

# BIN2BEAN

Turning biowaste into safe,  
effective and sustainable  
innovations for soil  
improvement

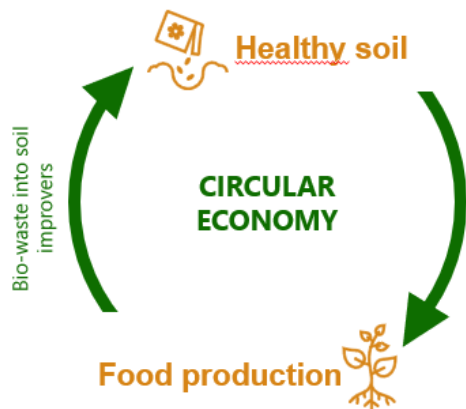
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How to valorise biowaste?



# Boosting the market deployment of safe, effective and sustainable innovations for soil improvement from bio-waste, towards regenerative soil systems

The general aim of the BIN2BEAN project is to help EU cities meet EU targets and objectives in their transition to healthy soils and soil regenerative systems, by **optimising bio-waste recycling into soil improvers** through innovative and economically viable value chains



## Project specific objectives:

- To support **3 cities** in restoring their soils from bio-waste
- To develop an **improved evaluation framework** for soil improvers from biowaste
- To **compare existing solutions** for the market uptake of the best performing
- To develop and pilot **12 business models** on innovative solutions for the production of soil improvers from biowaste
- To **support policymakers** in boosting local regenerative soil system

# Project partners



Consorzio  
Italbiotec



RUOKAVIRASTO  
Lisämedelverket • Finnish Food Authority



etaflorence  
renewableenergies



STADTREINIGUNG.HAMBURG





Soil fertility is decreasing

## CONTEXT

**In cities**

Between 60 and 70% of EU soils are unhealthy

need to use more

Soil improvers from biowaste

can be turned into

Bio-waste represents 1/3 of waste, only 17% is composted and digested (2018)

Already several existing solutions



## Bin2Bean concept

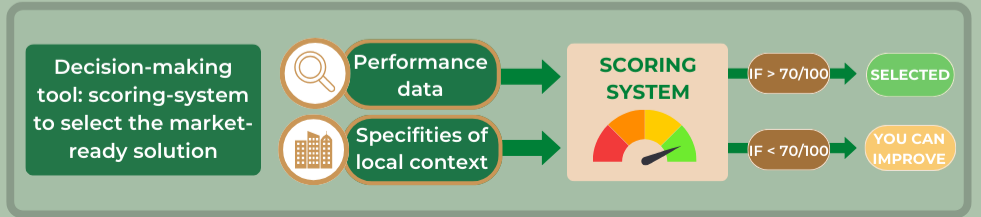
In 3 European pilot cities (Hamburg, Amsterdam, Egaleo), the project will:

- 1 Map and analyse local contexts and opportunities
- 2 Assess the safety and performance of bio-waste collection & resulting soil improvers
- 3 Select the most promising and relevant solutions to promote and fund
- 4 Develop local business models for these selected solutions

Based on their own local initiatives, context and needs

## Project Outcomes

PCDA (Plan, Do, Check, Act) Toolbox with roadmaps and guidelines



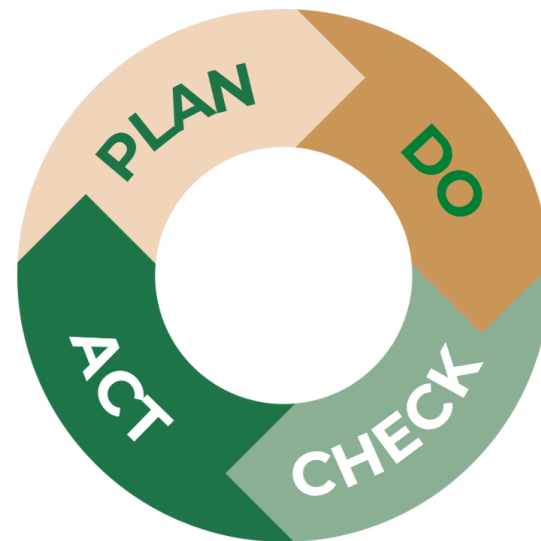
# Project results for the cities and local operators

## Toolbox with roadmaps and guidelines

**Aim:** guiding cities towards the replication and implementation of the BIN2BEAN approach

**Who:** cities, municipalities, waste managers

**What:** A roadmap on the sequencing and use of BIN2BEAN tools and guidelines on high-quality and efficient bio-waste collection and recycling, on safe and sustainable production and use of soil improvers and on maximizing the market uptake and economic viability of the most virtuous solutions.



