



Biorefinery concept for circular production of microalgae-based fuels for shipping and aviation

The concept

This project wants to support the large-scale production of microalgae-based sustainable aviation and maritime fuels, working to deliver an innovative, circular and complete biorefinery based production chain and also to develop a decision tool to analyze different scenarios to guide investors to the best solution for their specificities.

The process originates with microalgae cultivation in photobioreactors (PBRs) covered with semi-transparent photovoltaic (STPV) shell and develops along two possible pathways (HEFA, hydrotreated esters and fatty acids and HTL, hydro-thermal liquefaction), valorising byproducts and power streams and finally producing aviation and shipping fuels that comply with American Society for Testing and Materials (ASTM) standards.

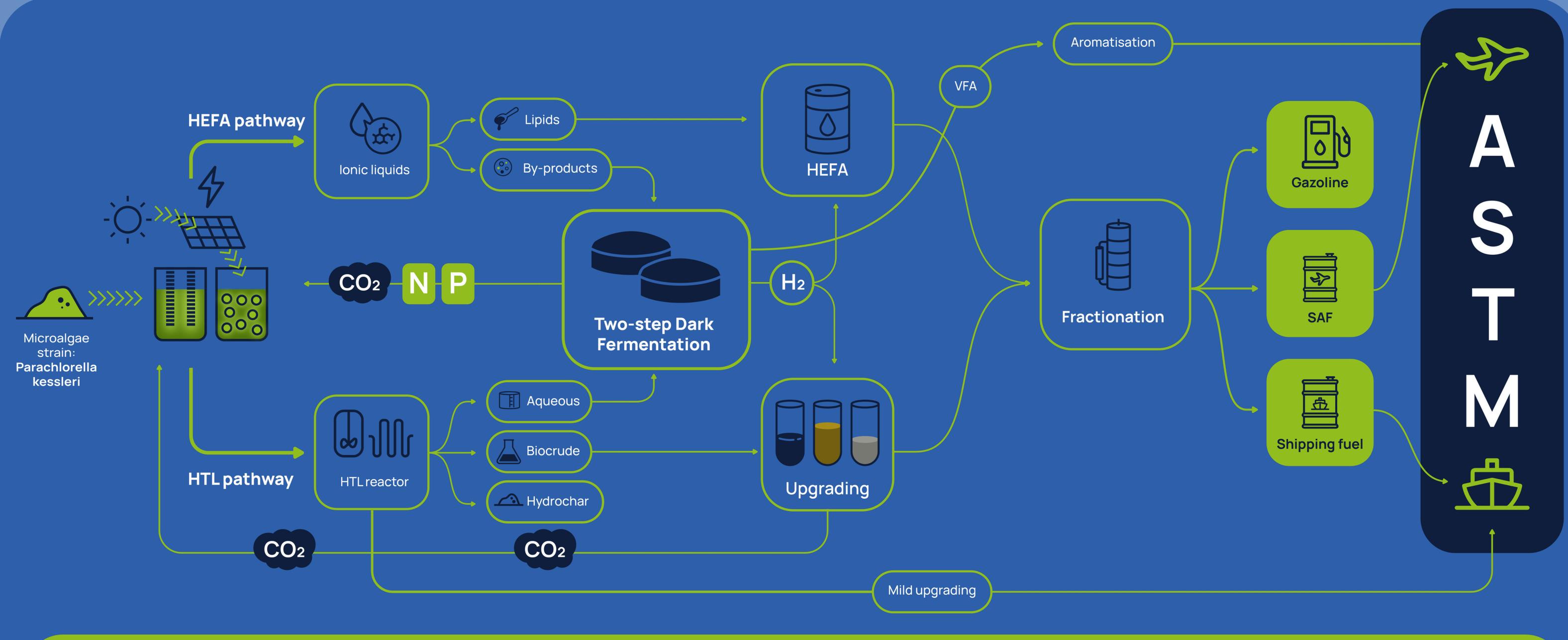
Three pillars of **COCPIT** approach:

Innovative solutions throughout the production process

02

Sustainability of the process through circularity

De-risking technology through COCPIT decision 03 tool implementation





Techno-economic evaluation, LCA, sLCA



COCPIT decision tool



Marketplace

Medium-long term impacts

Availability of disruptive renewable energy and fuel technologies

Costs and efficiency optimization of renewabled energies

De-risking investments in sustainable fuel technologies

Better assimilation of renewable fuel-based solutions













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Contacts





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