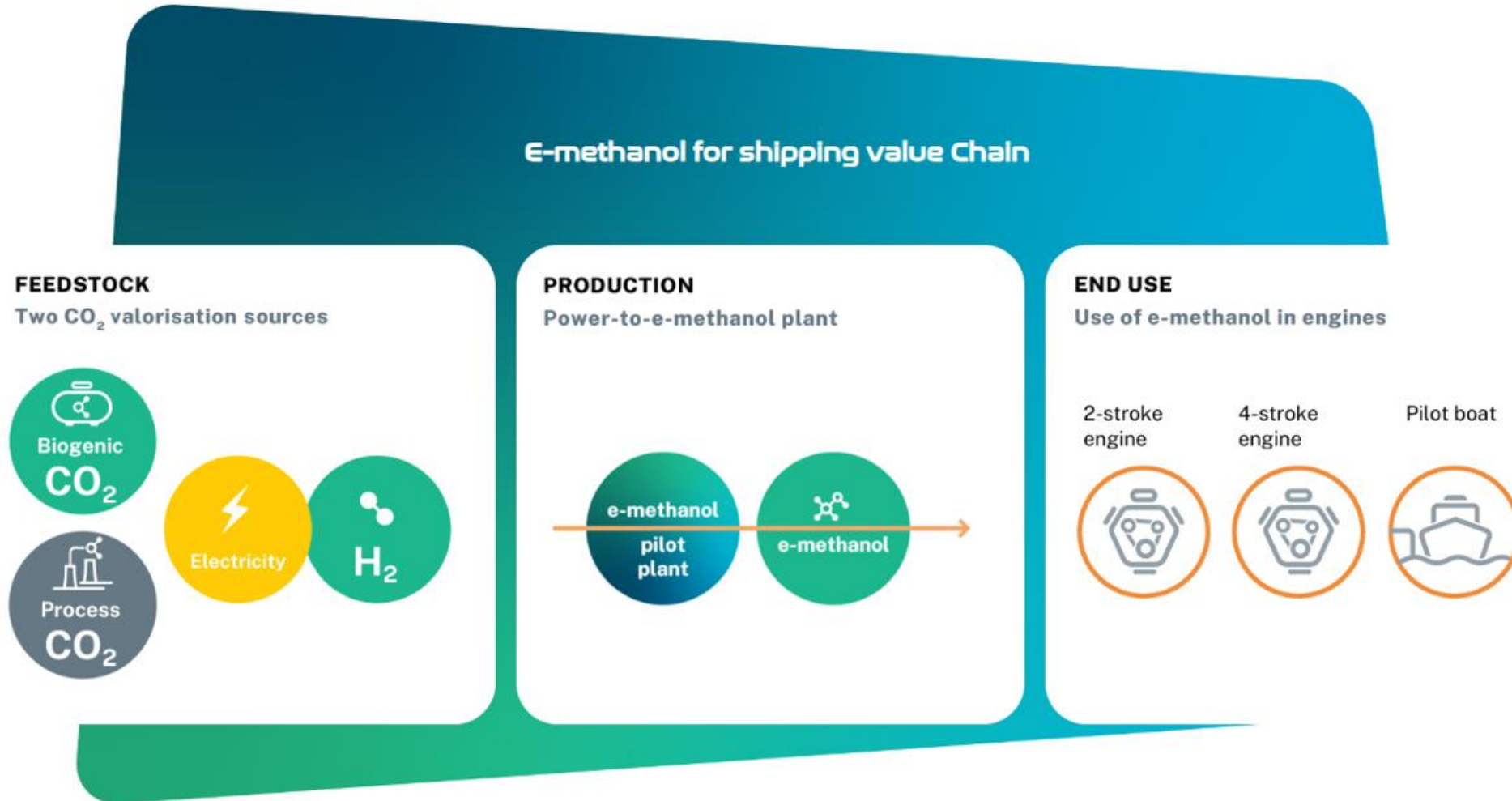
1 association: AVEBIOM

1 public agency: Swedish Maritime Administration



The overall goal of the POSEIDON project is to prepare the implementation of local value chains based on e-methanol as fuel for shipping in the ports of Valencia and Thessaloniki.

- **1st objective** is to build and test an innovative TRL7 e-methanol prototype plant based on a novel concept including CO₂ capture and filtration and production of renewable e-methanol,
- **2nd objective** is to establish two communities of practice in Thessaloniki and Valencia to collect feedback and strengthen collaboration at local level,
- **3rd objective** is to assess impacts of the value chain implementation through detailed technical, economic, environmental and social assessments,
- **4th objective** is to develop local roadmaps outlining the steps to be taken by stakeholders to implement the value chain in Valencia and Thessaloniki after project end,
- **5th objective** is to regularly share project activities, progress and achievements with academia, industry, policy makers and other relevant stakeholders to foster public acceptance.



