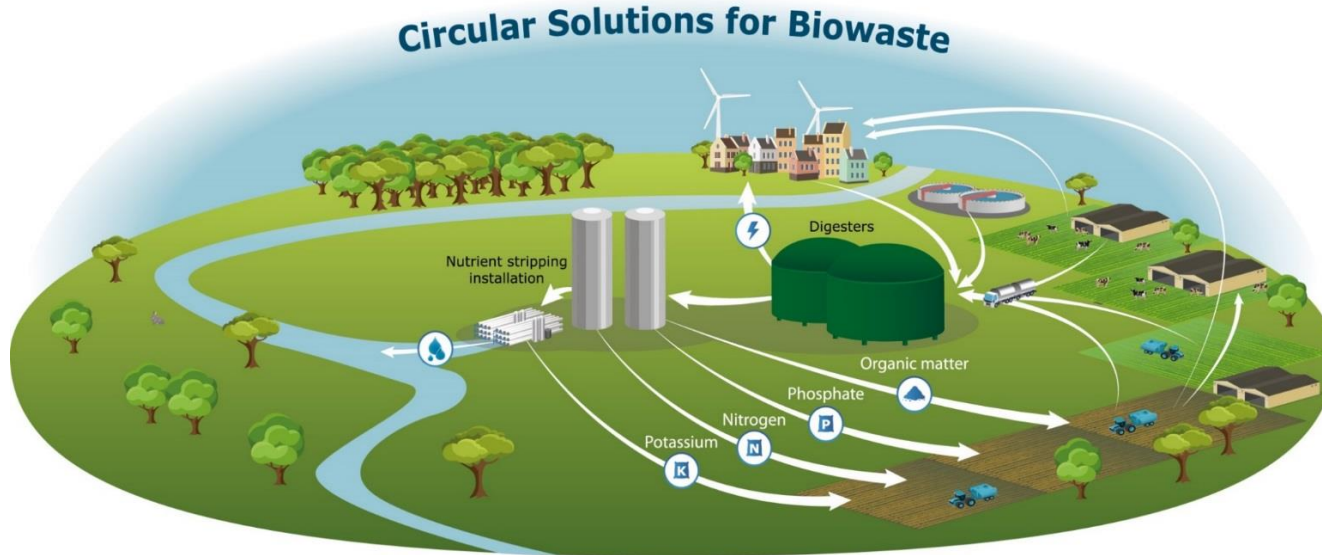


SYSTEMIC project *(June 2017 – Nov 2021)*

Systemic **large-scale** eco-innovation to advance **circular economy** and mineral recovery from **organic waste** in Europe



Developing a roadmap for the transition towards
a circular economy for nutrients from organic waste streams

SYSTEMIC in a nutshell

Visionaries / pioneers
5 demonstration plants



Sustainable approach
EIA & LCA



Economic feasible
Business cases
National support schemes



Outreach
28 plants as first followers



Minimize barriers – political
embedding
**Fertilising Products Regulation,
Nitrates Directive, etc.**



www.systemicproject.eu

Twitter: @systemic_eu

The project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement no. 730400.



Horizon 2020

Technical Innovation at large scale Demonstration Plants

Feedstock

- Pig manure
- Poultry litter
- Sewage sludge
- Energy crops
- Agro-industrial residues

Innovative Technologies

- Reverse Osmosis (RO)
- Evaporation
- Nitrogen stripping
- Phosphorus stripping

Biobased Products

- NK concentrates
- $(\text{NH}_4)_2\text{SO}_4$ (ammonium sulphate)
- Calcium phosphate & struvite
- Organic fertilisers & soil improvers
- Organic fibres
- Plus renewable energy



1. All large scale plants are running & plants have to be market oriented. *Just producing biobased products is no guaranty to survive!!!*

2. Biobased Nitrogen fertilisers can compete with synthetic mineral nitrogen fertilisers (agronomically/environmentally). Recovered phosphorus as secondary resource for fertilising industry. New options for organic fibres besides soil improvers.

3. High risks regarding investments nutrient recovery & reuse. Yet, market is not developed for Biobased and Tailor-Made Fertilisers. New incentives are needed to stimulate a broad implementation of Circular Economy for nutrients → (SYSTEMIC CE Webinar, 27 May 2021) → roadmap (Nov 2021)