

ECOMONDO
THE GREEN TECHNOLOGY EXPO



MEWLIFE

**MicroalgaE biomass from
phototrophic-heterotrophic
cultivation using olive oil
Wastewaters**



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PROJECT INFORMATION



- The project “**MicroalgaE biomass from phototrophic-heterotrophic cultivation using olive oil Wastewaters – MEWLIFE**” is co-funded by the LIFE Programme of the European Union (LIFE17 ENV IT 000180).

- Partners:



NextChem srl
Italy
Coordinator
(New prototype units realization)



Labor srl
Italy
Associated Partner
(Wastewaters pre-concentration)



Bio-P srl
Italy
Associated Partner
(New prototype units operation)



Technosind srl
Italy
Associated Partner
(Basic Engineering Design of prototype)



High Tech Recycling
Italy
Associated Partner
(Lab tests)



Megara Resins
Greece
Associated Partner
(Bio-polymer formulation)

- Duration: 36 months (01/07/2018 start date – 30/06/2021 end date)

PROJECT CONTEXT



TARGET ENVIRONMENTAL PROBLEM

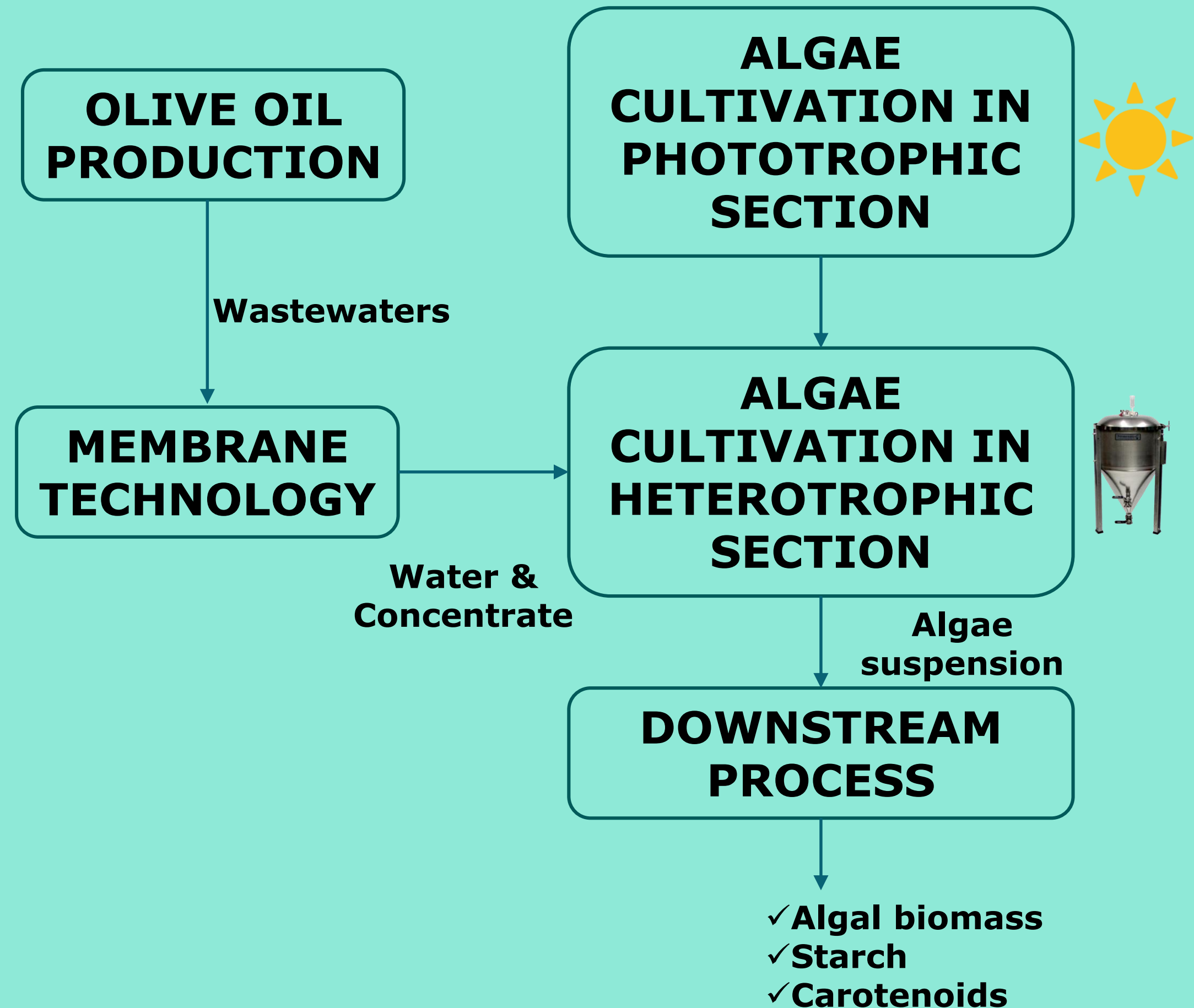
EU produces about 70% of the world olive oil (Spain, Italy and Greece as main producers).

