Biorefinery of Microalgae
Novel integrated chains

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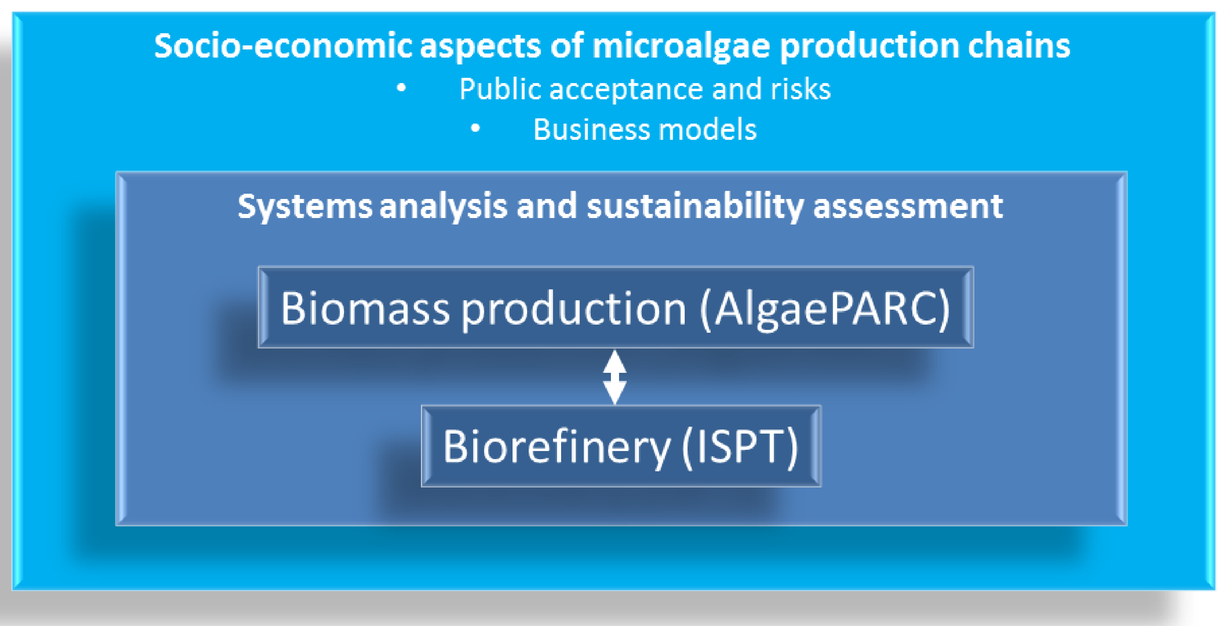
Objective:
Development of novel and mild biorefinery technologies and processes for microalgal biomass, in which the functionality of the different biomass components is maintained and energy requirement is reduced.



Motivation:
The ambition is to execute the research directed at development and implementation of sustainable production, biorefinery and commercial use of microalgae.
Biorefinery of microalgae does not exist! This is an essential step to turn microalgae biotechnology into a large commercial activity. Production and biorefinery of microalgae biomass need to be integrated due to the need of biomass supply and variability of biomass properties with the strain and process used. We work with a wide consortium of end users at AlgaePARC where we focus on biomass production. We will proceed with this strategy in this ISPT project with a focus on biorefinery of microalgal biomass.

Project scope:
Develop a program for research at laboratory and pilot scale to develop scalable technology and processes to fractionate microalgae biomass into the different components (lipids, proteins and carbohydrates), while keeping its functionality and minimizing the energy requirement

Status:
A consortium of companies in different sectors need to be set up. A first meeting will be organised in December with the consortium already present at AlgaePARC plus additional interested companies

Applicability:
Cross sector
Energy sector (lipids for biofuels)

Food sector (lipids and proteins as ingredients for food and feed)

Specialty sector (proteins as sugars for use as new building blocks or polymers)