AFTERLIFE

AFTERLIFE Stakeholder Workshop

Advanced Filtration Technologies for the Recovery and Later conversion of relevant Fractions from wastewater

OCTOBER 9, 2020

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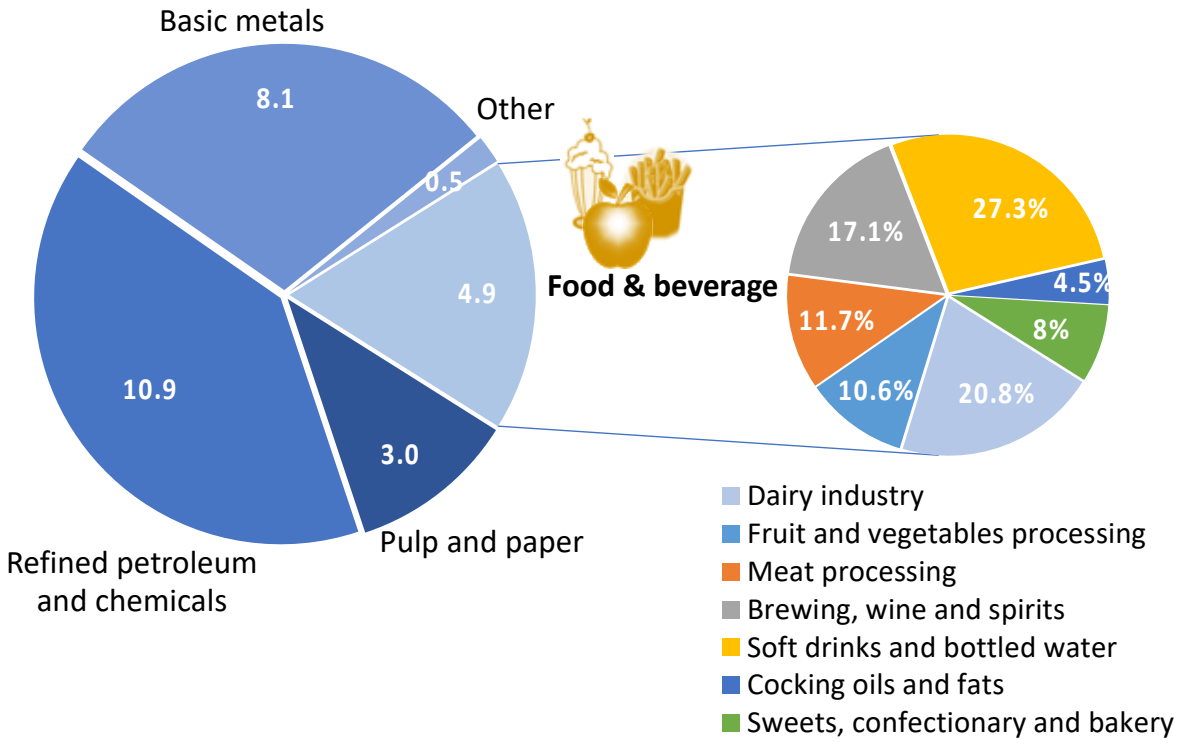
AFTERLIFE has received funding from the Bio-Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation program under grant agreement No. 745737 .