Wastewaters from olive oil plants cannot be treated in conventional biological depuration plants due to the toxic effect of antioxidants (PPs) on active sludge.

As results, these wastewaters are discharged in the environment acting as anti-microbial and phytotoxic agents.



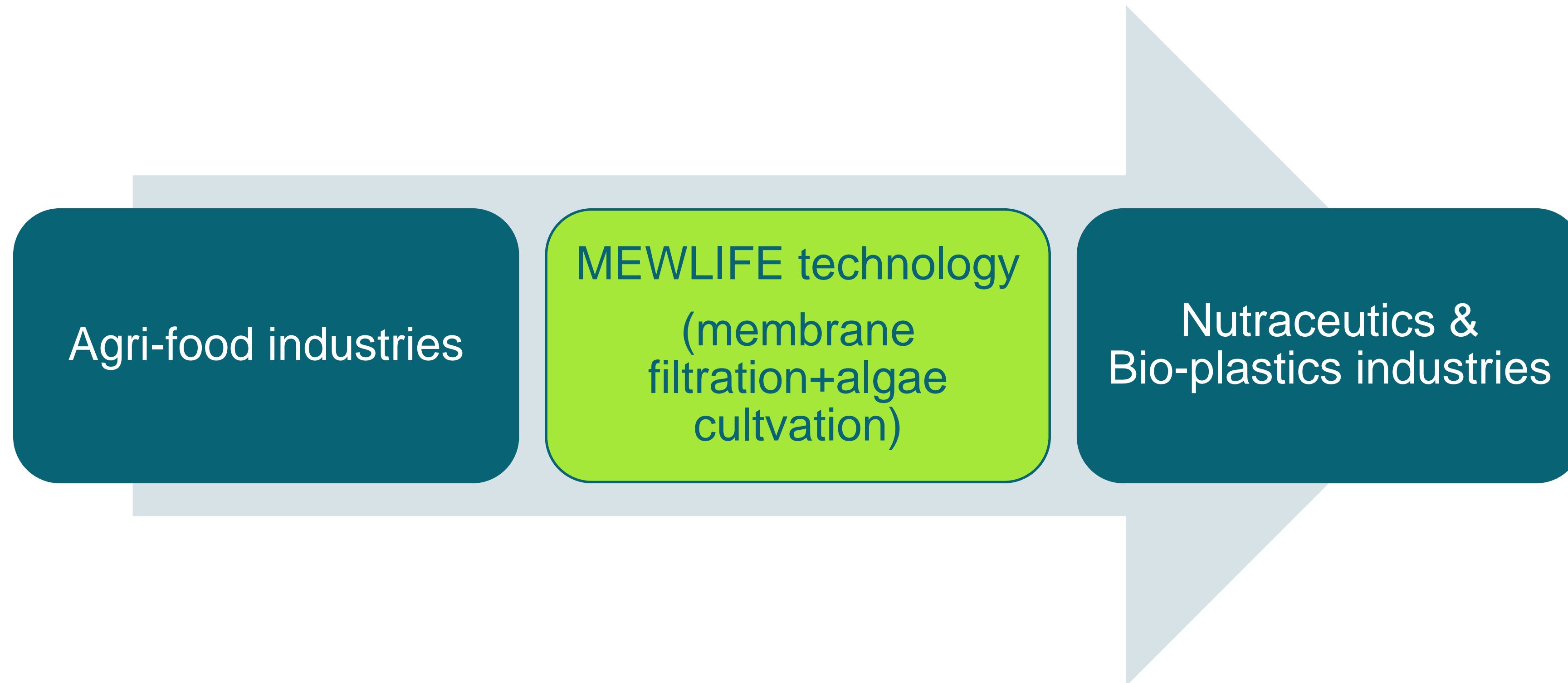
PROPOSED PROCESS



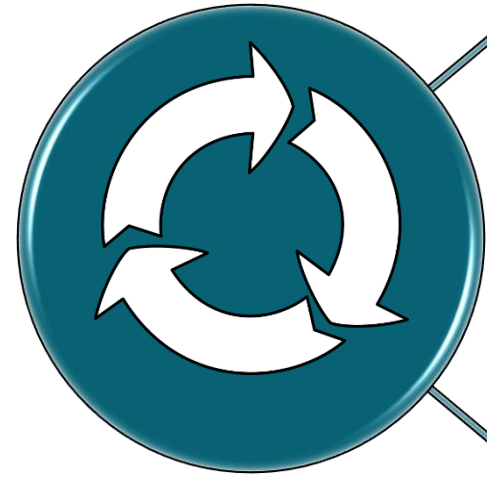
PROJECT OBJECTIVES



The MEWLIFE project aims to demonstrate the **environmental benefit** and **economic feasibility** of an **innovative