

LCA & Risk Assessment applied to the Water2REturn project

4th Phosphorus in Europe Research Meeting (PERM4), session "Contaminants, safety, LCA"
Leo Breedveld – 2B Srl, June 2nd 2021



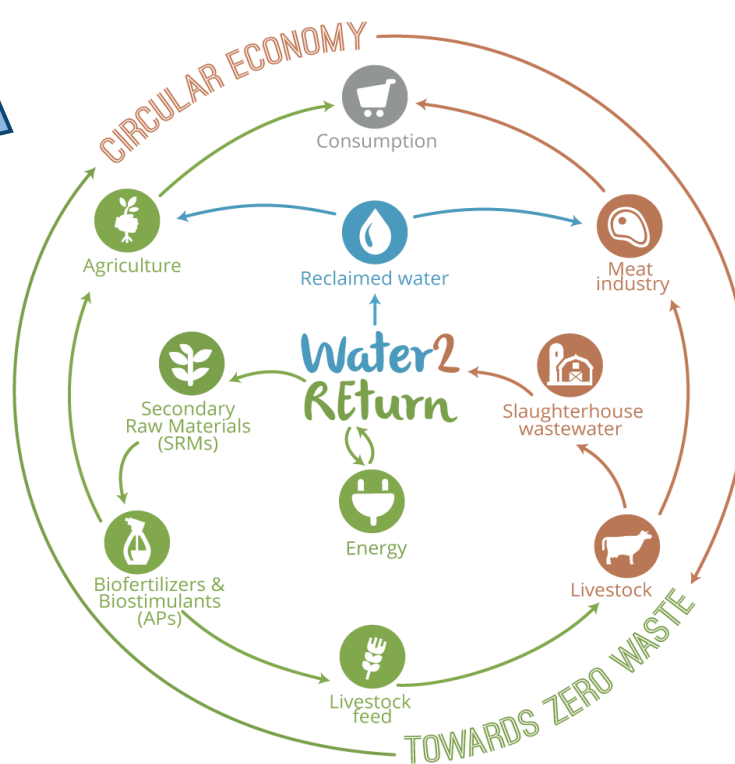
Slaughterhouse wastewater (SWW)



Nutrients
=
Contaminants

W2R Goal

- 90-95% nutrient recovery
- Free of pathogens and contaminants

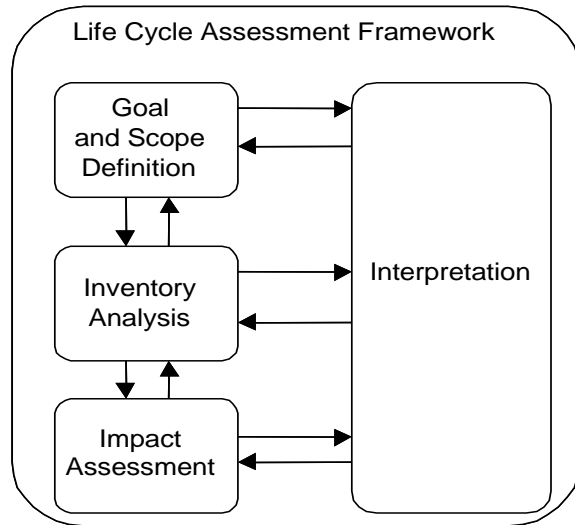


- Agronomic products
- Reclaimed water
- Energy



LCA & Risk Assessment

Life Cycle Assessment (LCA) (ISO 14040-14044)



- Environmental **impacts** and **benefits** of W2R system
- Comparison between traditional and **W2R technologies**
- **Eco-design** feedback for process **optimization**

The OH&S risk assessment (RA) will be based on the ISO 45001:2018 by applying the circular **Plan-Do-Check-Act (PDCA)** approach. The **data collection** will be done by means of performing **risk interviews and surveys**.

	Severity					
	Insignificant	Significant	Severe	Major	Catastrophic	
Almost Certain	Medium	High	High	High	High	Likelihood
Probable	Medium	Medium	High	High	High	
Possible	Low	Medium	Medium	High	High	
Unlikely	Low	Low	Medium	Medium	High	
Rare	Low	Low	Low	Medium	Medium	

- Identifying the potential biological risks
- Ensuring the pathogen free nutrient recovery
- Providing recommendations to **prevent** and **mitigate** the potential OH&S risks for workers

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