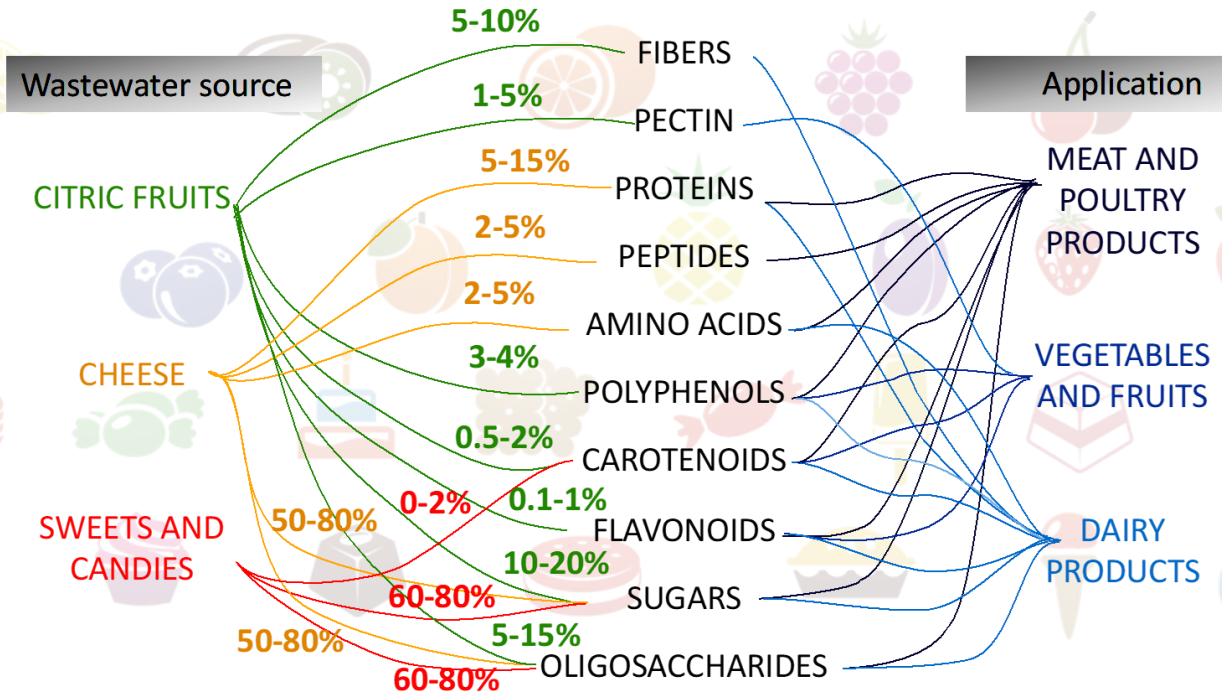
Wastewater… an abundant ~~waste~~ resource

Wastewater production in European (bio)industries

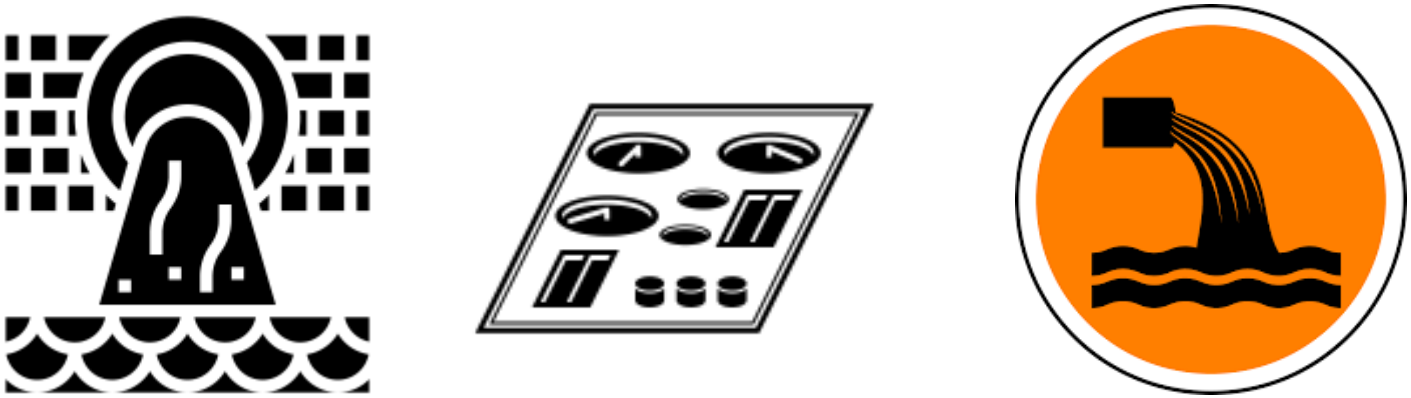


A rich source of valuable compounds

Wastewater from **food processing**: a great source of bio products!!



