

Grant Agreement number: 101037031

Project acronym: FRONTSHIP

Project title: A FRONTrunner approach to Systemic circular, Holistic & Inclusive solutions for a new Paradigm of territorial circular economy

Type of action: Deployment of systemic solutions with the support of local clusters and the development of regional community-based innovation schemes



Deliverable Number: 7.1

Methodological approach to enhance circularity in Lodz
Region - SOCIAL + POLICY
Citizen engagement

Delivery type:	Report
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Contractual delivery date:	M32
Delivery date:	M33
Dissemination level:	Public

Partners



HISTORY OF CHANGES			
Version	Date	Author/Contributor	Changes
1.0	17.05.2024	OPUS	First draft
2.0	28.05.2024	VELTHA/Aimee Forcada	First internal review
3.0	29.05.2024	LOM/Małgorzata Żak-Skwierczyńska, Laila Wojdał	Content for Chapter 6 added to the document
4.0	06.06.2024	RIC/Ewa Kochańska	Content for Chapter 4 added to the document
5.0	14.06.2024	OPUS	Internal review
6.0	28.06.2024	OPUS	Final version for submission
7.0	22.07.2024	EURADA	Quality assurance completed
8.0	22.07.2024	OPUS	Final version for submission

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1.Introduction

The report presents a methodological approach to incorporating the issue of circularity into regional and local policies regarding the participation of residents as active stakeholders in the process. As part of the report, we focus on the social dimension, based on experiences and pilot activities undertaken in the Parzeczew commune, the Bzura Inter-municipal Association and part of Lodz city, as a test area. These experiences can be transferred to the regional level after ensuring the appropriate scale and scope of implementation.

The developed solutions were included in the "participation ladder" diagram, i.e. the ladder of stakeholder participation and the method of their involvement. The starting point for creating the engagement model was the definition of including residents in the circular economy adopted for the Frontsh1p project. Its basic assumption is that inclusive activities refer to a) households and b) are stimulated by the influence of local authorities at every level of public administration.

The selection of tools developed for each level of the "participation ladder" was determined based on the analysis of the effectiveness of individual actions/behaviours in the context of CSS, which are the essence of the FrontSh1p project. These analyses allowed the identification of adequate tools - in accordance with the implementation strategy adopted for the Frontsh1p project, based on the use of the "small steps" philosophy aimed at achieving strategic goals using an adaptive approach. Solutions for activities involving residents should be implemented in the form of a sandbox project. This means that they need to be tested, improved and implemented on an ongoing basis. This way of achieving goals will enable their promotion and diffusion, and consequently their replication to other territories. Therefore, it is based on the innovative Circular Governance Model developed as part of the activity (D.2.2), called the CircuPuncture Model. All solutions according to this method are grounded on:

- a method based on integrated interpersonal and collective communication tools, supported by ICT technologies ("application economy");
- methodology for implementing small-scale projects in a situation where it is difficult to initiate and implement a comprehensive development vision in one step or as part of one large project;
- method of action to achieve strategic goals involving individual stakeholders in development activities;
- a method of bottom-up action initiated by people/stakeholders aware of the conditions and needs of organising a circular economy;
- the method of coordination and, consequently, integration of multi-agency, dispersed sectoral and cross-sectoral activities/projects;

- mechanism of coexistence of the social, economic and natural spheres based on market logic;
- mechanism of coexistence of the social, economic and natural spheres based on symbiosis and sharing.

To sum up, CircuPuncture is a strategy of operation on a smaller, local scale. As stated above, the CircuPuncture methodology is based on the creation, organisation, management and improvement of a Circular Territorial Cluster (CTC). The local territory is treated as a laboratory for creating, implementing and testing innovative projects - Circular Local Booster (CLB). The CLB is then ready to replicate to other locations in the cluster or to other CTCs.

According to this approach, a model for engaging residents is also included, which involves launching activities in a point-based, local manner, with the selection of tools adequate to the specific place. As part of the activities, the model is being tested in Parzeczew and Lodz.

2. Definition of social engagement in CE

For the needs of the FrontSh1p project, a definition of citizen engagement was created. Its main assumption is to indicate that appropriate behaviours involving residents in the circular economy (CE) require both activities addressed to the residents themselves (in our definition, resident = household) and activities related to the external environment, where mainly local governments can support the process of engaging citizens in CE.

Citizen engagement in the circular economy refers to the involvement of society (households) in activities (processes) for the implementation of solutions constituting the circular economy system (CES), also known as the circular economy (CE) or closed economy-loop economy (CLE). This concept means, above all, commitment to real processes related to management (processes from the real sphere - R) - undertaking specific practices.

The second element of the definition is actions (instruments) undertaken (used) by public entities, non-governmental organisations, etc. These support activities also need to be analysed as part of research on social engagement in CE.

Social involvement in the circular economy, in a broader sense, may also refer to regulatory processes related to management (processes from the regulatory sphere). An example is the design of organisational solutions aimed at increasing the circulation of natural resources in the socio-economic system, and thus reducing the anthropogenic impact on the

natural environment, mainly resulting from the production and collection of various types of waste, mainly post-consumer waste, i.e. waste accompanying consumption (i.e. mainly municipal waste).

R-real processes for engaging communities in the circular economy

We define the actions of citizens (households) for the circular economy as real (R) (and not just declarative) commitment to the following practices and processes:

1. Refusal (e.g. refusal of unnecessary consumption of goods; elimination of unnecessary/harmful consumption).
2. Reduction (reduction of consumption of goods to reduce the physical flow of matter in economic processes).
3. Reusage (multiplication of the use of material goods for their current purpose).
4. Renovation (renewing material goods to restore their original functionality and extend their life). Repairing (repair of broken or damaged material goods).
5. Reusage (finding new uses and functionalities for material objects already used in accordance with their original purpose).
6. Recycling (processing material goods into new, secondary raw materials), as well as activities not directly related to, but supporting such practices:
7. Sharing (using one item/material good together with other households to increase the intensity and efficiency of use).
8. Leasing (systems for renting material goods).
9. Segregation and selective collection in the local waste management system.

This definition is the basis for engaging residents and conducting activities involving residents in the Frontsh1p project.

External environment activities as part of citizen engagement

The second key element necessary to engage citizens in CE is for external institutions to take specific actions. This consists of:

1. Activities increasing awareness and knowledge of issues related to the circular economy (soft activities). Actions include:
 - a) informational activities,
 - b) educational activities,
 - c) promotional activities (e.g. aimed at creating new social trends in the CE area),
 - d) consulting activities.

Awareness-raising activities can be carried out by very different entities, for example,

- e) national (central), regional and local authorities,

- f) non-governmental/social organisations, social partners,
- g) private and public enterprises,
- h) educational institutions.

Increasing citizens' awareness of the above-mentioned issues and in the context of CSS will involve conducting dedicated campaigns at the regional and local levels with the active participation of residents. Particular emphasis will be placed on activities that can be implemented by residents in the area of R (real processes) that are possible in the household, looking at waste, e.g. feed & food, and taking actions aimed at applying the above-mentioned R (not wasting food, composting waste), or water and sewage (from saving water by reusing sewage by the resident).

2. Activities modifying the behaviour of citizens (households) in the sphere of managing material resources, in an institutionalised way, i.e. as a result of the use of legal and administrative coercion, as well as through a system of incentives and/or negative incentives - respectively: forcing, stimulating or discouraging specific actions, practices (tough actions like command and control, regulations and economic instruments).
 - a) These activities include, for example:
 - b) introducing the obligation to segregate and selectively collect waste,
 - c) introducing a system of fees (e.g. for products, recycling) and penalties and subsidies from state/local government authorities,
 - d) introducing a mandatory deposit system when producers use specific packaging,
 - e) others

As part of the CSS, this part will be based on the inclusion of residents in the processes of information and consultation of solutions in accordance with the principles of the "Ladder of participation".

3. Activities involving citizens in the process of creating systemic and regulatory solutions in the field of the circular economy (activities such as regulations by reaching agreements and co-creating policies and participating in decision-making processes). In accordance with the principle of co-management (governance by co-governance) - they include the involvement of citizens as participants and stakeholders in processes related to management and the organisation of the material resources management system itself (especially waste management) at the levels: strategic, operational and related to the creation of draft legislative solutions supporting the circular economy.

These activities may be implemented on a scale ranging from local/regional/national

and may include, for example:

- a) participation of citizens in consultation processes and co-creation of various types of public documents (concepts, policies, strategies, plans, programs) describing directions of activities related directly or indirectly to the issues of the circular economy,
- b) citizens' participation in legislative initiatives (e.g. legislative initiative),
- c) participation of citizens in advocacy and lobbying activities (e.g. petitions to the authorities),
- d) actions taken by citizens as part of the so-called non-statutory planning,
- e) others

Within each CSS, this part will be based on the inclusion of residents in the processes of information and consultation of solutions in accordance with the principles of the "Ladder of participation".

4. Activities encouraging citizens' (households) behaviour and practices to be consistent with the concept of a circular economy, introduced by private entities on the basis of self-regulation (voluntary regulation). This includes activities such as:
 - a) voluntary introduction of deposit systems, including the return of certain types of packaging,
 - b) introducing a free collection service for used material goods when purchasing a new one,
 - c) others

In this part of the Frontsh1p project, the concept of a **self-assessment tool** enabling residents to apply circular economy principles in their everyday lives was created. A tool in the form of, among others the mobile application, is intended to allow each resident to assess on an ongoing basis how they implement the principles of the circular economy, including the use of waste recycling. The tool includes models of incentives for residents, including reducing local taxes or fees and effectively recycling waste. Models of engaging local business, including local currency for specific raw materials to be used in local shops.

To sum up, the implementation of the above definition of social involvement in the circular economy within individual CSS includes:

1. Analyses related to direct household behaviour within individual CSS.
2. Analysis (research) of activities supporting the involvement of citizens (households) in the above-mentioned practices for a circular economy engaging citizens according to the Participation ladder.

The document presents a methodological approach to strengthening circularity in Łódzkie region, specifically in the social and political areas. This approach is based on a "Participation ladder" that aims to engage residents and other stakeholders in processes

related to the circular economy.

As part of this approach, various activities are planned to raise awareness of the local community about the circular economy and the planned project activities. These activities include information activities aimed at the local community, educational activities for kindergartens and schools, competitions for children and a micro-grant program under which residents will be able to implement their own projects related to the circular economy.

The consultation process will involve all regional stakeholders, including residents, local NGOs, business associations and local councillors. Finally, inclusive and co-implementation activities are planned, which will focus on the direct integration of the local community in the implementation of the circular economy and the project goals.

3. Methodology for strengthening the closed loop with the participation of residents within individual CSS

As part of each CSS, detailed analyses were carried out on the possibilities of engaging residents in the circular economy. The conclusions from these studies and analyses are included in detailed research included in reports for individual WPs regarding the involvement of residents. Below we present the main assumptions that formed the basis for planning activities related to the involvement of residents in the context of the "Participation ladder" described in Chapter 5 of this Report.

Based on a literature review on the issues of sustainable development and socio-economic aspects of environmental protection, the following types of instruments were identified to support the social involvement of citizens (households) in activities aimed at disseminating circular economy practices. These instruments can therefore be treated as systems of influences external to households, which serve to reorient their behaviours and practices to those that were identified in the course of previous research and development work under the FrontSh1p project and were indicated as recommended for citizens to undertake under the individual CSSs.

These instruments, which can potentially support the involvement of households in circular practices and counteract behaviour inconsistent with the idea of circular management, include:

1. Promotional activities/initiatives circular economy practices among households.

2. Educational activities/initiatives society (in particular people covered by general compulsory education - i.e. those of school age) in terms of the necessity/needs and possibilities of taking actions in the field of the circular economy.
3. Information activities and consulting to facilitate the introduction of circular economy solutions by households;
4. Financial incentives (positive and negative) are changing, first of all, the financial framework of household operations in such a way as to provide economic incentives to undertake circular practices and discourage activities that are inconsistent with the idea of circular management.
5. Legal and administrative regulations (compulsory measures) create a formal framework for undertaking circular practices by households, including in particular orders and prohibitions of specific behaviours, subject to enforcement mechanisms.
6. Co-creating solutions by households themselves, primarily in cooperation with other (external) entities (local governments, private entities, non-governmental organisations), but also as part of the self-organisation of cooperation between households forming a specific territorial community - serving the dissemination of circular economy practices (in the form of consultations, workshops, forums, referenda, co-governance / co-management).
7. Self-regulation (regulations and voluntary actions) – bottom-up creation and introduction of circular practices/solutions by households themselves in the form of "internal standards" covering a single household or a small group of households using a common property or infrastructure.

Below is a description of the above-mentioned types of instruments supporting social involvement in circular economy practices, indicating the most typical tools that can currently support household behaviour.