# Project results for the cities and local operators

## App for end-users to select the best soil improver

**Aim:** supporting well-balanced decisions for farmers to optimise agriculture inputs

**Who:** end-users, farmers

**What:** Update an already available farmer accessible platform with indicators coming from the project. End-users will be able to provide information on their soils and soil improver(s) of their preference, and the app will then provide, through the set of Indicators developed by BIN2BEAN, the effects on soil health end-users may expect. **3 soil improvers** maximum per LL will be considered to enter the platform alongside with their technical information.

farmmaps



<https://www.farmmaps.net/en/>

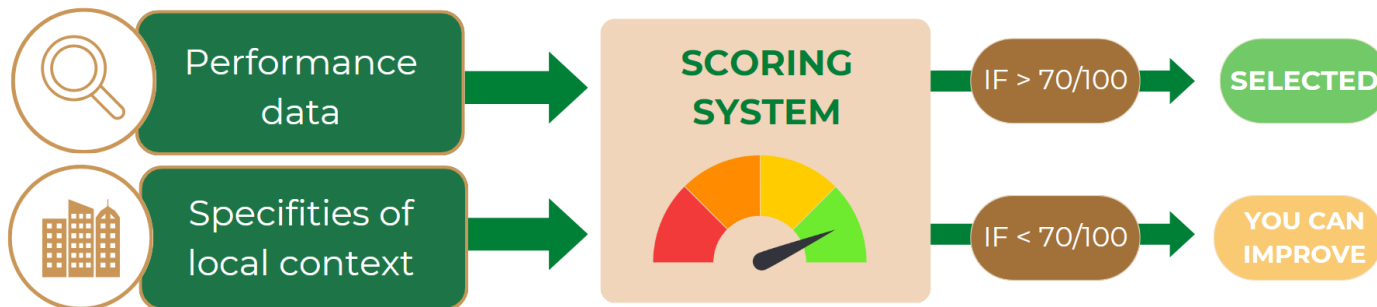
# Project results for the cities and local operators

## Scoring system as a decision-making tool

**Aim:** rates solution providers along the value chain to support cities in decision-making towards what is worth funding/investing on

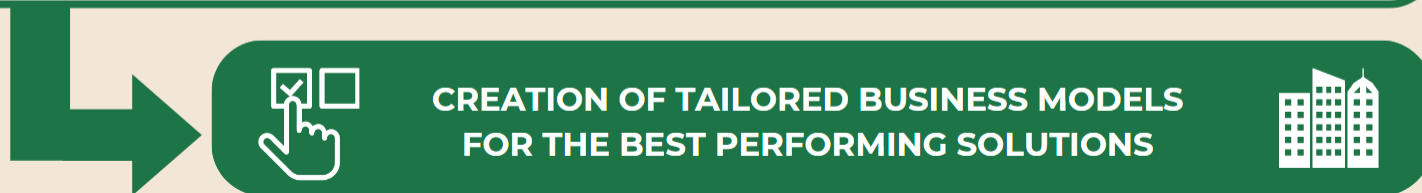
**Who:** policymakers, municipalities, cities

**What:** computing the overall performances of regenerative soil systems solutions, by combining a set of evidence-based indicators (technical, socio-economic and marketability).





# The BIN2BEAN approach: defining the best solutions for your city





# Living Labs



## Amsterdam

- District4district approach to collect OW since 2020
- Implement a new OW collection system via grinder for a new district (high buildings)
- Improve the quality of OW collected → high- quality valorisation



## Hamburg

- Door-to-door collection, although residual waste still contains 40% of OW
- Improve AD systems to produce soil improvers while reducing impurities also acting at social level to improve the biowaste collection (quality and quantity)



## Egaleo

- Transitional stage with regards to bio-waste management due to knowledge gaps
- Improve biowaste collection and attract citizens to the topic
- Demonstrate different strategies for composting to restore green urban areas

# What's new on BIN2BEAN?

>50 publications analysed at national, EU or international levels

18 cities interviewed across Europe

A survey with 455 consumers from 21 countries

15 interviews with solution providers

From bio-waste to soil regeneration: handbook of recommendations and good practices – a European perspective (D2.1)

COMING SOON TO OUR CHANNELS!



# Thank you!



## Contact details

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