

TREATMENT AND REUSE OF WASTEWATER STREAMS INTO PROCESS USING LOW ENERGY TECHNOLOGIES (ANAEROBIC DIGESTION + CONSTRUCTED WETLANDS)

Resource and Energy Efficienc

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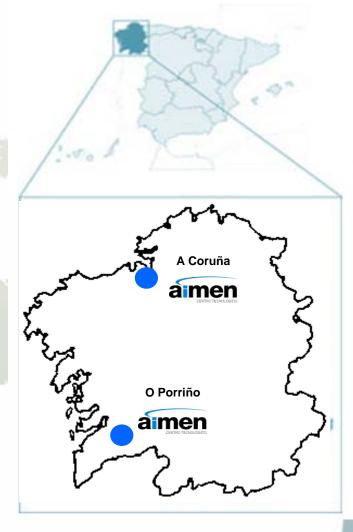
ORGANIZATION/COMPANY

Who is AIMEN?

The Technology Centre AIMEN was established in Vigo (Spain) in **1967**, promoted by a group of companies to provide **R&D** and **services** to the **Industry**.

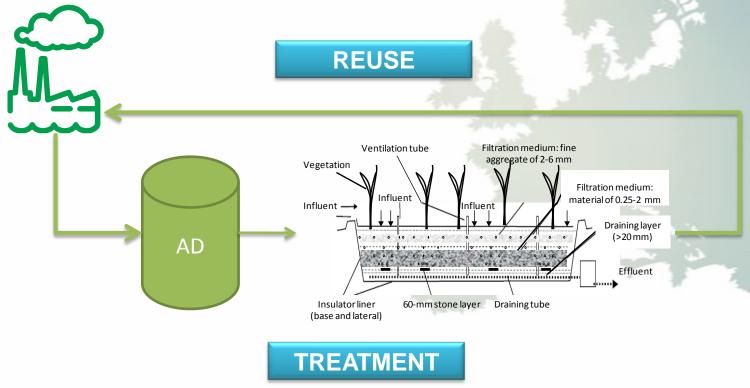
- Main research centre in Spain in the field of Materials, Joining Technologies and Laser Processing
- Non-Profit Private Association RTO
- 109 associated companies and more than 800 customers
- 100 R&D&i projects annually
 - 2014:
 - •13 FP7/H2020 projects
 - Coordinating: 8 projects





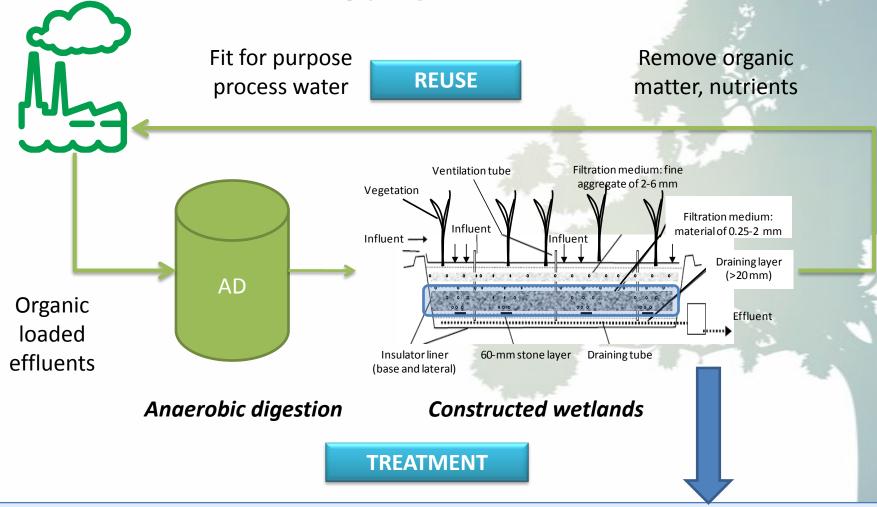
PROJECT IDEA

 MAIN CONCEPT: Treatment and Reuse of wastewater streams into process using low energy technologies (Anaerobic digestion + Constructed Wetlands)



- SPIRE Roadmap: Key Action 1.3: Optimal and integrated re-use of water
- H2020: SPIRE6-2015: Energy and resource management systems for improved efficiency in the process industries

PROJECT IDEA



Different kind of *industrial waste* (e.g: crashed concrete) as gravel layer to recover by adsorption valuable resources (e.g: P or metals).

EXPECTED IMPACT

- In relation to the call topic you will address (SPIRE 6- 2015)
 - **✓** Holistic resource management system:
 - Wastewater treatment for water reuse
 - ✓ Optimisation of interdependencies cross company collaboration
 - Waste as sorption material for water treatment
 - ✓ Optimisation of energy and resources supply and demand
 - AD+CW Low energy consumption
 - Water reuse in process (fit for purpose)
 - Work together with other treatment technologies and suitable for different industries.
- In relation to the SPIRE roadmap
 - ✓ Key Action 1.3: Optimal and integrated re-use of water
 - ✓ **Key Action 3.2.:** New processes for energy and resource efficient materials applied n sectors down the value chain WASTE2RESOURCE

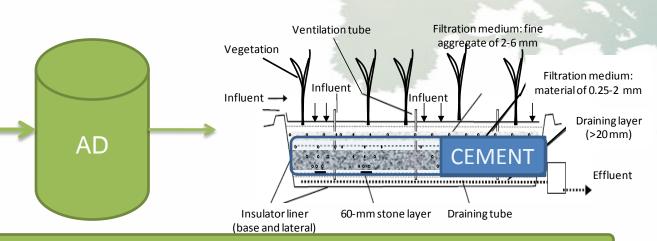
EXPECTED IMPACT

- Indicate the <u>cross-sectorial</u> characteristics of the idea
 - ✓ Wastewater treatment
 - ✓ Cement
 - √ Agri-food companies
 - √ High organic load effluents









EXISTING PROJECT CONSORTIUM

- AIMEN (RTO): Expertise in design and operation (Anaerobic digestion and constructed wetlands (AD + CW)
 - SWINGS (FP7) Coordinator (http://www.swingsproject.com)
 - HIGHWET (FP7) Coordinator (http://www.highwet.eu)
- Network of RTOs and SMEs related to AD + CW

LOOKING FOR PARTNERS

• Looking for a consortium aiming to incorporate this wastewater technology in order to reuse water in different processes and to take advantage of waste as sortion material to remove contaminants or valuable resources

CONTACT DETAILS

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Thank you for your attention!