approach** to produce **microalgal biomass** in an integrated phototrophic and heterotrophic cultivation system using preconcentrated (in a membrane system) **olive oil wastewaters** as carbon source for growing algae, thus contributing to **waste reuse and valorization**.

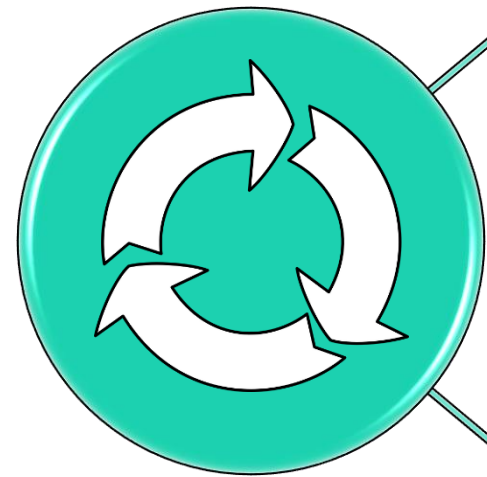


EXPECTED IMPACTS



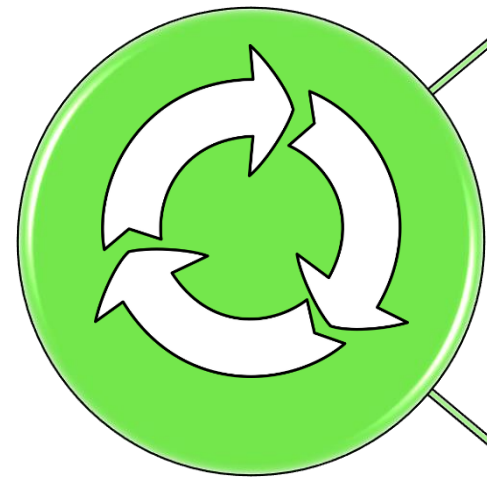
Wastewaters valorization

Wastewaters from agri-food industry will be treated, re-used and valorized, as input for algae cultivation.