1. Promotional activities/initiatives

Promotional activities and initiatives are key to encouraging households to adopt circular economy practices. These initiatives aim to trigger, inspire and facilitate sustainable and inclusive behaviour. These activities differ from others - they are informal and are aimed primarily at raising awareness of the need for social action and involvement in the circular economy. Examples of promotional activities:

- a) informal educational and awareness-raising campaigns (shaping attitudes) – workshops and webinars – to organise educational sessions informing households about the principles and benefits of the circular economy. Topics may include, for example: recycling, upcycling and sustainable consumption.
- b) dissemination of information:

- i) online resources - creating websites or apps that include guidelines on sustainable practices, recycling tips and information about local recycling centres
 - ii) social media campaigns – using platforms such as Facebook, Instagram and Twitter/X to share informative content, success stories and practical tips for sustainable living.
- c) motivational programs:
 - i) discounts and coupons – partnering with eco-friendly companies to offer discounts or coupons on sustainable products or services, motivating households to make eco-conscious choices,
 - ii) rewards and loyalty programs - implementing systems in which participants earn points or rewards for implementing circular practices, such as recycling or waste reduction.
- d) social involvement:
 - i) local events and workshops - organising events in communities to support discussions, share knowledge and exchange ideas about circular economy practices,
 - ii) social challenges - organising competitions or challenges encouraging households to come up with innovative ways to reduce waste or reuse items.
- e) partnerships and cooperations:
 - i) local business partnerships – working with local retailers, manufacturers and service providers to promote the adoption of circular practices and offer sustainable alternatives,
 - ii) NGO and government collaboration – working with non-profit organisations and government agencies to pool resources and strengthen the social impact of circular economy initiatives.
- f) demonstration projects – model households or communities – establishing/creating real-world examples that show/demonstrate the benefits and feasibility of circular practices, inspiring other households to follow suit (project showcase).
- g) technological solutions:
 - i) mobile applications and tools - developing applications that provide users with resources to track their consumption patterns, find recycling centres and access green alternatives,
 - ii) smart devices and IoT – integrate smart technology to help households monitor resource use and make more informed, sustainable decisions.
- h) political support - advocacy and policy initiatives - supporting policies that promote circular economy practices such as extended producer responsibility, achieving waste reduction targets and developing incentives for sustainable production.

- i) feedback mechanisms (procedures) - surveys and 'feedback loops' - seek information from households to understand their challenges and preferences, which can help develop more effective circular economy programs.
- ii) measurement and reporting (procedures) – indicators and progress tracking – establish clear indicators to measure the impact of circular economy initiatives and regularly report on progress to participants and stakeholders.

By implementing the above-mentioned promotional activities and initiatives, organisations (public and private) and communities can effectively engage households in adopting circular economy practices, leading to a more sustainable and environmentally friendly way of living.

2. Educational activities/initiatives

Educating household members, especially school-age children and adolescents, is the most fundamental way to spread and support circular behaviour in communities. Educational activities aimed at shaping attitudes and behaviours of households supporting the circular economy are usually understood as more formalized and obligatory initiatives than promotional activities and information consulting. Examples of educational activities and initiatives that can help achieve circular economy goals in households:

- a) workshops and training:
 - i) DIY repair workshops - teaching skills such as sewing, woodworking, carpentry and electronics repair to encourage repairing rather than replacing items.
 - ii) upcycling workshops – showing how to transform old or thrown away items into new and useful products,
 - iii) composting workshops – teaching how to compost organic or wooden and paper and cardboard waste at home to create nutrient-rich soil.
- b) educational programs:
 - i) circular economy curriculum – integrating circular economy concepts into school curricula to educate students from an early age,
 - ii) courses and webinars – provide accessible online resources on circular economy principles and practices for all age groups (pupils and students).
- c) awareness-raising campaigns:
 - i) information seminars – organising sessions to raise awareness of the benefits of circular economy practices,
 - ii) social events – organisation of events aimed at engaging and informing local communities about sustainable living and consumption.
- d) information resources:

- i) educational materials – developing leaflets, brochures and guidelines on circular economy practices for distribution in schools and communities,
 - ii) online guides and articles - creating easily accessible digital resources explaining circular economy concepts and tips/advice.
- e) demonstration projects:
 - i) case presentations of circular economy solutions – preparing physical exhibitions presenting examples of circular products and systems in action,
 - ii) prototype development workshops - encouraging participants (members of households participating in circular economy projects) to design and build their own products or closed-loop systems.
- f) joint initiatives:
 - i) partnerships with local businesses – working with businesses to promote and support circular economy practices through special events, discounts or incentives,
 - ii) community (communal) gardening and sharing programs - establishing local initiatives to share resources such as garden tools, garden plots or kitchen equipment.
- g) field trips and experiential learning:
 - i) tours to waste sorting plants - organisation of visits to recycling centres, composting plants and waste management plants to learn about the waste management process,
 - ii) sustainable product tours – visiting companies that focus on sustainable production practices and the circular economy.
- h) interactive games and simulations:
 - i) circular economy board games - creating games that educate players on resource management, waste reduction and sustainable production,
 - ii) online simulations – developing interactive online platforms where participants can virtually implement the principles of the circular economy.
- i) challenges for the community:
 - i) conceptual challenges zero waste – encouraging households and communities to reduce waste generation through competitions and prizes,
 - ii) competitions for circular innovations - organisation of competitions for individuals or groups to develop innovative circular solutions.
- j) social media campaigns:
 - i) # campaigns – initiating and promoting *hashtags* related to circular economy practices in order to raise awareness and encourage participation in circular economy,
 - ii) online challenges and commitments - encouraging people to share their commitment to circular economy practices via social media platforms.

- k) learning networks *peer-to-peer* – Local Circular Economy Groups – creating forums or initiating meetings in which participating individuals can share knowledge, tips and experiences regarding circular economy practices.
- l) policy support and engagement – advocacy workshops – educating communities on the importance of advocating for policies that support circular economy practices at local, regional and national levels.

By implementing these activities and educational initiatives, households can be better prepared to adopt and incorporate circular economy practices into their everyday lives, contributing to a more sustainable future.

3. Information activities and advice

Information activities and advisory initiatives to support household involvement in the circular economy are an important complement/addition to soft promotional activities and formalized and compulsory education (directed mainly to children and young people). What distinguishes information activities and advisory initiatives from other instruments is primarily the higher level of professionalism and substantive advancement of the information provided, as well as their focus primarily on adult household members.

Here are some information and advisory activities or initiatives that support the goals of a circular economy in households:

- a) workshops and webinars:
 - i) description – conducting workshops and webinars aimed at educating households about the principles and benefits of the circular economy. These sessions may cover topics such as recycling, upcycling, waste reduction and sustainable consumption,
 - ii) an example of an initiative is workshops “[Circular Living 101](#)” run by local environmental non-governmental organisations;
- b) educational materials:
 - i) description – development and distribution of information materials such as brochures, pamphlets and e-books that provide practical tips and guides on using circular practices at home,
 - ii) example of an initiative - downloadable e-guide on composting and organic/wooden/paper/cardboard waste management.
- c) online platforms:
 - i) description – creation of dedicated websites or social media platforms containing resources, articles and interactive tools that will help households implement circular practices,
 - ii) example of an initiative - “[EcoHomeHub](#)” – an online community providing resources on sustainable living.
- d) consulting services:

- i) description - offering personalized advisory services where experts provide households with tailored advice on transitioning to a more circular lifestyle. This may include waste audits, energy assessments and sustainable procurement guidelines,
 - ii) example of an initiative - "[Green House Consultants](#)" – a service connecting households with experts in the field of sustainable development.
- e) demo houses:
 - i) description – creating model homes or apartments that demonstrate sustainable living practices, including energy-efficient appliances, water conservation systems and waste reduction techniques,
 - ii) example of an initiative - "[Green Living Showroom](#)" – a physical space where visitors can experience circular economy practices in action;
- f) workshops and social events:
 - i) description – organising local events, fairs or social meetings dedicated to sustainable living. These events may include DIY workshops, eco-product demonstrations and educational activities,
 - ii) example of an initiative - "[Sustainable Lifestyle Fair](#)" – an annual event combined with workshops on circular economy practices.
- g) *online tutorials* and do-it-yourself (DIY) guides:
 - i) description - creating and distributing step-by-step tutorials, videos and guides that enable households to engage in activities such as repairing, repurposing and crafting with reusable materials
 - ii) example of an initiative – YouTube channel "[EcoCrafts101](#)" (and many more) with tutorials on upcycling household items.
- h) waste management consultations:
 - i) description – providing expertise in creating effective waste separation, composting and recycling strategies tailored to specific household needs and local regulations,
 - ii) example of an initiative - "[Waste Wise Advisors](#)" – a service that helps households optimise their waste management practices;
- i) challenges and competitions related to the circular economy:
 - i) description – initiating competitions or challenges encouraging households to create innovative ideas and solutions in the field of circular economy practices; it can promote creativity and engagement,
 - ii) example of an initiative - "[Circular Innovation Challenge](#)" – an annual competition for households to present their sustainable solutions.
- j) ecological house certification programs:
 - i) description – creation of certification programmes assessing and distinguishing households in terms of compliance with the principles of a circular economy, similar to LEED certification for buildings,

- ii) a hypothetical example of an initiative – "[Circular Home Certified](#)" – a program recognising households using unique sustainable development practices.

These activities and initiatives aim to provide households with the knowledge, tools and support they need to participate in and benefit from the circular economy. They play a key role in shaping sustainable practices at individual and community levels.

4. Financial incentives (positive and negative)

Financial incentives can play a key role in persuading households to adopt circular economy practices. These incentives can be positive (rewards or benefits) or negative (punishments or disincentives) and are intended to motivate individuals to adopt/implement sustainable behaviours. Here is a list of the most important examples of both types:

a) positive financial incentives:

- i) tax credits and deductions – governments can provide tax credits or deductions to households that use circular practices such as recycling, reusing or using energy-saving appliances.
- ii) subsidies for sustainable technologies – offering subsidies for the purchase of renewable energy systems, such as photovoltaic panels or energy-saving devices, can make these technologies more accessible to households,
- iii) rebates for recycling – State or local government recycling programmes may offer cash incentives or utility discounts to households that actively participate in recycling programs.
- iv) rash-for-waste programmes – Some regions may have programmes in place where individuals receive financial rewards for returning certain items for recycling, such as bottles, electronics or other materials.
- v) feed-in tariffs – these are payments made by governments to households or businesses that produce excess renewable energy that is fed back into the grid (prosumers),
- vi) green loans and financing – providing low-interest loans or special financing options for sustainable home improvements, such as installing energy-efficient windows or insulation,
- vii) carbon credits – some countries have established emissions trading schemes, which also allow households to earn credits for reducing their carbon footprint, which can be sold for financial gain,
- viii) repair and renovation incentives - encouraging the repair and refurbishment of goods/things (fixed assets) by providing tax breaks or subsidies for repair rather than replacing items.

b) negative financial incentives:

- i) garbage collection fees – charging households for garbage collection services based on the volume or weight of waste generated can encourage waste reduction and proper disposal,
- ii) landfill taxes – taxing waste disposal to landfills may encourage households to seek more sustainable waste management solutions,
- iii) emission charges – introduction of charges based on greenhouse gas emissions resulting from household activities, such as driving, heating or using electricity from non-renewable sources,
- iv) taxes or bans on plastic bags - imposing fees or outright bans on single-use plastic bags can encourage households to use reusable alternatives,
- v) carbon taxes – taxing the carbon content of fuels, electricity and other goods can encourage households to reduce their carbon footprint,
- vi) water conservation charges – implementing tiered water pricing structures where higher consumption results in higher costs, encouraging households to save water
- vii) penalties for non-compliance – enforcing fines or penalties for non-compliance with recycling or waste reduction regulations,
- viii) congestion pricing - charging for driving in crowded urban areas, encouraging people to use public transport, cycle or *carpooling*.

The financial incentives mentioned above can significantly influence household behaviour towards more sustainable practices. It is important that central government and/or local authorities carefully design and implement these incentives to ensure that circular economy practices are effectively promoted, while taking into account the potential economic impact on households.

5. Legal and administrative regulations (compulsory measures)

Supporting household engagement in circular economy practices requires a combination of legal and administrative provisions to establish a framework that encourages sustainable behaviour. Here are some examples of such mandatory measures and activities as well as "soft regulations" (recommendations regarding self-regulation or indication of trends and directions of future public regulations):

- a) extended producer responsibility (EPR):
 - i) description – EPR regulations impose responsibility on producers for the entire life cycle of their products, including collection, recycling and proper disposal. This encourages manufacturers to design products with circularity in mind,
 - ii) household involvement - encouraging consumers to participate in recycling programmes and make informed purchasing decisions.
- b) mandatory recycling programmes:

- i) description – local or national regulations that require households to sort and recycle certain materials, such as paper, glass, plastics, etc.,
 - ii) household involvement – requiring households to actively participate in local community recycling efforts.
- c) deposit systems:
 - i) description - these systems involve consumers paying a deposit when purchasing e.g. beverage packaging, which is returned after returning the empty packaging for recycling,
 - ii) household involvement - encouraging individuals to return items for recycling, reducing waste.
- d) waste-to-energy regulations:
 - i) description – guidelines regulating the conversion of waste into energy in processes such as incineration or anaerobic digestion,
 - ii) household involvement – promoting responsible waste disposal and reducing dependence on landfills.
- e) eco labelling and product certification:
 - i) description – introduction of regulations requiring products to bear labels informing about their impact on the environment, recyclability or other relevant information,
 - ii) household engagement – helping consumers make informed choices about sustainable products.
- f) bans on the use of single-use plastics:
 - i) description – regulations restricting or prohibiting the use of certain single-use plastics, such as straws, bags or kitchen utensils,
 - ii) household involvement - encouraging consumers to use reusable substitutes.
- g) composting regulations:
 - i) description – guidelines for composting organic waste at home or as part of social programs in local communities,
 - ii) household involvement – encouraging households to participate in composting, reducing the amount of organic waste going to landfills.
- h) tax reliefs and discount systems:
 - i) description – financial incentives for households to use sustainable practices, such as purchasing energy-efficient appliances or electric vehicles,
 - ii) household involvement – encouraging individuals to make environmentally friendly and economically beneficial choices.
- i) educational and awareness-building programmes:
 - i) description – government initiatives aimed at compulsory public education on the importance of circular economy practices and how to implement them at home,

- ii) household involvement - enabling individuals with the knowledge acquired at school to make sustainable choices.
- j) local centres together:
 - i) description – facilities where individuals can sell or exchange items they no longer need, promoting the reuse of goods/goods and reducing the amount of waste,
 - ii) household engagement – encouraging individuals to participate in the circular economy by extending the life of products.
- k) mandatory reporting and monitoring:
 - i) description - regulations requiring companies to report on their environmental impact, waste management practices and circularity efforts,
 - ii) household engagement - ensuring transparency and accountability in companies' efforts towards a circular economy for informed purchasing decisions by households.
- l) community involvement and participation:
 - i) description – regulations promoting community involvement in circular economy initiatives, such as local clean-ups, repair cafes or community gardens,
 - ii) household engagement – encouraging individuals to actively participate in sustainable practices in their local communities.

