



## **D3.1**

# **Selection of the investment projects for each of the lighthouse cities and regions**

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# 1. Executive Summary

HOOP project aims to provide Project Development Assistance (PDA) to 8 lighthouse cities and regions for the future implementation of biobased processes for the valorisation of the organic fraction of the municipal solid waste (OFMSW) and urban wastewater sludge (UWWS) that will help to unlock bio-based investments and deploy local bio economies in Europe. This deliverable provides the selected investment projects of each lighthouse city and region to valorise biowaste for the production of innovative, safe and sustainable bio-based products.

Before the definition and selection of the investment projects, in order to help the cities and regions on this decision, the Best Available Technologies (BATs) were identified for each lighthouse city and region. A specific methodology for the selection of the BAT has been developed. This methodology is based on information from the analysis of urban metabolism and baseline studies, including the current state of the city/region in terms of existing pilots, existence of an anaerobic digestion (AD) facility, the biowaste availability, the synergy with local economy, the need, and the alignment with city/region strategy. Besides, the most relevant parameters of the state-of-the-art of technologies for the production of biowaste based products, such as diagnosis, scalability, technical requirements, and expected impacts has been also considered. The proposed BATs are the result of a score obtained considering the abovementioned factors. Depending on the city and region, between two and four BATs have been proposed.

Based on the BATs suggested and upon the consultation with the Local HOOP Committees (LHC), each lighthouse city and region has selected the investment project/s. A total of 16 projects have been selected according to the specific characteristics, needs and preferences of each lighthouse. Among the technologies included in the HOOP portfolio most selected by the lighthouses are nutrient recovery, slow pyrolysis, and fermentation of used cooking oils.

The selection of the investment projects by the lighthouse cities and regions is based on their own needs and expectations, which could change during the HOOP implementation. In case this happens, this deliverable would be updated to include the new investment project arise together with the reasons and justification behind the changes.

The most popular investment projects are those related with the technologies of slow pyrolysis, nutrient recovery from dewatering of AD, fermentation of used cooking oils and insects fed with OFMSW and AD digestate.