Methodology Kit on stakeholders' engagement in circular lifestyles

Part of the NiCE D.2.4.1 Solution Box

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NICE GUIDES OVERVIEW

This document is a part of the NiCE Solution Box – a set of four guides offering practical and interconnected approach to advancing circular lifestyles and sustainable development in cities. Though each guide addresses a specific area, together they provide a complete toolbox for organizations, businesses, authorities, and citizens seeking to make urban spaces more resilient, resource-efficient, and community-oriented. All guides can be accessed on the NiCE Knowledge Platform: https://circularlifestyle.eu/resources.

Methodology Kit on stakeholders' engagement in circular lifestyles

This guide focuses on the human and organizational dimension of circular development. It provides step-by-step methods for NGOs, schools, and public authorities to initiate participatory processes, re-activate spaces, and encourage behavioral changes toward sustainability. It emphasizes scaling successful initiatives and sustaining impact over time. The kit combines theory with good practices from Central European cities (Bologna in Italy, Brzeg Dolny in Poland, Budapest in Hungary, Graz in Austria, Jihlava in Czechia, Košice in Slovakia, Ptuj in Slovenia, and Würzburg in Germany), offering versatile tools that can also be applied in other areas of sustainable urban development.

Guide: How to build, run and sustain a multifunctional resource centre

This guide focuses on transforming underused urban areas into dynamic hubs supporting circular practices. It provides a framework for planning, designing, and managing spaces that encourage the sharing, repair, and reuse of materials. Targeted mainly at NGOs and SMEs, this guide emphasizes the importance of stakeholder engagement, financial planning, and day-to-day operations. It also includes case studies from the NiCE Project that show how such centres can become economic and social anchors for city centres in Brzeg Dolny (Poland), Graz (Austria), Košice (Slovakia), and Ptuj (Slovenia).

How to link sustainable e-commerce with city centres. A guide for SMEs and municipalities to bring retail channels together for the benefit of all.

This guide responds to the growing influence of e-commerce on local economies. It offers SMEs actionable strategies to connect their online business activities with physical urban spaces, ensuring that city centres remain vibrant and economically relevant. This includes exploring localized delivery systems, creating synergies between digital and physical marketplaces, and encouraging sustainable practices that align with circular lifestyles. The guide also identifies opportunities for collaboration with logistics providers, technology developers, and community groups, positioning SMEs as key drivers of sustainable urban commerce.

Circular Water Kit addressing water re-use and water saving in cities

This guide highlights water as a critical resource in urban environments. It explains how local authorities and citizens can improve water efficiency, integrate reuse technologies, and enhance climate resilience. The guide's focus is both educational and applicative: it raises awareness about the value of water and provides policymakers and planners with tools to implement circular water strategies. Real-world examples from Bologna (Italy) illustrate the benefits of collaboration between public authorities and communities, showing how saving and reusing water can strengthen sustainability efforts across cities.

Content

1 INTRODUCTION

1.1 Context: about the NiCE project

The NiCE (From Niche to Centre - City Centres as Places of Circular Lifestyles) project is a transnational initiative aimed at revitalizing urban centres by promoting circular and sustainable lifestyle and consumption. In response to challenges such as the COVID-19 pandemic and the rise of online commerce, which have led to the decline of traditional retail spaces, NiCE seeks to transform city centres into vibrant hubs of circular lifestyles.

Central to the project's vision is the promotion of sustainable consumption habits and the establishment of strategic frameworks to support circular lifestyles. Through innovative urban development approaches, NiCE encourages the repurposing of spaces for reuse, repair, and sustainable consumption initiatives. The project also emphasizes education and collaboration, offering inspiration and practical tools to municipalities, citizen associations, and policymakers to foster sustainable behaviors and practices.

NiCE operates across eight Central European countries – Austria, Czechia, Germany, Hungary, Italy, Poland, Slovakia, and Slovenia – bringing together a diverse group of partners to share knowledge, implement pilot projects, and scale successful models. At the core of this cooperation are eight pilot actions implemented in different urban contexts, which served as real-life testing environments for circular lifestyle solutions and stakeholder engagement approaches.The methodology presented in this kit is directly derived from the collective lessons learned across these eight pilots. Through continuous exchange, joint reflection, and cross-evaluation among project partners, experiences from local implementations were systematically compared, validated, and refined at the transnational level. This collaborative process enabled the identification of common success factors, transferable methods, and context-sensitive adaptations.

As one of key outputs of NiCE's mission, the present *Methodology Kit on stakeholders' engagement in circular lifestyles* provides a structured approach for turning this vision into tangible actions, fostering greater collaboration, innovation, and resilience in urban environments across Central Europe. It translates the shared, transnational knowledge generated within the project into a coherent and replicable framework for stakeholder engagement.

1.2 Purpose of the Methodology Kit

The *Methodology Kit on stakeholders' engagement in circular lifetyle* aims to provide a comprehensive and practical guide for fostering collaboration and supporting the transition to

circular lifestyles in urban centres. The document serves as a step-by-step manual for NGOs, schools, and public authorities, equipping them with tools and insights to implement sustainable practices effectively.

The primary objectives of this kit are to demonstrate:

- Applied methods for initiating participatory processes with local stakeholders to reactivate spaces for circular economy initiatives.
- Strategies for engaging local actors and citizens to inspire and sustain behavioral changes toward circularity.
- Approaches to ensure the continuation and scalability of circular offers, extending their impact beyond the initial stages.
- Good practices from the NiCE project implemented across Central European countries, including Austria, Czechia, Germany, Hungary, Italy, Poland, Slovakia, and Slovenia.

All proposed methods and approaches are grounded in practical experiences gathered during the implementation of the eight NiCE pilot actions and enriched through structured transnational knowledge exchange among project partners.

In addition, the kit seeks to facilitate the wider implementation of circular lifestyles in Central Europe by providing actionable insights and methods. Furthermore, it supports promoting broader stakeholder engagement in the sustainable development of cities, fostering collaboration across sectors and communities.

While the primary focus of this kit is on circular lifestyles, the methods and approaches outlined are versatile and can be applied to other areas of sustainable urban development. By combining theoretical guidance with real-world examples, this document aims to inspire innovative solutions and drive meaningful action toward more sustainable and resilient urban environments.

1.3 Target groups

The Methodology Kit on Stakeholders' Engagement is designed to support a diverse range of users committed to fostering circular lifestyles and sustainable urban development. The primary target groups for this document are:

- NGOs: Non-governmental organizations play an important role in mobilizing communities, initiating grassroots projects, and advocating for sustainable practices. This kit provides them with tools to engage stakeholders, create partnerships, and implement impactful circular initiatives.

- Schools and universities: Educational institutions are vital for shaping the next generation's understanding and commitment to sustainability. By using this methodology, schools and univerisites can integrate circular lifestyle concepts into educational activities, engage students and their families in sustainable practices, and create collaborative projects that benefit the wider community.
- Public authorities: Local and regional governments are crucial in enabling and sustaining circular economy initiatives. This kit offers practical guidance to public authorities for designing policies, fostering collaboration among stakeholders, and scaling circular offers in their jurisdictions.

Although these three groups are the primary users, the methodology is versatile and can be utilized by other organizations, businesses, interest groups, Living Labs and community leaders interested in advancing sustainable development. Each section of the kit is tailored to provide actionable steps and examples relevant to the unique needs and roles of these target audiences.

By building on transnationally validated experiences, the methodology ensures relevance across different governance systems, cultural contexts, and urban settings in Central Europe.

2 CIRCULAR LIFESTYLE CONTEXT

2.1 The role of circular lifestyle in modern cities

A circular lifestyle is one that focuses on reducing, reusing, repairing and recycling materials (referring to the R-Framework) to create a more sustainable way of living.[1] Instead of the traditional "take, make, dispose" model, circularity encourages keeping resources in use for as long as possible. Transitioning to a circular economy means significant changes to ways of living. However, these aspects of CE are barely addressed.

The approach of circular lifestyles can be especially relevant to modern cities. They are home to over half of the global population. For Europe, the number is expected to rise to 83.7% by 2050.[2] As urban areas continue to grow and have become hubs of various forms of consumption of goods and services, they must lead the way in transitioning to circular economies and practices (CE). Cities are the places where change can be implemented locally and, on the ground, together with citizens.

[1] Cf Szabo et al. 2024, https://link.springer.com/content/pdf/10.1007/s43621-024-00726-0.pdf
[2] European Commission. Urbanisation in Europe. https://knowledge4policy.ec.europa.eu/foresight/topic/continuing-urbanisation/urbanisation-europe_en, Accessed 16. Dec.2025

Circular lifestyles are vital in addressing the environmental, social, and economic challenges cities face. Environmentally, they help reduce waste, lower carbon emissions, and conserve resources. Socially, circular practices can improve quality of life by creating cleaner, more liveable spaces or by integrating citizens in joint activities. Economically, they open up new opportunities for businesses and communities, like job creation in the recycling, repair, food or energy sectors. By embracing circularity, cities can reduce their reliance on finite resources and decrease environmental damage.

Fostering circular lifestyles also aligns closely with broader sustainability and climate neutrality goals, particularly in the context of the EU's commitment to achieving climate neutrality by 2050. Circular lifestyles as described above directly contribute to these objectives. Adopting practices like extended product lifecycles, energy saving, using products longer and a reduced consumption of animal products helps minimize CO2 emissions. These actions not only support EU-wide and national climate targets but also foster everyday behavior changes that align with climate neutrality goals.

By integrating circular economy principles into local climate protection efforts, cities can promote sustainable consumption patterns. This can include initiatives such as encouraging the use of electric mobility, promoting energy-efficient housing, and supporting repair and reuse industries. Circular lifestyles, therefore, are not just a theoretical concept. They are a practical means of achieving sustainable and climate goals, embedded in the daily routines of individuals and communities. It is important to note, that several cities worldwide have moved beyond simple recycling programs to adopt comprehensive Circular Economy Roadmaps focusing on different key areas such as food, plastics, textiles, electricals, transportation and the built environment.

2.2 Key stakeholders in circular urban development

Different stakeholders are equally responsible and important in their field for CE transition in urban areas. Therefore, advancing circular lifestyles in cities requires the collaboration of multiple stakeholders:

- Local communities and citizens are the target group of measures for promoting circular lifestyles. But they are also the backbone of the transition, as citizens adopt circular practices in daily life, from reducing waste or repairing to supporting local, sustainable businesses.
- NGOs often raise awareness, advocate for policy changes, and lead community-based projects that promote circular lifestyles.

- Public authorities create policies and infrastructure, such as circular economy strategies, recycling programs and incentives for sustainable practices, to support the transition at a city-wide level.
- Schools can incorporate topics related to circular lifestyles into their curriculum, implement practices together with students (such as a repair workshop or a garden), or collaborate with local initiatives and visit them.
- Businesses are key in innovating products and services that support circular principles, like repair services, upcycling, or sustainable goods.

Incorporating stakeholder engagement from the start of circular lifestyle projects, policies or any other initiatives ensures the sustainability, scalability and the acceptance of such activities. It also ensures a sense of ownership, making participating stakeholders feel responsible for the success as well. This leads to solutions being more likely to be adopted and maintained over time. For example, when businesses and public authorities collaborate on waste management systems, solutions are more likely to be both practical and backed by policy. Likewise, when the local community is involved in the planning process of a repair café or other initiatives, when they are able to contribute ideas and needs, it is more likely that they will use and support the new offers in the future.

Furthermore, research within the NiCE project showed not only the diversity of stakeholders but also the diversity of circular lifestyle offers. There are a variety of collaboration opportunities between stakeholders for a wide range of initiatives and activities. It is therefore important for cities to consider all these options if they want to promote circular lifestyles in their centres.

2.3 Challenges and opportunities in stakeholder engagement

One of the key barriers to engaging stakeholders in circular urban development is the lack of knowledge about circular lifestyles and the circular economy. Some stakeholders may not be familiar with the principles or the benefits of circular approaches, leading to hesitancy or resistance to change. In addition, there are often barriers related to trust: stakeholders may lack confidence in new ideas or in the groups involved, particularly if the proposals are perceived as untested or risky.

Another significant obstacle is the lack of capacities: For example, especially citizens, small businesses or local governments may face limitations in terms of funding, time, or administrative resources. The complexity of circular initiatives may also result in dependence on key staff, creating vulnerability when those individuals leave or become unavailable. Moreover, without a clear, direct benefit for those involved, such as financial returns, stakeholders might hesitate to invest in long-term projects. Upfront costs and the need for long-

term planning may deter participation, particularly in environments where short-term gains are prioritized over more qualitative benefits like skills development, cooperation, and empowerment.

These challenges can be mitigated through effective communication and collaboration strategies. First, it is essential to clearly define target groups and ensure that the circular activities are embedded within existing local structures. This makes initiatives more relatable and accessible to stakeholders. Keeping the formats of these initiatives simple, practical, and flexible helps reduce complexity, which can deter participation. Additionally, pop-ups and temporary spaces offer low-risk opportunities for stakeholders to test ideas without committing significant resources upfront. Participatory and co-creation methods are particularly valuable in building ownership and encouraging active involvement, making stakeholders feel more invested in the outcome. Aligning these activities with municipal and regional strategies enhances their relevance and long-term sustainability.

Finally, involving a wide range of stakeholders in circular initiatives also brings numerous opportunities. First, expertise from diverse fields can significantly enrich the development process. Ideas can be viewed from multiple perspectives and refined as a result. Task division according to expertise allows each participant to contribute in a way that leverages their strengths. In addition, involving various stakeholders provides access to different target groups, which can enhance the reach and sustainability of the initiative, ensuring that it resonates with a broad section of the community. Moreover, the collaboration of new or previously unconnected stakeholders can lead to the development of innovative and completely new ideas that would not emerge in more homogeneous groups.

3 INITIATING A PARTICIPATORY PROCESS

3.1 Identifying challenges to be addressed

The identification of challenges represents a foundational step for the development of effective circular lifestyle offers and should be grounded in a deep understanding of the local context. This process begins with the assessment of the socio-economic, environmental, and cultural conditions of the target area, acknowledging that circular solutions must be place-based and responsive to local specificities. As highlighted by recent Urban Living Lab approaches to circular economy co-design[3], contextual analysis enables the alignment of proposed actions

[3] Innella C, Ansanelli G, Barberio G, Brunori C, Cappellaro F, Civita R, Fiorentino G, Mancuso E, Pentassuglia R, Sciubba L and Zucaro A (2024) A methodological framework for the implementation of

with everyday practices, territorial resources, and institutional settings. Within the NiCE project, a similar needs-driven approach was applied for example in the POP UP STORE initiative in Ptuj (section 6.8), where the pilot addressed the challenge of limited public awareness of circular economy practices and the lack of accessible spaces for citizen engagement. On the other hand, the BME University Living Lab (Section 6.4) demonstrated how businesses and citizens can co-create circular solutions to foster a higher level of societal commitment to the transition.

This phase should be supported by the systematic consultation of existing data and studies, including surveys, policy reports, local statistics, and previous project outcomes. The use of evidence-based inputs allows for the identification of structural constraints and opportunities, while avoiding duplication of efforts and ensuring continuity with ongoing initiatives. Building on this knowledge base, existing gaps should be analysed, particularly in relation to the availability of circular products and services, levels of stakeholder engagement, governance arrangements, and patterns of resource use. This approach was applied, for example, in the Jihlava pilot (Section 6.2), where an initial analysis of reuse centre operations revealed that manual record-keeping significantly limited efficiency, data quality, and scalability, leading to the identification of digitalisation as a key intervention area. Similarly, in the Bologna pilot (Section 6.5) an initial analysis of local environmental conditions and ongoing initiatives highlighted increasing challenges related to water scarcity and extreme climate events, leading to the identification of circular water use in urban contexts as a key intervention area.Stakeholder engagement plays a crucial role in problem identification. Involving local actors, such as citizens, businesses, public authorities, and civil society organisations, helps to validate analytical findings, surface overlooked issues, and ensure that challenges are defined in an inclusive and shared manner. Participatory methods foster mutual learning and enhance the legitimacy of the identified challenges.

