



CE-SPIRE-07-2020

AccelWater

Full Title: Accelerating Water Circularity in Food and Beverage Industrial Areas around Europe

Aim:

AccelWater's project main objective is to optimize freshwater water consumption in the food and beverage industry under a water-waste-energy nexus by introducing beyond state-of-the-art water reclaiming, reusing and Artificial Intelligence enabled monitoring and control technologies. Thus the use of reclaimed water in the manufacturing processes of food and beverages will become possible.

Concept:

The food and beverage industry is the EU's biggest manufacturing, however it is one of the most water and energy intensive ones worldwide while the companies of this sector produce a lot of waste. Specifically, this industry consumes 56% of the available water for industrial and urban use. Additionally, food processing embeds 28% of the total energy used for production. Although progress has been made in increasing the water use efficiency through the use of modern technologies and methods, there is limited effort from the industry to minimize freshwater use during the raw material processing. Additionally, high water consumption in industrial areas leads to increased production costs. Currently, solutions for wastewater treatment in industries include the use of clarification, membrane filtration, reverse osmosis, process water polishing, disinfection with water treatment chemicals and UV, and biological treatment technologies. However, the use of these technologies under a water-waste-energy nexus is very limited.

Start date:

01/11/2020

End date:

31/10/2024