DO

Field experimentation & Citizen Adoption



ON-SITE SOLUTIONS IMPLEMENTATION & PILOT ROLLOUT

Translating strategic plans into tangible, on-the-ground change requires launching tailored operational pilots that engage local communities directly in bio-waste collection and processing. This phase tests practical interventions in real-world urban settings to assess feasibility, operational challenges, and community acceptance before scaling up across the municipality.

Example of Egaleo

In the Living Lab of Egaleo, local authorities mobilized the educational community by introducing a municipal-wide school composting initiative. Led by the City Council in collaboration with its Waste Management and Green Spaces Departments, the municipality procured specialized composting units and distributed them to participating schools across all education levels. To ensure smooth operations and prevent pest issues, the units were carefully installed in open, shaded yard areas directly on the soil over protective netting.

Dedicated teams of school staff, teachers, and enthusiastic students were trained through educational seminars to manage the waste inputs, maintain the correct balance of organic material, and regularly mix the compost over a 3- to 4-month operational cycle (carefully scheduled outside

the scorching Greek summer months). The resulting compost was sent to testing laboratories for quality verification and subsequently used to nourish school garden soils. Beyond producing organic soil improvers, the pilot sparked immense motivation among young students and their families, successfully instilling long-term bio-waste recycling habits and environmental awareness across the broader local community.

Activity Abstract

END-USER ACCEPTANCE AND WILLINGNESS-TO-ADOPT

Understanding public acceptance and financial trade-offs is essential when testing and implementing new bio-waste schemes. This activity deploys an online Discrete Choice Experiment (DCE) to evaluate resident preferences for key system features, such as collection locations, monthly costs, biowaste end-uses, and information feedback, alongside sorting habits and socio-demographic factors. By gathering empirical preference data from citizens, municipalities ensure that newly rolled-out bio-waste systems align with user expectations, boosting adoption rates and correct sorting behaviour.

- **Who leads it:** The municipal waste management department leads the initiative in close collaboration with a research institution (e.g., a university) to design and model the experiment. Additional partners include market research or survey panel providers to administer the tool, alongside target residents across the municipality.
- **What needs to be done:** Define realistic, context-specific collection attributes (such as collection frequency or bin proximity) and design the online questionnaire. Run a brief pilot test to check for length and clarity before fielding the survey via an online panel or local public networks. Apply discrete choice modelling (e.g., mixed logit) to quantify preference weights, providing clear data on consumer willingness to pay and system preferences.
- **When to use it:** Execute this survey once local collection options and cost ranges are established.
- **Timeline:**
    - Preparation & setup: Dedicate 4 to 6 hours to define scenario attributes and cost levels, 3 to 4 hours for translation, 3 to 4 hours for pilot testing, and 5 to 8 hours for panel setup.
    - Fielding & analysis: Allow 2 to 4 weeks for online data collection across target demographics, followed by 15 to 20 hours of choice modelling and statistical analysis. The survey takes participants around 10 minutes to complete.

Activity Abstract

Activity Abstracts

IMPLEMENTATION OF SOLUTIONS

LL HAMBURG

WHO	
Who should lead the activity?	The city or the public waste management company
Who should be involved?	Housing industry, compost marketing firm or authority
WHAT	
Short description of the activity	Defined measures at bio-waste collection bins at the housing industry to change the behaviour of the habitants
Purpose/Goal	The quality biowaste including biowaste-bins from housing industry of the compost leaving the biowaste composting is good following the regular framework
Inputs needed to prepare the activity	Define housing industry to be involved, different communication activities by letters. Preparation of the habitants surveys. Mailings, talks, posters.
Main steps	Recherche, planning, preparation, communication, determinations in person on the place, realisation, evaluation
Outputs of the activity	Testing the results by answering the question, if the quality of biowaste from underground biowaste collection bins have the quality to be handled in the composting plant and not to be rejected to be handles as residual waste
WHEN	
When should the activity be implemented?	Summer after 1 year of preparation
How much time should be planned to do this activity?	1 year
Timeline	M1 Kick-off, M5 selection of measures, M 10 starting activities, M13 end of activities
WHERE	
Where should the activity take place? (e.g. online, in person, on site)	Selected sites of multi-story-houses with bad biowaste quality
HOW WOULD YOU IMPROVE THIS ACTIVITY, COMPARED TO HOW YOU DID IT IN BIN2BEAN?	
Your feedback on experience or from people participating	After realized all these measures the quality of biowaste from biowaste-underground bins I as a whole is still that bad, that this material is still that bad, that it cannot be handles in a biogas and composting plant. But to mention is, that the biowaste-regulation set stricter rules. So the challenge will be follow after the end of the bin2bean-project anyway.