Finally, challenges should be prioritised according to their potential impact, urgency, feasibility, and relevance for stakeholders. This prioritisation supports strategic decision-making and guides subsequent co-design activities. Examples from the NiCE pilot cities illustrate how context-specific barriers, ranging from limited awareness of circular practices to fragmented local ecosystems, can be identified and addressed through a structured and participatory approach. For example, in the Re-use Centre Košice (Section 6.7), local challenges related to waste, social inclusion and underused resources were identified and addressed through a

urban living lab on circular economy co-design activities. *Front. Sustain. Cities* 6:1400914. doi: 10.3389/frsc.2024.1400914

Living Lab participatory approach. Also, in both the Jihlava (Section 6.2) and Bologna (Section 6.5) pilots the combination of data analysis described before was coupled with stakeholder consultations and helped to uncover not only technical or environmental challenges (manual record-keeping and water scarcity, respectively) but also organisational, behavioural, and awareness-related barriers affecting circular service development and the promotion of sustainable lifestyles among citizens and households.

The Bologna pilot further highlighted how combining contextual analysis with stakeholder engagement helps to address not only environmental challenges, such as water scarcity, but also behavioural and awareness-related barriers, particularly in promoting more sustainable water use practices among citizens and households.

3.2 Identifying and mapping stakeholders

Building on the identification of key challenges, the next step focuses on identifying and mapping the stakeholders who play a role in addressing them. Stakeholder mapping aims to recognise all relevant actors involved in, or affected by, the development of circular lifestyle offers within the target territory. These typically include non-governmental organisations, schools and educational institutions, public authorities, small and medium enterprises, large companies, citizens, and media actors, reflecting the complexity of local socio-economic ecosystems. The NiCE pilots applied this approach in their specific contexts and on their specific topics so, for example, in the Jihlava pilot (Section 6.2) stakeholder mapping included municipal authorities, a local NGO operating the reuse centre, national reuse networks, and supporting institutions, while in Bologna (Section 6.5) along with the Municipality, the local water management company, research groups from the University of Bologna, start-ups specialised in soilless cultivation, schools, and local associations were involved, and in Ptuj (Section 6.8) stakeholder mapping combined existing project networks with local ecosystem analysis, bringing together creative professionals, entrepreneurs, NGOs, public institutions and citizens to participate in the POP UP STORE activities.

This activity should be conducted through a combination of analytical and participatory techniques. Desk-based analysis of local governance structures, stakeholder matrices, and network analysis can be used to identify actors according to their influence, interest, and potential contribution. In line with Urban Living Lab approaches, systemic frameworks such as the quintuple helix model support a balanced and cross-sectoral identification of stakeholders across public, private, academic, and civil society domains. This process was operationalised through the establishment of Local Advisory Boards, which served as a platform for continuous validation of stakeholder roles, needs, and contributions throughout the pilot.

Participatory tools, including interviews, focus groups, and workshops, are essential to validate and refine the mapping process by integrating stakeholders' perspectives and contextual knowledge. As demonstrated in the Brzeg Dolny pilot (Section 6.6), stakeholder mapping can be effectively carried out using a triangulation approach that combines desk research with participatory methods, such as surveys targeting residents, NGOs and local businesses, as well as interviews and co-creative workshops, thereby ensuring a comprehensive and context-sensitive understanding of local needs and perspectives related to the circular economy. In the Bologna pilot (Section 6.5), stakeholder mapping and engagement were further refined through a combination of dedicated meetings, public events, and co-design activities, allowing for the progressive inclusion of additional actors such as teachers, citizen groups, and local associations, and ensuring a context-sensitive understanding of needs and opportunities.

Visual tools, such as ecosystem maps, help illustrate relationships, collaboration opportunities, and gaps in engagement. Evidence from successful Urban Living Lab [4] experiences shows that early and comprehensive stakeholder mapping strengthens co-design processes and enhances the relevance and acceptance of circular solutions. The Bologna experience (section 6.5) also showed that stakeholder mapping is an evolving process, as new actors were progressively involved throughout the pilot, including specific target groups such as students and urban gardening communities, adapting to emerging needs and levels of participation.

Stakeholder mapping should therefore be considered a dynamic and iterative process, evolving throughout the project lifecycle in response to changing contexts and levels of engagement. The University Living Lab at BME (Section 6.4) used workshops to engage Bachelor's and Master's students, as well as focus group discussions for doctoral students, to identify local needs and challenges.

3.3 Creating a Participation Plan

Purpose and Goals of the Participation Plan

The Participation Plan aims to ensure the structured, inclusive, and effective involvement of relevant stakeholders in the implementation of your project activities. Its primary purpose is to clarify the intended outcomes of stakeholder engagement and to define how participatory processes contribute to the overall objectives of the project, particularly in relation to co-

[4] Innella C, Barberio G, Brunori C, Cappellaro F, Ceddia AR, Civita R, Dimatteo S, Ferraris M, Pentassuglia R and Sciubba L (2024) Experimenting urban living lab methodology on circular economy co-design activities in some Italian urban territories. *Front. Sustain. Cities* 6:1406834. doi: 10.3389/frsc.2024.1406834

creation, knowledge exchange, and capacity building. Through active participation, stakeholders are expected to contribute local knowledge, validate project actions, support implementation, and enhance the long-term sustainability and transferability of results.

The participation plan seeks to strengthen ownership of project outcomes, foster collaboration across sectors, and ensure that developed solutions are aligned with real needs and contexts. It also supports transparency, mutual learning, and increased acceptance of project results among target groups. In the Jihlava pilot (Section 6.2), stakeholder participation combined technical development with community engagement, ensuring that digital solutions were continuously tested and adjusted based on user feedback and operational needs. The POP UP STORE pilot in Ptuj (Section 6.8) illustrates how participation planning can include both structured engagement activities and open formats that allow stakeholders to experiment with circular solutions.

Stakeholder Roles and Responsibilities

Stakeholders should be grouped according to their roles and level of involvement, as demonstrated for example in Košice (Section 6.7), where clearly defined roles of NGOs and public actors supported the effective operation of the Re-use Centre. Public authorities and policy makers are engaged to provide strategic guidance, ensure alignment with local and regional policies, and facilitate institutional support. Educational and research organisations contribute expertise, analytical input, and methodological support. Civil society organisations, NGOs, and community groups represent local interests, support outreach activities, and ensure inclusiveness. Private sector actors and practitioners contribute practical insights, innovation potential, and feedback on feasibility and implementation.

Project partners are responsible for coordinating participation activities, facilitating dialogue, documenting inputs, and ensuring feedback loops between stakeholders and the project consortium. Stakeholders are encouraged to actively participate in discussions, provide feedback, and contribute to co-creation processes within their capacities.

Timeline and Milestones

The participation plan should follow a phased approach. An initial mapping and engagement phase focuses on identifying key stakeholders and establishing contact. This is followed by an active participation phase, during which stakeholders are involved in workshops, consultations, and co-creation activities. Interim milestones include validation of interim results, collection of feedback, and adjustment of activities where needed. A final phase focuses on evaluation, reflection, and dissemination of outcomes, ensuring that stakeholder contributions are acknowledged and integrated into final outputs. The Jihlava pilot (Section 6.2) followed an

iterative approach, where stakeholder input collected during workshops, public events, and advisory board meetings directly informed ongoing adjustments of both digital tools and engagement activities.

Tools and Techniques for Participation

A mix of participatory tools and techniques should be applied to ensure flexibility and accessibility. These include participatory workshops and round tables, focus groups, semi-structured interviews, and both online and offline surveys. Digital tools can be used to facilitate broader participation and transnational exchange, while face-to-face formats support in-depth discussion and trust-building. Where appropriate, interactive and gamified methods can be applied to encourage engagement, particularly among younger or less traditionally involved stakeholder groups. The selection of tools should be based on the specific objectives of each engagement phase, available resources, and stakeholder preferences. A combination of workshops, public events (such as Reuse Days), and digital communication channels proved particularly effective in Jihlava (Section 6.2), highlighting the importance of combining online and offline formats to reach diverse stakeholder groups.

Resource Allocation

Resources for participation activities should be allocated within the project budget and include staff time, facilitation costs, meeting venues, digital tools, communication materials, and, where relevant, external expertise. Synergies with existing networks, events, and initiatives are used to optimise resource use and increase outreach.

Monitoring and Adaptation Strategy

The implementation of the participation plan should be monitored on an ongoing basis. Key indicators include the number and diversity of stakeholders involved, frequency of engagement activities, and quality of stakeholder contributions. Feedback could be collected through meeting summaries, surveys, and informal consultations. Based on monitoring results, the participation plan can be adapted to address emerging needs, improve engagement methods, or respond to contextual changes. This adaptive approach ensures the relevance, effectiveness, and resilience of stakeholder participation throughout the project lifecycle.

Creating a participation plan was an important condition at BME for the implementation of the University Living Lab (Section 6.4). Since this pilot action element covered an entire academic semester and included several co-creative activities for students and partners, a 14-week timeline and task plan were established prior to the start of the semester.

3.4 Reaching stakeholders

Crafting Clear Messaging

Reaching stakeholders should be based on the development of clear, concise, and tailored messaging that explains the purpose, relevance, and benefits of participation. Communication should emphasise how stakeholder involvement contributes to concrete project outcomes, local development, and shared learning. Messages should be adapted to different target groups, highlighting practical benefits, opportunities for influence, and the value of local knowledge, while avoiding overly technical language. Consistency in key messages should be ensured across all communication materials.This approach was showcased at the BME pilot action (Section 6.4). Since the pilot involved engaging several stakeholder groups through various events, formulating clear messages for each element was of high importance. Starting with the European Researchers' Night, we co-created an appealing title that reflected the event's purpose: "Is it possible to live in a city sustainably?". Similarly, the university course applying the University Living Lab methodology was given the straightforward title "Sustainable Business Model Design." Leveraging local networks played an important role in the citizen science activities, as both the European Researchers' Night and the Intensive Seminar acted as well-established "brands".

Communication Channels

A mix of communication channels can be used to effectively reach diverse stakeholder groups. Digital channels, including project websites, social media platforms, email newsletters, and online invitations, enable broad and timely outreach. To ensure accessibility for stakeholders with limited digital access, use offline channels such as community meetings, workshops, printed materials, and posters. The selection of channels should be adapted to local contexts and stakeholder preferences to maximise reach and engagement. In Jihlava (Section 6.2), stakeholder outreach combined digital communication (websites, social media) with physical events and community activities, demonstrating that hybrid communication strategies are essential for effective engagement. In the Brzeg Dolny pilot (section 6.6), combining social media outreach with on-site activities and cooperation with local institutions proved particularly effective in reaching both younger and older target groups. In Ptuj (Section 6.8), stakeholder outreach relied on a combination of social media communication, on-site visibility in the city centre, and direct interaction with visitors at the pop-up location.

Leveraging Local Networks

Existing local and regional networks should be actively leveraged to extend outreach and enhance credibility. Cooperation with local authorities, community organisations, educational

institutions, NGOs, and informal community leaders supports access to established stakeholder groups and trusted communication pathways. Use your exisitng institutional networks to disseminate information and invite participation, strengthening local ownership and relevance, as shown in Re-use Center Košice (Section 6.7), where trusted organisations that help people in need were used to effectively reach and engage different target groups.

Addressing Barriers to Engagement

Potential barriers to stakeholder engagement should be identified and addressed proactively. These include language barriers, limited time availability, transportation constraints, and unequal access to digital tools. Where necessary, communication materials should be provided in accessible formats. Make sure that meetings are organised in familiar local settings, and hybrid or flexible participation options are offered. This approach aims to ensure inclusiveness and equal opportunities for participation.

Building Trust and Relationships

Trust-building is a central element of stakeholder outreach. This is achieved through transparent communication, clear explanation of expectations, and regular updates on project progress and the use of stakeholder input. Open dialogue and responsiveness to questions or concerns foster long-term relationships and sustained engagement beyond single events. The Jihlava pilot (Section 6.2) highlighted that trust-building requires continuous interaction, where regular events, transparent communication, and visible results helped to strengthen long-term stakeholder relationships.

Follow-up and Feedback Mechanisms

Stakeholder engagement should be maintained through systematic follow-up and feedback mechanisms. Participants should receive summaries of meetings, updates on next steps, and information on how their contributions are integrated into project activities. Feedback can be collected through surveys, informal consultations, and direct communication, supporting continuous improvement of outreach and engagement strategies. This approach was showcased in the Jihlava pilot (Section 6.2), where systematic feedback loops, including consultations with stakeholders and iterative testing of solutions, ensured that stakeholder input was effectively integrated into the development of circular services.

4 ENGAGING LOCAL ACTORS AND CITIZENS

4.1 Raising awareness

Raising awareness is one of the most important steps when introducing circular lifestyle initiatives in a city. Before people can participate, they need to understand what circularity means and how it benefits their everyday lives. Circular lifestyles focus on reducing waste, reusing materials, repairing items instead of replacing them and sharing resources within the community. For cities, this approach leads to cleaner public spaces, reduced costs for waste management and stronger community connections. Explaining these benefits in simple language helps residents see why circular solutions matter. For example, in Graz a leaflet was created to spread the idea of the project and to invite interested stakeholders to networking meetings.

Awareness-raising can also be supported through visible urban initiatives. For example, the POP-UP STORE pilot in Ptuj (Section 6.8) functioned as an open space where citizens could explore circular products, services and lifestyle practices.

Effective awareness campaigns should speak differently to each audience. Schools respond well to playful learning activities and challenges that show students how to reuse or repair items. NGOs often prefer clear information about how circular initiatives can support for example vulnerable groups, as demonstrated in the Re-use Centre in Košice (Section 6.7), where cooperation with social organisations helped redistribute items to people in need while raising awareness of circular practices. Businesses need practical examples of how reuse or repair can reduce costs and strengthen their social responsibility, as illustrated by the Košice pilot (Section 6.7), where collaboration with companies highlighted the contribution of circular activities to their ESG reporting and corporate sustainability goals. The general public reacts well to messages that combine environmental and social value, such as saving money, supporting neighbours, or reducing waste, as demonstrated in Košice Re-use Center (Section 6.7), where communication emphasised both the environmental benefits of reuse and the social impact of donations within the local community.

To reach these audiences, cities should use a mix of communication channels. Social media is useful for short, engaging content and regular updates. Local media such as radio, newspapers and online portals, help spread key messages to a broad audience. Community meetings, neighbourhood forums and public events provide space for direct conversations. Posters and flyers in public buildings, cafés, libraries and schools reach people who may not be active online.

Sharing local success stories is especially powerful. Showing examples of repaired items, successful donation campaigns, or community events helps residents imagine how circularity works in practice. People trust what they can see, especially if it comes from someone they know. During the BME pilot action (Section 6.4), enhancing an evidence-based understanding of how circular offerings can operate over a longer lifetime was especially important for stakeholder engagement. The Educational and Reuse Centre and a package-free shop provided relevant testimonials on how to contribute effectively to a circular city ecosystem. In the Jihlava pilot (Section 6.2), awareness was effectively raised through visible community activities such as reuse events, swap initiatives and public workshops, which helped translate abstract circular principles into tangible everyday practices. Similarly, the Brzeg Dolny pilot (section 6.6) showcased that real examples of upcycled products, repair activities and community events significantly increased residents' interest and helped translate abstract circular economy concepts into tangible, everyday practices.