Current approach



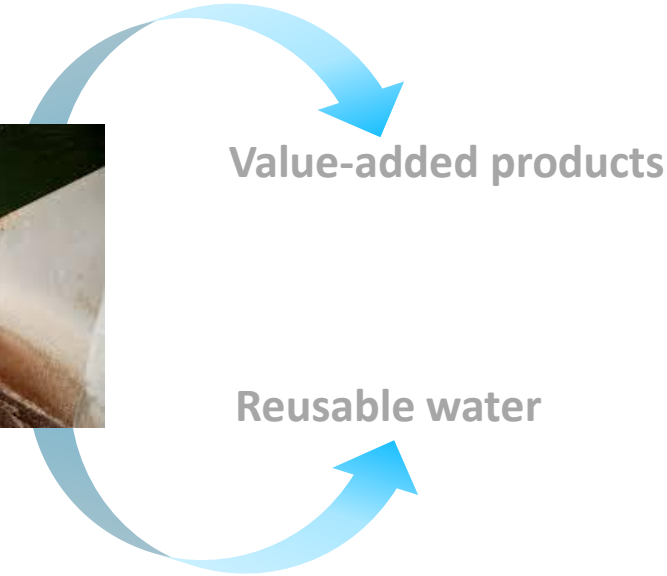
Collection → **Treatment** → **Discharge**

Recycling and energy aspects should be considered to develop sustainable treatment systems!

Proposed approach: fitting in a circular bioeconomy

Focus on extraction and concentration techniques that will lead to the valorization of wastewater

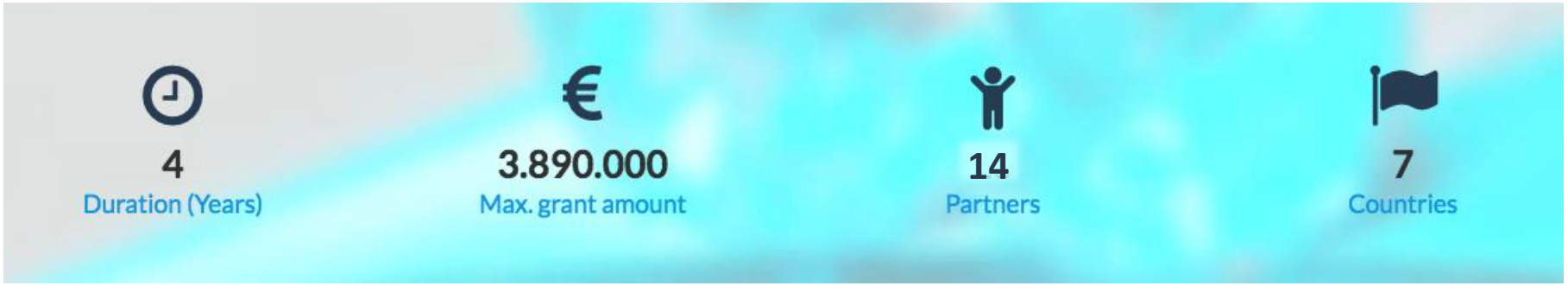
- Green techniques
- Cost-effective
- Flexible



Application of extraction techniques in wastewater valorisation: AFTERLIFE project

- The AFTERLIFE project proposes a flexible, cost- and resource-efficient process for valorizing wastewater
- It will represent an advance on existing approaches to wastewater treatment
- It will separate out the different components of value using a series of membrane filtration units
- These will then be treated to obtain high-pure extracts and metabolites or, alternatively, to be converted into value-added biopolymers
- In addition to the value extracted from the solids, the remaining outflow of the water will be ready for re-use