These regulations contribute to the creation of an institutional environment in which households are not only encouraged, but also legally obliged to participate in circular economy practices. This helps shift consumer behaviour towards more sustainable and environmentally friendly choices.

6. Co-creation of solutions (consultations, workshops, forums, referenda, co-governance/co-management)

Co-creating solutions to support household engagement in circular economy practices involves engaging individuals, communities and stakeholders in collaborative efforts to promote sustainable consumption and resource management. Here are some methods to co-create such solutions:

- a) consultations:
 - i) purpose – the consultation is to obtain input and feedback from households and stakeholders on circular economy practices,
 - ii) description – organising structured meetings, surveys or interviews to understand the needs, preferences and challenges faced by households in implementing circular economy practices. This can help tailor solutions to specific contexts.
- b) workshops:

- i) goal – workshops provide a practical educational experience, offering practical knowledge and skills related to circular economy practices,
 - ii) description – conducting workshops on topics such as waste reduction, upcycling, repair skills and sustainable shopping. These workshops can strengthen households' capacity to implement circular practices in their daily lives.
- c) forums and discussion groups:
 - i) goal – forums create a space for open dialogue, information exchange and cooperation between households, experts and community members,
 - ii) description – organising online or physical forums where people can discuss ideas, share experiences and ask questions about circular economy practices. These platforms can strengthen a sense of community and provide a support network for people interested in sustainability.
- d) referendums and polls:
 - i) purpose – referendums and surveys are tools for collective decision-making, allowing households to express their preferences and priorities in terms of circular practices,
 - ii) description – conducting referenda (formal votes) or disseminating surveys to find out public opinion on specific initiatives, policies or projects related to the circular economy. This helps to adapt solutions to the values and expectations of a given community.
- e) management and political involvement:
 - i) goal – cooperation with local governments and decision-makers can create a favourable environment for circular economy practices at the household level,
 - ii) description – lobbying for policies that encourage or mandate circular practices, such as waste separation and recycling programs, tax incentives for environmentally friendly products, or regulations that promote the reparability and durability of products.
- f) demonstration projects:
 - i) Objective – Demonstration projects demonstrate practical applications of circular economy principles in communities, providing tangible examples for households to replicate.
 - ii) description - implementing small-scale pilot projects (e.g. local composting sites, shared tool 'libraries') to demonstrate the feasibility and benefits of circular practices. These projects serve as educational tools and inspire wider adoption.
- g) educational campaigns:

- i) goal – educational campaigns aim to raise awareness and provide information about the benefits and methods of applying circular economy practices,
 - ii) description – launching campaigns through various channels (websites, social media, workshops, etc.) to inform households about the importance of the circular economy, how to reduce waste and make sustainable choices.
- h) motivational programs:
 - i) goal – incentive programmes provide households with tangible rewards or benefits for implementing closed-loop management practices,
 - ii) description – offering incentives such as tax breaks, discounts on sustainable products or access to exclusive services for households that actively engage in circular economy practices.

Effective co-creation of solutions requires active participation, clear communication and continuous feedback with involved households and other stakeholders. It is important to adapt these methods to the specific needs and preferences of the particular community involved in the CSS project.

7. Self-regulation (regulations and voluntary actions)

Household self-regulation of circular economy practices refers to the conscious and voluntary efforts made by individuals or families to engage in sustainable behaviours and practices in their homes. This includes taking proactive steps to minimise waste, conserve resources and contribute to a more sustainable and circular economy. This may include a range of actions and behaviours aimed at reducing environmental impact, promoting resource efficiency and supporting circular principles.

Key elements of self-regulation in the context of circular economy practices include:

- a) voluntary engagement – this is the choice made by individuals or households to participate in sustainable practices without external, formal obligations or legal requirements. This demonstrates a personal commitment to environmental responsibility.
- b) conscious decision-making - involves making thoughtful and conscious choices regarding consumption, waste management and the use of resources. This may include considering the environmental impact of products and services before purchasing or disposing of them.
- c) implementing sustainable practices – self-regulation involves adopting specific actions and behaviours consistent with the principles of the circular economy. This may include practices such as recycling, composting, reducing single-use items, and repairing or repurposing items.

- d) responsible resource management – means effective use of household resources, including energy, water and materials. This may include practices such as energy conservation, water conservation techniques and responsible shopping habits.
- e) promotion of longevity and durability – self-regulation in practising circular economy also emphasizes the importance of extending the life of products. This can be achieved through activities such as maintenance, repairs and choosing durable goods over disposable or short-lived alternatives.
- f) support for second-hand and sustainable shopping – choosing used or sustainably produced items instead of constantly purchasing new products. This encourages a move away from the 'throwaway culture' towards a more sustainable and resource-efficient model.
- g) engagement and sharing with the community – self-regulation can go beyond individual households and include cooperation with neighbours and communities. This may include sharing resources, participating in local initiatives and promoting sustainable practices.
- h) continuous learning and education – includes staying up to date with current environmental issues, circular economy principles and sustainable practices. This enables individuals to make more informed choices and adapt their behaviour in response to new information or technology.

Overall, self-regulation in circular economy practices enables individuals and households to play an active role in creating a more sustainable and environmentally responsible future. It involves a combination of informed decision-making, voluntary action and responsible resource management to contribute to the development of a circular economy.

The instrument analysis was used to conduct two studies within the project:

1. Survey research among CSS leaders - based on the survey conducted among the leaders of individual CSS regarding the identification of the expected involvement of citizens (households) for the CSS, and the subsequently developed subject characteristics of the specificity of expected household practices identified for each CSS, led to the identification of potentially applicable social practices in the field of circular economy within CSS. (Attachment: [TECHNICAL REPORT_CSS Leaders Survey](#))

For each CSS, the analysis was performed according to the following scheme:

Table 1: Scheme of identification / analysis / evaluation of instruments supporting household practices for the implementation of circular solutions under CSS1 "wood packaging waste" wood waste packaging)

Types (kinds) instruments/tools to support social involvement in the circular economy	Name of practice (categories of practice)										
	re f u s e (s p l i t)	r e d u c e (r e d u c e)	r e u s e (r e u s e)	r e f u r b i s h	r e p a i r (f i x)	r e p u r p o s e (r e p u r p o s e)	r e c y c l e (p r o c e s s)	segreg ate and collect selecti vely in the local waste manag ement system	s h a r e (s h a r e)	l e a r n i n g (l e a r n i n g)	other speci fic soluti ons/a ction s for a given CSS
Promotional activities/initiatives	2	2	1	1	1	1	0	1	-	-	-
Educational activities/initiatives	3	3	2	1	1	1	1	3	-	-	-
Information activities and advice	1	1	2	2	2	2	2	3	-	-	-
Financial incentives (positive and negative)	3	3	1	1	1	1	2	3	-	-	-
Legal and administrative	0	0	0	0	0	0	0	3	-	-	-

regulations (coercive measures)											
Co-creating solutions (consultations, workshops, forums, referenda, co-governanc e/co-manage ment)	0	0	1	1	1	1	1	1	-	-	-
Self-regulatio n (regulations and actions voluntary)	2	2	2	1	1	1	1	1	-	-	-
Other (?)	0	0	0	0	0	0	0	0	-	-	-

NOTE: the table is used to identify instruments supporting the social involvement of households in undertaking practices to implement the actions/solutions envisaged in a given CSS. Identification using scale:

- "3" very important/key instruments (conditioning the effectiveness of CSS activities - necessary),
- "2" important instruments (supporting the effectiveness of CSS activities),
- "1" instruments generally supporting social involvement in the circular economy,
- "0" no connection or marginal significance of a given instrument for undertaking practices in a specific scope (no or insignificant impact on the implementation of activities within a given CSS).

The "-" sign indicates that a given practice category has not been identified for a given CSS at all – therefore – others were also not identified

In the study, first of all, those groups of practices were excluded from the assessment of instruments (by inserting the '-' sign in the appropriate columns) for which no practices in a given CSS were identified at the earlier stages of the survey conducted with the project's technological partners. The key element of the assessment of instruments was a review of thematically selected foreign literature (see bibliography) in order to assess the significance of the impact of various instruments (actions) on the previously identified circular practices of households, taking into account their specificity in a given CSS. Therefore, the basis for the analysis/evaluation of the instruments were secondary sources (publications on the policy of supporting the circular economy and its instruments), and the contribution of the

authors of this study consisted of their reinterpretation in the context of the specificity of waste products in a given CSS. The assessment is therefore of an expert nature, i.e. based on the knowledge of the authors of the study, supported by studies of the literature. The choice of such a development method (expert assessment based on a literature review) resulted from the need to obtain the most universal assessment of the instruments, i.e. not limited only to identifying the specificity of local or regional conditions (the Lodz region) but relating to various territorial systems (in Europe).

A four-level assessment scale was adopted, described in detail in Table 1. The selection of the value assigned to instruments supporting a given group of circular practices was an expert assessment, preceded by a discussion by the authors. The analysis was performed for all 4 CSSs.

It can be concluded that the most important instruments supporting the circular behaviour of households within CSS, according to the surveyed leaders, are information activities and professional consulting, as well as educational activities and initiatives. It is assumed that financial incentives should/may play only a slightly less important role. Household self-regulation (bottom-up regulation and voluntary actions) as well as promotional activities and initiatives are instruments of medium/medium-low importance for supporting household circular practices. However, instruments/solutions based on co-management/co-governance were assigned quite low importance. Legal and administrative regulations (compulsory measures) were rated the lowest by far, as their importance as instruments supporting households in circular practices is low. The research results were used to create a participation ladder in the field of citizen engagement.

2. The second research part included a descriptive conceptualization of the instruments that should be used at the level of the local/regional territorial system to support circular household practices (recognized in the previous analyses), the undertaking of which will contribute to the implementation of activities envisaged under a given CSS and to increase community involvement in circular economy in general. The starting point for a detailed characterization of the instruments is their preliminary review carried out as part of the identification of instruments (tools) supporting household practices in their involvement in activities undertaken within each CSS.

The methodological assumption included an analysis of the practices and instruments that should be used for individual CSS

Table 2: List of entities and circular practices of households that can be supported by them for the implementation of solutions under CSS1 "wood packaging waste" wood waste packaging)

	Name of the practice (categories of circular practices identified for households)
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Entity name

	T O G E T H E R
	o t h e r s p e c i f i c s o l u t i o n s / a c t i o n s f o r a g i v e n C S S
	l e a s e (l e a s e)
	s h a r e (s h a r e)
	s e g r e g a t e a n d c o l l e c t s e l e c t i v e l y i n t h e l o c a l w a s t e m a n a g
	r e c y c l e (p r o c e s s)
	r e p u r p o s e (r e p u r p o s e)
	r e p a i r (f i x)
	r e f u r b i s h
	r e u s e (r e u s e)
	r e d u c e (r e d u c e)
	r e f u s e (s p l i t)

								e m e n t s y s t e m				
government administration (central)	1	1	0	0	0	0	3	2	-	-	-	7
Local government unit commune	1	1	0	0	0	0	2	3	-	-	-	7
Local government unit, district	0	0	0	0	0	0	0	1	-	-	-	1
Local government unit, region	1	1	0	0	0	0	1	2	-	-	-	5
NGOs	2	2	2	2	2	2	1	1	-	-	-	14
Academic sector and R&D	1	1	1	2	2	1	2	1	-	-	-	11
Public enterprises	0	0	0	0	0	0	2	2	-	-	-	4
Private enterprises	0	0	0	3	3	0	3	1	-	-	-	10
Household	3	3	3	3	3	3	1	3	-	-	-	22
Other (?)	0	0	0	0	0	0	0	0	-	-	-	0
TOGETHER	9	9	6	10	10	6	15	16	0	0	0	

NOTE: the table is used to indicate which entities (organisations / institutions) can support which groups of circular household practices. The possibility of supporting a given category of practices by entities was determined using a scale (expert assessment):

- "3" very important/key support (conditioning the effectiveness of CSS activities - necessary),
- "2" significant support (increasing the effectiveness of CSS activities),
- "1" general support for social involvement in circular economy,
- "0" support of marginal (unimportant) importance for undertaking the practices in question or the lack of possibility of supporting the given practices by the relevant entity - at all.

The "-" sign indicates that a given practice category has not been identified for a given CSS at all – therefore – instruments supporting this type of practices were also not identified.

Source: own study.