Working with influencers, community leaders, teachers, or respected NGO representatives can significantly increase impact, as demonstrated in the Košice pilot (Section 6.7), where collaboration with well-established local NGOs supporting vulnerable groups increased trust and motivated citizens to donate and participate more actively. These trusted figures help translate circular principles into familiar language and motivate their communities to join. Visual and interactive content such as short videos, infographics, storytelling posts, or small exhibits, makes complex ideas easier to understand and more attractive. When communication is clear, positive and accessible, awareness grows naturally and creates the foundation for a strong circular community. The experience from Jihlava (Section 6.2) shows that awareness-raising is most effective when communication is combined with hands-on activities, enabling citizens to directly experience the benefits of circular lifestyles.

4.2 Co-designing circular offers with the community

Co-design is a collaborative approach where community members help create solutions from the very beginning. Instead of designing a circular initiative behind closed doors, co-design invites citizens, NGOs, schools and local businesses to share their ideas, needs and experiences. It is especially useful when developing new services such as a re-use centre, repair program, or sharing platform, because it ensures that the final solution fits local habits and real challenges, as demonstrated in the Re-use Centre in Košice (Section 6.7), where stakeholder input directly shaped the services and activities offered.

Several tools can support the co-design process. Brainstorming sessions help gather many ideas quickly and encourage creative thinking. Living Labs offer a more structured environment

where stakeholders can explore problems together, test small-scale solutions and learn from real-life situations, as applied in Košice (Section 6.7), where the Living Lab approach was used to co-design operation of the Re-use Centre, helping to shape its services, operational model and overal setup together with local stakeholders. Design thinking workshops guide participants through understanding challenges, generating concepts and shaping practical solutions. Prototyping, creating simple models, mock-ups, or trial versions of circular services, allows the team to check what works and what needs adjustment before investing more resources. A practical example of collaborative experimentation is provided by the POP-UP STORE initiative in Ptuj (Section 6.8), where creative actors, entrepreneurs and citizens jointly presented and tested circular solutions.

Co-design is an iterative process, which means ideas are developed step by step. After testing a first version, whether it is a workshop format, a donation system, or a layout for a re-use space, feedback is collected from community members. This feedback is then used to adjust and refine the idea, creating a new version that better meets people's needs. Iteration continues until the solution becomes functional, user-friendly and sustainable. The Jihlava pilot (Section 6.2) followed an iterative testing approach, where early versions of the solution were refined based on feedback from users involved in daily operations. By involving the community throughout the process, cities not only improve the quality of their circular offers but also build trust, ownership and long-term participation.

During the needs analysis for the definition of the BME pilot action (Section 6.4), stakeholder groups identified that incorporating real business cases into various courses would be vital for stakeholder activation. This co-design element was essential for the structuring of the University Living Lab sessions. The Lab served as an intensive co-design initiative involving businesses, students, four university teachers, and the Local Board of Stakeholders. Similar approach was also tested in Graz (Section 6.1), where networking meetings and workshops were crucial to define key issues that city departments, local actors of circular economy as well as property owners wanted to focus on and in which they saw main benefits for their businesses. The idea of the "House of Future" is based on these insights and foresees co-design and co-creation as one of its pillars.

4.3 Fostering community participation

Fostering community participation is key to making circular initiatives work in the long term. The best way to mobilize citizens is to partner with groups that already have strong local connections. NGOs can link initiatives to vulnerable communities, schools can involve students and parents, and interest groups such as neighbourhood clubs or makerspaces can contribute

skills and volunteers. These partnerships help spread information naturally and motivate more residents to join. This approach was reflected in pilots in Jihlava and Košice (Section 6.2 and 6.7), where cooperation between the municipality, a local NGO and volunteers enabled broad community participation in reuse activities.

Many people face barriers that limit participation, such as limited time, or difficult access to venues. These can be reduced by using simple communication, offering activities at different times and choosing easily accessible locations. Small adjustments like providing translations, short workshops, or welcoming spaces make it easier for citizens to take part. The Jihlava pilot (Section 6.2) demonstrated that community participation increases significantly when activities are easy to join, socially engaging and embedded in existing local initiatives.

Community members can contribute in many ways: donating or repairing items, attending workshops, volunteering, or sharing information. NGOs can help coordinate distribution of donated items, while schools or businesses can host activities or provide materials, as illustrated in Košice (Section 6.7), where partnerships supported both the collection and redistribution of items. When roles are clear and participation is easy, communities become active partners and help strengthen circular efforts across the city.

4.4 Leverage existing networks and spaces

Effective stakeholder engagement begins with recognising and activating networks that already exist in the local environment. Mapping schools, community centres, cultural institutions, NGOs, local businesses, and informal neighbourhood groups allows cities to identify partners who can support circular lifestyle initiatives with minimal additional resources. These networks often have established trust within the community, making them valuable entry points for participation and communication.

As demonstrated by the Zero Waste Multicentre in Brzeg Dolny (Section 6.6), leveraging existing networks can be operationalised through formalised cooperation with schools (pre-booked workshop slots integrated into school schedules) and partnerships with local service providers supplying reusable materials. The case shows that combining the physical space of the centre with established institutional channels allows for efficient programme planning, predictable participation levels, and reduced organisational costs. Similarly, the pilot in Jihlava (Section 6.2) illustrates how existing networks such as the Silo community, the reuse centre, and municipal structures were key entry points for stakeholder engagement and project implementation. By building on existing community initiatives such as reuse centres and cultural activities, the project successfully strengthened participation and ensured continuity of circular actions.

Collaboration with local institutions such as schools, libraries, municipal offices, and youth or senior centres can expand outreach efforts and embed circular practices into everyday routines. These institutions can provide space for workshops, help mobilise participants, and integrate circularity into their own activities. Partnerships with businesses, such as repair shops, local producers, or second-hand sellers, can further expand circular offerings.

This is also reflected in the Košice Re-use Centre (Section 6.7), where cooperation with NGOs and social service organisations allowed the initiative to respond directly to the needs of vulnerable groups while simultaneously activating donation networks and community participation.Engaging local champions is also essential. These may be respected teachers, active seniors, local entrepreneurs, artists, or community leaders who can inspire others through their personal involvement. Empowering them to co-create or lead activities increases credibility and broadens participation beyond traditional stakeholder groups. The BME pilot action (Section 6.4) engaged the first package-free shop established in Budapest for the University Living Lab. As a result, sharing news related to the implementation of the pilot initiative achieved a wider outreach.

Finally, creating shared physical spaces where circular practices can take place strengthens visibility and fosters a sense of collective ownership. These spaces act as anchors for continuous engagement, enabling residents to meet, experiment, exchange materials, and build habits that support long-term circular behaviour. This is clearly exemplified by the pop-up stores in Graz (Section 6.1) and in Ptuj (Section 6.8), where temporarily activated vacant retail spaces became visible hubs for circular entrepreneurship, experimentation, and stakeholder interaction, demonstrating how even short-term spatial interventions can generate lasting engagement and collaboration.

4.5 Education and capacity building

Education is one of the strongest drivers of behavioural change, making capacity building a core pillar of stakeholder engagement in circular lifestyles. Developing educational programmes tailored to different target groups ensures that each group receives relevant knowledge matched to its needs and level of experience, as applied in Košice (Section 6.7), where educational activities and hands-on workshops helped raise awareness of circular practices among different target group. While young people may benefit from creative, hands-on activities and storytelling, SMEs or municipal staff require more structured content focused on processes, regulations, and business opportunities.

A strong educational dimension is visible in the Budapest University Living Lab (Section 6.4), where students engaged in co-creation processes and practical problem-solving tasks. The

pilot shows that integrating circular economy principles into formal education, combined with real-life case studies and collaboration with local businesses, can transform participants from passive learners into active circular innovators.

Interactive learning approaches significantly strengthen engagement and retention of knowledge. Workshops that involve real problem-solving, repair tasks, material reuse challenges, or cooking with leftovers enable participants to experience the value of circularity directly. Role-playing games, debates, simulation exercises, or practical case studies help illustrate the consequences of consumption choices and offer alternative, more sustainable approaches. Such methods also encourage collaboration between diverse groups and help build a shared understanding of circular solutions. In Jihlava (Section 6.2), activites such as workshops and swap events provided hands-on learning experiences that helped participants understand and adopt circular practices.

This approach is also reflected in the Bologna pilot (Section 6.5), where citizens and students co-designed and tested practical solutions for circular water use through Urban and School Living Labs. The combination of experimentation, co-creation, and educational activities enabled participants to directly apply knowledge in real-life contexts and share it within their communities. Similarly, the University Living Lab at BME (Section 6.4) applied challenge-based learning for co-creation. Students shared that although they worked with different businesses, they also began to rethink their own consumption patterns and needs.

The importance of education and capacity building is clearly illustrated by the Zero Waste Multicentre in Brzeg Dolny (Section 6.6). A structured system of recurring, hands-on workshops, supported by educators and external practitioners and based on locally sourced materials, ensures strong practical relevance of the activities. The pilot demonstrates that combining skill-based learning (e.g. repair, upcycling) with continuous engagement formats and systematic feedback mechanisms significantly increases participants' ability to independently apply circular practices in everyday life. In Ptuj (Section 6.8), collaboration between cultural actors, businesses, civil society organisations and public institutions played an important role in creating a dynamic environment for testing circular initiatives.

A critical component of long-term capacity building is providing training to key stakeholders, such as NGOs, educators, local associations, and public authorities. Equipping them with tools, templates, and ready-to-use methodologies empowers them to lead circular initiatives independently and subsequently guide others. Regular train-the-trainer sessions, mentoring, and peer-learning opportunities help ensure that knowledge circulates across sectors and does not remain centralised in a single team.

Further support can be provided through accessible online resources, that enable continuous learning and broader dissemination. These may include step-by-step guides, webinars, toolkits, downloadable worksheets, or video tutorials that individuals and organisations can use at their own pace. Online platforms also create opportunities for cross-regional exchange, enabling stakeholders to learn from good practices in other cities and to share their own experiences. By combining hands-on learning with digital materials, cities can create a flexible and inclusive educational environment that supports scaling and long-term adoption of circular lifestyles.

4.6 Offering incentives and support

To actively involve local businesses, NGOs, civil society actors and consumers in a multifunctional centre for sustainable lifestyles, a balanced mix of financial and non-financial incentives should be established. Financial incentives may include subsidies for pilot projects, reduced rental fees for centre spaces, and discount schemes for organisations offering circular or low-impact products and services. For customers, incentives such as loyalty discounts, vouchers, or reduced participation fees for workshops can encourage sustained engagement.

Beyond direct financial support, the centre can play a key role in building access to grants and funding opportunities. This includes providing guidance on public funding programmes, EU or municipal sustainability grants, and impact-oriented foundations. Dedicated support services - such as proposal-writing workshops, matchmaking with funding bodies, or shared applications for collaborative projects - can significantly lower entry barriers for smaller actors.

Technical and logistical support is equally important. The centre can offer shared infrastructure (e.g. workshop spaces, repair tools, exhibition areas) as well as shared personel resources (e.g. producers themselves or jointly hired personel cover opening and sales hours alternately), expert consultations on circular design or sustainable procurement, and operational support such as event organisation, communication, or monitoring of environmental impacts. In the POP-UP STORE pilot in Ptuj (Section 6.8), outreach activities combined social media communication with on-site interaction in a central urban location, helping attract diverse groups of visitors.

For more visibility shared campaigns of different actors for joint activities and offers may be a great opportunity. In Jihlava (Section 6.2), technical support in the form of digital tools significantly reduced administrative burden and improved operational efficiency, acting as a key incentive for stakeholder involvement.

To reinforce motivation, community engagement should be visibly rewarded. Active participants may receive sustainability certificates or labels (“Circular Partner”, “Community Champion”), enhanced visibility through the centre’s communication channels, or public recognition at annual award ceremonies. These non-material incentives strengthen reputation, trust, and long-term commitment, while fostering a shared identity around sustainable living. The experience in Jihlava (Section 6.2) shows that non-financial incentives, such as improved workflows, visibility, and community recognition, can be equally important as direct financial support. Other approach was tested at the University Living Lab at BME (Section 6.4). This pilot showcased that partners were motivated to take part in the action due to the invitation from a highly prestigious educational institution.

4.7 Using gamification and interactive tools

Gamification and interactive tools can significantly increase participation by making sustainable behaviour tangible, social, and rewarding. Effective gamification relies on clearly defined objectives, transparent rules, and attractive rewards. Objectives may include reducing waste, increasing reuse, or encouraging participation in circular activities. Rules should be simple and inclusive, enabling individuals, households, or organisations to take part without technical barriers. Engagement events organised within the POP-UP STORE in Ptuj (Section 6.8) included exhibitions, presentations and workshops that encouraged citizens to interact with circular economy practices.

Examples of gamified initiatives include circular economy challenges, where local businesses and citizens collect points for repair activities, sustainable purchases, or participation in workshops. Recycling or zero-waste competitions between neighbourhoods, schools, or organisations can further stimulate collective action. Digital tools such as apps, QR codes, or interactive dashboards may be used to track progress and visualise collective impact.

Rewards can be both material (e.g. vouchers, free workshop access, discounts at partner businesses) and non-material (e.g. rankings, badges, certificates, public recognition). In some cities, participation in waste prevention activities is also linked to municipal waste management fee systems, meaning that collected points or demonstrated behaviour can lead to lower waste collection charges. This introduces a direct economic incentive alongside social recognition and strengthens long-term engagement. By combining competition with collaboration, gamification strengthens learning, reinforces behavioural change, and transforms sustainability into a shared and motivating experience within the centre.

Quizzes on facts about circular lifestyles are easy-to-understand engagement techniques. During several activities within the BME pilot initiative (Section 6.4), we introduced short questions regarding the material footprint of various products - such as “How much water is needed to produce a pair of jeans?” - to effectively raise awareness.

4.8 Organizing engagement events

Engagement events are a core instrument for activating local actors and making circular practices visible and experiential. A diverse event portfolio ensures that different target groups - businesses, NGOs, families, and individual consumers - can participate according to their interests and capacities. Typical event formats include repair fairs, upcycling and DIY workshops, swap meets, and educational talks on sustainable consumption, energy use, or circular design. Leveraging well-known event platforms for educational talks on circular lifestyles can be highly effective, as they offer significant brand value. A prime example is the European Researchers’ Night series (as in case of the BME pilot action – see Section 6.4). In Jihlava (Section 6.2), events such as Reuse Days, swap activities, and workshops played a central role in activating local stakeholders and making circular practices visible and accessible. The POP-UP STORE pilot in Ptuj (Section 6.8) demonstrates how interactive and hands-on experiences can encourage citizens to reflect on consumption patterns and explore more circular lifestyle choices.

Hands-on formats are particularly effective. Live demonstrations of circular practices -such as composting, (textile) repair, furniture upcycling, or product disassembly - allow participants to directly experience alternative ways of producing and consuming. These activities lower knowledge barriers and empower visitors to apply what they learn in their daily lives. These hands-on formats proved particularly effective in Jihlava (Section 6.2), where direct experience and social interaction significantly increased public engagement and interest in circular solutions.

Events also serve as networking platforms for local actors, enabling cooperation between businesses, NGOs, and citizens. Co-creation workshops or thematic market days can showcase local solutions while strengthening regional value chains. By combining practical learning, social interaction, and visibility, engagement events anchor the multifunctional centre as a lively hub for sustainable lifestyles and long-term community involvement, as demonstrated in Košice (Section 6.7), where community events such as workshops, donation drives and swap played a key role in engaging local actors and promoting circular practices. The Jihlava pilot (Section 6.2) confirmed that regular and diverse engagement events are essential for building long-term community involvement and sustaining circular initiatives.