LL EGALEO

WHO	
Who should lead the activity?	The City Council and some specific Departments (Waste Management Department, Green Spaces Department)
Who should be involved?	Local authorities, schools and teaching staff, compost testing labs
WHAT	
Short description of the activity	The city should invite all schools from all school levels to engage in school composting. Those schools who either have their own composting device or that have obtained a composting device from the Municipality can join the activity.
Purpose/Goal	To raise awareness in school teachers, students and their families on how to collect biowaste at home and/or school and use the composting device to produce good quality compost. To obtain good quality compost from schools. To test the compost in the lab to check for contamination or impurities.
Inputs needed to prepare the activity	Define schools that will eventually be involved, make sure the composting device has some key requirements, monitoring of the process at least twice per month since there needs to be a team of people per school to mix up the content,
Main steps	1. Find a company that can provide the Municipality with composting devices. 2. Offer the composting devices to schools that interested in joining the procedure. 3. Make sure the device is correctly established in the schools (open and shaded space, kept away from animals if it is in a yard as much as possible, set up on the soil since underneath there is a plastic net to hinder animals and rats from entering). 4. Identify some key school staff that will be in charge and responsible for the content of the device. 5. Identify some people to mix and monitor during the summer months (depending on the climate and the country, Greece is too hot for compost to be able to survive during the summer months). 6. Spend 3-4 months monitoring the content and throwing also the correct analogy of green waste. 7. Send the compost to the adequate lab to test for its quality. 8. OPTIONAL: have schools engage in a competition for the best composting product and have them rewarded by the Municipality.
Outputs of the activity	Awareness of the school community (school teaching staff, students and their families) in terms of BW recycling and management at home/school level. Educate the school community on BW. Testing of the compost. Use of compost in school garden soils.
WHEN	
When should the activity be implemented?	Any time, avoiding summer months if too hot and too dry.
How much time should be planned to do this activity?	Three to four months to be able to have a good amount of compost.
Timeline	Depending on when the project starts. For Egaleo M18 and on was ideal.
WHERE	

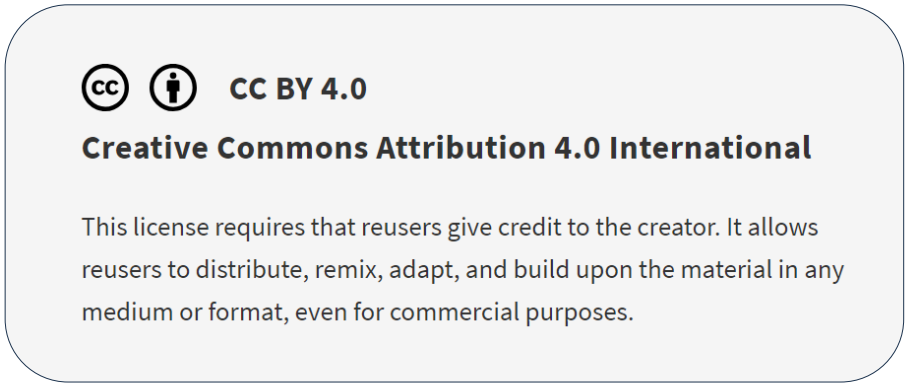
Where should the activity take place? (e.g. online, in person, on site)	In person because there is no other way of engaging in this activity. On site(school yards and gardens)
HOW WOULD YOU IMPROVE THIS ACTIVITY, COMPARED TO HOW YOU DID IT IN BIN2BEAN?	
Your feedback on experience or from people participating	Some more educational seminars should be delivered to the school teachers and students before they engage in this activity. We offered one per school. Students were thrilled to know about the BW recycling procedure and how much the compost can offer to the soil. All students whose school agreed to work the composting device had excellent motivation even if the compost product was not the best every time. The message was delivered and the younger people have already started being familiarized with BW recycling.

