



PERFORM

Project Summary - June 2020





















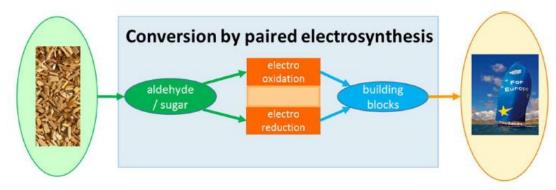




Project outline

- Four year IA project budget € 8.7 M€, started 1 January 2019
- ► Granted under the call H2020- CE-SPIRE-02-2018: Processing of material feedstock using non-conventional energy sources
- ► Goal: to develop solutions for the electrification of the chemical industry
 - ► Electrochemical production methods for value-added components
 - ► More efficient and sustainable production

Power 2 Performance



Green feedstock High value outlets High efficiency – high selectivity
Paired electrosynthesis
Integrated process

High performance applications Low carbon footprint



Main Objectives

- Development and construction of a highly versatile and modular TRL6 PowerPlatform
- Demonstration of the improved flexibility without major losses in the overall process performance
- ► Dissemination and exploitation of the major innovation outcomes www.youtube.com/watch?v=Qh8aiStL1CM

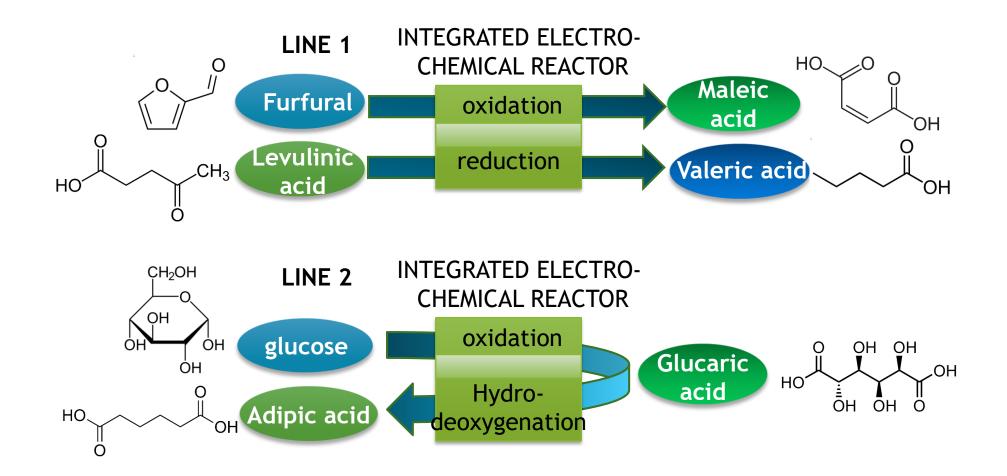
Milestones

- ▶ 2020: Single cell electrochemical reactors constructed
- ▶ 2021: Integral bench scale system developed and tested
- ▶ 2022: Perform pilot platform commissioned and tested





The two showcases

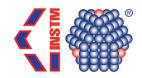




Project consortium



Research institutes









Electrochemical system & catalyst experts

Reactor & component developers

System integration & piloting

Commercial use, exploitation, & impact

Industry

















- An excellent track record with respect to electrochemistry and system demonstration is embodied in the academic, research, and technology partners
- Sustainability assessment, dissemination and exploitation activities will be led by highly effective specialized companies.
- The whole value, knowledge and supply chain is represented in the consortium and its complementarity is key for the success of PERFORM.





PERFORM

Project approach

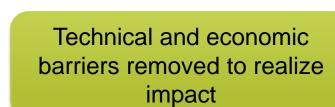
Advanced paired electro-synthesis technology

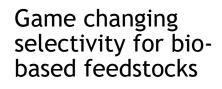


Highly
energy
efficient &
cost effective
systems

Improved competitive-ness for the EU chemicals industry

Demonstration in a relevant environment





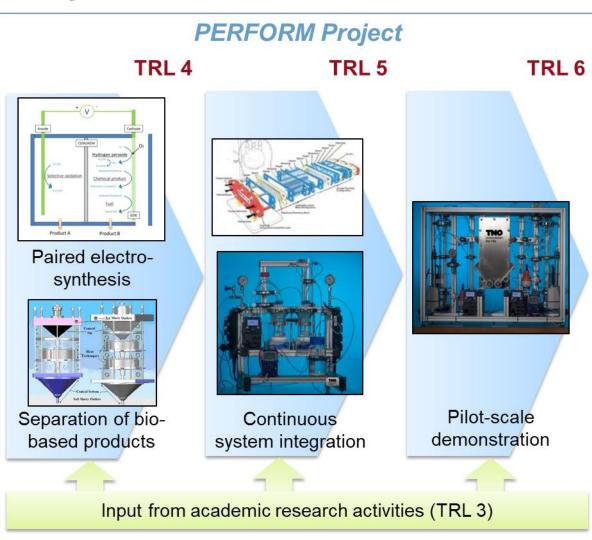
Highly relevant industrial cases for near term implementation

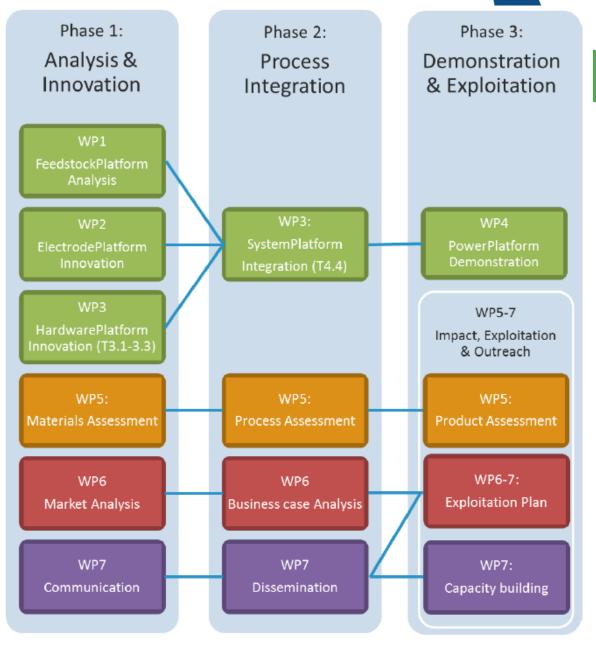
Open access infrastructure available for companies to use after the project





Project Structure







Info

- performproject.eu
- www.voltachem.com
- www.youtube.com/watch?v=Qh8aiStL1CM

Coordinator contact:

- ► TNO www.tno.nl
- Erwin Giling <u>Erwin.giling@tno.nl</u>

This project has received funding from European Union's Horizon 2020 research and innovation program under grant agreement N° 820723.