5 CONTINUING CIRCULAR OFFERS AND SCALING THEM UP

5.1 Embedding circular lifestyles into local policies

Embedding circular lifestyles into local policies is a key condition for ensuring the long-term sustainability of circular initiatives beyond individual projects or pilot phases. While many circular activities start as bottom-up initiatives driven by NGOs, schools, or active citizens, local policy frameworks play a crucial role in stabilising, legitimising, and scaling these efforts. When circular lifestyles are reflected in municipal strategies, action plans, or regulations, they gain continuity, access to resources, and institutional support. Across NiCE pilot cities, the embedding of circular initiatives into local policy frameworks proved to be a critical success factor for their long-term continuity, particularly when strong cooperation between municipalities and local organisations was established (see Section 6).

Local governments can influence the uptake of circular lifestyles through a range of policy tools and instruments. **Strategic instruments** include integrating circular principles into urban development strategies, climate and energy plans, waste prevention programmes, social inclusion strategies, or education policies. **Regulatory measures** can support circular initiatives by enabling the temporary use of vacant spaces (which was an approach successfully applied in the Re-use Centre Košice, where a previously unused municipal space was repurposed for its creation), simplifying administrative procedures for community-led activities, or adapting public procurement rules to favour reuse, repair, and service-based models. This approach was successfully applied in the Re-use Centre Košice (Section 6.7), where a previously unused municipal space was repurposed to establish a functioning circular service. **Financial and non-financial incentives** – such as reduced rents in municipal premises, small operational grants, communication support, or access to municipal staff expertise – can significantly lower entry barriers for local actors. Several NiCE pilots demonstrated that aligning circular initiatives with existing municipal priorities and strategies increases their institutional support and access to resources (see Section 6).

Equally important are **governance and coordination mechanisms**. Experience from NiCE pilot cities shows that circular initiatives often cut across traditional policy silos, combining environmental, social, economic, and cultural objectives. Establishing cross-departmental working groups, appointing a municipal contact point for circular economy topics, or formally recognising intermediary organisations (e.g. NGOs, reuse centres, universities) helps improve coordination and implementation capacity. NiCE pilots demonstrated that the establishment of a Local Advisory Board comprising different local actors facilitates cross-sector coordination

and supports the alignment of circular activities with municipal priorities. For example, in Graz (Section 6.1), close cooperation with municipal departments, including economic development and environmental authorities, ensured that pilot activities such as the “Herrengasse 10” pop-up store and the “House of the Future” were directly linked to city strategies and policy goals. Similarly, the Living Lab approach applied in Budapest and Bologna (Sections 6.4 and 6.5) demonstrated how structured stakeholder engagement can help idenfity the needs of specific stakeholder groups and support the integration of circular solutions into local governance frameworks. For example, during the University Living Lab series (Section 6.4), an important local organization co-financed by the Budapest Municipality - the Educational and Reuse Centre - was involved. By co-creating solutions with university students, the Municipality gained valuable insights into the needs of this specific stakeholder group.

Advocating for circular policies requires proactive engagement with policymakers. Effective strategies include presenting evidence-based arguments derived from pilot experiences, such as environmental benefits, social impacts, or cost savings for municipalities. For example, in the Re-use Centrum Košice (Section 6.7) it proved more effective to highlight social impacts, which generated direct savings for the city while also delivering environmental benefits, rather than focusing solely on environmental impacts that would not have reduced waste management costs. Highlighting co-benefits – revitalisation of city centres, social inclusion, skills development, or local job creation – has proven particularly effective in gaining political support. Involving policymakers early through workshops, study visits, advisory boards, or pilot evaluations strengthens ownership and increases the likelihood that circular lifestyles will be embedded into long-term local policy agendas. Across NiCE pilots, successful advocacy combined strong partnerships with public authorities and clear evidence of local impact. For example, experiences from Košice (Section 6.7) highlight the importance of emphasising social and economic benefits, while pilots such as Jihlava and Graz (Sections 6.2 and 6.1) demonstrate how early involvement of municipalities and alignment with local strategies can strengthen policy uptake. In addition, initiatives such as the POP-UP STORE in Ptuj (Section 6.8) show how temporary pilot actions can serve as testing environments, generating insights that inform both policy development and long-term integration of circular approaches.

5.2 Financial models for sustaining circular initiatives

Ensuring the long-term financial sustainability of circular initiatives is one of the main challenges once pilot funding ends. Experience from the NiCE project demonstrates that successful circular initiatives rarely rely on a single funding source. Instead, they combine different financial models and revenue streams, creating hybrid financing structures that increase resilience and adaptability over time. Across NiCE pilots, financial sustainability was

most effectively achieved through hybrid models combining public support, community engagement, and partnerships with external actors (see Section 6).

Public funding often plays a crucial role in initiating and stabilising circular initiatives. Municipal grants, regional programmes, and national or EU funding schemes (such as Interreg, LIFE, or cohesion policy instruments) can support the launch, testing, and further development of circular solutions. Local authorities can facilitate access to public funding by aligning circular initiatives with existing policy priorities – such as climate action, waste prevention, social services, or urban regeneration – and by providing co-financing, administrative support, or access to municipal infrastructure. As highlighted in Section 5.1, embedding circular lifestyles into official strategies often improves eligibility for public funding and supports long-term financial planning. In several NiCE pilots, including Jihlava and Brzeg Dolny (Sections 6.2 and 6.6), municipal support in the form of infrastructure, coordination, and institutional backing proved essential for initiating and stabilising circular initiatives.

Private sector partnerships represent another important pillar of financial sustainability. Local businesses can engage as sponsors, donors of materials, service providers, volunteers, or long-term partners, contributing financial resources, expertise, logistics, or infrastructure. For companies, cooperation with circular initiatives offers opportunities to test new business models, strengthen corporate social responsibility profiles, and build stronger relationships with local communities. Clear value propositions, transparent governance structures, and clearly defined roles are essential to ensure mutual benefits and long-term commitment. For example, in the Re-use Centre Košice (Section 6.7), collaboration with corporate partners such as IBM and T-Systems contributed not only to the development of digital tools, but also provided tangible benefits for their ESG reporting, demonstrating mutual value creation. Experiences from Würzburg (Section 6.3) further highlight that testing new service models in real conditions can reveal important economic and behavioural barriers that need to be addressed for long-term financial sustainability. Such partnerships illustrate how circular initiatives can create shared value by combining local impact with corporate sustainability objectives.

Community-based financing models can further strengthen financial resilience while reinforcing local ownership. Crowdfunding campaigns, membership fees, donations, pay-what-you-can models, or small participation fees for workshops allow citizens to directly support initiatives they value. Beyond financial contributions, these models increase visibility, trust, and community engagement. NiCE pilot experiences show that initiatives communicating their social and environmental impact clearly are more successful in mobilising local support. Community-based activities such as workshops, reuse events, and volunteer engagement,

together with other open and accessible formats, play a key role not only in generating small revenue streams, but also in strengthening trust, visibility, and long-term local support, as demonstrated for example in Jihlava and Ptuj (Sections 6.2 and 6.8).

NiCE pilot experiences confirm that the long-term viability of circular initiatives is rarely based on a single funding source, but instead relies on hybrid models strategically combining public funding, private sector cooperation, and community-based contributions.

A practical example is the Zero Waste Multicentre in Brzeg Dolny (Section 6.6). The initiative combined municipal support (provision of space, basic operational funding and coordination) with partnerships with local businesses that donated materials and expertise. Workshops and community events generated small participation fees, while high citizen interest enabled volunteer involvement and follow-up funding applications. Similarly, the Re-use Centre in Košice (Section 6.7) relied on municipal backing and NGO partnerships, complemented by targeted donation campaigns and in-kind contributions from businesses and citizens.

It is important that beneficiaries view European funding opportunities as a means to define and shape future activities. For BME (Section 6.4), as the importance of innovative, challenge-based learning courses grows, the Sustainable Business Model Design course represented an important step toward integrating such initiatives into the educational portfolio over the long term.

Overall, NiCE pilot experiences demonstrate that financial sustainability is closely linked to stakeholder engagement, where strong community involvement, institutional support, and cross-sector partnerships reinforce each other.

5.3 Monitoring, evaluating, and adapting circular offers

The transition to a circular economy is a dynamic process that requires more than just the initial implementation of "green" services. To ensure that circular offers, such as reuse centres, sharing platforms, Living Labs or repair cafes, remain impactful and relevant, a rigorous framework for Monitoring and Evaluation (M&E) is essential. This process allows organizers to move beyond theoretical goals and prove that their initiatives result in genuine resource decoupling and behavioral change. The Jihlava pilot action (Section 6.2) provides a practical example of this approach, where digital tools were introduced to systematically improve data collection, monitoring, and evaluation of reuse operations, while also supporting more consistent and comparable reporting of reuse activities at national level.

The Pressure-State-Response (PSR) Framework

A robust M&E strategy is often rooted in the Pressure-State-Response (PSR) model. This causal framework is vital for understanding how a specific circular intervention interacts with the urban ecosystem:

- **Pressures**: Monitoring the specific human activities that stress the environment, such as high rates of single-use consumption or waste generation.
- **State**: Evaluating the current quality of the environment and natural resources, providing a baseline for change.
- **Response**: Assessing the societal reaction, including the adoption of circular business models and shifts in public awareness.

By applying this model, practitioners can determine if a "Response" effectively mitigates a "Pressure" and improves the "State" of the urban environment.

Defining Multi-Dimensional KPIs

Successful evaluation requires defining Key Performance Indicators (KPIs) that span environmental, social, and economic domains. Using a Project Excellence Model, indicators should be split into two categories:

- **Enablement Criteria:** These measure the quality of leadership, the effectiveness of stakeholder engagement, and the efficient allocation of financial and human resources.
- **Result Criteria:** These focus on tangible outcomes, such as waste diversion rates (prioritizing "Refuse" and "Reduce" over "Recycle") and the satisfaction levels of the direct beneficiaries.

For instance, in Jihlava (Section 6.2), improved data collection enabled more accurate tracking of material flows, operational performance, and reuse outcomes, supporting evidence-based decision-making and laying the groundwork for more standardised and scalable reporting practices across reuse systems. In the case of the BME pilot action (Section 6.4), and in line with the university's protocol, the satisfaction level of direct beneficiaries played a significant role. An ex-ante satisfaction survey for the intensive seminars and a University Living Lab closure discussion were both appropriate formats to collect feedback from pilot users.

Tools for Monitoring: Digital and Participatory

Modern monitoring relies on a hybrid of quantitative digital data and qualitative community feedback. Key tools include:

- **Digital engagement platforms:** Gamified mobile applications (such as the Austrian Nachhaltig in Graz/ The "Sustainable in Graz" app, https://nachhaltig-in-graz.at/app-nig/ or the Hungarian beeco green compass app, https://www.beeco.hu/en) are used to track real-time user behavior, providing data on engagement levels and the frequency of circular actions.
- **Environmental calculators:** Digital tools that measure footprints allow participants to visualize their personal impact, serving as both an educational tool and a data source for behavioral monitoring. See for instance the calculator of Global Footprint Network: https://www.footprintcalculator.org/home/en.
- **Stakeholder mapping & Living Labs:** These methods provide a baseline "status quo" assessment. By comparing initial interviews and mapping data with post-implementation results, organizers can measure the actual shift in community perception and participation. The benefits of Living Lab methodology for stakeholder engagement and activition is highlighted by the Bologna pilot action (Section 6.5) as well as the Budapest pilot action (Section 6.4). The Living Lab methodology is proved to engage citizens for behavioural changes.

To structure the collected information, the Circular Cities Project Excellence Framework (CC-PEM) can me used to link monitoring data to clear evaluation categories. CC-PEM distinguishes enabling factors such as objectives, stakeholders and processes from results such as environmental, social and economic impacts, allowing both short-term participation and long-term behavioral change to be assessed. The CC-PEM can be accessed on the NiCE Knowledge Platform: https://circularlifestyle.eu/resources.

An important pillar of the CC-PEM/ implementation of pilot actions is the assessment of partners and resources. All pilot actions within the NiCE project have been implemented with the involvement of various stakeholders. Some pilot actions developed strong collaborations with a few specific partners: for example, Zukunftshaus Würzburg and a bicycle courier (Section 6.1), SILO Jihlava (Section 6.2), and BME (Section 6.4). In contrast, other pilots engaged a broad range of partners, such as those in Graz (Section 6.1) and Košice (Section 6.7). In Ptuj (Section 6.8), partnerships between cultural actors, local businesses, civil society organizations, and public institutions helped create a collaborative environment for promoting circular solutions. Furthermore, the circular community hub - a new investment in Brzeg Dolny (Section 6.6) - underlines the importance of partner organizations in launching new circular offerings. Key contributors there included the Municipal Centre of Culture (co-organizer of the zero-waste festival), the Municipal Utilities Company (providing workshop materials such as

wood and furniture), and the Local Action Group (integrating the Multicentre into organizational networks to facilitate joint activities).

Some pilot actions have a significant impact on addressing material usage and savings within the local ecosystem. The Reuse Recognizer tool tested in Jihlava (Section 6.2) demonstrates how digital solutions can automate data collection, reduce administrative burdens, and generate reliable datasets for monitoring circular activities. Similarly, the circular community hub in Brzeg Dolny (Section 6.6) can measure the volume of materials upcycled due to its activities.

Adaptive Management and Local Agenda 21

The ultimate goal of M&E is **adaptive management**. No assessment tool is perfect for every context, so the framework must facilitate "fine-tuning". By identifying the specific benefits and drawbacks of a pilot phase, decision makers can refine their offers to better meet stakeholder needs and expectations. This iterative approach is deeply aligned with the principles of Local Agenda 21 (LA 21), which advocates for sustainable development driven by local consultation and community consensus. LA 21 emphasizes that long-term success depends on a continuous cycle of planning, implementation, and community-based evaluation. By rooting circular offers in this participatory tradition, urban leaders ensure that initiatives are not only ecologically sound but also socially inclusive and locally owned. This ensures that circular offers do not remain static but grow in efficiency, social acceptance, and environmental impact over time. For instance, Jihlava pilot action (Section 6.6) demonstrated that that continuous monitoring combined with stakeholder feedback enables iterative improvements of both digital tools and service design. Adaptive management was crucial in the case of the BME pilot (Section 6.4), as various program elements depended on the willingness of users to participate. The University Living Lab for sustainable business planning required the highest level of commitment and was able to activate a small number of stakeholders. By diversifying the program portfolio, larger stakeholder groups were activated through the addition of special events (such as the intensive seminar and the European Researchers' Night) which required a lower time commitment.

5.4 Scaling up circular initiatives

Scaling a circular initiative requires a strategic shift from a "protected" pilot environment to the complex realities of the broader urban landscape. The first step is identifying scalable elements – the core components that remain effective regardless of location. Based on recent frameworks, these include high intensity "Living Lab" methodologies (see pilot actions in Bologna – Section 6.5 and Budapest – Section 6.4) and digital engagement tools that provide

quantifiable data. While individual activities may be local, the underlying framework of community-led value retention is a prime candidate for expansion across entire municipal districts. In Jihlava (Section 6.2), the combination of digital tools, community engagement, and stakeholder cooperation represents a scalable model that can be adapted to other urban contexts.

