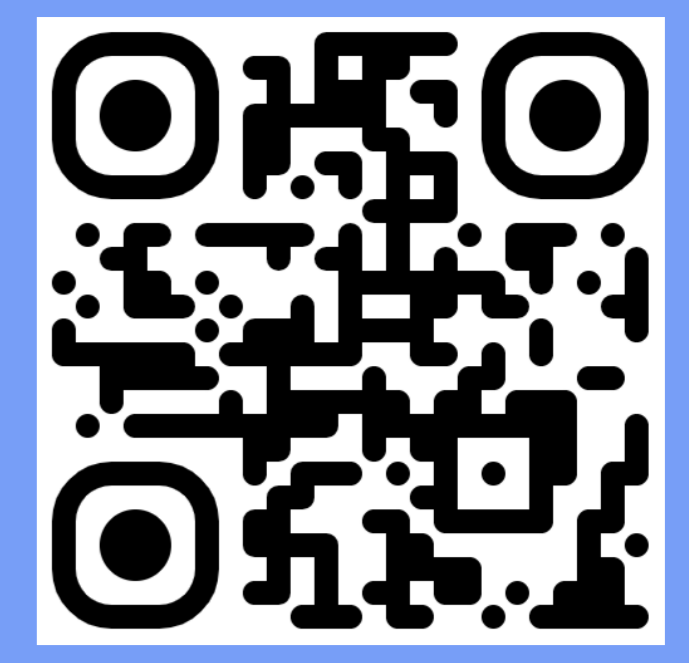


SUSTEPS

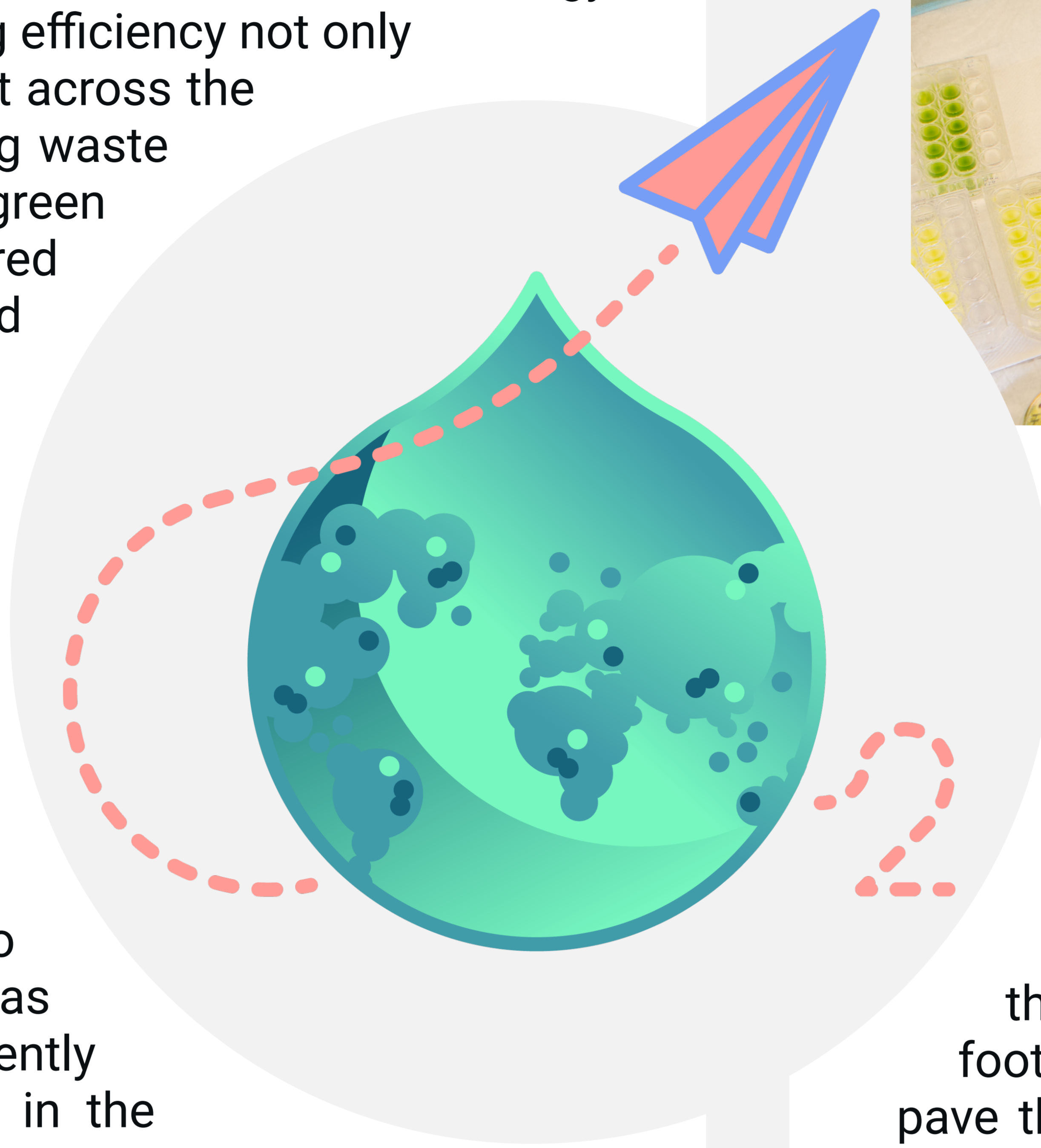
SUSTAINABLE, SECURE AND COMPETITIVE ENERGY THROUGH SCALING UP ADVANCED BIOFUEL GENERATION



