



HORIZON-CL4-2021-TWIN-
TRANSITION-01-14

AshCycle

Full Title: Integration of Underutilized Ashes into Material Cycles by Industry-Urban Symbiosis

Aim:

Ashes from the incineration of municipal solid waste, biomass and sewage sludge are currently underutilized and a part of them ends up in landfills. With them, a significant number of metals, nutrients, rare earth elements and industrially valuable minerals contained in the ashes are lost as well. The AshCycle project will provide tools for reducing the waste generation by developing new utilization possibilities.

Concept:

The project will deploy exemplary pilot solutions of the Industrial-Urban Symbiosis (I-US) concept by demonstrating novel recovery methods for valuable elements from the ashes. Furthermore, the aluminosilicate-rich minerals recovered from the ashes are piloted as a feedstock for companies across value chains to obtain products for construction and wastewater treatment leading to increased resource efficiency and circularity. The AshCycle project has a broad cross-sectorial symbiotic approach as there are companies involved from, for example, waste management, energy production, ash processing, construction material manufacturing, water treatment, and information technology. Moreover, a cloud-based digital tool will be developed to embed modern artificial intelligence (AI) and machine learning (ML) algorithms in such way, that they can be used by ash producers. With this tool, ash producers can utilize modern modelling methods to evaluate quality and optimal utilization potential of their ashes.

Start date:

01/06/2022

End date:

31/05/2026