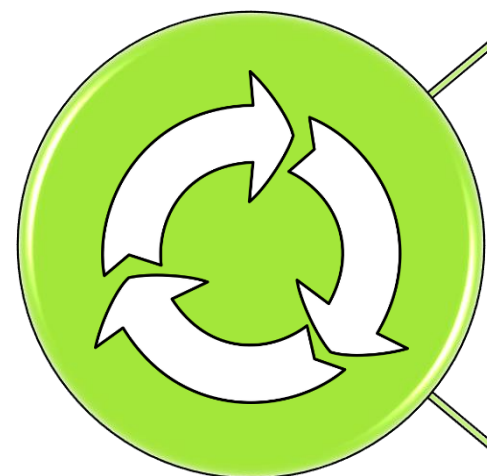
Microalgae biomass growth

The integrated phototrophic-heterotrophic system will allow costs reduction in microalgae cultivation.



High-added value products

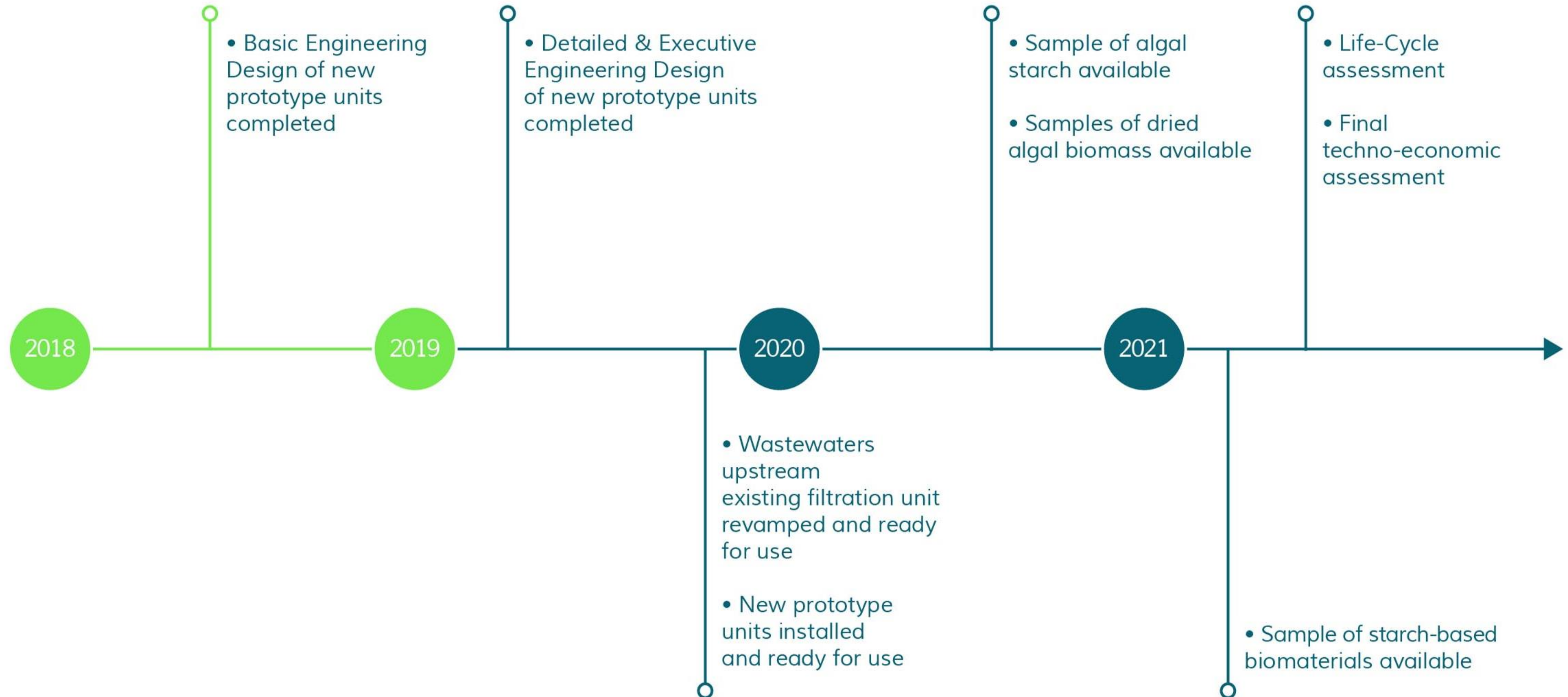
Products for *nutraceutical* applications and *bio-polymers* formulations will be extracted from algal biomass.