OUR WEBSITE

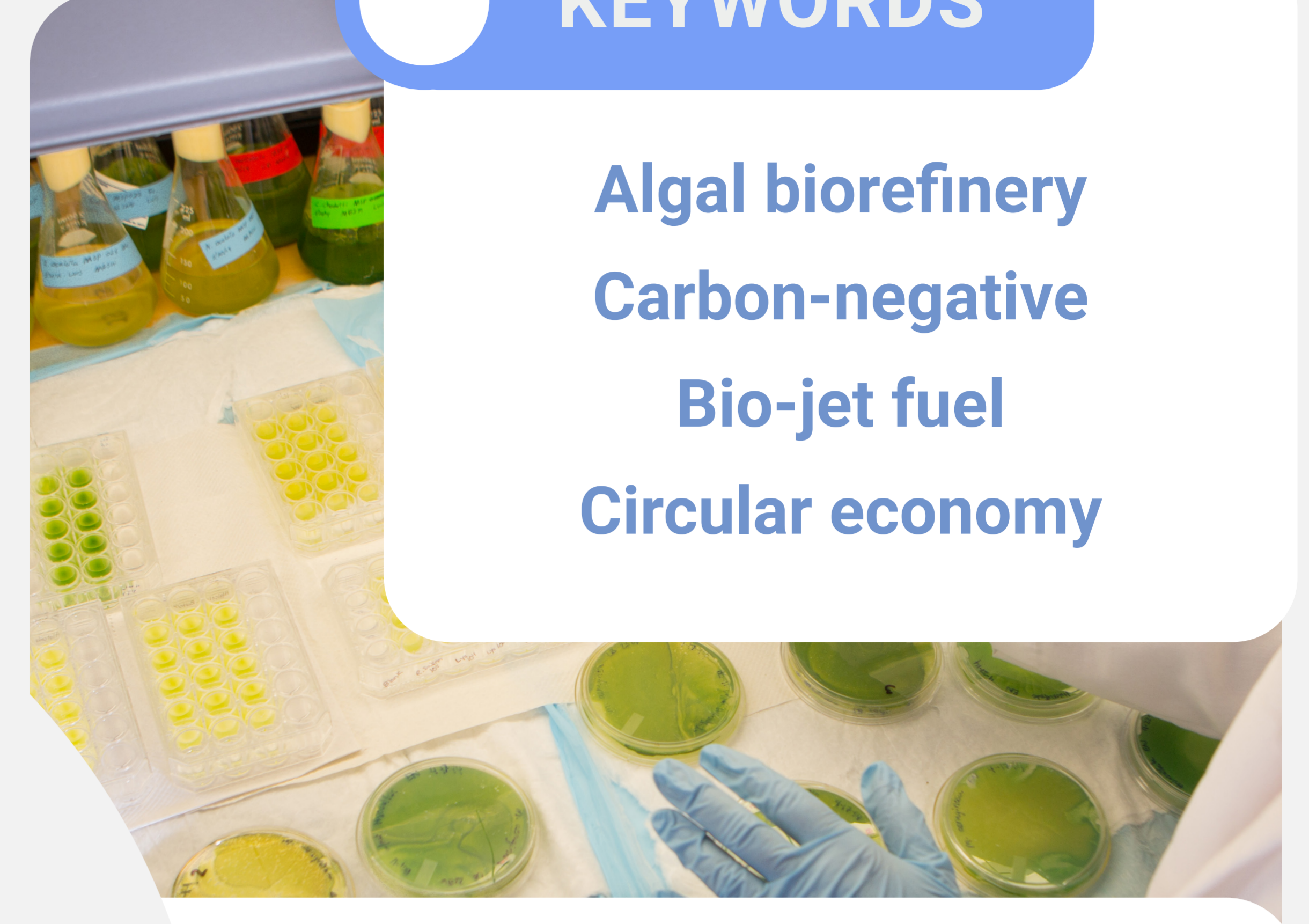
SUSTEPS aims to revolutionize renewable fuel technologies by advancing the algae-based biofuels value chain. The project's goal is to create technologies that meet the market's specifications for replacing fossil fuels in targeted sectors. This will pave the way for a cleaner and more sustainable energy future. SUSTEPS targets enhancing efficiency not only in the main conversion process but across the entire value chain. By incorporating waste stream valorization and utilizing green hydrogen and biologically captured process flue gas, the integrated bio-thermo-chemical process is designed to be more efficient.