However, replication is not a "copy-paste" process; success depends on adapting to local contexts. A circular offer must be tailored to the specific cultural and social conditions of a new setting to ensure social acceptance. Central to this success is a robust collaborative ecosystem; it is essential that the municipality works in tandem with educational institutions, NGOs, and both public and private organizations (see especially the pilot actions in Graz – Section 6.1, Brzeg Dolny – Section 6.6, Košice – Section 6.7 and Ptuj – Section 6.8).. The municipality plays a particularly vital role by providing low-rent facilities to house these initiatives, lowering the barrier to entry for circular startups and social enterprises. This multi-sectoral approach combines administrative power, research expertise, and market agility to move initiatives from niche experiments to urban standards. It happens that specific elements of pilot actions can be replicated not the complete actions. For instance, in the case of the Jihlava pilot (Section 6.2), core elements such as digitalization and stakeholder collaboration are transferable; however, their implementation must be adapted to local institutional and community conditions (interest from other cities in the Jihlava solution further confirms its replication potential when combined with local adaptation and stakeholder engagement). Living Lab-based projects (such as the Budapest and Bologna cases - Sections 6.4 and 6.5) require viable leadership structures for stakeholder activation. When revitalizing fading city centers (such as in Brzeg Dolny, Košice, and Ptuj - Sections 6.6–6.8), physical infrastructure is needed for capitalization.

Furthermore, if a municipality manages multiple locations in close proximity, a thematic street concept for circular lifestyles can be implemented. This creates a visible, high-impact hub that concentrates circular offers, making sustainable choices more convenient and recognizable for the public. To maximize reach, thematic events such as a "Charity Shops' Night" or "Researchers' Night" (such as the pilot action in Budapest – Section 6.4) should be strategically communicated to activate citizens. When strategically communicated, these events demystify circularity and provide a low-barrier environment for activating citizens. By combining physical infrastructure, like pop-up stores, thematic streets, with multi-sectoral partnerships, urban leaders can transform niche pilots into permanent, scalable pillars of a circular society.

To achieve broad impact, strategic partnerships for expansion must leverage community-facing platforms. By transforming circular economy from an abstract concept into an engaging, collective urban experience, these collaborations can effectively scale circular lifestyles. This ensures that circular initiatives do not remain static but grow in efficiency and environmental impact over time through a shared, locally-owned commitment. Strategic alignment is needed to choose the proper community-facing platform. For instance, in the case of the circular community hub in Brzeg Dolny (Section 6.6), a dedicated social media profile was established to communicate results and achieve higher visibility. Similarly, in the case of the Budapest initiative (Section 6.4), the existing social media profiles of the Department and Faculty were leveraged to better meet stakeholders' needs.

It is important to note that circular transitions require time and the accumulation of experience. Pilot initiatives such as the POP-UP STORE in Ptuj (Section 6.8) and Future House S in Graz (section 6.1) demonstrate how temporary engagement formats can generate stakeholder interest and provide insights for the development of longer-term circular initiatives. Similarly, the pilot action in Budapest (Section 6.4), thanks to its modular nature, can be replicated periodically with different areas of emphasis. For instance, the European Researchers' Night event in 2025 was accompanied by a book and plant swap party to achieve greater interest and visibility.

6 PRACTICAL EXAMPLES AND CASE STUDIES

6.1 Austria: Urban activation through circular entrepreneurship – Pop-up store in Graz

In April 2024, the City of Graz offered a small vacant room in Herrengasse 10, close to the main city square, for temporary use during the summer. The space became the pilot location for a pop-up store focused on circular economy products. The location is characterized by a high volume of tourists and locals alike.

After initial coordination and outreach in April and May 2024, the pop-up officially opened on 1 June 2024 and ran until end of September 2024, concluding with a joint closing event on 21 September 2024.

6.1.1 Context and background

The City of Graz through its Department of Economic and Tourism Development provided a 22m^2 space in the middle of the old town - free of rent and side costs. Its adress was: Herrengasse 10, (GPS: 47.070534734957334, 15.439110937521841). The premises featured

small display windows for visibility to the outside where producers could present their products and crafts.

The only conditions were that the shop had to be attractively designed, operated with regular opening hours, and to be equipped by the entrepreneurs themselves, including furniture and cash register systems. The focus was primarily on:

The initiative was supported by the city's urban activation program "#schau-vorbei," which required the shop to be open Monday to Friday, 10 a.m. to 6 p.m. throughout the pilot.

This vision of a "sustainable department store" continued to grow during the NiCE project.

The pilot project at Herrengasse 10 was intended to serve as a small model for the "House of Future".

Figure 1 Pop-up store in Graz. Source: StadtLABOR

Over the preceding months, three networking meetings took place gathering stakeholders' needs and connecting circular economy actors with space owners. Dialogue among stakeholders of circular economy highlighted their need for affordable spaces and greater visibility and inspired the idea of a joint CE organization in Graz. However, it also became evident that vacant space owners showed little interest in supporting pilot initiatives connected to circular economy in the city centre. Therefore the City of Graz, as associated partner, was one of the key stakholders to make a space available.

6.1.2 Stakeholders involved

The main stakeholders were the City of Graz, Department of Economic and Tourism Development, StadtLABOR GmbH and entrepreneurs involved in the circular economy and creative industries. These were mostly self-employed women and startups who wanted to try their hand at running a pop-up store. There was support from the initiatve #schau-vorbei and "Graz City of Design" for visibility and promotion.

From the earliest phase, interested entrepreneurs were engaged in discussions about shared room usage, agreements, schedules, and shop setup. During the pilot, shared room usage and activities were organized collaboratively. The focus was on self-organization, and the aim was to give entrepreneurs as much freedom and scope for development as possible.

6.1.3 Engagement strategies and methods

The most important thing was communication and organization within the group at the beginning of the pop-up store. Therefore, several meetings (online and in person) were held 1-2 months before the launch of the pop-up store. By the third meeting, groups had formed and entrepreneurs had joined forces. From that point on, these groups were supported in the implementation of the pilot project. StadtLABOR coordinated cooperation between the individual companies, established joint rules for working together and set up events and conducted marketing efforts to which all participants were invited to gain further visibility.Over all StadtLABOR supported 16 participants in their work at the pop-up store over the course of several months. However, the goal from the outset was to enable users to work independently.

6.1.4 Implementation process

The most important milestones were the joint tour of the space at Herrengasse 10 and a meeting to form groups. On June 4 and July 25, there was a joint photo shoot with the responsible city councilor, attended by many entrepreneurs and key stakeholders. The closing event was a special highlight, where everyone looked back on the past months together.

The challenges were the different needs of the entrepreneurs. Even in groups that had initially come together, there were sometimes disagreements during the ongoing process. For example, opening hours or difficulties with the cash register system.

StadtLABOR provided support here and also acted as a conflict manager.

Figure 2 Closing event. Source: StadtLABOR

The lessons learned: From the outset, a common “set of rules” should be established, signed by all, and adhered to during ongoing operations. This could include: compliance with opening hours, cleanliness of the space, etc.

6.1.5 Outcomes and impact

One vacant space was reactivated by a participating company after the pop-up store.

By participating in the pop-up store, the company recognized the market potential for its idea and opened its own shop in downtown Graz in the fall of 2024.

The merger of several companies also inspired another shop, the “Nachhaltige Kreisslerei” (Sustainable Circular Economy), which offered various products from different companies.

Since the pilot project at Herrengasse 10, the companies behind the products themselves have also been present in the “Nachhaltige Kreisslerei” store and support each other with opening hours. This saves on personnel costs.

6.1.6 Lessons learned

The project provided valuable insights into sustainable consumption and the use of vacant properties. There is considerable interest in local, regional and sustainable products, but it is evident that demand often remains subdued due to pricing. With regard to the use of vacant properties, it became clear that there is a noticeable need for spaces where entrepreneurs can test new ideas. The sharing of space and human resources proved particularly successful, emerging as a functioning cooperation model. It was also striking that the call for proposals for the use of the spaces was predominantly taken up by women. We would say that a crucial learning is, that „Cooperation is the key“!

6.2 Czechia: Integrating digital solutions with local circular activities in Jihlava

The pilot project in Jihlava, a mid-sized city in the Czech Republic with a historic centre and an active community interested in sustainable urban living, explored ways to engage citizens and local stakeholders in circular economy practices.

The project focused on sharing, repairing, and reusing goods to promote sustainable lifestyles, while integrating digital tools to facilitate access and participation, complementing and supporting local community events and physical circular initiatives. Public engagement, co-creation of events, and networking with local actors were essential components to generate interest and demand for these digital circular solutions.

6.2.1 Context and background

The pilot was initiated by local NGO SILO Jihlava and implemented in cooperation with other local partners. Jihlava, like many Central European cities, faces challenges such as limited awareness of circular opportunities, fragmented local initiatives, and underutilized public and community spaces.

The goal of the pilot project was to introduce digital tools and platforms to support circular activities, ensuring that citizens and local stakeholders could easily access, participate in, and benefit from these services. Public engagement, co-creation of events, and networking with local actors were integral components, helping to generate interest and demand for the digital circular solutions.

6.2.2 Stakeholders involved

A preliminary stakeholder mapping identified relevant actors through desk research, interviews, and community consultations. A local advisory group was formed to guide the pilot throughout its implementation.

Key stakeholder groups and their roles included:

- **Citizens:** the main target group, participating in workshops, surveys, and community events.
- **NGOs:** local environmental and community organizations helped organize events, run workshops, and connect with community members.
- **Public authorities:** the city of Jihlava provided support through access to public spaces, communication channels, and policy guidance.
- Some **local businesses** participated in workshops, supported the provision of resources, and explored opportunities for circular business models.

6.2.3 Engagement strategies and methods

The pilot used a variety of strategies to ensure inclusive participation and effective stakeholder engagement:

- **Participatory workshops and co-design sessions:** Citizens collaborated on identifying needs and designing circular initiatives.
- **Community events:** Reuse Days, workshops, fashion shows with reused textiles, and regular cultural activities fostered circular practices and public engagement.
- **Surveys and feedback tools:** Online surveys were used to assess citizen interest, preferences, and awareness.

- **Digital and physical communication channels:** Social media, local ‘newspapers’ and posters helped reach diverse audiences.

Figure 3 Fashion show. Source: ENVIROS

6.2.4 Implementation process

The pilot was implemented by Silo Jihlava between 2024 and mid-2025, focusing on introducing digital tools to enhance circular activities while maintaining community engagement.

The process began in early 2024 with stakeholder mapping and needs assessment, identifying local actors as key participants. Insights from this phase guided priorities for public activities and digitalization efforts.

Throughout 2024, Silo Jihlava organized the first Reuse Day, combining swaps, small workshops, and fashion shows with reused textiles, alongside regular reuse centre operations. Additional workshops and cultural events, such as sewing sessions and concerts, complemented these activities, fostering awareness and participation in circular lifestyles.

By late 2024, the team identified process management within the reuse centre *Útulek věcí* as the most promising area for digitalization. Early 2025 focused on developing and testing a digital tool to streamline centre operations, improve donor and recipient management, and facilitate broader engagement. Feedback from staff and visitors ensured the tool was practical and user-friendly.

This phased approach allowed Silo Jihlava to simultaneously engage citizens, maintain ongoing services, and pilot digital solutions, creating a solid foundation for future scalable circular initiatives.

6.2.5 Outcomes and impact

The pilot successfully laid the groundwork for integrating digital tools into circular activities while engaging citizens and stakeholders. The reuse centre and community events, including Reuse Days, workshops, and cultural activities, provided multiple entry points for participation.

These activities increased awareness of circular lifestyles and strengthened the local community around reuse and sustainable consumption. Citizens became more familiar with the services offered by Silo Jihlava, while collaboration between NGOs, public authorities, and other local actors fostered exchange of ideas and partnerships.

The project contributed to both immediate and longer-term impacts by combining offline engagement with digital support, increasing visibility of circular practices, and reinforcing the local ecosystem of actors committed to sustainable urban development. Lessons from this pilot offer practical guidance for replicating similar initiatives in other urban contexts.

Figure 4 Resue Days. Source: ENVIROS

6.2.6 Lessons learned

Key insights from the Jihlava pilot include:

- **Combining ongoing services**, such as the reuse centre, **with public events** like Reuse Days, workshops, and cultural activities effectively attracts diverse participants and maintains interest over time.
- Early **stakeholder mapping and needs assessment** are essential to identify relevant actors and align project activities with community needs and operational priorities.
- **Digital tools** should support and streamline existing services rather than introduce entirely new processes. In Jihlava, enhancements focused on reuse centre operations, improving efficiency in item tracking, inventory management, and user communication.

- **Networking and co-creation** with local stakeholders builds capacity, encourages experimentation, and strengthens the ecosystem for circular activities.

Recommendations for replication include the following:

- Start with small, visible, and interactive activities to attract attention and interest.
- Integrate circular activities into schools and community programs to engage younger generations.
- Ensure low-barrier participation with simple instructions, accessible locations, and clear communication.
- Maintain continuous feedback loops with stakeholders to adapt and improve activities.
- Use pilot experiences to formalize partnerships and create long-term circular lifestyle networks.

6.3 Germany: Bicycle pick-up and delivery service for repair and rental items

In Würzburg, the German Environment Agency (UBA) launched a bicycle pick-up and delivery service for repair and rental items as a pilot project. The idea behind it was to link sustainable e-commerce with city centres for the benfit of both.

The service was tested in cooperation with the Würzburg Zukunftshaus, the bicycle courier Radius, and adelphi. Beyond that, more local partners and citizens were involved at the local advisory board which supported the project.

Figure 5 The Zukunftshaus Würzburg. Source: Zukunftshaus

6.3.1 Context and background

UBA identified the need to experiment and test with how online and offline retail could be integrated, while simultaneously revitalizing the city centre.

The Zukunftshaus, a cooperative in the city centre of Würzburg, which focuses on circular lifestyles. It offers already covered four pillars: sustainable products, renting, repairing, and swapping. The pilot added a new dimension: a pick-up and delivery service for rental items and for products customers brought in for repair.

The UBA, as part of the NiCE project, was the initiator of this pilot, supported by adelphi. The local implementation was carried out by the Zukunftshaus and the bicycle courier service Radius.

6.3.2 Stakeholders involved

The pilot used a preliminary needs and stakeholder analysis (desk research, interviews and ideation workshops) to identify relevant actors and target groups. A local advisory board with diverse stakeholders was established at the start of the pilot. The board brought together representatives from the City of Würzburg, the Julius-Maximilians-University Würzburg, memo Stiftung, and several NGOs.

Figure 6 First Advisory Board Meeting Workshop at Zukunftshaus in October 2024. Source: Jan Gimkiewicz

Key stakeholder groups and their roles were:

- Citizens were the target group for the service
- small and medium sized businesses: the service was tested in cooperation with the Würzburg Zukunftshaus, the bicycle courier Radius, and adelphi
- NGOs, the local university and the city of Würzbug were involved at the local advisory board which supported the project

6.3.3 Engagement strategies and methods

The engagement process relied on a combination of participatory and ideation workshops, customer surveys, and regular pilot team meetings, complemented by a series of public and semi-public events. These included a kick-off event, a closing event, and an online seminar, alongside diverse communication activities carried out throughout the pilot. This mix of structured collaboration formats and open events supported both continuous coordination among partners and broader outreach to external stakeholders.

A variety of tools and techniques was used to support communication and cooperation. These included newsletters, dedicated websites, and social media profiles, as well as a collaborative online board that enabled shared work among partners. Presentations, a project flyer, and a video conferencing tool were used to facilitate both internal coordination and external dissemination, ensuring accessibility for different stakeholder groups.

Communication channels played a particularly important role during the implementation of the delivery service. Project partners were highly active in promoting the new service and circular lifestyle offers more broadly. This involved coordinated activities across websites, newsletters, and social media, as well as presence at street festivals, local campaigns, and direct, face-to-face contact at the shop. These efforts resulted in wide outreach, with one short video becoming Zukunftshaus's most-viewed post to date, illustrating the strong resonance of the communication activities.

To encourage active participation, several incentives were offered. Local stakeholders benefited from networking opportunities through advisory board meetings and other project events. Citizens were invited to take part in selected activities free of charge, such as the bicycle cinema, while additional incentives included vouchers for free use of the delivery service. Together, these incentives supported engagement across different target groups and reinforced commitment to the pilot activities.

