www.vivaldi-h2020.eu

@Vivaldi_project

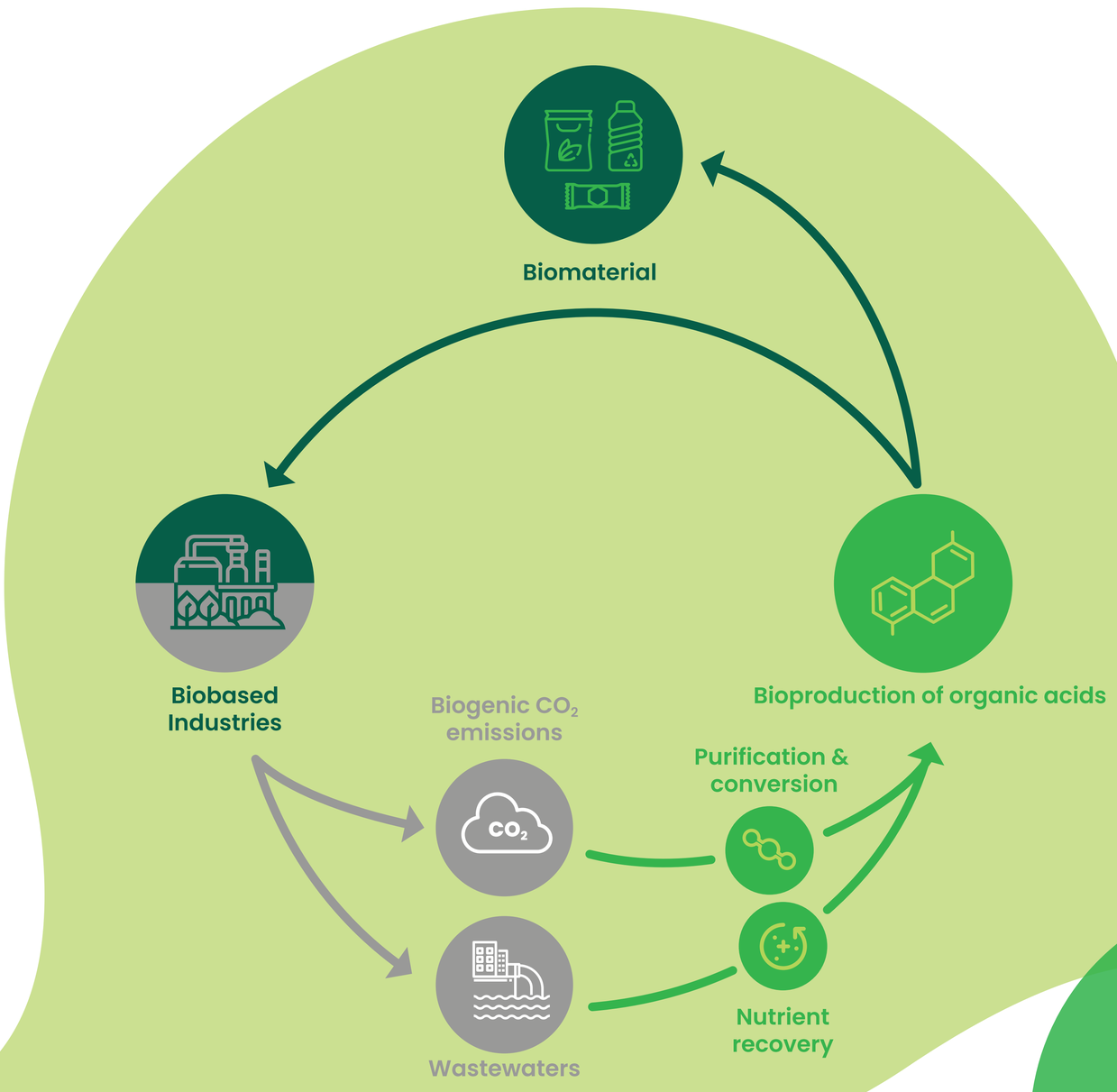
VIVALDI H2020 project

VIVALDI TURNS CO_2 EMISSIONS INTO SUSTAINABLE BIOPRODUCTS

As a response to the urgent need to reduce greenhouse gas emissions, VIVALDI project develops an innovative and cost-effective solution for bio-based industries to recycle their CO_2 emissions and shift towards a circular economy.

Focusing on four key bio-industry's sectors (Pulp & Paper, Food & Drinks, Bioethanol and Biochemicals), VIVALDI transforms real off-gases into 4 industrially relevant organic acids: lactic acid, succinic acid, itaconic acid and 3-hydroxypropionic acid. These high-value chemicals can re-enter in the plants' production process to enhance their sustainability, or open new business opportunities as building blocks for novel biomaterials.

The adoption of the VIVALDI concept will not only allow bio-based industries to reduce CO_2 emissions, but to reuse them as a novel feedstock, lowering the dependency on fossil fuels import and the exploitation of key resources such as energy, raw material, freshwater and land.



VIVALDI 4 MAIN STEPS:

1. Biogenic CO_2 emissions are captured and transformed into different chemical components (methanol and formic acids) via electrochemical reduction.
2. To increase the plant's circularity, nutrients are recovered from industrial wastewaters using bioelectrochemical systems.
3. Thanks to a new fermentation process, organic acids are produced using the chemical components and the nutrients produced in step 1 and 2.
4. The organic acids produced are industrially validated to ensure that they comply with current industrial standards.

CONSORTIUM

The VIVALDI project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000441. The information contained in this poster does not necessarily reflect the position or opinion of the European Commission.