



H2020 RUN4LIFE PROJECT



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Recovery and Utilization of Nutrients 4 Low Impact Fertilizer

Project description

The world food supply is entirely dependent on the use of fertilizers. However, the current fertilizer production practices are not sustainable. Phosphate (P) rock is a non-renewable resource, whereas the nitrogen (N)-based fertilizers production is highly energy-intensive, currently relying on the use of fossil fuels.

Domestic wastewater is an important carrier of resources –especially water and nutrients– which are hardly recovered in the current centralized wastewater management systems.

Run4Life proposes a radical change to efficiently recover nutrients from wastewater (ww) within a circular economy approach:

- Decentralized recovery at the source,
- Segregating concentrated waste streams such as black water (toilet ww), grey water (other domestic ww) and organic kitchen waste,

- Innovative nutrient recovery technologies are integrated with complementary fertiliser concepts to reduce environmental and health risks.

It is foreseen up to 100% nutrient (NPK) recovery (2 and >15 times current P and N recovery rates, respectively) and >90% water reuse. In collaboration with fertilizer producers, the resulting products will be characterized and possibilities for their agricultural and further applications will be explored, thanks to the participation of prospective end-users in the consortium and the development of a new business model based on a cooperative financial scheme.

Run4Life will be large scale demonstration at 4 living sites in Belgium, Spain, Netherlands and Sweden, adapting the concept to different scenarios (market, society, legislation...). The information obtained in the 4 demo-sites will be used for process simulation to conceive a unified



Run4Life model which will be applied in a fifth demo-site, allowing new business opportunities and providing data for critical raw material policies.

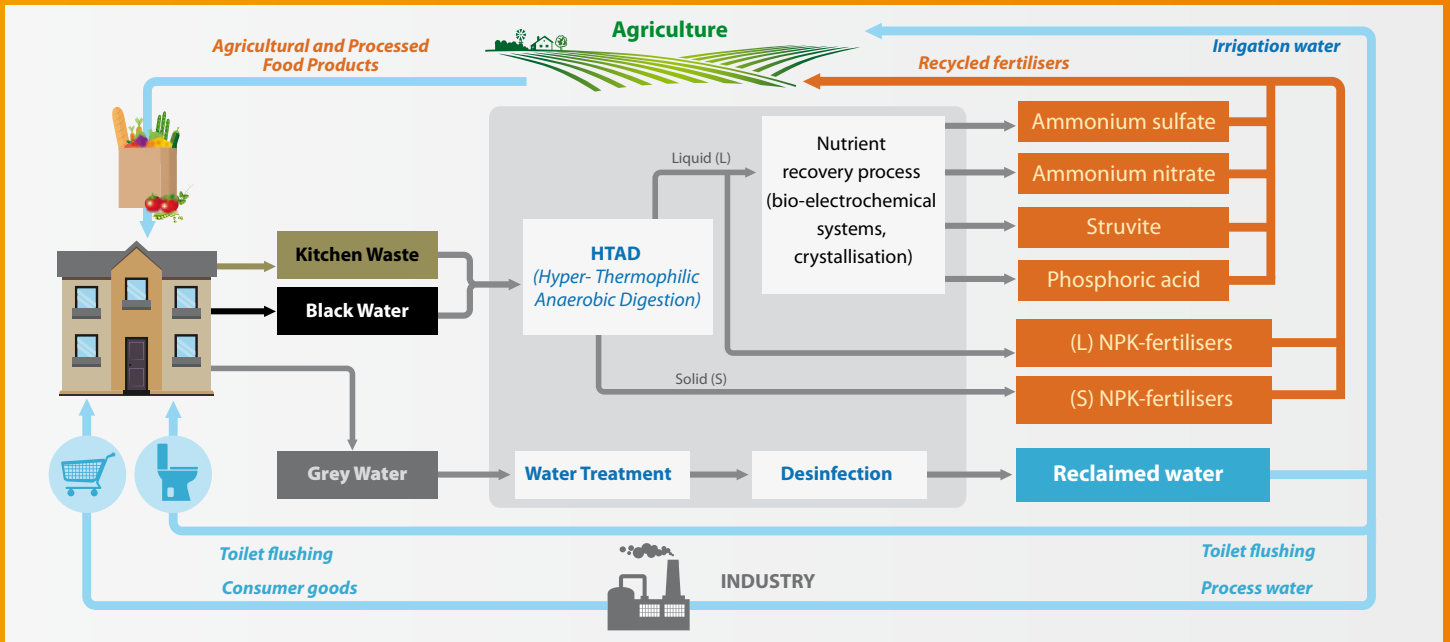
The process will be optimized by on-line monitoring of key performance indicators (nutrient concentration, pathogens, micropollutants). Monitoring of data and modelling of the process will be included in a Run4Life Platform allowing the optimization of the process