Table 3: List of entities (institutions/organisations) with the instruments that they can potentially use to support circular practices of households to implement solutions for CSS1 "wood packaging waste" (wood waste packaging)

Entity name	Types of instruments/tools supporting social involvement in the circular economy								
	Promotional activities/initiatives	Educational activities/initiatives	Information activities and advice	Financial incentives (positive and negative)	Legal and administrative regulations (compulsory measures)	Co-creation of solutions (consultations, workshops, forums, referenda, co-governance/co-management)	Self-regulation (regulations and voluntary actions)	Other (?)	T O G E T H E R
government administration (central)	1	3	0	3	3	0	0	0	10
Local government unit commune	2	3	2	3	3	3	1	0	17
Local government unit, district	0	1	0	0	0	1	1	0	3

Local government unit, region	1	0	1	2	0	1	1	0	6
NGOs	3	2	3	0	0	3	2	0	13
Academic sector and R&D	1	3	3	0	0	1	2	0	10
Public enterprises	1	0	1	0	0	1	1	0	4
Private enterprises	0	0	1	0	0	1	0	0	2
Household	0	0	0	0	0	3	3	0	6
Other	0	0	0	0	0	0	0	0	0
TOGETHER:	9	12	11	8	6	14	11	0	

NOTE: the table is used to indicate which entities (organisations / institutions) can use which instruments to support the circular practices of households. The assessment of the possibility (effectiveness) of using an instrument of a specific type by a given entity was made using a scale (expert assessment):

- "3" instrument potentially easy to be used (conditioning the effectiveness of activities within the CSS - necessary),
- "2" instrument potentially possible to be used (increasing the effectiveness of CSS activities),
- "1" instrument potentially difficult for use (providing general support for social involvement in circular economy),
- "0" instrument potentially very difficult to impossible to be used (providing support of marginal/irrelevant importance for undertaking circular practices by households or providing no support at all).

Source: own study

From the review of instruments supporting the involvement of households in circular economy practices, certain solutions (actions) are repeated in several of the analysed instrument categories. In particular, this applies to activities related to supporting circular household practices through such types of activities such as education, information activities, consulting and training. These types of solutions may be both formal and informal; they can support economic instruments (i.e. changing the circumstances/financial conditions of household operations) and legal and administrative instruments (i.e. related to the introduction of household obligations to undertake circular practices, as well as their enforcement). It should be emphasized that the importance of education / information /

consulting / training is also key to the introduction of instruments and activities in the sphere of co-governance (co-authority) and self-regulation.

This leads to the conclusion that the development of instruments supporting household practices in their involvement in the circular economy, as part of activities undertaken in a given CSS, should in particular focus on information, educational and inclusive initiatives.

The above analyses were used to develop a participatory circular economy planning model with the participation of residents based on the participation ladder described in part 5 of the Report.

Attachments:

[CSS1_Characteristics of the specifics of the expected household practices](#)

[CSS2_Characteristics of the specifics of the expected household practices](#)

[CSS3_Characteristics of the specifics of the expected household practices](#)

[CSS4_Characteristics of the specifics of the expected household practices](#)

4. Identification of regional stakeholders

Involving the regional stakeholders - in other words - the entire local community, represented by the quadruple helix, is essential for implementing the circular economy at the regional and local levels. This comprehensive approach includes:

1. **Local and Regional Government:** Local government, particularly at the lowest levels such as communes and associations of communes, as well as city associations, plays a crucial role. Housing communities and cooperatives, which indirectly manage e.g. housing spaces, can also conduct effective activities to increase circularity. These entities can create and enforce policies, provide funding and resources, and foster collaborations that promote circular economy initiatives within their jurisdictions.
2. **Business, Economic Sector:** The economic sector, especially small and medium-sized enterprises (SMEs), is pivotal. SMEs are the backbone of the European economy, representing 99% of all enterprises in the EU. However, they also have a significant environmental impact, accounting for an estimated 60-70% of total environmental pollution in the EU. Engaging SMEs in circular economy practices can significantly reduce their environmental footprint while promoting sustainable business models and innovation.
3. **Universities, research centres, and scientific institutions:** Academia supports circular development by advancing knowledge, training the next generation of leaders, fostering innovation, influencing policy, and engaging with communities to promote sustainable practices. Academic institutions contribute through research, education, industry partnerships, and community outreach, all of which are crucial for the widespread adoption and success of circular economic principles.
4. **Society, households, NGOs, and residents:** Households, non-governmental organisations (NGOs), and residents who are committed to acting based on circularity are vital components of the community. These groups can drive grassroots initiatives, participate in recycling and reuse programmes, advocate for sustainable practices, and support local circular economy projects. Their active involvement ensures that circular economy principles are adopted and practised at the individual and community levels.

By integrating the efforts of all regional and local stakeholders: local government, the economic sector, academia, and households, the quadruple helix model creates a comprehensive and collaborative framework. This model maximizes the potential for implementing effective circular economy strategies that are sustainable, inclusive, and beneficial to the entire community.

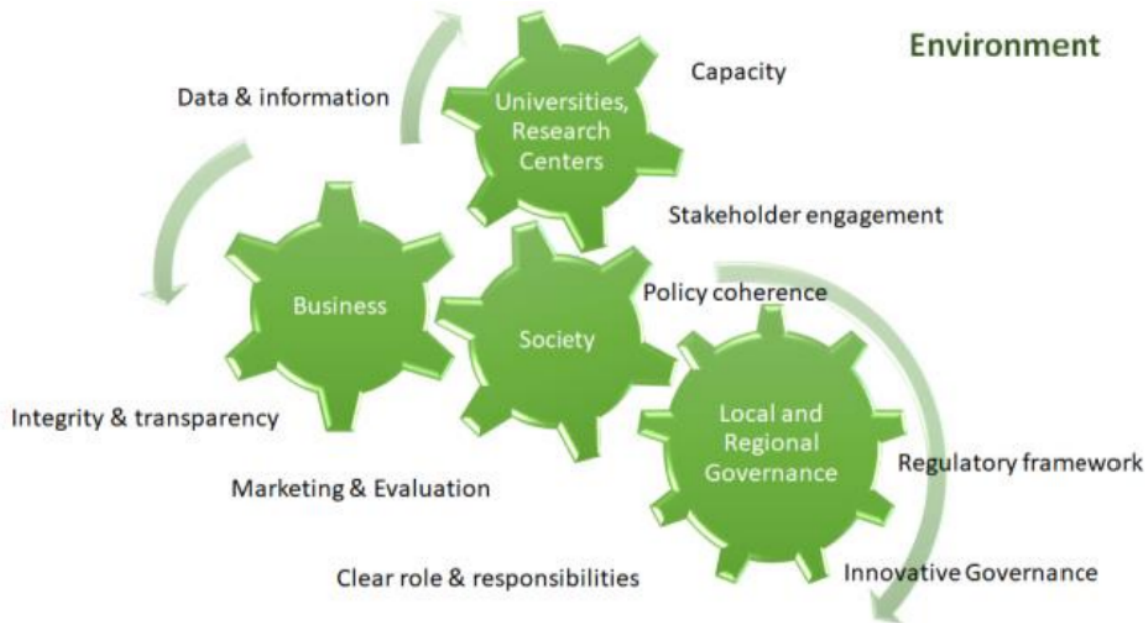


Figure 1: Regional Stakeholders and Their Engagement in Circular Economy Development

Local stakeholders are key actors in the circular transformation through the CircuPuncture Governance Model (Frontsh1p, Report D2.6.). The Circular Territorial Cluster is a kind of locally embedded economic network. Embedding in this case has a strong link to the existence of short supply chains for raw materials and goods. In this network, besides the classical actors (companies, academia, governments), citizens (society) play an important economic role. Here, society is seen as a co-producer, who is an active, economic market participant. Relations between stakeholders are crucial. On the one hand, it is about shaping a new form of the market where products do not appropriate the value of resources. On the other hand, the goal of stakeholder cooperation and involvement in the creation of a circular market is to take advantage of opportunities in goods that have not yet been perceived as resources.

The relations between them should be coopetition (both cooperation and competition), symbiosis and co-production. Moreover, these relations should be based on the coordination of an open inter-sectoral network (Report D.2.6). These kinds of networks based on natural ecosystems in a circular economy are called entrepreneurial ecosystems. Relationships of economic actors and public and social institutions in such networks have the character of symbiosis. Symbiosis means relationships in which two or more unrelated entities exchange materials, energy or information in a mutually beneficial way. On economic grounds, it is called industrial symbiosis. Industrial symbiosis involves cooperation and exchange relationships between different entities, including entrepreneurs, seeking synergistic effects. This type of cooperation most often also contributes to the development of social relations between participants.

However, the transformation of the economy from a traditional market model to a circular economy requires profound changes not only in structures but also in the awareness of its participants and understanding of common goals. The structure and existence of networks are based on the principle of mutual benefits. The basic benefits of the network are reciprocity and interdependence, loose coupling and the supply of new energy to network elements.

Results of the Compass of convergence of regional stakeholders' activities (Frontsh1p, Report D2.6), allow us to conclude by checking the level of convergence of joint and individual projects implemented by stakeholders in order to strengthen the circular economy of a given territory. In addition, the compass provides information to what extent the activities and different types of projects of stakeholders operating in the region are convergent. The territorial compass of integration of activities indicates the scope of mutual impact of projects implemented by the local community and results for the purposes of the activities of other CTC partners (company, academy and government). The main conclusion in the context of society is that CE strengthening projects are mainly sectoral and society is an especially isolated group. Moreover, projects undertaken by the government and society rarely focus on strengthening the competitive position or inclusion in the added value chain. The results of projects of the government and society rarely coincide with the projects of the companies and academia. To sum up, local society is a group of local stakeholders that requires special interest and inclusion in the circular transformation in all areas of its functioning.

Identification of regional stakeholders in each replication region is essential in order to build a strong network of partners who can enhance the circularity locally. Partner EURADA is responsible for mapping the stakeholders and gathering information on the contacts and interests of these actors in the FrontSh1p project.

D9.2 will provide more information on the regional stakeholders' network.

5. Participatory circular economy (CE) planning model with the participation of residents

5.1 The “Ladder of Participation” model as a method of involving residents in the circular economy (CE)

The “Ladder of Participation” model as a method of involving residents in the circular economy (CE) was developed for the needs of the Frontsh1p project. Its essence is to present the involvement of residents/citizens/households in the decision-making process at the interface of relations with the environment, in particular the key partner, which is public administration, especially at the local government level.

The presented solution comes from the theory of participation models based on the solutions proposed by Sherry R. Arnstein’s “Ladder of Participation” and Roger A. Hart’s model within the “Ladder of Participation”.

The purpose of using the method is:

1. Increasing residents' awareness of the circular economy and its benefits.
2. Educating residents on practices and activities related to the circular economy.
3. Strengthening the involvement of residents in the implementation of projects related to the circular economy.
4. Collaborate with local NGOs and business associations to promote and support the circular economy.
5. Creation of a micro-grant program that will enable residents to implement their own projects related to the circular economy.
6. Including residents in decision-making processes regarding the circular economy at local and regional levels.
7. Promoting and supporting circular economy practices among residents, such as reducing, reusing, recycling and separating waste.
8. Introducing incentives for residents to use circular economy practices, e.g. reducing local taxes or recycling fees.
9. Supporting local business and entrepreneurship related to the circular economy, e.g. by introducing a local currency for specific raw materials.
10. Facilitating residents' self-assessment in the application of circular economy principles.

For the needs of the Frontsh1p project, a model of local community inclusion was developed, assuming the following levels of including residents in the circular economy

based on the "Participation ladder". The model is organised in the research part referred to in part 3 of this Report:

1. Promotional activities/initiatives circular economy practices among households.
2. Educational activities/initiatives for society (in particular people covered by general compulsory education - i.e. those of school age) in terms of the necessity/needs and possibilities of taking actions in the field of the circular economy.
3. Information activities and consulting to facilitate the introduction of circular economy solutions by households.
4. Financial incentives (positive and negative) change, first of all, the financial framework of household operations in such a way as to provide economic incentives to undertake circular practices and discourage activities that are inconsistent with the idea of circular management.
5. Legal and administrative regulations (compulsory measures) create a formal framework for undertaking circular practices by households, including in particular orders and prohibitions of specific behaviours, subject to enforcement mechanisms.
6. Co-creating solutions by households themselves, primarily in cooperation with other (external) entities (local governments, private entities, non-governmental organisations), but also as part of the self-organisation of cooperation between households forming a specific territorial community - serving the dissemination of circular economy practices (in the form of consultations, workshops, forums, referenda, co-governance / co-management).
7. Self-regulation (regulations and voluntary actions) – bottom-up creation and introduction of circular practices/solutions by households themselves in the form of "internal standards" covering a single household or a small group of households using a common property or infrastructure.