Two CO₂ valorisation routes will be explored: biogenic CO₂ in Valencia and process CO₂ in Thessaloniki



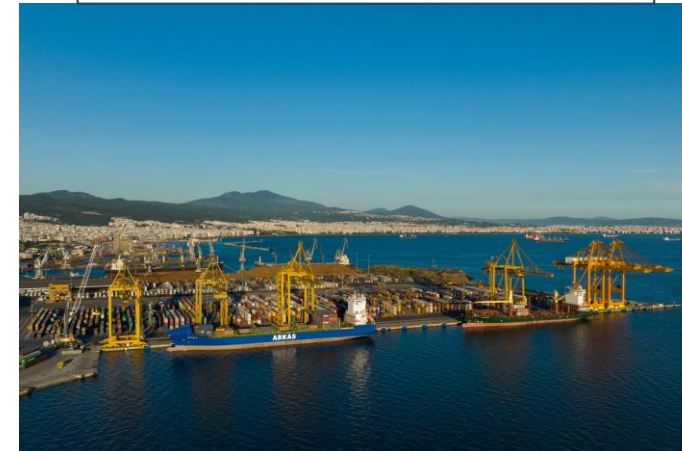
Use case Valencia – biogenic CO₂ from wastewater treatment plant



Port	Valencia
Sea basin	Mediterranean Sea
Port's area	5.6 km ²
Yearly cargo traffic	79 million tons (2022)
Direct employment	17.973