Location: Ghent (Belgium), Vigo (Spain), Sneek (Netherlands) and Helsingborg (Sweden)

Duration: From the 1st June 2017 to the 31st May 2021

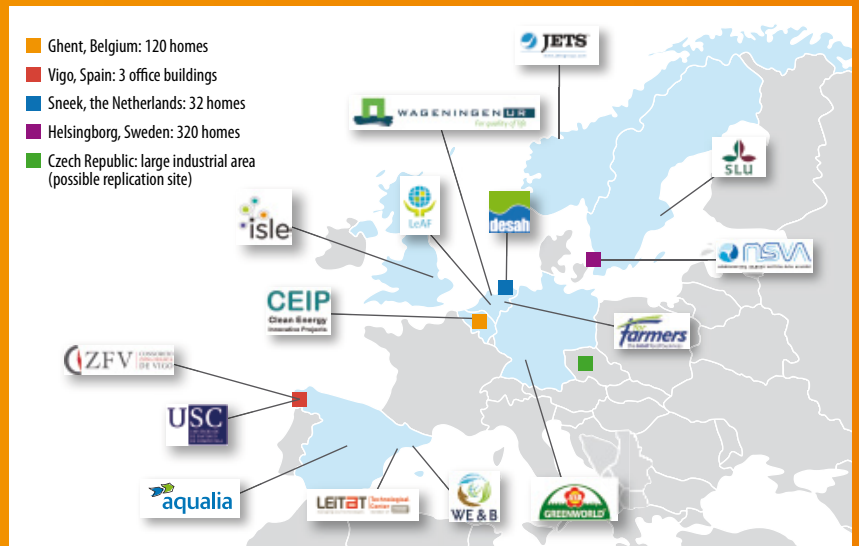
Total Budget: 7,720,900.61 € **Aqualia:** 1,219,827.24 €



and nutrient recovery while facilitating a decentralized management.

Run4Life opens a new paradigm in society. Therefore active measures such as knowledge brokerage activities will be developed as engagement strategy to advocate the institutional, legal and social acceptance of Run4Life nutrient recovery technologies.

Communication and dissemination activities will be focused on different stakeholder levels aiming at the maximization of market success.



PROJECT PARTICIPANTS

- FCC Aqualia (Coordinator, Spain)
- DESAH (Netherlands)
- SLU, Sveriges Lantbruksuniversitet (Sweden)
- LEAF (Netherlands)
- LEITAT (Spain)
- NSVA, Nordvastra Skanes Vatten Och Avlopp (Sweden)
- USAC, Universidad de Santiago de Compostela (Spain)

- WE&B, Water Environment & Business Development (Spain)
- Wageningen University (Netherlands)
- ZFV, Consorcio de la Zona Franca de Vigo (Spain)
- JETS, ECOMOTIVE (Norway)
- Isle Utilities (United Kingdom)
- CEIP, Clean Energy Innovative Projects (Belgium)
- Forfarmers Corporate Services (Netherlands)
- ASB Grünland Helmut Aurenz (Germany)



DETAILS OF FUNDING

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- Project:** Grant agreement n° 730285.
- Grant:** Subsidy of 70% of the budget.

Funding Received
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Aqualia: 853,879.07 €

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