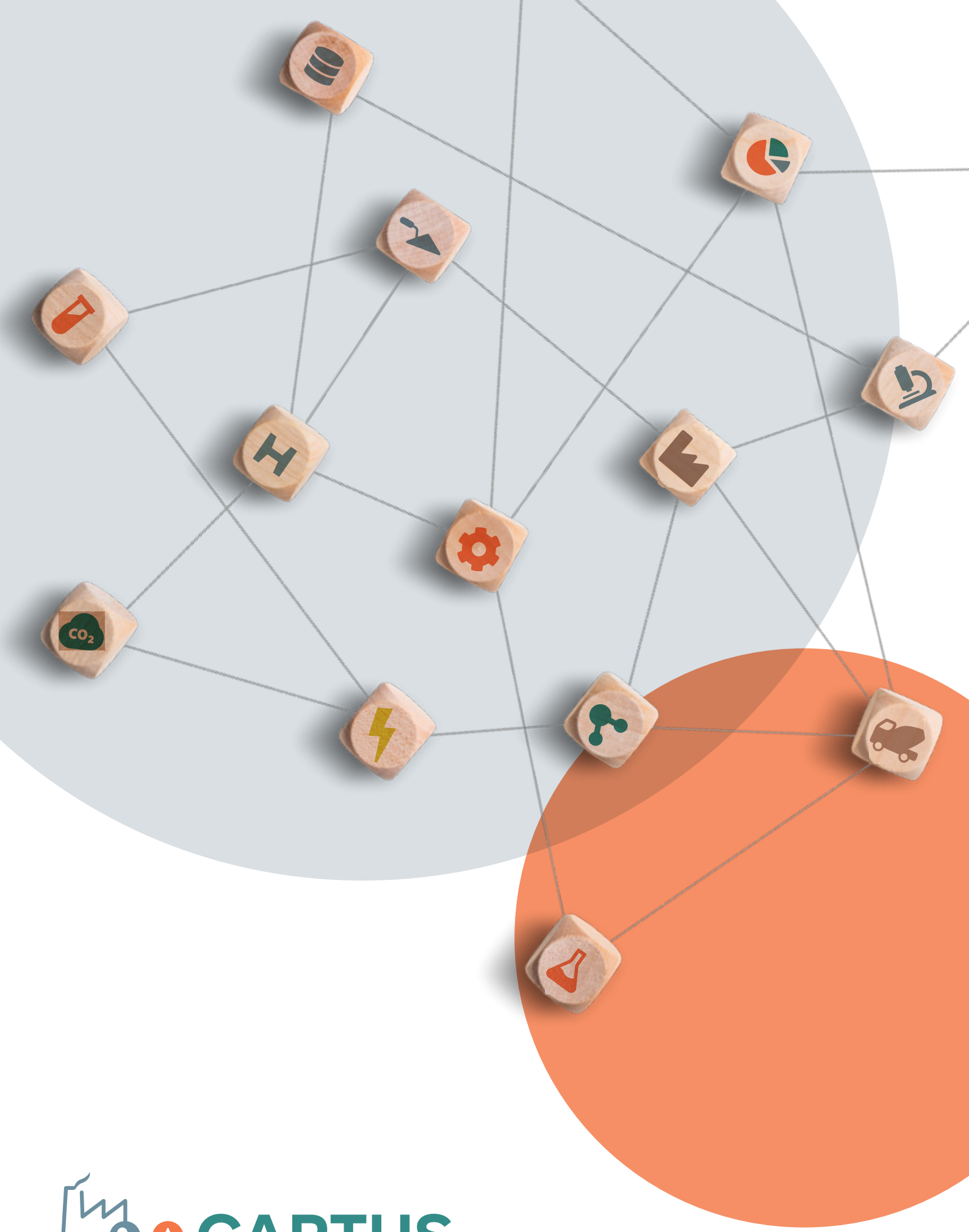


CAPTUS

LIQUID RENEWABLE ENERGY CARRIERS FROM
CAPTURED CARBON EMISSIONS

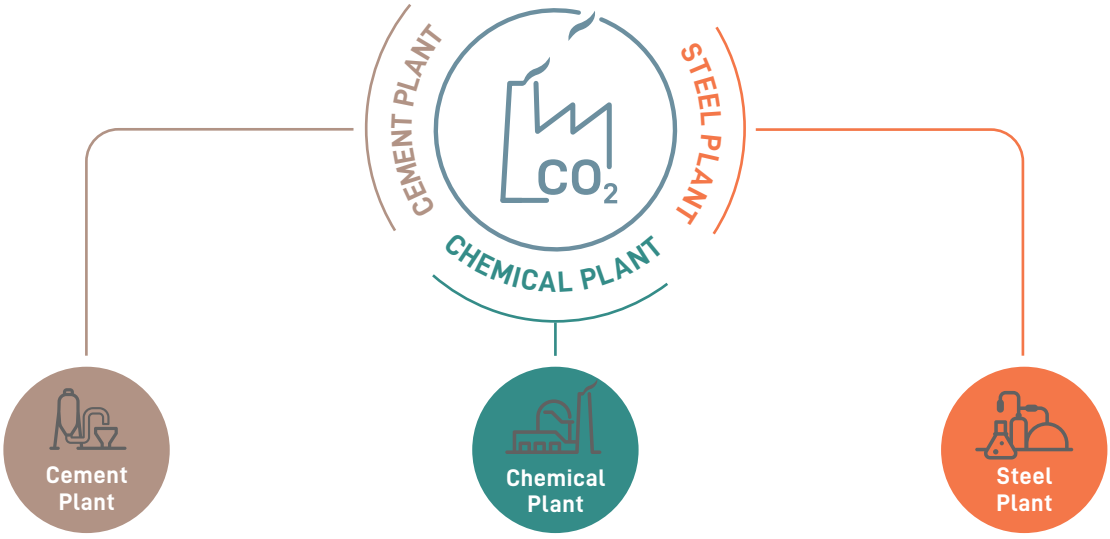
Funded by
the European Union

ABOUT CAPTUS

Starting in June 2023 for a **4-year period**, **CAPTUS** is a 10M€ innovation action project funded by the European Union's research and innovation program Horizon Europe.

Assembling a consortium of **18 partners** from **8 countries**, and combining multidisciplinary competencies and resources from academia, research, engineering, industries and universities, CAPTUS aims to demonstrate sustainable and cost-effective pathways to produce **renewable energy carriers** (RECs) in **energy intensive industries** (EIIs) by **valorizing industrial carbon emissions** and **integrating renewable energy sources**.

CAPTUS will demonstrate 3 cost-effective pathways at 3 demo sites and will perform REC upgrading studies and quality assessment



3. Electrochemical reduction of CO_2 to produce **formic acid** from carbon emissions in a cement plant.

2. Lipids-rich microalgae cultivation followed by hydro-thermal liquefaction to produce **bio-oils** from carbon emissions in a chemical plant

1. Bioprocess based on a two-stage fermentation to produce **triglycerides** from carbon emissions in a steel plant.

OBJECTIVES BEYOND TECHNOLOGY VALIDATION

- Guidelines and recommendations.
- EU roadmaps for deployment of carbon capture and utilization (CCU) technologies.
- Business models and replication potential
- Integrated life cycle assessment of the whole REC value chains
- Advanced energy management system to integrate renewable energy surplus in EIIs.
- Thermo-economics models for
- carbon capture and utilization technologies.

CAPTUS will directly impact in the **clean energy transition** of EIIs towards a net-zero carbon industry, aiming at achieving this objective by 2030.

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PARTNERS

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