6.3.4 Implementation process

The pilot activity was implemented with the following milestones:

- In September 2023 the cooperation between UBA and Zukunftshaus was initiated.
- The pilot kick-off event was in May 2024.
- The pilot service ended in December 2024.
- The local pilot closing event, with the bicycle cinema, was held in May 2025, linked to the Zukunftswoche Mainfranken.

Figure 7 Bicycle cinema at theater hall Erlöserschwestern. Source: Zukunftshaus

As part of the ongoing project activities, regular pilot meetings and workshops with all cooperation partners have been held throughout 2024 and 2025. The official project kick-off took place in May 2024, marking the formal start of activities and stakeholder engagement. Advisory board meetings have been held at key intervals to provide strategic guidance, ensure alignment with overarching goals and foster cooperation between board members. An online seminar has been organised together with Zukunftshaus and our tandem partners from Czechia, Enviros and Silo, in March 2025. The goal was to share interim results and foster further exchange among participants. During the implementation of the delivery service partners were very active to promote the new service and circular lifestyle offers in general.

Although in the user survey of the Zukunftshaus, customers showed interest in using a bicycle delivery service, they service had only a few users in the end. This was due to several factors: the Zukunftshaus had no online payment function which made a full delivery service difficult, delivery prices were too high, Würzburg is a city with good public transportation and active bicycle scene. These factors occurred during the pilot time and were addressed with multiple communication activities, adjustment of prices and free delivery offers.

6.3.5 Outcomes and Impact

It was a big challenge to develop ideas to the topic “linking sustainable e-commerce with city centres”, since there are not so many good practices. However, together with all involved partners we have implemented a completely new service offer for Zukunftshaus customers and all Würzburg citizens. Zukunftshaus and Radius had the opportunity to test a new offer without a big risk. On that basis, Zukunftshaus can think about further ideas.

The project also paved the way for new/further cooperations between all involved city stakeholders. At the end of the last advisory board meeting, all partners expressed interest in continuing the collaboration. First ideas were about events during the local action “Stadtradeln” in May 2026.

Finally, numerous events and communication measures made it possible to reach a large number of people. This drew people's attention to sustainable concepts such as repairing, renting and also bicycle delivery services.

6.3.6 Lessons learned

When selecting relevant stakeholders, we looked for connections to circular lifestyles, sustainable consumption, and online retail. This included not only traditional sustainability groups but also logistics experts like Radius. We also aimed to collaborate with city representatives, the University of Würzburg and its WUE-Lab, and other local initiatives, to link the pilot to the local network.

Figure 8 Launch of the cooperation between Radius and Zukunftshaus. Source: Zukunftshaus

Offers for circular lifestyles must be accessible, flexible and convenient. If an offer is not good (e.g. here, due to the lack of online payment or the absence of full delivery services), it will not be used often.

After the initial phase, pilot partners tried to attract users with low prices or even free delivery. However, it seemed as though it was already too late. Pilot partners would recommend now starting such a service with low prices and then slowly approaching the actual costs later on.

The pilot closing event, the bicycle cinema, was a great success. Zukunftshaus, Radius and the City of Würzburg are already discussing the possibility of repeating the event during the next “Stadtradeln” campaign in May 2026.

6.4 Hungary: Co-creation for more circular cities – activating students and citizens through University Living Labs

This case study describes how the Budapest University of Technology and Economics (BME) implemented a pilot to engage primarily university students as well as citizens for implementing circular lifestyles, specifically emphasizing the "refuse" and "reduce" aspects of the circular economy. Through a mix of public awareness workshops (European Researchers' Night), intensive seminars, and the launch of a new "Sustainable Business Model Design" course, the project established a University Living Lab (ULL). This approach allowed students to co-create

circular solutions with local businesses, effectively bridging the gap between academic theory and practical urban sustainability.

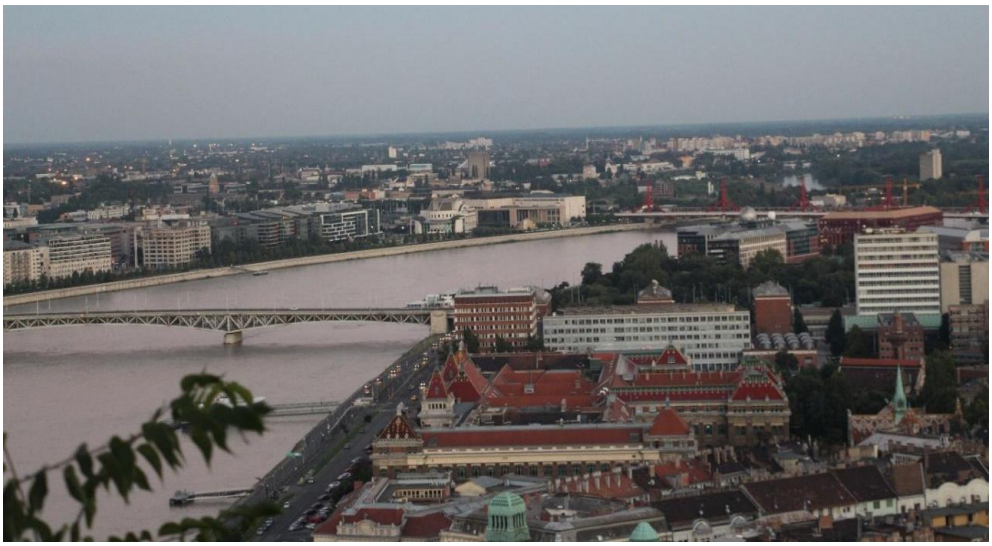

Figure 9 View from the Gellért Hill – Budapest University of Technology and Economics Campuses. Source: BME

6.4.1 Context and background

The pilot was implemented at the BME university campus located in Újbuda (District XI), Budapest's most populous district and a vibrant hub for circular economy initiatives.

The context for the intervention was defined by a needs analysis conducted in 2023, which revealed that while students encounter sustainability in theory, they lack awareness of local circular services and find the university's own operational infrastructure (waste management, cycling facilities) insufficient to support a truly circular lifestyle.

The process was initiated and led by the Department of Environmental Economics and Sustainability at the Budapest University of Technology and Economics. The activities were carried out within the framework of the NiCE project funded by the Interreg Central Europe programme, ensuring alignment with the project's broader objectives related to promoting circular lifestyles in urban environments.

6.4.2 Stakeholders involved

The pilot engaged a diverse range of stakeholder groups representing both the academic environment and the wider local ecosystem. Key participants included undergraduate and master's level university students, academic faculty members, local businesses such as the Ligeti Package Free Shop, and public entities including the FKF and MOHU Educational and

Reuse Centre. In addition, the general public, including local citizens and university alumni, was involved to broaden the societal relevance of the activities.

Stakeholders contributed through clearly defined and complementary roles. Students participated as “circular innovators” within the Living Lab framework, working on practical challenges related to circular lifestyles. Local businesses and reuse centres supported the process by providing real-world case studies, practical challenges, and opportunities for site visits. Strategic guidance and institutional support were ensured through the establishment of a Board of Local Stakeholders, which brought together representatives from different sectors and provided expert input throughout the pilot.

The stakeholder mapping process was grounded in a preliminary needs analysis conducted in late 2023, which included workshops and interviews to identify relevant target groups and engagement priorities. Based on these findings, a formal Board of Local Stakeholders was established to secure cross-sectoral representation and to embed the pilot within existing local networks and institutional structures.

6.4.3 Engagement strategies and methods

The engagement process was based on a combination of participatory workshops, focus groups, the University Living Lab methodology, and educational modules built around a learning by doing approach. These approaches allowed stakeholders to actively contribute to the co-creation process while linking theoretical knowledge with practical experimentation.

A range of tools and techniques was applied to support engagement and learning. The 9R model framework was used as a guiding structure for discussing circular strategies, while personal carbon and water footprint calculators helped participants reflect on the environmental impacts of their everyday choices. Gamified digital tools, such as the Beeco mobile application, were employed to increase motivation and user engagement. In addition, interactive swap party activities focused on books and plants were organised to foster community interaction and to translate circular principles into tangible social experiences.

Figure 10 Workshop with University Students (October 2023). Source: BME

Communication with stakeholders was ensured through multiple channels, including project blog posts published on the Faculty website, regular updates on LinkedIn, conference presentations, and face-to-face co-creation sessions. This multi-channel approach helped to reach different target groups and to maintain visibility throughout the pilot.

Several incentives were offered to encourage active participation. Students received course credits, businesses benefited from networking opportunities through the Stakeholder Board, and members of the public were invited to take part in free educational games and activities. These incentives proved highly effective in ensuring strong commitment within the intensive University Living Lab framework.

6.4.4 Implementation process

The pilot was implemented over a one-year period, from September 2024 to September 2025. Key milestones during this timeline included participation in the European Researchers' Night in September 2024, the launch of the Sustainable Business Model course in spring 2025, and the pilot closing event in September 2025.

A range of activities was conducted throughout the implementation phase. These included awareness-raising workshops for the general public, site visits to reuse centres, business model design sessions within the academic setting, and a pilot-closing swap party that combined community engagement with practical circular action.

One of the main challenges identified during implementation was a perceived credibility gap, as students felt that the university's own operational practices did not fully reflect the circular principles promoted in teaching. This challenge was addressed by creating a structured

dialogue between students and senior management, using the results of the Living Lab activities as a basis for discussion and reflection.

6.4.5 Outcomes and impact

The pilot generated several tangible results and had a clear impact on academic practice. The primary output was the formal institutionalization of circular economy principles through the new "Sustainable Business Model Design" course. This resulted in the creation of the first University Living Lab (ULL) cohort, where interdisciplinary student teams produced detailed circular business model innovation proposals. These proposals were developed in direct collaboration with local "anchor" partners, such as the Ligeti Package Free Shop and the MOHU Educational and Reuse Centre, providing these businesses with fresh, data-driven perspectives on scaling their circular impact.

In terms of behavioural change and shifts in perspective, the pilot successfully shifted the participants' focus from traditional waste management (recycling) toward higher-level circularity (the "Refuse" and "Reduce" tiers of the 9R model). Discussions indicated that students moved away from a "passive consumer" mindset toward becoming "proactive circular actors." The pilot action contributed to the increase in the ability of students to critically evaluate "greenwashing" in digital applications and marketing.

Beyond formal education, the pilot had a notable effect on community and network building. The university campus was reactivated as a space for circular social exchange, demonstrating its potential as a living environment for sustainability practices. Events like the Book & Plant Swap party and the European Researchers' Night workshops demonstrated that circularity can be a low-barrier, community-building tool. The establishment of the Board of Local Stakeholders created a permanent bridge between BME and the Újbuda district's circular ecosystem, ensuring that the university remains a central hub for multi-stakeholder collaboration in Budapest.

Figure 11 Book & Plant Swap during the Pilot Closing Event at the European Researchers' Night (September 2025). Source: BME

6.4.6 Lessons learned

One of the primary insights from the pilot concerned the trade-off between depth and scale in Living Lab approaches. A primary insight was that the University Living Lab (ULL) model offers a "transformative" power that standard lectures cannot match. However, this depth of engagement requires a significantly higher investment of faculty time and administrative coordination. While highly effective for developing specialized "circular entrepreneurs", the model is difficult to scale to thousands of students without dedicated personnel and long-term institutional funding.

Another critical lesson is related to bridging the perceived credibility gap between institutional rhetoric and operational reality. Students pointed out that while they were learning about circularity in class, the university's daily operations undermined the message. To be an effective "focal point" for stakeholders, a university must serve as a functional model of the practices it teaches.

The pilot also demonstrated the importance of targeted rather than generic communication. Broad sustainability messaging was found to be less effective than communication focused on small, incremental steps. By promoting incremental, realistic lifestyle changes – rather than demanding immediate radical overhauls – the project maintained higher engagement levels and reduced "sustainability fatigue".

Based on these lessons, several recommendations for replication can be formulated. Future iterations should place greater emphasis on interdisciplinary recruitment by explicitly highlighting the practical and entrepreneurial benefits of the University Living Lab in order to attract students from non-environmental backgrounds, such as engineering or management. It is also recommended to create low-barrier entry points by combining social events, such as swap parties, with more technical workshops, thereby engaging citizens who might otherwise feel intimidated by the circular economy. Finally, project leaders should prioritise operational advocacy by involving university facilities management as a key stakeholder at an early stage, ensuring that campus infrastructure and everyday practices evolve in parallel with the curriculum.

6.5 Italy: Use water in a circular and efficient way for urban farming

The “Acqua in circolo” pilot project, conducted by ENEA in Bologna, involved citizens in designing, implementing, and testing solutions for more efficient and circular water use, in particular to grow vegetables, herbs, and ornamental plants in the city centre (Urban Living Lab) and to reduce water consumption at home (School Living Lab). Although the initiative was conceived and coordinated by ENEA, the pilot was the result of collaborative planning by

representatives of the city's local authorities and neighboring municipalities, civil society, the university, and the local water management company, all of whom were brought together on the pilot's Stakeholder Board. Citizens involved in the pilot project were able to explore the topic of circular water management, particularly applied to the city centres. In the Urban Living Lab, they then developed and tested three urban farming solutions that will remain available to the community even after the pilot's conclusion, i.e. a rainwater cistern with phytoremediation, a wicking bed system, and a column for hydroponic cultivation. In the School Living Lab, they monitored their household consumption, identified solutions to reduce it, and processed the information to produce videos and comics on the topic.

6.5.1 Context and background

The location chosen for the Italian NiCE pilot was Bologna, a city in Northern Italy with a metropolitan area of approximately 400,000 inhabitants.

The topic of water is of particular interest to local institutions and citizens, who in recent years have been increasingly directly affected by extreme water-related events, such as summer droughts linked to ever-rising temperatures and periodic floods, one of which occurred during the first months of the pilot.

On the topic of water, ENEA, which has one of its research centres in Bologna, has made available its expertise, ranging from the management of complex systems and networks to the identification of suggestions for saving water in everyday life.

Along with these skills, its roots in the Bologna area, constant dialogue with institutions, and collaboration with local associations and NGOs have allowed ENEA to be the initiative's promoter and the focal point for connections among the other individuals and groups involved.

6.5.2 Stakeholders involved

The Municipality of Bologna has extensive experience implementing initiatives to increase its circularity and, more generally, its sustainability, and immediately supported the NiCE idea, becoming an Associated Partner.

In the initial phase of the project, a mapping of circularity initiatives in the Bologna area was conducted, allowing for contact with good practices and those implementing them: the local water management company, a start-up specializing in soilless cultivation with efficient water use, a group of researchers from the University of Bologna working on Nature-Based Solutions, and citizen groups implementing green projects in their neighborhoods.

These contacts allowed for the creation of an initial core of stakeholders who, together with ENEA, gradually shaped the pilot project.

Based on the initial ideas developed, the city area in which to implement the activities was identified, i.e. the Porto-Saragozza neighborhood, and two main target groups were identified for the pilot: individual citizens, for whom an Urban Living Lab was organized, and elementary and middle school students, for whom a School Living Lab was organized.

To facilitate the involvement of these two groups, additional specific stakeholders were included in the design process, particularly teachers from the neighborhood schools and associations that work with citizens on sustainability and social and cultural promotion.

6.5.3 Engagement strategies and methods

During the design phase, dedicated meetings were organized by ENEA with various stakeholders, including teachers to discuss integrating the pilot activities into the school curriculum, the start-up to explore possible practical applications for citizens, and the Municipality and representatives of the Porto-Saragozza neighborhood to identify spaces for the activities.

The pilot's launch event, in June 2024, was the first opportunity for the general public to be informed of the project and invited to the event through flyers distributed at the offices of some of the participating associations and the neighborhood, and via email to representatives of potentially interested groups, such as the association of municipal vegetable garden growers.