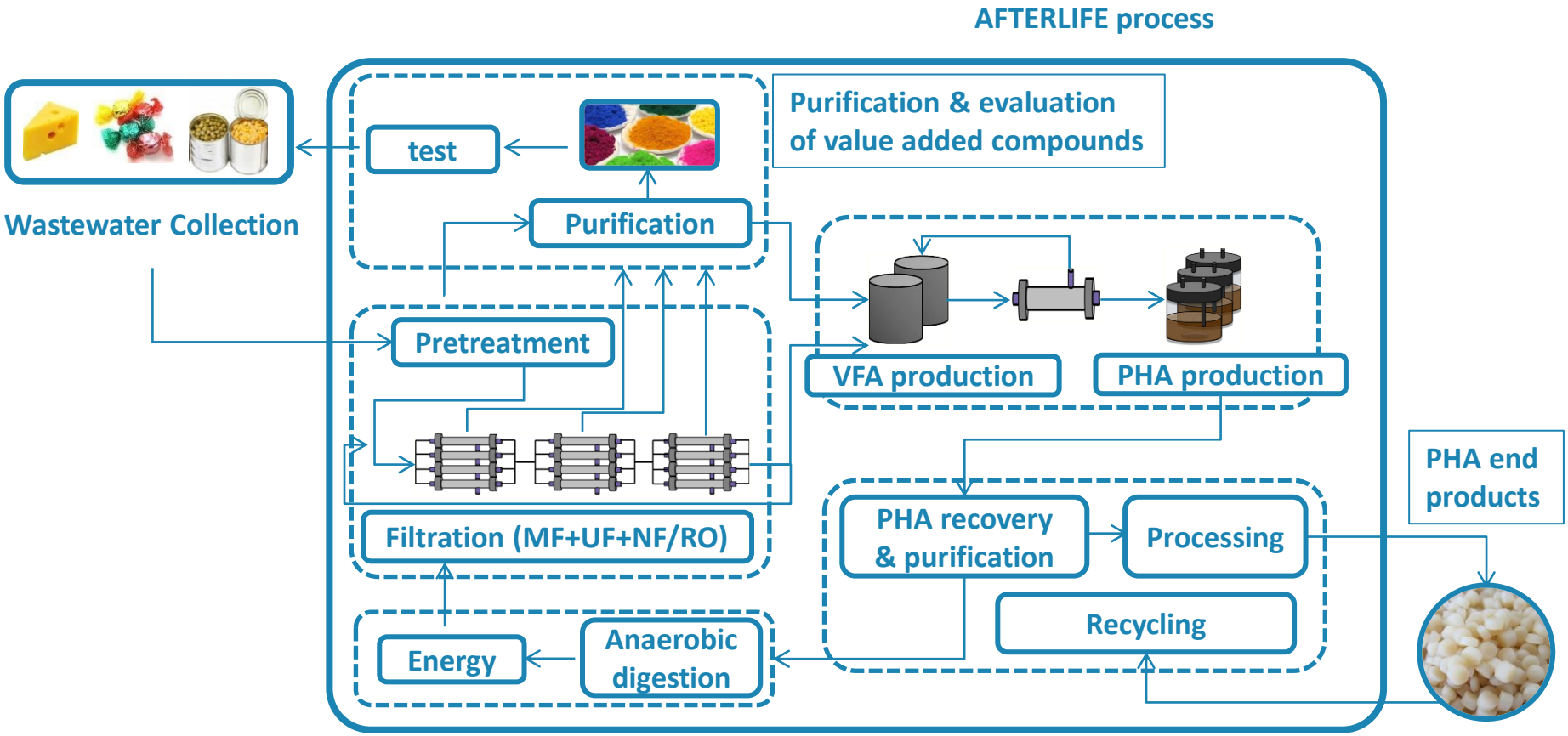
AFTERLIFE project: consortium



5 RTD &
Non-profit org.

9 SMEs

AFTERLIFE project: the process



AFTERLIFE project: wastewater

Wastewater Collection

Heritage-W

- **High concentrations of SS**
- Whey can be studied as a **raw material of fat, protein and lactose**