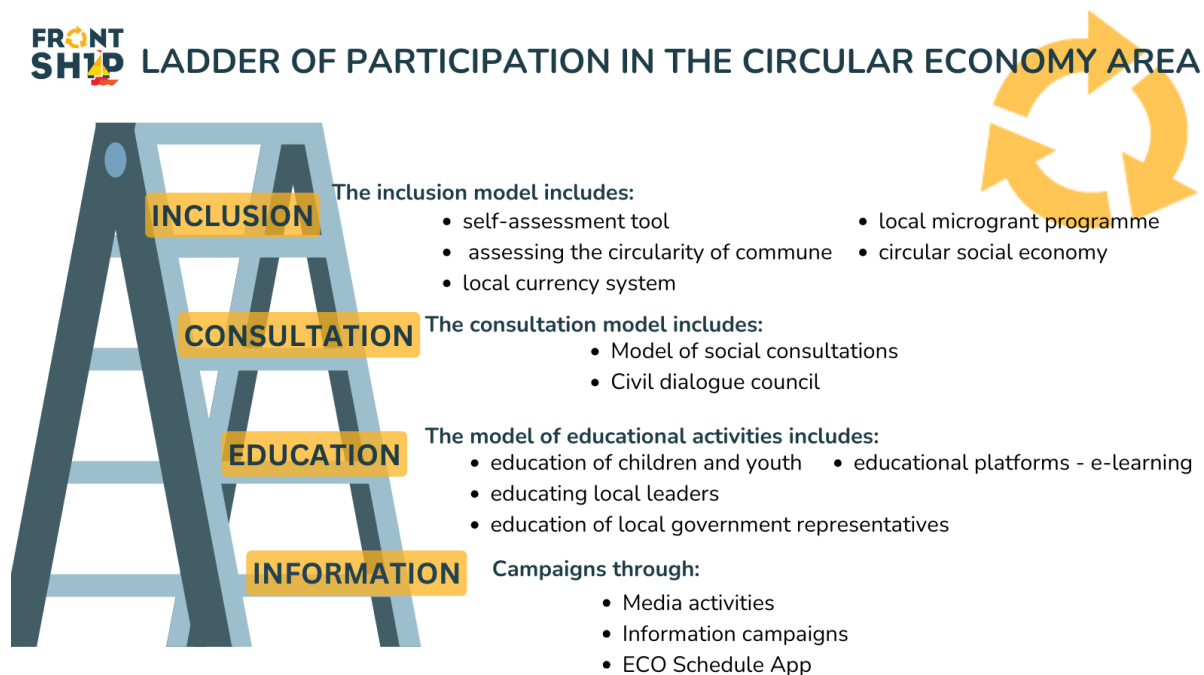


Figure 2: Ladder of Participation in the circular economy

Table 4: Ladder of Participation model

Analysed area within CSS	Translating the participation ladder into the model of engaging residents in the circular economy
promotional activities/initiatives information activities and consulting	Informing
educational activities/initiatives	Education
legal and administrative regulations (compulsory measures)	Consulting
co-creating solutions	Co-determination
self-regulation (regulations and voluntary actions)	Cooperation

Table 5: The adopted "Ladder of Participation" model

	Ladder step	Form of engaging residents and their influence
The environment of the	Lack of information	Local authorities do not undertake any information activities or fulfil the information obligation to a

participation process		minimal extent. As a result, residents have no information - lack of involvement.
	Informing	At the community level, specific channels, methods and forms of information activities available to residents are adopted. Residents are informed about solutions and courses of action to be taken.
	Education	At the local community level, specific methods are adopted to increase knowledge about topics subject to participatory processes. Each participation process has built-in tools for educating residents.
Participatory activities - inclusion	Consulting	Local community has adopted and accepted tools and methods of conducting activities aimed at obtaining opinions from residents, carried out in the form of open processes or dialogue bodies. The processes clearly define the framework for residents' influence, the forms of implementation of the consultation process and are adequate for the recipient groups.
	Co-determination	The community has an adopted decision selection mechanism that is binding on local authorities, in which the residents' decision is accepted and implemented (the basis is a formal or social contract).
	Cooperation	The community has developed and implemented mechanisms in which residents, together with local authorities, can implement solutions and take responsibility for them.

As part of the Frontsh1p project, the "Ladder of Participation" - adopted, translates into specific solutions that are intended to ensure citizen engagement as part of the creation of a circular economy. It should be remembered that the "Ladder of participation" model is a scheme where, at the level of practice, individual "rungs of the ladder" should interpenetrate and complement each other. For the purposes of implementing activities related to citizen engagement, the "Ladder of Participation" within the FrontSh1p project has been modified. The areas of co-decision and cooperation have been combined as "inclusive activities".

Below we present selected tools that were created as part of the Frontsh1p project and refer to individual rungs of the ladder.

Table 6: Tools developed for each rung of Participation ladder

	Ladder step	Tools developed within the Frontsh1p project
The environment of the participation process	Information	A model of information campaigns involving residents in circular economy, including: a) general campaigns informing what circular economy is b) information campaigns regarding citizens engagement regarding specific wastes that are the subject of the Frontsh1p project c) information campaigns about the "circular commune" and "circular household" models
	Education	The model of educational activities includes: a) activities in the field of education of children and youth b) activities in the area of educating local leaders c) activities in the area of education of local government representatives d) educational platforms - e-learning
Participatory activities - inclusion	Consultation	The consultation model in the circular economy area under the FrontSh1p project includes: a) model of conducting local consultations b) The Dialogue Council as a consultative body at the local level that involves social partners in consultations
	Co-determination	At the FrontSh1p project level, a "local currency" model was created, developed in cooperation with the local community
	Cooperation	As part of the FrontSh1p project, a model of a

		local microgrant program was created as a tool for involving residents in independent projects in the circular economy area and strengthening circular behaviour.
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5.2. Information activities in the area of circular economy (CE) with the participation of residents

Information activities are the first rung of the "Ladder of participation" and involvement of residents in the circular economy. The aim of the activities is to increase residents' awareness of the need to undertake circular activities, inspire residents with various examples of activities undertaken in the circular economy area and implement the 6 R ideas included in our definition of citizen engagement.

The main assumptions of information activities are:

1. Raising awareness of threats to the natural environment related to waste, consumerism, and the linear economy.
2. Educating society in the spirit of respect for the natural environment, ecological values and new technologies supporting the implementation of circular solutions.
3. Shaping attitudes enables the treatment of waste as raw materials in production.
4. Implementing the 6R principle in households.
5. Understanding the essence and importance of the "human-environment" system, i.e. the interdependence of human and the environment.
6. Developing a sense of responsibility for the natural environment and shaping appropriate attitudes towards the environment.

In the FrontSh1p project, information activities are carried out on two levels:

1. European and regional - showing the assumptions of the project and the idea of a circular economy.
2. Local - for the purposes of testing communication tools with residents in the context of engaging them in the circular economy and understanding the idea of residents' participation - campaigns in Parzeczew and in the Bzura Intermunicipal Association.

The main communication and dissemination activities of the FrontSh1p project are led by the partner EURADA and promote the project's activities and results to pave the way for the effective exploitation of its results.

Communication is essential to ensure a high impact on project activities and results. Effective activities in this area ensure that the project reaches as many decision-makers, members of the scientific community, representatives of the public sector and citizens as

possible. Well-designed messages within these activities help to promote the economic and social benefits of the circular system solutions developed to a wider audience.

FrontSh1p communication activities are aimed at a two-way exchange, so that the project and its results not only reach the divided and targeted communication audiences, but also that the project receives input from relevant stakeholders (government and policy makers, industry, academic and research community, citizens and other projects and EU initiatives). In addition, FrontSh1p has been linked to relevant clusters and projects to ensure collaboration and learning that contributes to promoting the long-term vision.

Appropriate alignment and targeted messaging are required to ensure that project goals are achieved. To this end, key messages are outlined in the project's Communication and Dissemination Plan (D 9.1). The defined goals and communication messages are based on the core concepts of the FrontSh1p project:

1. Sharing information about identified strengths, weaknesses and causes in the transformation of the Łódzkie region towards a circular economy.
2. Generating interest in public and private investments that contribute to overcoming market failures in areas covered by CSS implementation in regions.
3. Improving consumers' and citizens' understanding and acceptance of circular and climate-neutral services and products.
4. Collaboration with community innovation programs in the areas of wood packaging, food and feed, water and nutrients, and plastic and rubber waste.
5. Detailed sustainable and inclusive development in Lodz clusters as part of their socio-economic recovery after the Covid-19 crisis.

The main communication instruments for reaching segmented target groups such as government, academia, private sector and citizens are:

1. project website
2. social media channels: primarily Twitter/X and LinkedIn, but also Instagram and - most importantly in terms of civic engagement - a Facebook group addressed specifically to residents of the Łódzkie region. Therefore, content on social media is published in both English and Polish.
3. promotional videos and associated YouTube channel
4. bulletin
5. participation in conferences, organisation of workshops and other events

The activities of the partner EURADA are addressed to various recipients and demonstrate a broad understanding of the project's assumptions.

In the citizens engagement area of the project, information activities addressed to the inhabitants of the Parzeczew commune, implemented by the PRZECZEW partner, and activities addressed to the residents of communes included in the Bzura Inter-municipal Association, implemented by the BZURA partner, were tested.

The tested model of information activities included:

1. Activities in the media.
2. Information campaigns.
3. Use of IT tools in the Parzeczew commune - Ecoharmonogram application.

As part of the report, we present a description of the activities carried out and planned to be implemented in the field of citizen engagement.



Figure 3: Ladder of participation: information activities

Activities in the media

1. Social media
 - a. target group: residents and local leaders interested in circularity
 - b. objectives of the activity: promoting cooperation and social involvement in activities for nature conservation, ecology and circular economy, and building a community of people involved in environmental protection, promoting local activities and joint initiatives for ecology.

c. implementation method:

By using various social media platforms, you can reach various target groups and promote the ideas of the circular economy in an attractive and interactive way. Municipalities have social media accounts and websites, where posting regular information and entries, in graphic and descriptive form, is a great way to promote the idea of a circular economy and build a community interested in the topic. Within social media, the largest target group can be built on the following platforms:

- Facebook,
- Instagram,
- X,
- LinkedIn,
- YouTube,
- TikTok,
- Pinterest.

Additionally, publishing on social media will allow you to increase the reach of information and interest a larger group of people in educational content and participation in ecological events and campaigns.

Action example: creating a FB group “Życie w (o) biegu”

As part of the FrontSh1p project, a Facebook group was created to support residents in their efforts to improve environmental protection and implement solutions and information regarding the circular economy. The group promotes a circular economy policy that minimises the use of raw materials, waste, emissions and energy loss by using waste from some processes as raw materials for others, thus closing their cycle. The website publishes regular and up-to-date information about actions and events aimed at reducing the consumption of raw materials, secondary circulation of objects, repair initiatives, meetings and publications on the topic of circular economy, as well as educational events on the indicated topic.



Figure 4: Screenshot of FB group "Życie w (o) biegu"

- target group: Communes belonging to the Inter-municipal Association "BZURA", office workers, residents of communes and cities in the area of operation of the Inter-municipal Association "BZURA". The target group is mainly between the ages of 25-50
- aim of the activity: dissemination of local circular initiatives - events, workshops, competitions, exhibitions and other local initiatives aimed at promoting the circular economy and broadly understood protection of the natural environment.
- method of implementation: publishing content in the form of short information, and invitations to initiatives related to environmental protection.

2. Circular spot

- target group: employees of local government units
- activity objectives: to teach both customers and office employees about the correct principles of waste segregation, learn information about the circular economy, places of repair, replacement of items, and a number of good tips enabling the implementation of the 6R principle in households.
- implementation method

Organisation of a publicly accessible place at the commune office, where there will be containers for segregation of waste, collected separately, including paper, plastic and glass. It is not necessary to create a new room, but to allocate a space that can be accessed by a person visiting the building, if it is possible in the waiting room or main hall. Placing containers for the separation of basic types of waste, with stickers with an image and description of waste (in accordance with the municipal regulations), which can and should not be thrown into a given container, will have an informative and educational function. Municipalities can place containers, for example, under an information board on which the

waste management organisation system is described, there are cleaning regulations, a declaration template, contact information for the person dealing with waste management in the municipality, or simply a poster promoting environmental protection or illustrating waste management in a given commune, but there is also a package of educational information on the possibilities of implementing the 6R principle in everyday life, such as the possibility of using repair points, points where you can share and exchange or sell things you don't need at a bargain price.

3. Broadcasts and articles in local media

- a. target group: residents
- b. objectives of the activity: increasing knowledge about circular economy and at the same time inspiring to take specific actions to protect the environment.
- c. implementation method:

Organising radio shows and publishing articles in the local press can bring many benefits, such as increasing public awareness of the circular economy, inspiring local initiatives and encouraging changes in consumer and business habits towards a more sustainable future. Additionally, municipalities can promote circular attitudes in the press and radio as part of implemented investments, actions and programs, which are covered by local media.

Sample materials:



Figure 5: Screenshot of article with survey about circular economy in Parzęczew

Information campaigns

- 1) Ecological campaigns
 - a) target group: commune residents

- b) objectives of the action: increasing residents' awareness of their participation in the circular economy and encouraging them to take action to care for the environment.
- c) implementation method:

Implementation of ecological campaigns that also have an educational effect. There are many ecological actions that can be implemented in municipalities to promote sustainable development and environmental protection, for example:

- cleaning up the world - the campaign includes various grassroots ecological activities, such as cleaning public and recreational areas, forests, natural monuments, and planting trees, but it is also an excuse to conduct, for example, outdoor educational workshops.
- "Garage sales" - this is a popular form of sales in which people sell their unnecessary or used items directly from their own yard, garage or similar place. This is a great way to get rid of unnecessary things, while giving others a chance to buy them at lower prices than in stores.

These activities can be implemented both by local governments and by local communities, institutions and non-governmental organisations, creating joint efforts to protect the natural environment.

Sample materials:

- rules of the world clean-up campaign "Akcja Reakcja" (Attachment: [ACTION_REACTION](#))
- rules of the "SWAP Action" (Attachment: [REGULATION_SWAP_ACTION](#))

2) Study trips:

- a) target group: municipality representatives and residents
- b) activity objectives: familiarizing with the forms and methods of waste collection and recycling, as well as learning good practices, processes and technological solutions in order to implement them in their environment.
- c) implementation method:

Organisation of trips of municipal representatives to places where municipal waste is managed in an innovative way. The participants of the trip may be, for example: local leaders, councillors, village heads, members of circles, associations, formal and informal groups existing in the commune, employees of the office and organisational units whose scope of interest oscillates around the problem of waste and solving it using circular economy methods.

The study trip can provide participants with insight into various aspects of the circular economy, from public policy to technological innovation and practical business activities. Participants will have the opportunity to gain practical knowledge and establish contacts with key players in this field, which may contribute to the development of similar initiatives in their own environments.

Sample materials:

On April 6, 2022, representatives from the member communes of the Intermunicipal Association "BZURA" and partners in the FrontSh1p project participated in a study visit to the Municipal Waste Disposal Plant "ORLI STAW" in Prażuchy Nowe, commune, Ceków Kolonia, near Kalisz. The plant is located in an area of approximately 22 hectares surrounded by forests. The investor, owner of the land and user is the Municipal Association of Municipalities "Czyste Miasto, Czysta Gmina", consisting of 23 municipalities, which has successfully implemented and modernised the investment over the years, which makes it an interesting example for analysis and a good model for others to follow.