The email addresses of approximately 230 people interested in receiving updates on the project and the pilot were also collected, and regular communications were sent to them. A website was created to present the pilot, its objectives, and its methodology, and to provide updates on its activities in the News section.

During the pilot, for the Urban Living Lab three meetings were organized to discuss circular economy and water, to design systems for more efficient and circular water use in three real-world contexts proposed by citizens (i.e. a communal garden, a co-housing courtyard, a university building), and then to build three prototypes to be installed in the three contexts. The discussions, especially in the initial phases, were guided by ENEA and other supporting experts, but the active involvement of participating citizens was constant, thanks also to the ongoing support of professional facilitators.

Figure 12 Team building activity during one of the Urban Living Lab meetings with citizens (September 2024). Source: ENEA.

During the pilot, the citizens most directly involved in the Urban Living Lab experiment were invited also to join a specially created WhatsApp group to exchange information about the project's progress and similar initiatives of potential interest to the group.

For the School Living Lab, ENEA experts fostered student engagement and curiosity by showing them laboratory objects related to water, as well as providing technical explanations of the water cycle, particularly in urban settings. They also challenged them to propose tips for reducing water consumption at home, rather than presenting best practices already identified by ENEA. With the support of their teachers, students were further involved in promoting the topics discussed in class at home and by creating videos and comics on water conservation.

6.5.4 Implementation process

Aside from those with the Municipality of Bologna, which, as an Associate Partner of the NiCE project, has been involved since the project's start (May 2023), the first contacts with potential stakeholders took place in late 2023, with the mapping of Bologna's best practices related to the circular economy.

In early 2024, contacts were initiated with the stakeholders identified to join a formal board that can offer support and input throughout the pilot. Membership applications were collected between April and May 2025.

The first engagement with the general public, being citizens another key stakeholder for the pilot, took place during the launch event in June 2024 and continued with public meetings in the fall of 2024.

Following the meetings, a smaller number of citizens, namely a group linked to the Porta Saragozza municipal gardens, one linked to the Porto 15 co-housing project, and a third linked to the DICAM Department of the University of Bologna, were involved in testing solutions for efficient and circular water use until June 2025, actively using the cultivation systems and testing their characteristics in practice.

The pilot's closing event in June 2025 offered the opportunity to bring together in one physical location many of the citizens involved in the experiment in the previous months and attract new citizens to hear the story of their experience.

Figure 13 Building a DIY wicking bed together during the final pilot event (June 2025). Source: ENEA

The main challenge faced during the pilot was the need to relocate the rainwater collection tank installed at the Porto 15 co-housing facility due to unexpected maintenance work on a nearby building. In that case, the diverse network of stakeholders actively involved in the project allowed ENEA to quickly find an alternative solution to temporarily house the tank at a social promotion association and circularity hub in Bologna.

6.5.5 Outcomes and impact

Among the pilot’s major concrete results is the installation of three solutions for the efficient and circular use of water for urban farming, i.e. a rainwater cistern with phytoremediation, a wicking bed system, and a column for hydroponic cultivation. These systems remain on-site and available to citizens.

The organization of meetings open to all citizens brought together people all interested in urban farming but ranging, e.g., in age, profession, and cultural background. Both the discussions during the in-person meetings and the communication via WhatsApp between these people

allowed for a rich exchange of opinions and information, not only on the specific topic of efficient and circular water use but also on sustainable lifestyles more generally.

The activity with the students also provided an indirect yet highly practical opportunity to connect with their families, whom the students involved in home experiments to save water.

The collective use of the wicking bed installed at the Porta Saragozza municipal gardens also extended to the educational activities of the growers' group, who used and continue to use the installed system to introduce the kindergarten children they work with to the topic of sustainability and an understanding of natural processes.

Figure 14 Kindergarten children experimenting with the wicking bed at the Porto Saragozza municipal gardens. Source: ENEA

6.5.6 Lessons learned

The success of the pilot activities would not have been possible without a careful analysis of stakeholders and initiatives in the Bologna area, to identify and engage the most interested and interesting stakeholders.

Redundancy, i.e. the possibility of an excess of stakeholders involved, may complicate the activities somewhat, for example by increasing the number of entities to be agreed upon to define meeting times, but it certainly ensures that the natural decline in interest and participation from some does not undermine the project's implementation.

Certain types of stakeholders have proven interesting not only for their specific characteristics but also as multipliers towards others. In this sense, schools (students and teachers) play a

fundamental role in generating enthusiasm and shared knowledge on a topic that can then be extended beyond the classroom.

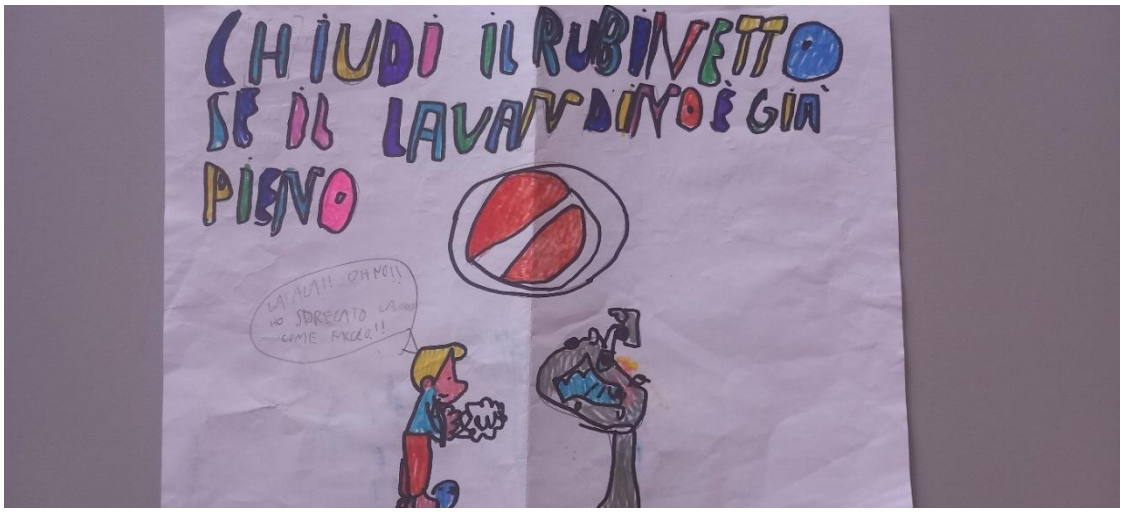

Figure 15 Illustrated tips for saving water from students at participating Bologna schools. Source: ENEA

From an institutional perspective, having representatives from the Municipality and its neighborhoods on board who believe in the project, support it, and periodically show up at meetings is an invaluable added value for any initiative in an urban context.

6.6 Poland: From an empty shop to a circular community hub – stakeholder engagement through the Zero Waste Multicentre in Brzeg Dolny

The Zero Waste Multicentre in Brzeg Dolny is a municipally initiated pilot developed within the NiCE project to activate local stakeholders and citizens around circular lifestyle practices. The pilot transformed an unused commercial space into a multifunctional community hub focused on reuse, repair, upcycling and sustainable consumption. Through a combination of hands-on workshops, educational cooperation with schools, material reuse partnerships with local businesses and continuous community involvement, the Multicentre became a practical testing ground for participatory engagement formats.

6.6.1 Context and background

Brzeg Dolny is a small post-industrial municipality in south-western Poland with a strong industrial identity and a relatively dispersed urban structure. While the town benefits from active educational institutions and a network of local organizations, it has limited informal public spaces dedicated to community-led activities. The pilot was implemented in a former retail unit located in a residential area between a primary school and a kindergarten, ensuring natural daily exposure to families, children and educators.

Prior to the NiCE pilot, circular economy-related activities in Brzeg Dolny were scattered and largely dependent on individual engagement. Existing initiatives, such as educational workshops, environmental campaigns, or informal reuse practices lacked a common space and coordination framework. Citizens often perceived circular lifestyles as abstract or demanding, with limited opportunities to practice them locally. The municipality identified the need for a low-threshold, visible space that would connect stakeholders, enable experimentation and support behavioural change through direct experience.

The Municipality of Brzeg Dolny acted as the initiating and coordinating body of the pilot, responsible for securing the space, defining the engagement framework and ensuring institutional backing. The pilot was initiated and implemented by the Municipality of Brzeg Dolny within the framework of the NiCE project, with active involvement of local NGOs, schools, municipal institutions and informal community groups. Brzeg Dolny, like many post-industrial towns in Central Europe, faces challenges such as limited awareness of circular economy principles, fragmented bottom-up initiatives and a lack of accessible spaces for practical environmental education. The Zero Waste Multicentre was conceived as a response to these challenges, providing a physical hub that connects existing local resources, knowledge and stakeholder networks into a coherent, visible and transferable model.

Figure 16 Workshop organised in the Zero Waste Multicentre. Source: Municipality of Brzeg Dolny

6.6.2 Stakeholders involved

The activities were implemented through the involvement of a diverse set of stakeholder groups representing both formal institutions and local community actors. Municipal authorities played a central role by providing project leadership, managing the space, and coordinating activities. Primary schools and teachers were key partners in delivering educational engagement through regular workshops. NGOs contributed their expertise in sustainability and supported the facilitation of activities. Small and medium-sized enterprises were involved mainly as providers of surplus materials, including textiles, upholstery foam, and wood, which enabled hands-on reuse practices. Additional support was provided by the Municipal Library

and the Municipal Utility Company, which contributed to community outreach and material resources. Informal groups and local residents were engaged as active participants and co-creators of activities.

The roles and contributions of stakeholders were clearly defined and complementary. Schools participated in monthly upcycling workshops, engaging approximately 20-60 pupils per month and integrating circular economy topics into informal education formats. SMEs supported the Multicentre primarily through material donations, which made it possible to organise practical reuse and upcycling workshops. NGOs contributed thematic knowledge and facilitation skills, ensuring the quality and relevance of activities. Municipal entities ensured effective outreach, logistical support, and long-term stability of the initiative through their institutional backing.

Figure 17 Upcycling workshop for school studens. Source: Municipality of Brzeg Dolny

The stakeholder mapping process relied on a combination of focus groups, surveys, existing municipal cooperation networks, and public meetings. Particular importance was given to informal communication channels, which proved essential for sustaining long-term engagement, especially with schools and educators. This mixed approach allowed for the identification of both formal partners and informal community actors, strengthening the inclusiveness and resilience of stakeholder involvement.

6.6.3 Engagement strategies and methods

The engagement strategy of the Zero Waste Multicentre was based on continuous, practice-oriented participation rather than one-off consultation. The core approach consisted of regular hands-on workshops (upcycling, sewing, woodworking, furniture restoration, plant-based cooking and creative reuse), designed as open, interactive formats encouraging active involvement rather than passive attendance. Feedback from participants was gathered primarily through direct conversations after workshops, short verbal evaluations with teachers and facilitators, and observation of participation patterns, which proved more effective than formal surveys in this small-community context.

To foster inclusion and collaboration, the Multicentre relied on low-threshold tools that required no prior expertise. These included:

- shared toolkits (sewing machines, basic woodworking tools),
- reused materials provided by local SMEs (textiles, upholstery foam, wood offcuts),
- modular workshop scenarios that could be adjusted for different age groups.

Workshops were structured around co-creation tasks, where participants collectively decided how materials would be reused, encouraging peer learning and creativity. For school groups, activities were adapted to support informal education objectives, linking circular practices with practical skills development. The physical space itself functioned as a tool: an open, visible workshop area allowed spontaneous engagement and observation, lowering psychological barriers to participation.

Communication with stakeholders was maintained through a combination of direct, relationship-based channels and light digital outreach. With schools and NGOs, communication relied mainly on established informal networks, personal contacts, phone calls and direct messages with teachers and school principals, enabling fast coordination and trust-based cooperation. Digital channels, including social media and municipal communication platforms, supported visibility and played a main role regarding communications with citizens.

The pilot deliberately avoided financial incentives, focusing instead on non-monetary, experience-based incentives. These included free access to tools and materials, acquisition of practical skills, opportunities for creative expression, and participation in a socially meaningful initiative. For schools, incentives included ready-made educational content aligned with sustainability themes and minimal organizational burden. For SMEs, participation offered a practical way to reuse surplus materials locally and strengthen their community profile. These incentives proved effective: repeated participation of schools (20–60 pupils monthly), high interest among adult participants (20-40 monthly) and sustained material contributions from businesses demonstrated that intrinsic motivation and tangible benefits were sufficient to maintain stakeholder involvement.



Figure 18 Woodworking and furniture renovation workshops. Source: Municipality of Brzeg Dolny

6.6.4 Implementation process

The pilot implementation followed a clearly structured, multi-phase timeline spanning from late 2023 to October 2025. Preparatory activities began in November 2023 with concept development for the Zero Waste Multicentre, stakeholder consultations, user surveys, and world café workshops, complemented by transnational coordination within the NiCE project.

In 2024, the focus shifted to technical preparation and capacity building, including architectural planning, securing workshop materials through cooperation with the Municipal Utilities Company and local businesses, renovation works (June 2024), and the establishment of communication channels such as the pilot blog and social media. The official launch of the Multicentre took place in February 2025, following equipment installation, finalization of the activity schedule, and a public kick-off event.

Between February 2025 and October 2025, the Multicentre operated on a regular basis, delivering workshops, meetings, and community events, culminating in the Zero Waste Festival in June 2025 and the preparation of the pilot documentary report. The implementation cycle concluded with evaluation activities and an on-site visit of the NiCE Project partners in October 2025, allowing for reflection, peer learning, and capitalisation of results.

Figure 19 Zero Waste Festival in Brzeg Dolny. Source: Municipality of Brzeg Dolny

Core activities included monthly workshops for adults, school groups, open community events, thematic sessions led by NGOs and reuse-oriented initiatives supported by local businesses. On average, 8 events per month were organised. The Multicentre also served as a meeting point for planning new activities and discussing future cooperation.

Workshops combined practical skills development with informal education on circular lifestyles, ensuring both learning and engagement. The diversity of formats allowed the Multicentre to reach different target groups while maintaining a coherent circular economy narrative.

Key challenges included initial low awareness, logistical coordination of materials and the need for constant on-site supervision. These were addressed by intensifying cooperation with schools, clarifying operational rules and appointing a dedicated Multicentre supervisor to ensure continuity and quality.

Additional challenges included balancing openness of the space with safety and responsibility for tools, especially during workshops for children. These issues were mitigated through clearer scheduling, defined responsibilities and gradual professionalization of daily operations.

6.6.5 Outcomes and impact

The pilot resulted in the successful transformation of an unused retail space into a functioning Zero Waste Multicentre with a regular programme of activities. Material reuse partnerships with SMEs were established, and a stable cooperation model with schools was developed. In addition, the Multicentre became a recognized local venue for circular education, hosting workshops across multiple thematic areas such as upcycling, sewing, woodworking, and plant-based cooking. The establishment of clear operational procedures and a fixed activity schedule ensured the replicability and continuity of the pilot beyond the project timeframe.

Participants demonstrated increased openness toward repair, reuse, and sustainable consumption. Teachers reported growing interest among pupils, while adult participants expressed greater confidence in applying circular practices at home. Repeated participation, particularly among school groups, indicated a shift from one-time engagement toward longer-term learning processes. Moreover, participants increasingly perceived circular practices as accessible and practical rather than complex or restrictive, lowering psychological barriers to behaviour change.

The Multicentre strengthened also the local ecosystem for circular lifestyles and provided the municipality with a tested engagement model. It contributed to embedding circularity into everyday life rather than treating it as a one-off project activity. The pilot also reinforced cross-sectoral cooperation between public institutions, NGOs, and local businesses, creating a foundation for future joint initiatives. At a strategic level, the experience generated transferable insights that can inform municipal policies and future capitalisation efforts within and beyond the NiCE framework.