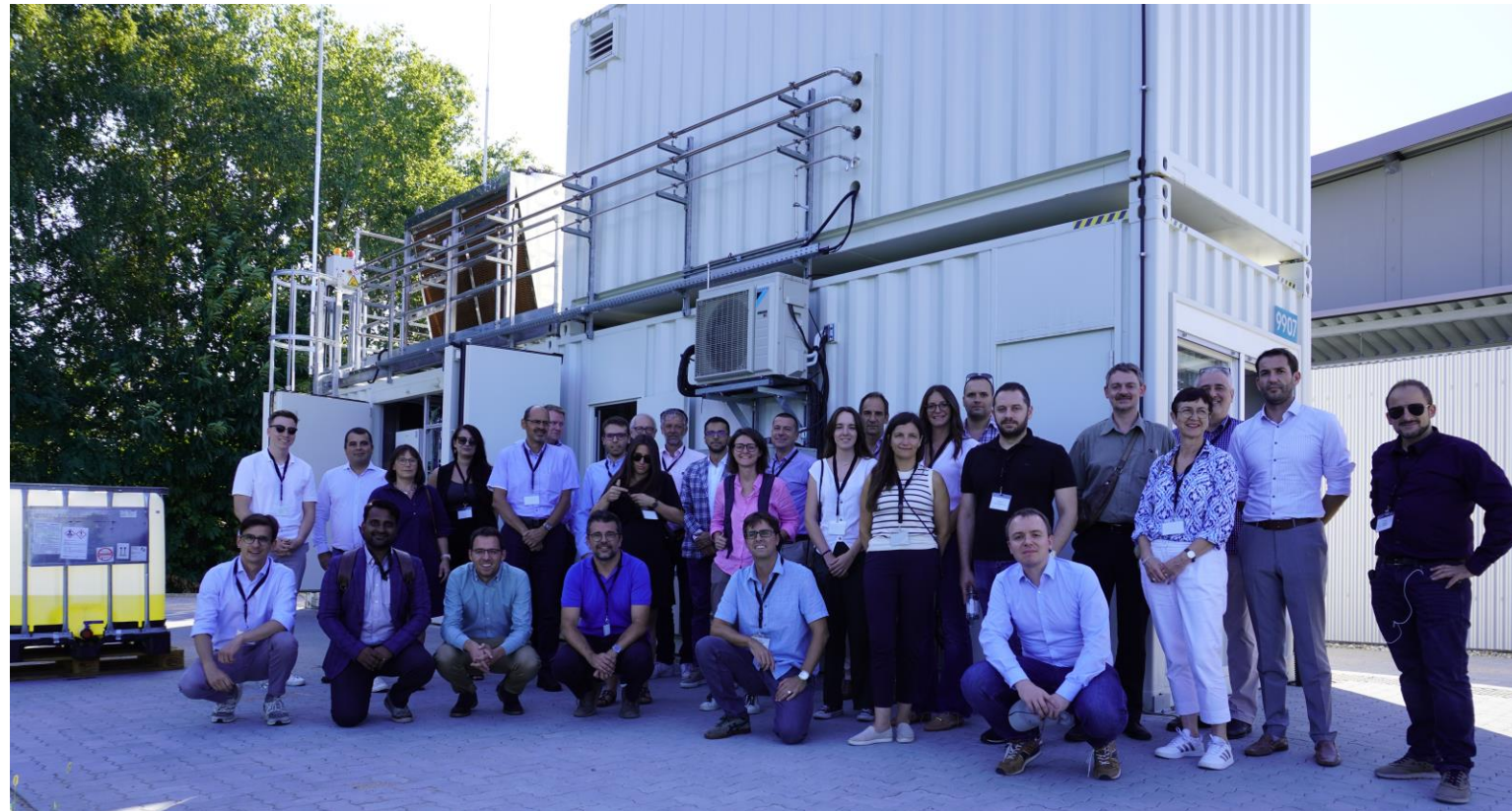


Use case Thessaloniki – process CO₂ from lime plant



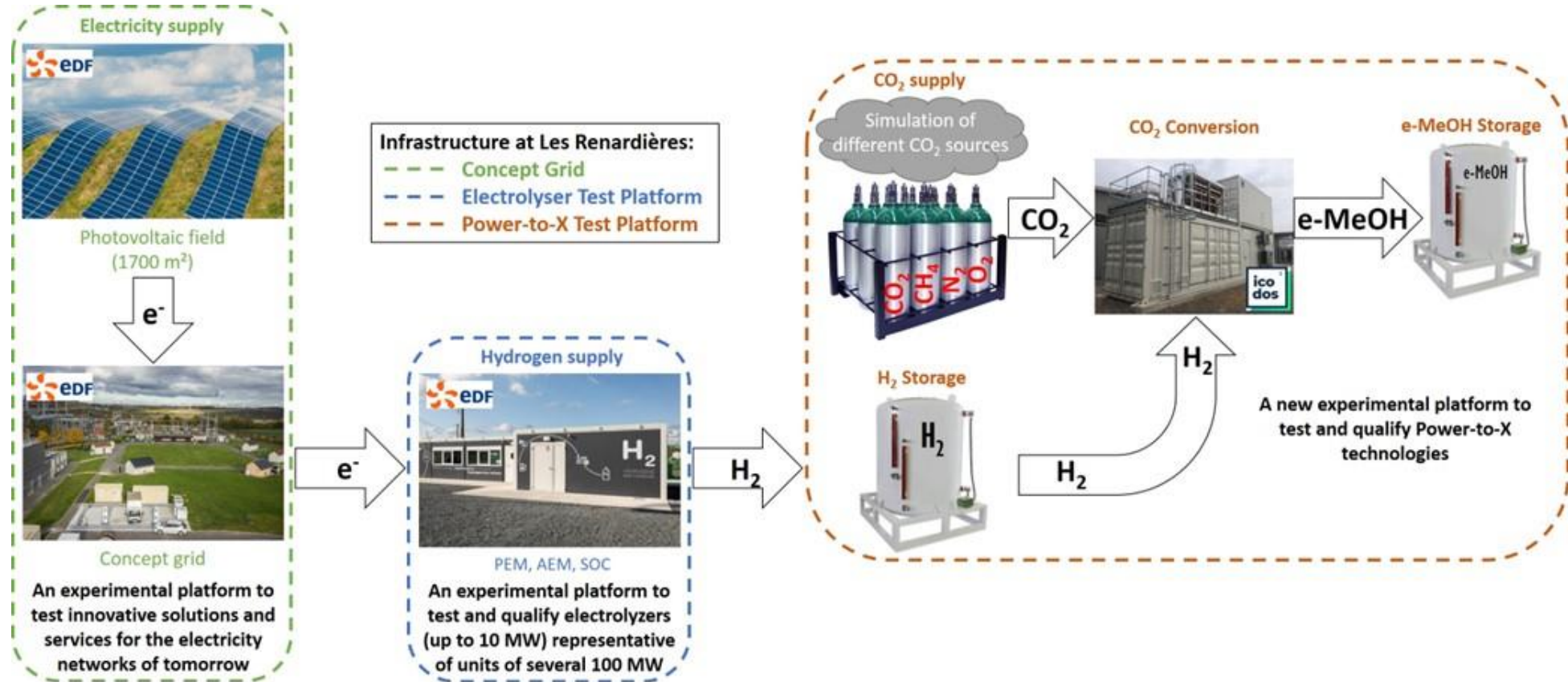
Port	Thessaloniki
Sea basin	Aegean Sea
Port's area	1.5 km ²
Yearly cargo traffic	7.3 million tons (2023)
Direct employment	525

Development of a TRL7 power-to-methanol prototype plant and demonstration in test platform



POSEIDON consortium in front of proof-of-concept methanol plant developed by partner KIT and licensed to partner ICODOS, installed at the Energy Lab of KIT in Karlsruhe, Germany'

Development of a power-to-methanol prototype plant and demonstration in test platform



EDF test platform to be adapted and used to test the e-methanol prototype from ICODOS

Testing of produced e-methanol in 2-stroke and 4-stroke engine and pilot boat



2-stroke engine



4-stroke engine



Pilot boat

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**THANK YOU FOR
YOUR ATTENTION.**



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