The group of 24 tour participants was welcomed and introduced to the issues related to municipal waste management by the Chairman of the Management Board of the Association, Mr. Jan Kłysz, while the details of waste issues and the history of the plant were presented to us by Mr. Piotr Szewczyk, Deputy Director for Technical Affairs and Maintenance.

The trip of representatives of the Association's member municipalities to the Municipal Waste Disposal Plant "Orli Staw" allowed them to become acquainted with the forms and methods of selective waste collection and recycling, as well as to learn about good practices, processes and technological solutions at the plant.



Figure 6: Study visit in Municipal Waste Disposal Plant "Orli Staw"



Figure 7: Study visit in Municipal Waste Disposal Plant "Orli Staw"

3) Eco-friendly promotional materials

- a) target group: residents, officials, and local leaders
- b) action goals: creating ecological promotional materials contributes to environmental protection but can also have a positive impact on the image and activities of the commune/city, encouraging a more sustainable approach to the economy.
- c) implementation method:

Creating educational materials such as circular economy posters and leaflets, as well as the use of eco-friendly promotional materials are great ways to promote sustainable values and

Examples include:

- reusable thermal and liquid cups,
- pens, notebooks and others made of second-generation raw materials,
- reusable bags,
- gadgets made of natural materials that can be reused.

Sample materials:



Figure 8: Reusable water bottle

- 1) Competitions for schools
 - a) target group: school students
 - b) objectives of the activity: developing attitudes of respect for nature, care for the natural environment and readiness to take actions to protect the environment, as well as teaching children and young people how to observe changes in the environment and how to analyse and understand the causes of these changes.
 - c) implementation method:
 - i) organisation of competitions for children, teenagers and teachers of primary schools located in the commune
 - ii) organisation of an art competition for primary school students for two-dimensional work made using any technique in A4 format, the aim of which will be to illustrate the slogan "Waste = raw materials" in the most accurate way possible

- iii) organisation of a photography competition for junior high school students entitled "The second life of waste"
- iv) organisation of a competition for secondary school students for an article titled: "Idea for Waste"
- v) organisation of a competition for natural science teachers for the most interesting scenario of an ecological lesson on municipal waste

An example of the competition that can be conducted within primary school students can be found under attachment: [RULES OF THE COMPETITION FOR PRIMARY SCHOOLS CIRCULAR BAND.](#)

1) Competitions for residents

- a) The "Circular Cuisine Master" competition is addressed to residents over 16 years of age. Interested participants must describe their recipe for a dish from leftovers, take photos and send it to the provided email address. The competition will be decided on the Facebook page of the Parzeczew Commune using likes. The competition is organised by the Parzeczew Commune as part of the FrontSh1p project, which deals with closed-circuit waste management. The competition aims to popularise and promote the idea of not wasting food and preventing waste.
- b) target group: residents of the commune, mainly primary school students
- c) the objective of the activity: organising ecological competitions in the commune mobilises the community to take action to protect the environment. Through competition and prizes, people are motivated to take pro-ecological initiatives, such as planting trees or separating waste. These activities not only improve the condition of the environment, but also integrate the community and build interpersonal bonds.
- d) method of implementation: organisation of the culinary competition "Master of Circular Cuisine"
- e) sample materials: regulations of the "Circular Cuisine Master" competition (Attachment: [RULES OF THE COMPETITION MASTER OF CIRCULAR CUISINE](#))

Use of its tools in the municipality of Parzeczew - eco schedule application

Eco Schedule is a free mobile application that allows the commune's residents easy access to the always up-to-date waste collection schedule and various types of additional information and notifications related to waste and the circular economy.

The application not only reminds you about the waste collection date, but also:

- helps to sort waste properly,
- provides information about the days and hours when the selective waste collection point is open,

- has information about the current state of air quality,
 - reminds about the payment deadline,
 - has a donate/exchange module thanks to which residents can give items they no longer use a second life,
 - has information on the general assumptions of the circular economy in a form easily accessible to residents
- a) target group: commune residents
 - b) aim of the activity: efficient contact with residents in the field of waste management, but also conducting surveys, especially on the topic of circular economy
 - c) method of implementation: encouraging residents to download and use the application and posting materials intended for them

Sample materials:

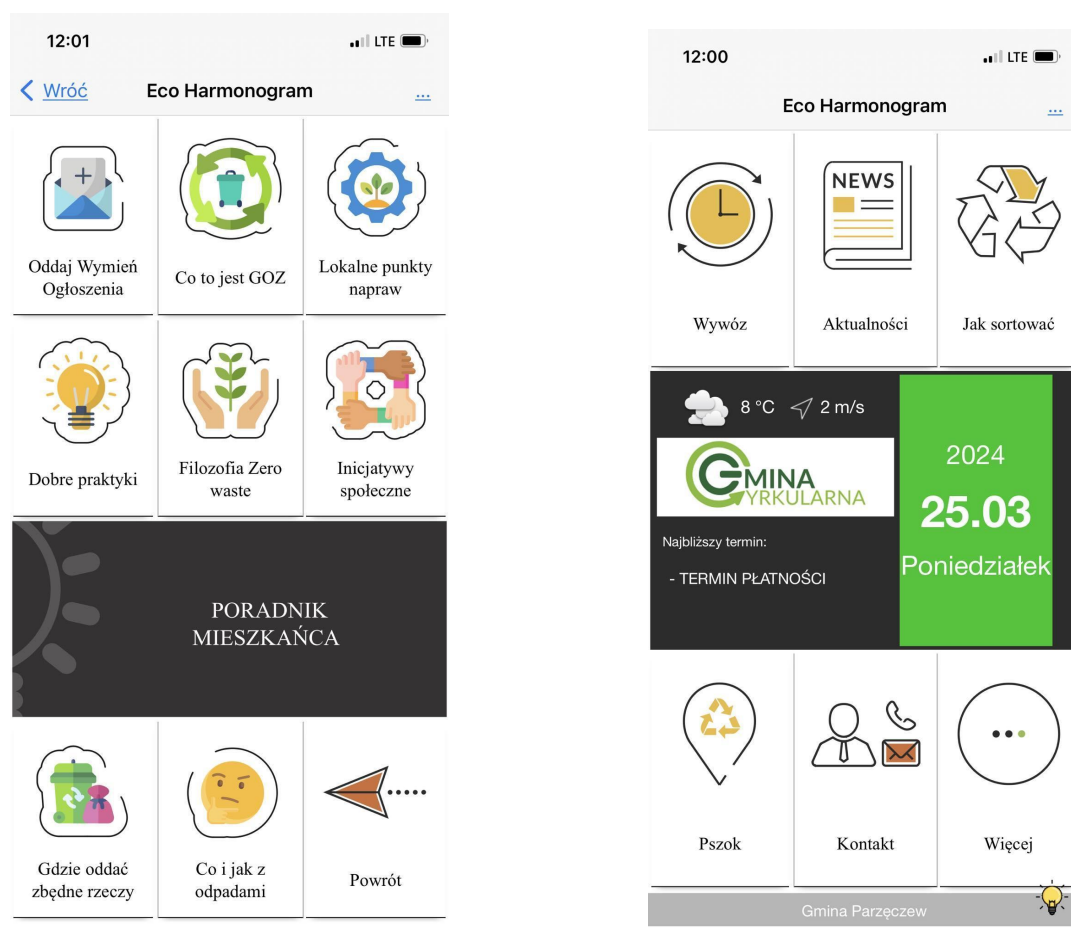


Figure 9: EcoHarmonogram Application

Furthermore, thanks to partner SLOM, we analysed information campaigns already conducted and existing in the Łódzkie region that are relevant and complementary to activities under FrontSh1p project:

- THE WATER FROM LODZ IS THE BEST campaign: <https://lodzkawodanajlepsza.info/>
- Small retention solutions (guide):
<https://uml.lodz.pl/ekoportal/klimat/woda/przeciwdzialamy-suszy/rozwiazania-malej-retencji-przewodnik/>
- BUILD A RAIN GARDEN:
<https://uml.lodz.pl/ekoportal/eko-wiedza/wlacz-sie/biznes-dla-srodowiska/>
- Recycling machine - Aleksandrów Łódzki:
<https://aleksandrow-lodzki.pl/eko-miasto/gospodarka-odpadami/automat-do-recyklingu/>
- Ecological campaigns of the Municipal Office in Aleksandrów Łódzki called "We help the planet - use it again and again:
<https://expressilustrowany.pl/lodzkie-tu-mozna-wymieniac-zuzyte-plastikowe-butelki-na-nagrody/ar/c11-17089437>
- We repair with Veolia - a program implemented by the Veolia Polska Foundation for over 4 years, focused on promoting the idea of zero- and less-waste:
<https://www.fundacja.veolia.pl/nasze-projekty/naprawiamy-z-veolia>
- Information campaign - ecological articles in the free local government newspaper of the RZGÓW Commune, published every month (electronic version available for download on the commune's website). It also covers topics related to waste.

5.3 Educational activities in the area of circular economy (CE) with the participation of residents

Educational activities in the area of the circular economy are the basis for the change we want to achieve towards a more sustainable production of goods and use of natural resources. Educational activities in this area can be carried out from an early age. Due to the transition period, we are in (between the linear economy and the attempt to transition to a circular economy), these activities must cover wide groups of recipients: children, youth, adults, non-governmental organisations, local government units, regional authorities and, of course, entrepreneurs. Educational activities should cover the following aspects:

1. Increased awareness: Many citizens are not aware of the need to change the economic model to a more sustainable and effective one, which is the circular economy. Educational activities help raise public awareness of the problems associated with the traditional "extract-produce-use-dispose" model and teach how to be more sustainable through a circular approach.

2. Changed behaviour: Education can help people understand why and how they should change their everyday behaviours to support the circular economy. This may include, but is not limited to waste separation, repair and reuse of products, or preference for products with a longer service life. This is an aspect that we place particular emphasis on in the FrontSh1p project, because it gives the opportunity to engage each resident on an individual level and in a practical way in the circular economy.
3. Support for innovation: Educational activities can also promote technological and process innovations that support the circular economy. Educating society about new technological and business solutions can stimulate demand for this type of solution and support the development of enterprises working on circular products and services. At the same time, we should not forget that the education of entrepreneurs in this area is equally important.

Educational activities under the project, as intended, focus mainly on the area of the Parzeczew commune, Łódzkie region, Poland, especially in the city of Parzeczew, however, various activities took place as well in the city of Lodz and throughout the communes that belong to Bzura Intermunicipal Union.

Parzeczew has approximately 1,000 inhabitants and regained city rights in 2024. Agriculture is the dominant economic sector here, but it struggles with low profitability and fragmentation of farms. Industrial processing, trade and construction are other important branches of the economy. The largest employers are the Military Unit, the Commune Office, schools and the Commune Health Centre. There is a need to support the development of entrepreneurship and the creation of new jobs in the commune.

BZURA Inter-municipal Union from the Lodz region in Poland consists of 19 communes, of which 1 is an urban commune, 2 are urban-rural communes and 16 are rural communes. As of 30.06.2023, the communes included in the Association are inhabited by 146,105 people. This is a region with intensive agricultural specialisation, especially in the fields of vegetable growing, fruit growing, breeding live pigs, poultry and dairy production. The economy is also developing in these directions, which largely specialises in industries drawing from the local agricultural market. Moreover, taking into account the location and rapid development of communication routes, the logistics, courier, construction and food industries are also of great importance in the region's economy. The main goal is to build the Bzura Circular Centre, the heart of which will be a municipal waste management plant focused on recovery and recycling.

The city of Lodz is the third largest city in Poland. Located in the central part of the country, the city was known for many years for its textile industry. Currently, Lodz is a strong scientific centre, which is best evidenced by the graduates of universities, a city of creative industries and an increasingly popular point on the tourist map of Poland. The cultural offer is created by Lodz theatres, philharmonics, museums and other institutions, as well as

international festivals, including film, music and design festivals. Lodz has 661.3 thousand inhabitants (mid-2022), and over 1.1 million in the Lodz agglomeration.

Educational activities within the FrontSh1p project took place on five levels:

- 1. Education of children and youth.**
- 2. Education of non-governmental organisations and local government units.**
- 3. Education of farmers and entrepreneurs.**
- 4. Education of local leaders and animators.**
- 5. E-learning activities.**

In Parzeczew the education process was preceded by information meetings with space for co-deciding on the directions of development of educational and implementation activities in Parzeczew, moderated by the OPUS partner. The addressees of these meetings were city authorities, subordinate units and stakeholders. Each meeting contained educational elements because it was necessary to introduce concepts previously unknown or poorly known to the participants: circular economy, local currency, social enterprise and others.

Education of children and youth

The primary objective of this activity is to develop children's and young people's understanding of the essence of ecosystems, natural resources and the impact of people on the environment and learn how to achieve a balance between the use of resources and environmental protection, so that current and future generations are provided with good living conditions.

Organization of ecological lessons in primary schools included topics like:

- correct waste separation
- hierarchy of waste management methods
- circular economy - explanation
- waste = raw material – how to make the best use of resources
- product life cycle

The lessons are intended for children from primary schools in the commune/city, schools that are willing to carry out such lessons. The lesson plan will vary for different age groups, divided into grades 1-4 and grades 5-8. The lessons will be conducted by a qualified ecological education animator. In some cases, at the end of each such lesson, an ecological knowledge competition can be held, with promotional gadgets as prizes.