Jake-WW

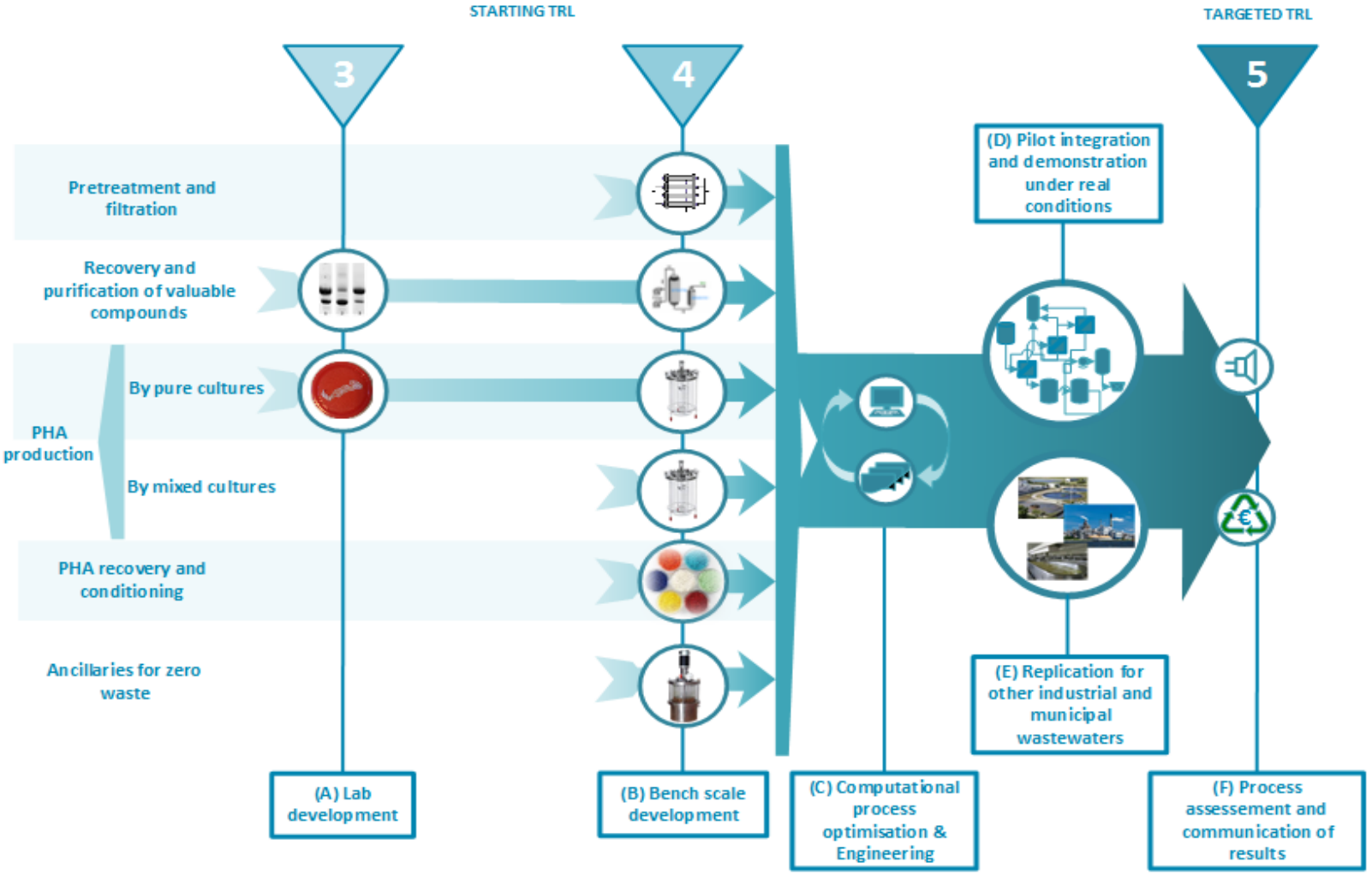
- **High concentration of SS**
- **Very high sugar content**
- Low fat and protein concentrations