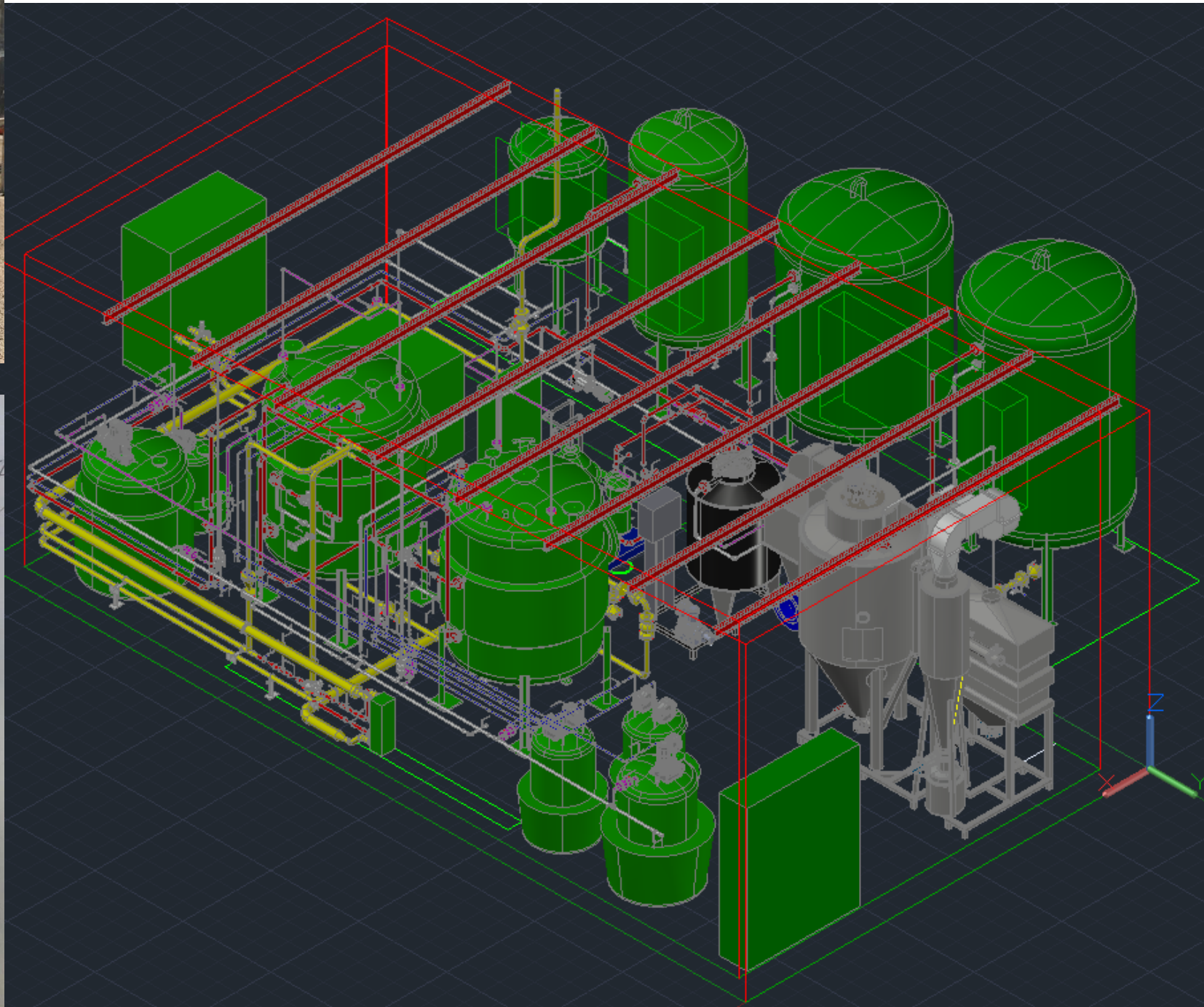
Use of different wastewaters

The replicability of the developed process using other wastewaters (i.e milk whey) will be also addressed during project development.