So far, inter alia the following workshops have been conducted:

- 19 April 2023 - for a group of students from schools in Parzeczew and Chociszewo - "Introduction to the circular economy and local currency"
- 26 July 2023 - for members of the local newspaper Młody Paris in Parzeczew - "Introduction to the circular economy. Possible actions."

- 6 February 2024 - for students of Spatial Planning from the University of Lodz in Lodz - "Engaging residents in the circular economy"
- 20 March, 2024 - for grade 5 students at the Primary School in Chociszewo - "Your trace in nature"
- 21 March 2024 - for students of grade 8 at the Primary School in Parzeczew - "Ekokariera. Your future in the circular economy"
- 25 March 2024 - for students of class 6A of the Primary School in Parzeczew - "Your trace in nature"
- 25 March 2024 - for students of class 7B of the Primary School in Parzeczew - "Ekokariera. Your future in the circular economy"
- 14 May 2024 - for students of Spatial Planning from the University of Lodz in Lodz - "Engaging residents in the circular economy"

Workshop scenarios for primary schools – Attachments:

- [SCENARIO_PRIMARY_SCHOOL_5-6_YOUR_FOOTPRINT_IN_NATURE](#)
- [SCENARIO_PRIMARY_SCHOOL_7-8_ECOCAREER](#)

Education of non-governmental organisations and local government units

Actions carried out by BZURA included training for environmental protection staff. Objectives of the action were to raise the qualifications of environmental protection staff in municipalities and environmental protection institutions operating in the municipalities.

Training for substantive employees of municipal offices dealing with waste management in municipalities that are a source of knowledge on key topics related to the circular economy and adaptation to this economic model implemented in the European Union was conducted.

The training programme included:

- circular economy – introduction,
- using all raw materials, products and waste, obtaining maximum value from them,
- from production and consumption to waste management and the secondary raw materials market,
- strategy for plastics in the circular economy,
- eco-design including repair and modernisation options, durability and recyclability of products,
- implementing best practices in waste management and resource efficiency in municipalities,
- introduction of requirements and goals related to waste management,
- creating solutions, defining quality standards for secondary raw materials,

- innovative solutions for plastics, food waste, critical raw materials, construction and demolition waste, biomass and bio-based products.

Other trainings conducted in Parzeczew city:

- 22 March 2024 - training for NGO staff and representatives of organisational units, other adults - "Sustainable institution"
- 28 April 2023 - for officials of the Parzeczew Commune in cooperation with the Parzeczew Commune Office and the Polska Zielona Sieć Association - „Is cheap energy possible in the commune? Community energy, energy cooperatives, various local energy sources - new subsidy programmes

Workshop scenarios for NGOs and local governments - Attachment: [SCENARIO_NGO_THE FUTURE OF A SUSTAINABLE ORGANIZATION.](#)

Education of farmers and entrepreneurs

As presented in D.4.2. educational activities will be complemented by activities aimed at farmers to increase their innovative capacity and to address the challenges of land abandonment due to reduced soil quality. This action intends to increase income opportunities through sustainable practices on marginal lands providing opportunities for diversification. Partner NOVAMONT together with Partner PARZECZEW and the local farmers' association will aim to create new production and income opportunities for farmers, especially for areas of the country characterised by the presence of marginal lands at risk of abandonment or where crops are being changed, thereby avoiding any competition with food and feed crops.

At present, Partner PARZECZEW is in the process of negotiations with the farmers' association in order to proceed with the assumed tasks.

As part of the preparatory stage, a series of meetings with Farmers of the Parzeczew Municipality were conducted. They led to valuable discussions and agreements, highlighting the collaborative efforts between project partners and local farmers to effectively utilise marginal lands for sustainable agricultural practices and bioproduct development. The content of these exchanges will be further developed into topics of a Farmers' workshop being prepared in collaboration with the technical partner NOVAMONT, Parzeczew Municipality, the Agricultural Associations Lodzki Ośrodek Doradztwa Rolniczego, Parzeczew and VELTHA. The workshop should focus mainly on innovative agronomic practices, business models and income opportunities, logistics and contractual models.

Below is a summary of the meetings held and their agenda:

WP4 Meeting Poland (March 9, 2023)

Utilization of Marginal Lands:

- Discussion on utilising marginal lands in Poland for sustainable cropping systems.
- Identification of local companies for vegetable oil extraction.
- Engaging local farmers to cultivate these lands.

WP4 Meeting (October 18, 2022)

- The utilisation of marginal lands for growing oil crops to produce biodegradable bio-lubricants:
- Discussions on the benefits of using these bio-lubricants over traditional mineral oils, emphasising environmental safety and sustainability.

Engagement with Farmers:

- Identifying suitable crops and sustainable cropping systems
- Engaging local farmers in the Łódzkie region for pilot field trials on marginal lands.

WP4 Meeting Novamont (October 21, 2022)

From Oil Crops in Marginal Lands to Biodegradable Bio lubricants:

- Plans to cultivate oil crops like sunflowers and safflowers on marginal lands.
- Agreement between Novamont, farmers, and Parzeczew Municipality for land use and crop cultivation.

Collaboration with farmers for the cultivation of oil crops on marginal lands:

- Novamont will supply seeds and technical support, and the farmers will manage the cultivation process.
- The partnership aims to enhance the economic viability of marginal lands and produce valuable bio-lubricants.
- Novamont will provide seeds and reimburse farmers for fieldwork.
- Aim to use the harvested crops for bi-lubricant production.

WP4 Meeting Poland (March 9, 2023)

Marginal Land Valorisation:

- Visit marginal lands near the Parzeczew Municipality Office.
- Discussions with farmers about cultivating oil crops on marginal lands.
- Agreement on the cultivation protocol, including the use of fertilisers and harvesting methods.

Collaboration with Farmers:

- Interaction with local farmers to understand and plan the use of marginal lands for crop cultivation.
- Focus on cooperative agreements for sustainable land use and crop production.

Farmers Agreements:

- Agreements between Novamont, farmers, and Parzeczew for land use.
- Farmers are to be reimbursed for fieldwork, with the ownership of harvested seeds held by Novamont for oil extraction.
- Discussions on cultivation practices and soil management to ensure successful crop production.

Expected outcomes:

By utilising marginal lands effectively, farmers will be promoting sustainability and increasing the economic viability of these otherwise underutilised areas. With the appropriate technical support, farmers will be empowered, ensuring Frontsh1p's long-term positive impact on the local community.

Education of local leaders and animators

The objective of the activity is to promote knowledge about the circular economy and its importance for environmental protection around the world, but above all in small, local homelands, as well as implement solutions enabling the development of the circular economy in local government units.

This is implemented by the organisation of circular ecological workshops for local leaders in municipalities. Each meeting is attended by 10-15 people, and therefore the participants will be treated as individually as possible due to the fact that they will know each other and will be able to use good practices together and replicate them locally. Education should be provided in particular to those responsible for environmental protection. These people should have appropriate preparation and knowledge. Moreover, it is necessary to provide continuous further education for such people, not only during training courses, conferences and symposia organised on broadly understood ecological topics, but also through practical forms, such as workshops.

Therefore, it is advisable to organise workshops for members of municipal councils, as people who create local laws and decide on the regulations for maintaining cleanliness and order in municipalities. Each council has from 15 to 21 members, and guests present at the sessions or council meetings can also participate in the meetings. The workshops aim to increase councillors' awareness of the circular economy in the context of municipal waste management in municipalities, which is intended to improve the level of decision-making

and organisation of the waste management system in municipalities. The workshops will allow us to learn about various methods and practices for maintaining order and cleanliness in municipalities. Moreover, if in communes there are associations, rural women's groups, and other formal and informal groups (e.g. seniors) interested in environmental protection and circular economy, the implementation of workshops should be repeated for this group of recipients.

Programme includes topics like: Circular economy, Hierarchy of waste management, Circular business models, Legislation.

Workshops are also intended to train the teachers, as they can be seen as local leaders in the society as well. The overall objective is to prepare and activate teachers to act on responsible purchases and promote proper waste management by providing participants with knowledge and practical skills and presenting activating methods in the ecological education of children and youth, including didactic games and activities.

The idea for the educational workshops for residents and schoolteachers is to prepare teachers and commune leaders to conduct educational activities promoting segregation and reducing the amount of waste as part of the concept of a closed-loop economy - circular economy. During the workshops, participants acquire natural and ecological knowledge through direct action, learn how to use natural curiosities when working especially with children, and also receive suggestions for additional activities and lesson plans. The workshops are aimed at gaining practical knowledge and useful educational tools.

Workshop programme: Circular economy, Hierarchy of waste management, Circular economy – definitions, Circular business models, Eco-design, Waste used as secondary raw materials - resources, Product life cycle.

Workshop scenarios for local leaders - teachers constitute: Attachment: [SCENARIO_LOCAL LEADERS AND TEACHERS to the Report.](#)

Moreover, educational activities are also carried out at the level of the city of Lodz at the Local Activity Place (Miejsce Aktywności Lokalnej - MAL) at ul. Legionów 20 Street, run by the OPUS Centre. Here, the target group is all city residents, regardless of age or other characteristics. MAL is a place open especially to people living in the area, because its purpose is to integrate neighbours around various topics of interest. One such topic is the circular economy. At MAL, we try to bring the idea of circularity closer to residents through their active participation in the proposed workshops, city games and other initiatives. Ultimately, MAL is to be a space co-created with residents who will propose their initiatives and projects, including in the area of circular economy and ecology.

One of the workshops to be conducted at MAL is workshops using 3D printing with the purpose of enhancing the possibility of repairing broken elements. Other workshops include topics connected to reusing and upcycling such as using egg trays to sow seeds, making a cat scratcher from a paper poster tube, making decorations using the "string art" technique using wood waste, Making concrete flowerpots using tetrapak, plastic (food) packaging, nailing wooden flowerpots together using wood waste from dismantling pallets, making baskets and flowerpot covers using old newspapers.

E-learning Activities

The umbrella activity undertaken as part of the implementation of educational activities in the FrontSh1p project (as part of WP9 under the leadership of TUL and EURADA) is the creation and making available to the public an e-learning platform. A knowledge portal has been launched at <https://e-learning.frontsh1p.eu/> which will include courses and interesting information about the project, and its results, but also explanations of general concepts related to the Circular Economy, System Solutions Circular Economy and strategies for overcoming challenges in implementing the principles of the circular economy.

From the technical side, the platform is based on Moodle, a well-known, highly developed, open environment for remote learning available via ICT networks and a web browser. The FrontSh1p platform is equipped with a number of tools for preparing advanced courses based on a variety of classes. The basic and most common activities used are lessons, forums, chats, workshops, tests, quizzes, and assessments. Materials in courses can be made available in many different forms: from text, images, files, but also interactive videos and games based on H5P technology.

The recipients and users of the platform can be anyone who registers by providing basic data and an e-mail address. The content of the courses that will be made available on the platform will be prepared by representatives of the project partners in the scope of their competencies and specialties related to the project, but also those that may facilitate familiarisation with the idea of a circular economy, waste management, material recovery and reuse.

The ambition of the project partners is to prepare content for recipients at very different levels - from students to scientists. The platform is designed to be used via a smartphone or tablet, so it can also be a tool for children to learn through play. We would like to instil the idea of taking care of our planet from an early age, but also provide knowledge about specific solutions that can be applied at the level of households, enterprises, communes and even cities. Through the platform, we will share good practices developed as part of

the project, indicate potential areas for the development of circular economy tools at all levels, and present the results of the actions taken using our own examples.

We hope that the platform will become a base of knowledge and contacts enabling the creation of a wide audience - people working to protect the environment and limit its exploitation.

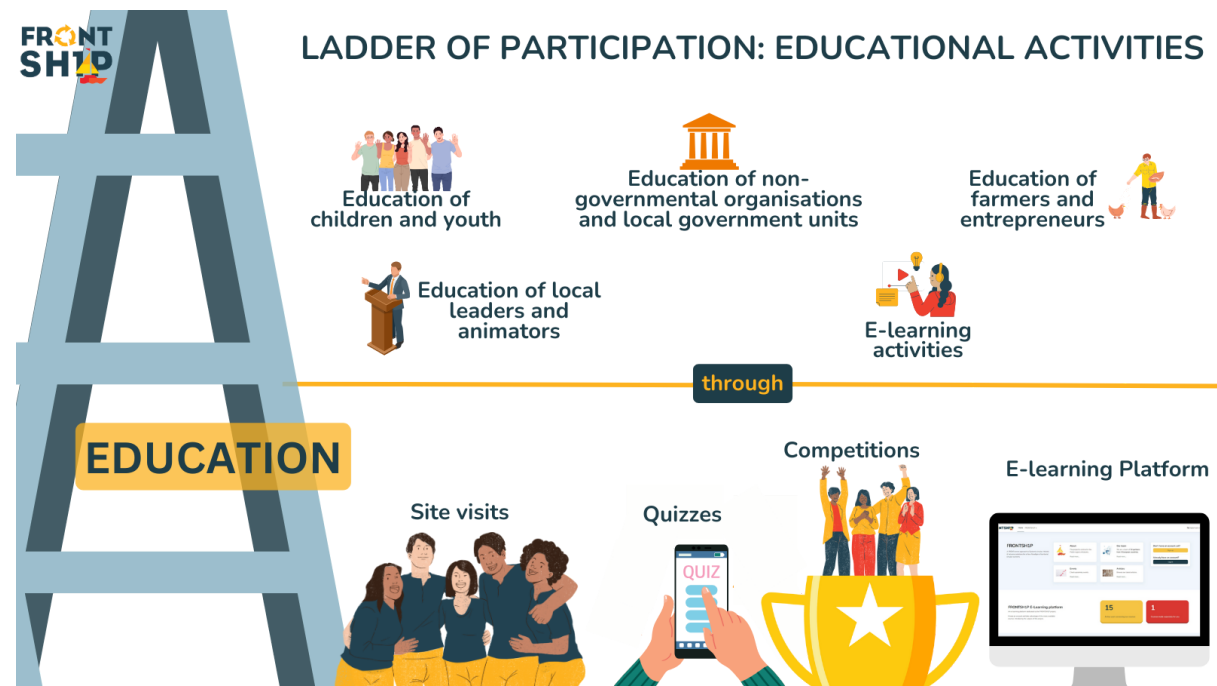


Figure 10 Ladder of participation: educational activities

Overview of EU Best practices in educational activities in the field of citizen engagement

In Poland, there's a notable gap in circular economy (CE) education, particularly in primary and secondary schools. However, initiatives like the "Eco-Schools for Advancing Circular Economy" ([E-SPACE](#)) in Slovenia and Latvia showcase best practices. Supported by Lucart Professional, E-SPACE aims to embed CE concepts into school curricula. Its objectives encompass creating a CE curriculum framework, developing educational materials, training teachers, and raising awareness among students about CE concepts, including the production cycle and sustainable practices.