END-USER ACCEPTANCE AND WILLINGNESS TO PAY

WHO	
Who should lead the activity?	City/Municipal Waste Management (WM) dept., in collaboration with a research institution (e.g. university) to design and analyze the discrete choice experiment.
Who should be involved?	Citizens (residents of the target region), a market research/survey panel provider to administer the survey, City WM dept., researchers to design the DCE and information treatments.
WHAT	
Short description of the activity	An online discrete choice experiment (DCE) survey administered to residents, testing preferences for different biowaste collection system designs. Depending on local context, the DCE can vary either the type of collection system, monthly cost, end-use of the biowaste, the location of collection points, access to information, and feedback on biowaste quality. The survey also captures current biowaste sorting behavior and socio-demographics.
Purpose/Goal	To identify which biowaste collection system attributes residents prefer in order to design biowaste collection systems that increase resident uptake and correct sorting behavior.
Inputs needed to prepare the activity	Previous citizen studies (if any), current biowaste collection challenges and infrastructure options in the target region, a defined set of realistic collection-system attributes and levels to test (informed by local policy options and feasibility)
Main steps	• Define the local context-specific attributes and levels for the DCE based on what is realistically implementable in the target region • Design the survey • Pilot test the survey for clarity and length

	• Distribute the survey via an online panel provider or through local recruitment channels • Analyze results using discrete choice modelling (e.g. mixed logit) to estimate preference weights for each attribute
Outputs of the activity	Quantified resident preferences for collection system design attributes
WHEN	
When should the activity be implemented?	At the beginning of the Plan phase, once local collection-system alternatives and cost ranges have been identified
How much time should be planned to do this activity?	Survey completion time for participants is approximately 10 minutes. Preparation typically requires several weeks; fielding through a panel provider to reach an adequately powered sample typically takes 2–4 weeks; analysis (choice modelling) requires specialized statistical expertise and typically several weeks additional.
Timeline	• **Attribute/scenario design:** 4–6h (defining collection systems, cost levels, locations) • **Survey translation and adjustment:** 3–4h • **Piloting:** 3–4h to test and refine before full launch • **Fielding via own network or panel provider:** depends on whether you already have access to a panel; if not 5–8h to set up. Then 2–4 weeks for data collection • **Choice modelling and analysis:** 15–20h (requires discrete choice/mixed logit expertise)
WHERE	
Where should the activity take place? (e.g. online, in person, on site)	Online
HOW WOULD YOU IMPROVE THIS ACTIVITY, COMPARED TO HOW YOU DID IT IN BIN2BEAN?	
Feedback on experience from Living Labs or people participating	• Novel systems like the kitchen sink grinder were hard to evaluate, since most residents had never encountered one — it's unclear whether low preference reflects genuine dislike or general aversion to unfamiliar technology • Cost is a tricky attribute: residents usually have no real sense of what they currently pay for waste collection, since it's bundled into general municipal taxes. Making cost explicit and salient in the experiment may inflate its apparent importance relative to how much it actually drives real-world decisions
Feedback on experience from partners leading the activity	• Overall, the DCE gives good indications of what residents want from an "ideal" collection system and which features matter most to them in principle • In an online survey format, there's no way to confirm whether participants actually understood the written description of a new collection system before making their choice

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Bin2Bean

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