The production of biofuels using microalgae as a raw material and CO₂ as a feedstock holds significant potential for positive environmental impact. This innovative approach not only provides a sustainable source of biofuels but also contributes to carbon capture by utilizing the flue gas of the production process, consequently mitigating greenhouse gas levels in the atmosphere.



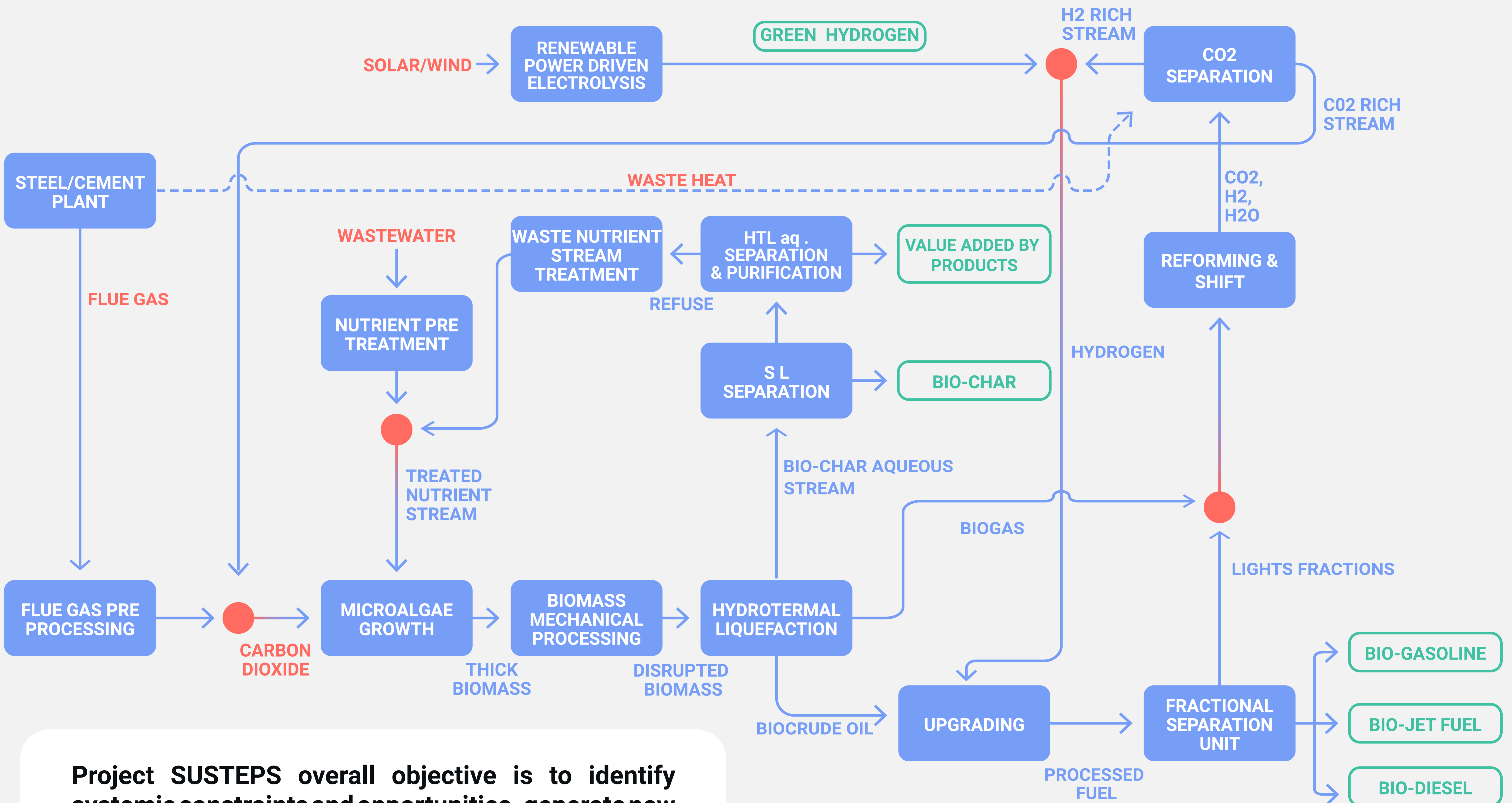
KEYWORDS

Algal biorefinery
Carbon-negative
Bio-jet fuel
Circular economy



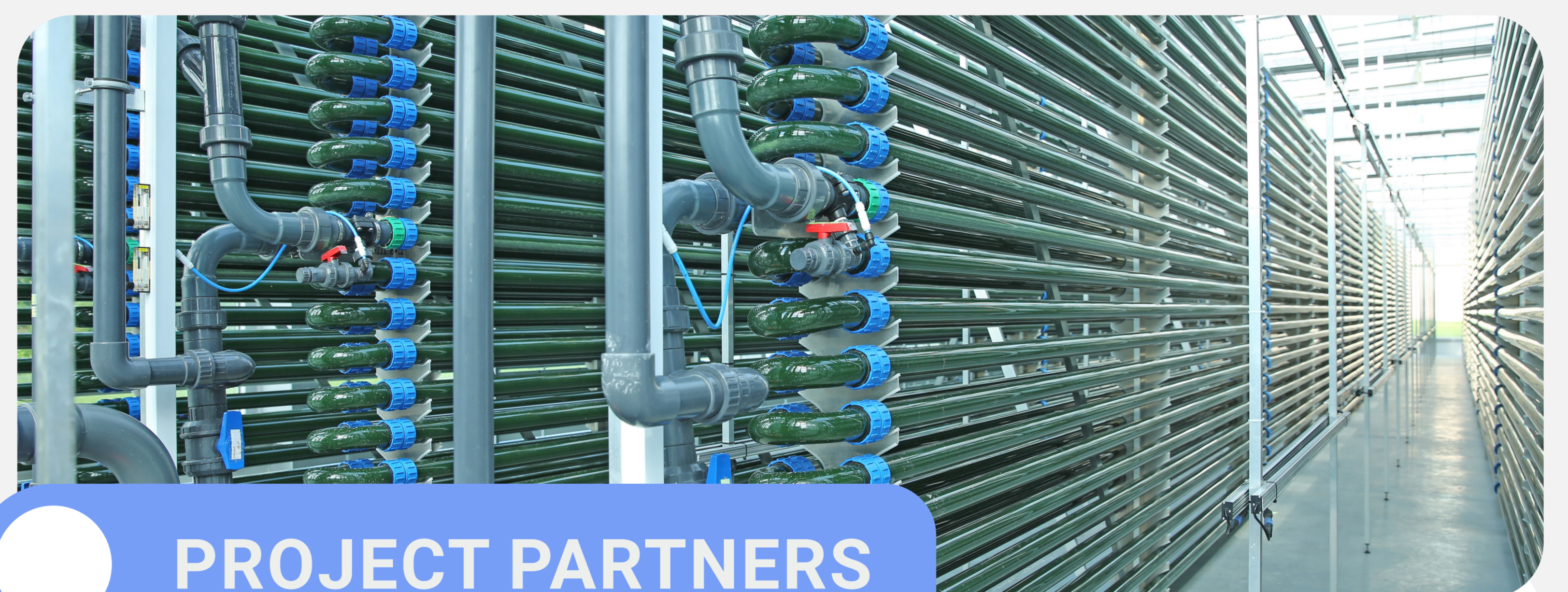
Microalgae's rapid growth and high lipid content make them an efficient biofuel feedstock, offering a renewable alternative to traditional fossil fuels.

By harnessing these technologies, the biofuel production process has the potential to reduce overall carbon footprints, enhance energy security, and pave the way for a more sustainable and environmentally friendly energy future.



Project SUSTEPS overall objective is to identify systemic constraints and opportunities, generate new knowledge and propose best practice solutions for the scaling up of a sustainable algae-based biofuel value chain.

It aims to contribute to cost-effective and more sustainable large-scale production of sustainable algae-based biofuels by developing and validating a bio-refinery concept that efficiently produces sustainable biofuel from non-food/feed microalgae via CO₂ fixation from high-emission facilities and through feeding on nutrient-rich wastewater, thereby minimising biomass production costs and utilising harmful CO₂ emitted from energy-intensive activities.



PROJECT PARTNERS



This project has received funding from Horizon Europe, the European Union's Framework Programme for Research and Innovation, under Grant Agreement No. 101122363 (SUSTEPS). Funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union. The European Union cannot be held responsible for them.



Funded by the European Union