6.6.6 Lessons learned

The experience demonstrated that the availability of a physical and easily accessible space is a key condition for sustained stakeholder engagement, as it provides a visible and reliable point of contact for the local community. Experiential and hands-on formats proved to be more effective in fostering deeper behavioural change than purely information-based approaches, as they allow participants to directly engage with circular practices. Primary schools emerged as particularly strong multipliers for circular lifestyle initiatives, enabling repeated engagement with young participants and indirect outreach to families. The process also highlighted the importance of continuous coordination and a flexible approach, especially in small-municipality contexts where capacities and resources can be limited. Finally, the visibility of activities and the presence of regular opening hours were shown to have a significant impact on participation levels and on building trust among different stakeholder groups.

For replication, municipalities should secure long-term access to space, appoint a dedicated coordinator, involve educational institutions early and allow for iterative development of activities. Combining municipal leadership with community co-creation increases both impact and sustainability.

Additionally, partnerships with local businesses can strengthen resource flows and reduce operational costs, especially when material reuse is integrated into workshop design. Finally, embedding pilot activities within broader municipal strategies and capitalisation frameworks enhances their potential for scaling and long-term institutionalisation

6.7 Slovakia: Re-use Centre Košice – Building a circular and socially inclusive community through stakeholder engagement

This case study describes how CIKE engaged local stakeholders to create the first Re-use centre in the city, an innovative space combining circular economy principles with social support for vulnerable groups. Through participatory workshops, targeted donation campaigns, cooperation with NGOs and community activities, the pilot brought together citizens, organizations and public institutions. The engagement process helped define the centre's goals, shape its services and build a strong community around reuse, solidarity and sustainability. The outcomes include a functioning social re-use model, strengthened partnerships and increased awareness of circular lifestyles in Košice.

Figure 20 Re-use Centre Košice. Source: CIKE.

6.7.1 Context and background

The engagement took place in Košice, the second-largest city in Slovakia, known for its active cultural scene but facing environmental and social challenges, including waste production, rising living costs and the need for more accessible sustainability initiatives. The Re-use centre was established at street Kováčska 18, in an unused municipal space in the historic city centre.

Košice lacked a visible, accessible place for re-use, circularity, donation and community learning. Existing circular initiatives were scattered, hard to find and not connected. Citizens often did not know where or how to donate items responsibly. Social services lacked sufficient resources and vulnerable communities had limited access to essential household items. Stakeholder engagement was needed to identify needs, design a meaningful model and build a network able to operate the centre.

The engagement process was led by CIKE – Creative Industry Košice, in cooperation with the City of Košice (Department of Strategic Development) and K13 – Košice Cultural Centres, within the Interreg Central Europe project NiCE – From Niche to Centre.

6.7.2 Stakeholders involved

Stakeholders were identified through desk research on existing circular and social actors in the city, interviews and consultations with NGOs and public institutions. As well as there were three Living Labs held from December 2023 to April 2024, where stakeholders co-designed the centre's vision. This mapping helped define the model as socially focused, practical and community-driven. In this process, the following key stakeholders groups have been indentified:

- NGOs and social service organizations: ETP Slovakia, DEDO Foundation, MyMamy, Crisis Centre for Mothers with Children, Arcidiecézna charita, SPLETINIA, UVP Animal Shelter
- Public authorities: City of Košice, K13 – Košice Cultural Centres
- Businesses and corporate volunteers: IBM, T-Systems
- Local citizens: donors, workshop participants
- Experts and educators: sustainability specialists, craft educators, circular economy practitioners

The team brought together a diverse set of strengths that shaped the initiative. NGOs played a key role by identifying the real needs of vulnerable groups and co-organizing donation campaigns tailored to those challenges. The City of Košice, together with K13, offered strategic guidance and provided the municipal space that enabled the activities to take place. CIKE

coordinated the overall engagement, organized events and ensured smooth day-to-day operations. Corporate partners contributed by designing a future digital platform aimed at connecting donors with recipients in an efficient and transparent way. Citizens actively joined the process as donors, learners and engaged community members. Finally, experts enriched the initiative by leading educational workshops focused on reuse, craft and sustainability, helping to build practical skills and raise awareness.

6.7.3 Engagement strategies and methods

The process combined several engagement approaches. Participatory Living Labs helped stakeholders shape the centre's goals and services, while interviews with NGOs clarified the needs of vulnerable groups. Workshops on circular lifestyle topics brought citizens into the pilot action and targeted donation campaigns offered practical ways to contribute. Coordination meetings with partners ensured that activities remained aligned and well-organised.

Key tools included co-design exercises during Living Labs and basic needs-assessment methods such as interviews and mapping. Hands-on activities like upcycling workshops helped create an open and engaging atmosphere. Short surveys gathered feedback during events and cooperation with IBM and T-Systems enabled design of a prototype digital matching tool.

Communication was maintained through in-person meetings with NGOs and city departments, supported by social media posts and email updates for the public. Public events such as the Kick-off, Mini Book Swap and Earth Day helped broaden outreach, while informal conversations with visitors at the centre strengthened relationships.

Figure 21 Workshop organised in the Re-use Centre Košice. Source: CIKE.

The project relied on non-financial incentives. Free workshops encouraged people to visit and clearly defined donation campaigns motivated donors by showing exactly who would benefit. Growing visibility and trust supported continued NGO involvement, demonstrating that intrinsic motivation and meaningful impact were sufficient to engage the community effectively.

6.7.4 Implementation process

The pilot in Košice was implemented between December 2023 and October 2025, with the following phases:

- Dec 2023–Apr 2024: Stakeholder mapping & Living Labs
- Summer 2024: Renovation of the unused space
- Oct 2024: Official opening of the Re-use centre
- Oct 2024–Apr 2025: Workshops, donation campaigns and community events
- 2025: Development of digital matching tool with corporate volunteers

A wide range of activities was carried out throughout the initiative, creating a dynamic and engaging environment for the community. The team organised twelve educational workshops covering topics such as reuse, the circular economy, minimalism, upcycling and repair. Alongside these, ten targeted donation campaigns were conducted in close cooperation with NGOs, complemented by collection drives supporting seniors, mothers with children, homeless people, refugees, community centres and a local shelter. Community events, including a Mini Book Swap and an Earth Day stand, helped attract broader public interest and fostered interaction among residents. Regular meetings with partners and corporate volunteers ensured smooth coordination and continuous improvement of the programme.

Figure 22 Products collection campaign. Source: CIKE

The project also faced several challenges, which required practical and flexible solutions. During the winter months, insufficient heating made the space uncomfortable, so additional heaters were installed and activities were rescheduled to warmer periods of the day. Limited space and storage capacity prompted more careful planning of collection drives and workshop formats. Parking difficulties for donors were addressed through clearer communication and the organisation of smaller-scale campaigns. Lower attendance in cold months led to adapted promotion strategies and a warmer, more inviting indoor setup. Finally, reaching new audiences required strengthened cooperation with NGOs, hosting events in public spaces and enhancing social media communication to expand visibility and engagement.

6.7.5 Outcomes and impact

The initiative generated a range of tangible results, demonstrating its value both for the community and for the city. One previously unused municipal space was successfully reactivated and transformed into a lively circular community hub. Over the course of the project, ten targeted donation campaigns were carried out to support vulnerable groups, and twelve workshops attracted more than sixty returning participants. Hundreds of items, including clothing, kitchenware, hygiene products, children's goods and small pieces of furniture, were redistributed to those in need. Collaboration between the city, NGOs and citizens grew stronger, while work also progressed on developing a prototype of a digital tool that would match specific needs with available donations.

These activities led to noticeable behavioural changes. Citizens began donating with greater intention and awareness, understanding better how their contributions could make a difference. NGOs started to view the centre as a reliable and dignified place for distributing support. Participants increasingly embraced habits of reuse, repair and mindful consumption, and the workshops played an important role in reshaping attitudes toward second-hand items and broader sustainability practices.

The project also had wider impacts on the promotion of circular lifestyles in Košice. It increased the visibility of reuse as a normal, community-based activity and introduced circular education into everyday urban life. By creating a new form of social infrastructure that supports both inclusion and circularity, the initiative laid the groundwork for long-term circular hubs that can continue to grow and evolve in the city.

6.7.6 Lessons learned

Several important lessons emerged from the implementation of the initiative. One of the key insights is that community engagement is strongest when activities respond to real social needs rather than relying solely on abstract environmental messages. The experience also showed that even small and easily accessible spaces can generate substantial community interest when they are co-created with local stakeholders. Clear communication, especially through specific and concrete donation lists, proved essential for building trust and encouraging participation. Integrating reuse activities with educational workshops helped shift mindsets and supported long-term behaviour change. Overall participation increased when events were simple, practical and welcoming to a wide range of residents.

Based on these observations, several recommendations can guide future efforts. Starting with participatory design processes is crucial to understand local needs before launching any

services. Close collaboration with NGOs is highly valuable, as they have a deep understanding of vulnerable communities and can help shape effective support. Instead of relying on general collection bins, offering regular, themed donation campaigns ensures more targeted and meaningful contributions. Workshops should continue to play a central role in keeping citizens engaged and learning. Finally, ensuring basic comfort conditions, such as adequate heating, sufficient storage space and good accessibility, is essential when reusing existing spaces for community purposes.

6.8 Slovenia: POP UP STORE in Ptuj

6.8.1 POP UP STORE as a participatory tool for promoting circular lifestyles

The POP UP STORE pilot activity was implemented as a temporary, flexible engagement space designed to raise awareness of circular economy principles and actively involve local stakeholders in co-creating circular lifestyle solutions. By combining physical visibility with participatory formats, the POP UP STORE functioned both as an information hub and a testing ground for circular products, services, and ideas. The pilot aimed to connect citizens, creative actors, businesses, and public authorities, foster dialogue on sustainable consumption, and demonstrate how circular practices can be integrated into everyday urban life. The activity resulted in increased stakeholder awareness, new cross-sector collaborations, and concrete inputs for further circular initiatives at local level.

Figure 23 POP UP STORE in Ptuj. Source: ZRS Bistra Ptuj

6.8.2 Context and background

The POP UP STORE was established in a centrally located, easily accessible yet for years empty permises in the city centree, ensuring high visibility and spontaneous footfall. The location was selected within a lively city area frequently used by residents and visitors, making it suitable for informal engagement with diverse target groups.

Despite growing policy attention to circular economy and sustainable lifestyles, local citizens and small businesses often lack practical understanding of circular concepts and opportunities for direct involvement. There was a clear need for an approachable, low-threshold engagement format that could translate abstract circular economy principles into tangible experiences and encourage behavioural change.

The pilot activity was initiated and coordinated by the NiCE project partner at local level, in cooperation with municipal authorities and local development or cultural organisations. These entities were responsible for overall coordination, stakeholder outreach, and alignment with the NiCE project objectives.

6.8.3 Stakeholders involved

The implementation of activities involved a broad range of stakeholder groups representing different perspectives within the local circular ecosystem. These included local citizens and consumers, who were engaged as end users of circular solutions, as well as actors from the creative and cultural sectors such as designers, artists, and makers. Small and medium-sized enterprises, including circular and social enterprises, played an important role alongside non-governmental organisations and civil society organisations active in the field of sustainability. Municipal departments and other public institutions were involved to ensure alignment with local strategies, and in some cases educational institutions contributed where relevant.

Each stakeholder group contributed in a distinct way. Citizens took part primarily as visitors, contributors, and testers, providing feedback on proposed circular solutions and helping to assess their usability and relevance. Creative and cultural actors were responsible for curating and showcasing circular products, designs, and concepts, thereby translating abstract sustainability principles into tangible and accessible forms. Businesses presented circular services and business models, demonstrating their practical application and economic potential. NGOs supported the process by contributing expert knowledge, educational content, and facilitation skills, while public authorities strengthened the initiatives through increased visibility, institutional legitimacy, and strategic alignment with municipal policies.

Figure 24 Visitors of the POP UP STORE in Ptuj. Source: ZRS Bistra Ptuj

The stakeholder mapping process combined several complementary approaches. Stakeholders were identified through existing NiCE partner networks, local ecosystem mapping exercises, and consultations with municipal representatives. To ensure diversity and inclusiveness, particularly with regard to grassroots initiatives and small-scale actors, open calls were complemented by targeted direct invitations. This approach allowed for the involvement of both established organisations and emerging local actors, creating a balanced and representative stakeholder mix.

6.8.4 Engagement strategies and methods

The POP UP STORE pilot activity in Ptuj applied a low-threshold, participatory engagement approach based on the temporary activation of a vacant space in the historic city centre. The space was conceived as a small-scale “living laboratory” that enabled direct interaction between citizens, local artists, craftspeople, and project partners, while presenting circular economy principles in a practical and accessible way.

Engagement relied mainly on face-to-face interaction and experiential learning. Local creative actors were given free access to the space to present and sell their products and organise exhibitions, allowing circular concepts such as reuse, local production, and sustainable consumption to be communicated through tangible examples. Circularity was further reflected in the reuse of furniture sourced from the Centre for Reuse Ptuj. Communication was ensured through on-site facilitation, printed materials, and social media channels, while non-financial incentives such as visibility and networking opportunities proved effective in sustaining stakeholder engagement.

6.8.5 Implementation process

The implementation of the POP UP STORE pilot activity was carried out in several consecutive phases, starting with preparatory activities and followed by the operational phase of the store. After identifying a suitable vacant premises owned by the Municipality of Ptuj, a rental agreement was concluded and the space was cleaned, technically prepared, and furnished.

The furnishing followed circular principles, with reused furniture sourced through the Centre for Reuse Ptuj. In parallel, local artists and craftspeople were identified and engaged through existing networks and introductory meetings, during which the operating model of the POP UP STORE and the roles of participants were defined.

The operational phase started in mid-October 2024 with the official opening of the POP UP STORE, followed by regular opening hours, rotating product displays, and thematic activities such as sales exhibitions. Additional activities included the organisation of a joint sales exhibition in December, which fully activated the available space and expanded stakeholder participation. Challenges during implementation included limited footfall due to the location and organisational demands related to staffing and sales administration. These issues were addressed through flexible organisation, cooperation with educational institutions, and adaptive use of the space.

6.8.6 Outcomes and impact

The POP UP STORE pilot resulted in the successful activation of a long-vacant commercial space in the historic city centre and its temporary transformation into a multifunctional hub for local creative production and circular economy practices. The activity enabled local artists and craftspeople to access an affordable sales and exhibition space, respond to a clearly identified local need, and increase the visibility of their work. The store also served as a testing environment for new forms of collaboration between cultural actors, public institutions, and project partners.

At the behavioural level, the pilot contributed to increased awareness among visitors regarding sustainable consumption, reuse, and the value of locally produced goods. For participating stakeholders, the activity strengthened cooperation, built trust, and generated practical experience in operating shared spaces. More broadly, the pilot supported the NiCE project's objectives by demonstrating how circular economy principles can be applied to revitalise urban centres and stimulate social and economic activity in underused areas.

6.8.7 Lessons learned

The pilot activity highlighted the effectiveness of temporary, low-threshold interventions for engaging local stakeholders and reactivating vacant urban spaces. Providing free or affordable access to centrally located premises proved to be a strong incentive for creative actors, while continuous content renewal helped maintain public interest. At the same time, the experience showed that a limited number of participants makes it difficult to ensure continuous operation, indicating the need for a broader stakeholder base in future phases.

For replication and further development, it is recommended to increase the number of participating creators, strengthen links with existing cultural events and festivals, and make greater use of public space in front of the premises to improve visibility. Maintaining simple and flexible administrative solutions, such as the established sales and GDPR procedures, is also considered essential for the sustainability and scalability of similar pilot activities.