Draft Project Title	CANREED - Combination of ANaerobic Waste Water Treatment with an Aerated REedbed in an Energy Efficient Design
Short Description of the project idea and expected outcomes	The CANAREED system is defined as the innovative wastewater treatment covery and revalorization system including all elements required in the engineering solution to be implemented in industrial (food) processing. The project aims to achieve the realization of sustainable water treatment including good effluent quality in an energetically responsible manner. The demonstration project will be carried out at a food processing plant, but the proposed solutions and techniques are generally applicable over the total fruit and vegetable processing sector as well as in much of the food and drink sector.
Main Objectives	The overall objective of the CANAREED project is to develop a novel wastewater treatment technology for different kind of industries and sectors. This overall objective is split into the following points: To develop the best solution for the integration of the CANAREED system into the different wastewater streams Different operation modes will be analysed and the best control and operation strategy will be developed. To develop the conceptual design of the engineering solution of the CANAREED system for different sectors.
Specific Objectives	Concretely, the specific objectives that will be achieved related to the CANAREED system are the followings: To demonstrate the developed CANAREED System in a real environment: A pilot plant of a scaled pilot installation will be built. It will be installed in …… The developed prototype will be installed in the mentioned pilot plant and its performance will be monitored at least during six months. The objective of the project is to reach a TRL 07 of the developed technology
List of potential activities	WP1 - Demonstration UASB aerated wetlandUASB pilot tests on wastewater Food Industry Focus: efficiency (effluent quality and biogas production), process stability, Aerated intensive wetland pilot tests on effluent UASBAttention to: influence of suspended solids, nutrient removal, off-gas treatment, effluent qualityWP2 – Combination of technology's i.e. coupling of wetlands with - NF / RONF / RO pilot tests on effluent wetlands Focus: efficiency (water quality, recovery), process stability (purification membranes)WP3 – Assessment energyEvaluation of the durability of the technology WP 4: Dissemination and exploitation Analysis of market potentials, applications perspectives, risk and opportunities. To benchmark performance characteristics of the demonstrator’s, based on energy, exergy, economic and environmental performance. Evaluation of environmental benefits, impacts and calculation of external costs. Assessment of the performance of the proposed system in terms of the expected increase on the efficiency levels, compared to traditional wastewater recovery systems. Business models for different European regions and associated market plan. Analysis of market potentials, application perspectives, risks and opportunities for the Canareed technology. Establishment of business requirements accounting for social needs.
Expected impact on European level	

	Within this project will be tested in particular the combination of an anaerobic treatment with an aerated reed. This combination appears very promising, as a UASB plant has very low power consumption and high treatment efficiency of waste water streams with high organic load. In addition, the biogas produced can form a source of energy for business processes, or to valorize directly by the gas, or by means of a CHP the gas to be converted into electricity. • Reducing the load on surface waters by a thorough purification using the combination UASB + aerated rietveld • Reduction of energy consumption for purification by combining two highly energy-efficient purification • Reducing water consumption by extending the purification with a recycling option, or directly or receives secondary treatment by NF / RO.
Call identifier	Water in the context of the circular economy - CIRC-02-2016-2017
Type of action (RIA, CSA, etc.)	RIA
	I am looking for a project leader/coordinator
Which kind of partner are you searching for?	Industry
Expertise or specific role of partners sought	Demonstration
Partners sought from specific country or region, please indicate	EU
Title	Director
Name	Dion
Surname	van Oirschot
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Organisation	SME
Description of the organisation	Rietland, since it's start in 1994 has been building and constructing treatment wetlands. Dion van Oirschot, founder and still the owner of the company, combined his technology background from the University of Technology Eindhoven with his passion for the environment. Since it's foundation, several hundreds of projects were realised in the Netherlands and Belgium. Initially the emphasis was on treatment of domestic wastewater of remote homes, treatment of dairy farm wastewater and waste water treatment for ecological housing projects. This way Rietland has gained experience with several types of treatment wetlands, each with their own strong points