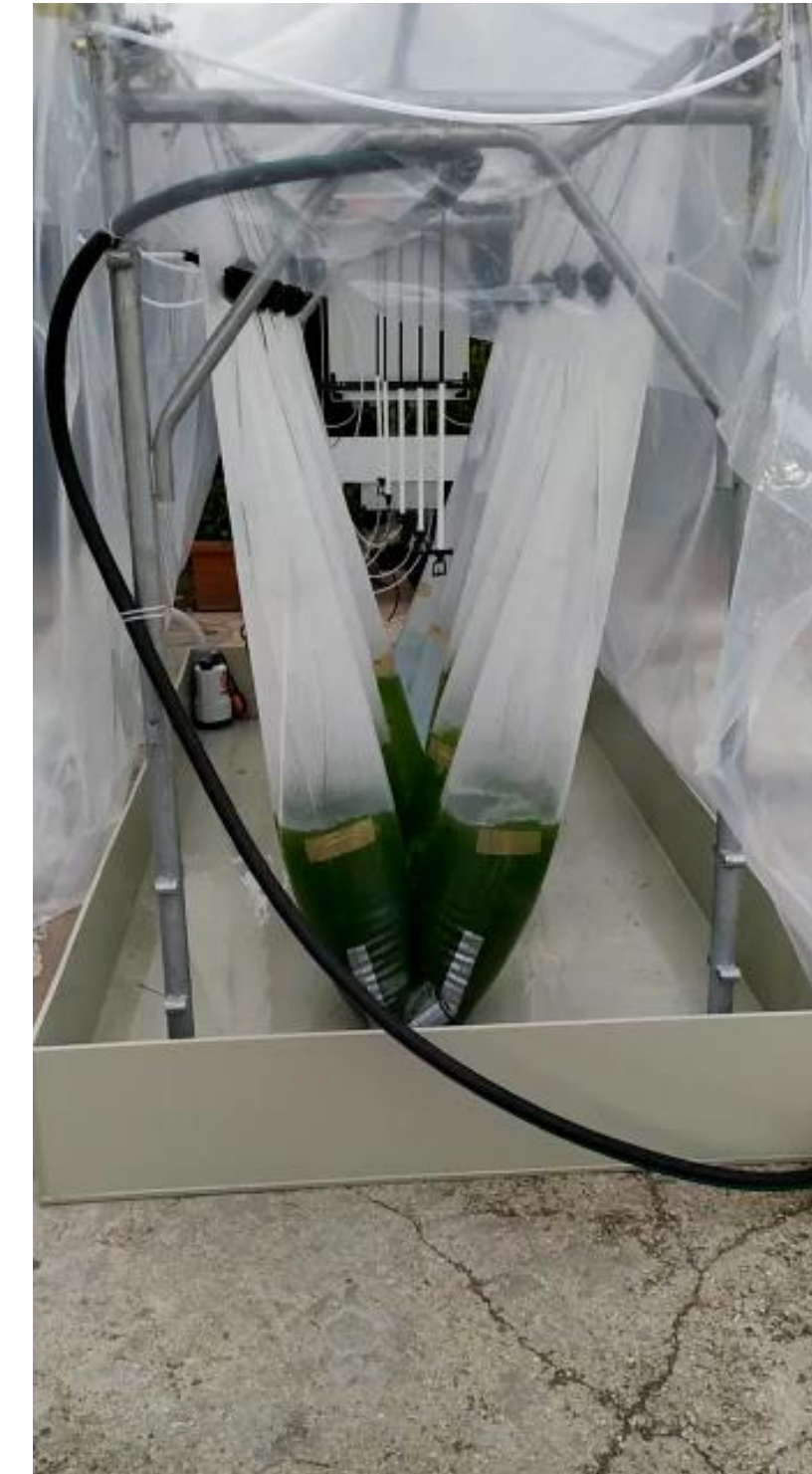
MEWLIFE - WORK PROGRESS



MEWLIFE – NEW PROTOTYPE UNITS



New heterotrophic cultivation unit



New phototrophic cultivation unit



Stay update and join us at www.mewlife.eu