



About HOOP and this seminar

Martín Soriano, Valuewaste and HOOP Coordinator
Technologies for UBW and WWS valorisation
Urban Circular Bioeconomy Webinar Series, 26 May 2021



1. The HOOP Solution

- The objective: The H2020 HOOP project supports 8 lighthouse cities and regions in developing large-scale urban circular bioeconomy initiatives.
- How? Providing Project Development Assistance (PDA) to the cities and regions – providing them with the technical, economic, financial and legal expertise needed to develop concrete investments to valorise OFMSW (Organic Fraction of Municipal Solid Waste) or UWWS (Urban Wastewater Sludge) with the aim of obtaining safe and sustainable bio-based products.

PDA elements



Local context & urban metabolism



Circular business models



Technological and environmental assessments



Innovative financial engineering & procurement

1. Project Concept

8 Lighthouse cities & regions: the HOOP demonstrators



SFC-25 EU funded projects

- Scalibur
- Valuwaste
- WaysTUP!



15 bio-processes



PDA for Circular Cities Systemic Innovation
Provide technical, economic, financial, legal, and business model assistance



Stakeholder engagement & mobilisation

- Quadruple helix
- BCs



Replicability strategy



Network of follower cities



The Urban Circular Economy Hub (UCBH)



Circular Bio-based Quality Label



Tools for evaluation and decision making



Virtual Academy

1. Portfolio of Bio-Processes for OFMSW

HOOP offers a portfolio of 10 processes to valorise **Organic Fraction of Municipal Solid Waste (OFMSW)**, and 5 processes to valorise **Urban Wastewater Sludge (UWWS)**. These processes build on the results of Horizon 2020 projects SCALIBUR, ValueWaste and WaysTUP!.

OFMSW

1. Biochemical conversion of the OFMSW
2. Insects reared on HORECA waste
3. Bioprocesses involving methanotropic bacteria using biomethane arising from the anaerobic digestion of the OFMSW
4. Black Soldier larvae fed with OFMSW or digestate from anaerobic digestion
5. Nutrients recovered from the residual dewatering liquid from anaerobic digestion
6. Fermentation of spent coffee grounds
7. Biochemical production of functional ingredients from animal by-products
8. Bioprocess, fermentation 2,3 Butanediol from OFMSW + garden + UWWS
9. Fermentation of used cooking oils
10. Production of biofertilisers and biostimulants

UWWS

1. Bioconversion of UWWS: steering CO₂ fermentation with bioelectrochemical systems
2. Bioconversion of UWWS: PHBV production
3. Slow pyrolysis of UWWS
4. Production and purification of volatile fatty acids
5. Cellulosic rejections WWTP to Ethyl lactate biosolvents

2. About this webinar

- Technology is one of the challenges covered by the HOOP PDA.
- In particular, providing assistance on technologies to valorise OFMSW or UWWWS into added-value bioproducts.
- The objective of this webinar is to highlight some of the most promising technologies from our mother projects.



The HOOP project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°101000836

3. Our ambitious speaker lineup



[Leticia Pereira Gómez](#)

Project Manager at the Innovation & Technology Department of [Aqualia](#)



Konstantinos Komnitsas
Professor at the School of Mineral Resources Engineering, [Technical University of Crete \(TUC\)](#)



[Ines del Campo](#)

Senior R&D Engineer and Project Manager at [CENER](#)



[Caterina Coll Lozano](#)

CEO at [PERSEO Biotechnology](#)



[Juan Cortes](#)

Chief Science Officer at [Entomo](#)



[Dimitris Malamis](#)

Laboratory and Teaching Staff at [National Technical University of Athens](#)



[Michael Jensen](#)

Group Chief Commercial Officer at [UNIBIO](#)



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Thank you for your attention!

Martín Soriano
martin.soriano@cetenma.es