Citromil-JL

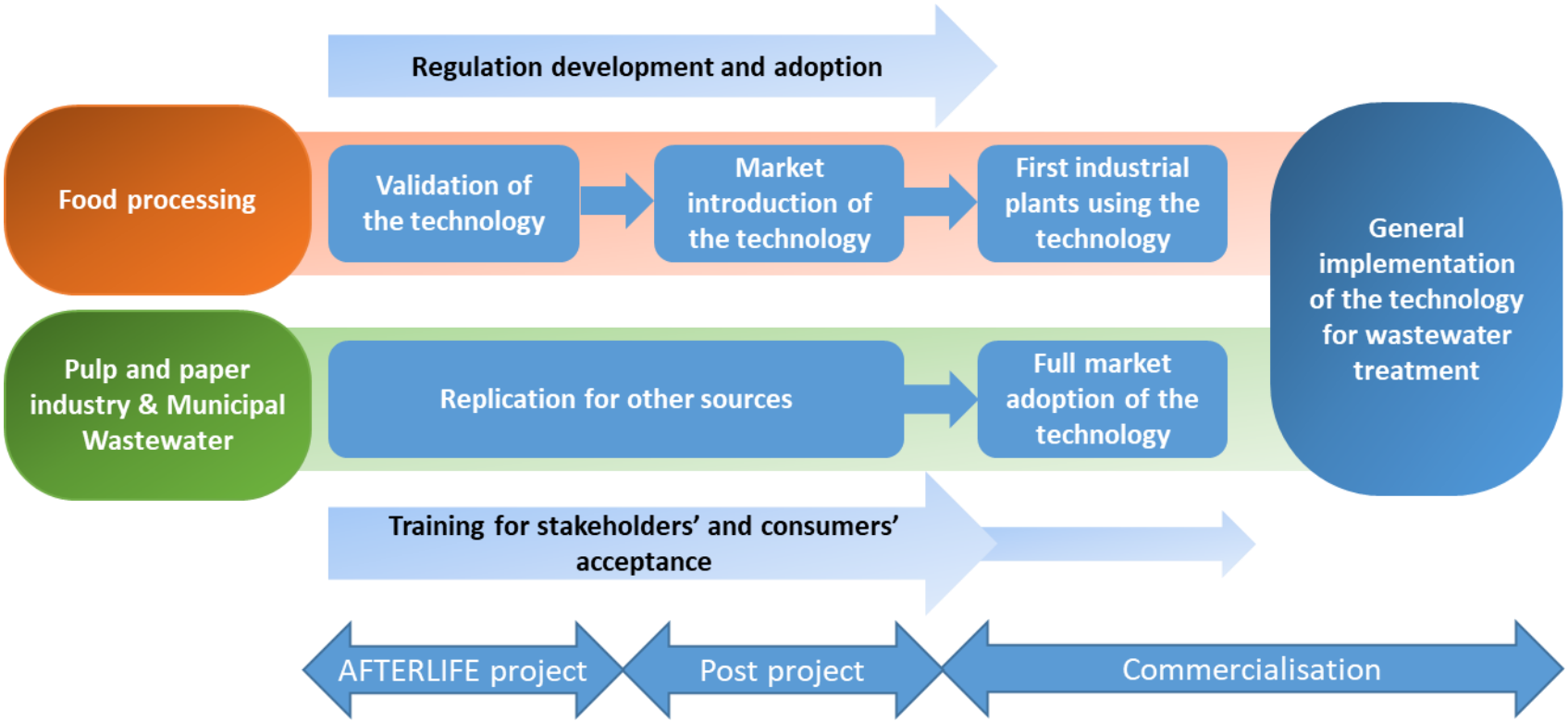
Citromil-EO

- Higher concentrations of compounds in Cit-EO than Cit-JL
- **Notable SS/pulp** concentration
- Some sugars, low fat and low protein concentrations
- **High concentrations of compounds of interest** in Citromil-EO, **such as flavonoids and limonoids, and relevant quantities of essential oils**

AFTERLIFE project: roadmap



AFTERLIFE project: roadmap



Webinar Speakers from AFTERLIFE consortium

Dr. Antti Gronroos
VTT, Finland
Membrane technology

Dr. Nicola Frison
Innoven, Italy
VFA production

Dr. Oliver Drzyzga
CSIC-CIB, Spain
PHA production

Dr. Javier Ceras
Lurederra, Spain
Extraction techniques

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https://www.youtube.com/watch?v=egIUtwdFQMA

visit us at:
www.afterlife-project.eu

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