There are several other examples of initiatives working with similar goals around the EU. Operating in Pontypridd, Athens, Naples, Brussels, Kumanovo, and Strasbourg, [CEYOU](#) aims to foster youth-led initiatives and networks focused on the circular economy that work at local, regional, national and European levels. The partnership, partly funded by the Erasmus+ program, works to establish dialogue forums between youth organisations and

local authorities, develop training programs, promote dialogue at various levels, create Open Educational Resources (OERs), and develop a guidance app for young people.

[ECO-CIRCLE](#) is another collaborative initiative under Erasmus+ focusing on youth education in CE and eco-responsible social entrepreneurship. Through innovative educational patterns and non-formal methods like gamification, ECO-CIRCLE aims to equip young people with the skills and attitudes needed for a sustainable future. Project outcomes include a competency framework focusing on the necessary skills, capacities and attitudes needed to navigate the Circular Economy, an e-learning platform, and an educational e-game, alongside national focus groups and multiplier events to disseminate project results in each partner country, France, Italy, Spain, Netherlands, Finland and Slovenia.

In the Netherlands, [Ecodam](#) aims to provide experiences for children and young citizens, to understand the various aspects of the circular economy such as materials, energy and food. Through workshops, design challenges, and pilot projects with schools, Ecodam aims to instil early awareness and action toward sustainability. They seek to become a hub for circular research and knowledge, promoting a culture of collaboration and shared values. Significant milestones include a festival with workshops and activities facilitating 500 pupils in 2020 followed by a circular design and build challenge with 100 pupils. They are currently looking for partners to help realise a location for a pilot lab.

Another initiative in Flanders, Belgium, called [Circonopoly](#) addresses the lack of circular economy education for secondary school students through a simulation game. Circular Flanders together with POM West-Flanders started the project The Next Generation is Circular, with Cobot, a sector training fund of the textile industry in Belgium, and PlastIQ, a sector training fund of the plastics industry. The result, Circonopoly, introduces young people to circular economy principles in an interactive and engaging manner, free of charge online with instruction videos and teaching materials for teachers. Through co-creation with students and teachers, the game currently evolves to meet educational needs and preferences. To ensure the game's uptake among educators and students, highlighted is the importance of pre and post-game discussions for deeper learning and understanding when used in practice.

[Circular Game](#), an initiative within the Agro2Circular, a sister EU project of FrontSh1p, aims to educate young people about the principles of circular economy by developing a video game. The main activity of Circular Game involves students from primary and secondary schools in the region participating in workshops on video game design, coding, and circular economy. Collaborating with Talento Stem association and Arcade Makecode, the workshops aim to teach students the fundamentals of game development and circular economy concepts. Students work in teams of four to create games that reflect their

understanding of circular economy principles learned during the workshops. These games are then entered into a circular economy video game contest, involving over 300 students from Alhama y Murcia. Moreover, the Agro2Circular project is also engaged in awareness-raising talks at primary and secondary schools, VET centres, universities and companies to spread knowledge about the principles of the circular economy.

REFERENCES:

- <https://www.ecoschools.global/>
- <http://ceyou.eu/>
- <https://ecocircleproject.com/>
- <https://ecodam.org/>
- <https://circonopoly.be/>
- <https://agro2circular.eu/news/circular-economy-is-not-a-game-it-is-a-videogame/>

Educational activities under the project are a continuous process and will be carried on. In the coming months, we plan to expand our activities mainly in Lodz and complete the series of workshops in Parzeczew. It is worth mentioning that we also respond to current needs arising during the project implementation and we gladly accept invitations to conduct workshops for various social groups.

5.4 Consultation activities in the circular economy area with the participation of residents

Consultation activities and dialogue bodies are part of the participatory activities of the "Ladder of participation" with inclusive activities (co-decision and cooperation). There are many opportunities to participate in the law-making process at its various stages - from the preparatory stage, through comments on legal acts introducing new solutions, to the assessment of the functioning of existing regulations. The legal basis for consultations is found in the Constitution of the Republic of Poland and other acts, e.g. Act of March 8, 1990 on municipal self-government, described in Attachment: [CONSULTATIONS LEGAL BASIS FOR CONSULTATIONS AND THE CREATION OF DIALOGUE BODIES](#). In previous years, principles were developed that consultants should take into account in their activities, e.g. 7 principles of consultation (Ministry of Digitisation), Canon of Local Consultations (FISE: <https://kanonkonsultacji.fise.org.pl/regulamin-konsultacji-z-mieszkancami/>), the "Active in consultations" project co-financed by the European Union under the European Social Fund by OPUS Center in partnership with the city of Lodz.

Consultation rules:

1. Principle of good faith: consultations are conducted in the spirit of civil dialogue. The parties listen to each other, showing their willingness to understand different points of view.
2. Principle of universality: anyone interested in the topic should be able to find out about the consultations and express their views there.
3. Principle of transparency: information about the purpose, rules, course and result of consultations must be publicly available. It must be clear who represents which view.
4. Principle of responsiveness: Everyone who submits an opinion is entitled to a substantive response within a reasonable time, which does not exclude collective responses.
5. Principle coordination: consultations should have a host who is responsible for the consultations both politically and organisationally. They should be properly anchored in the administration structure.
6. Principle of predictability: consultations should be conducted from the beginning of the legislative process. They should be conducted in a planned manner and based on clear rules.
7. Principle of respect for the general interest: although individual consultation participants have the right to present their particular interests, the final decisions made as a result of the consultations should represent the public interest and the general good.

The consultation principles were the starting point for proposing changes to the Regulations of the City of Parzeczew adopted in RESOLUTION NO. XXI/192/16 OF THE MUNICIPAL COUNCIL OF PARZECZEW. The following changes to the above-mentioned resolution were proposed:

1. Including the possibility for residents to submit applications in the consultation regulations in terms of initiating the consultation process, determining the minimum conditions for the application and the number of residents (registered/residential) and the procedure for examining the application (principle of universality, transparency, good faith). Taking into account the size of the commune, the required number of residents requesting consultations could be 50 or 100 people. Of course, changes to the resolution also need to be consulted by asking the residents.
2. Extension of the consultation duration to min. 21 days - now there are 14 days (the principle of universality) - par. 6 point 4.
3. Extension of the deadline for announcing consultations: "at least 14 days before the start of the consultation (now there are 7 days) - par. 7 point 4 - "The dates of the meetings should be given in the announcement of the consultations, which should be posted no later than 14 days before the start of the consultation."

4. Optional - proposition in the resolution to expand information channels to include social media (principle of universality).

Attachment: [CONSULTATIONS_RESOLUTION - example](#)

Consultations are planned in accordance with stages, described in the Canon of Local Consultations and consultation models developed by the OPUS Center as part of its participation activities in other social projects.

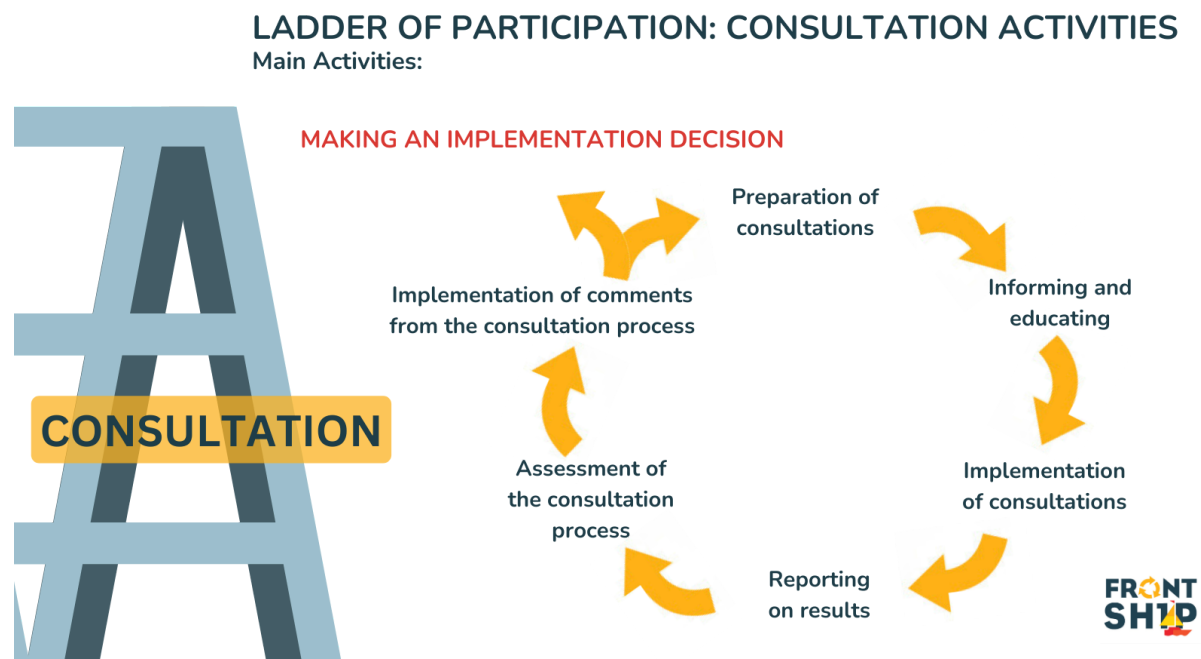


Figure 11: Ladder of participation: Consultation activities

1. Preparation of consultations.
2. Informing and educating.
3. Implementation of consultations.
4. Reporting on results.
5. Assessment of the consultation process.
6. Implementation of comments from the consultation process.
7. Making an implementation decision.

Description of the planned consultation process for the introduction of local currency in Parzeczew

*It will be possible to implement the model on the condition of the involvement of municipal authorities and changes in local law.

1. Preparation of the consultations

In order to achieve genuine cooperation with residents, it is worth taking care of:

- the greatest reach possible, reaching every potential participant,
- selection of groups of participants consistent with the topic,
- good/right choice of methods and channels of reaching,
- ensuring enough time,
- choosing a good moment,
- guaranteeing funds for the process,

At the consultation preparation stage, it is important to define the topic and purpose of the consultation as well as stakeholder groups and methods of reaching these groups (the principle of good faith, universality, and predictability).

The main stakeholder groups in the area of local currency in the Parzeczew commune are non-governmental organisations (KGW, Sports Clubs, LGD, Młody Paryż), public institutions - FIT, GOPS, RCR; entrepreneurs, residents). The best channels for reaching these groups are announcements on the commune's website, information on Parzeczew's Facebook page, personal contacts, and announcements in the building of the Parzeczew Municipal Office.

The preparatory stage also includes a selection form of consultation and appropriate date and duration. The resolution in Parzeczew assumes a minimum duration of 14 days. Due to the fact that the plan includes two forms of consultation, we recommend a duration of 21 days.

On the topic of local currency, we recommend consulting: a form of meetings with residents and surveys with comments. The selection of appropriate forms and techniques for conducting social consultations is the responsibility of the local government as the host. It should be remembered that the forms must serve to achieve the assumed goals of the consultation and be selected and implemented in such a way as to ensure the universal participation of residents. Due to the difficult topic of local currency, the form of meetings with residents and surveys after the meetings seems to be the most appropriate. It provides the opportunity to present clear information and dialogue on this topic.

The ideal method will be a workshop method, which, thanks to the tools used, will introduce the topic and allow more people to take part in it to express their opinions. Additionally, it is worth conducting consultations based on a survey completed, for example, by the Ekoharmonogram application and after the meetings. The meetings should be held, for example, at the Regional Development Center and/or at the Commune Office and/or in village communities.

2. Information and education

(principle of good faith, universality, predictability)

Information is the basis of mutual relations with the community. It is good practice to inform residents about the entire process in which they are participating, including when they can expect tangible results from the decision. Just making a decision (better through consultation) does not end the task. It is worth remembering about the participants during the implementation of the decision made. Sometimes the topic is so difficult that if we do not take care to broaden the knowledge of the participants, the results will be mediocre.

Such a topic is the circular economy and the topic of local currency, which, when implemented, requires the involvement and participation of residents. Therefore, it is important to plan educational activities at least a month in advance.

Secondly, what is also extremely important is the language and form in which the authorities communicate with the residents. Words are often used in official matters that many people do not associate with anything they would like to take part in. The principle "the simpler the better" should be in the first place here.

The introduction to any successful consultations should be a good information policy, i.e.:

- as much information as possible on the local government's website and on BIP
- transparency of these pages and content
- keeping you informed about everything project decisions on the local government's website and in the BIP (the point is not that the local government informs residents about the decisions taken)
- knowledge about decisions should always be publicly available.

Due to the complexity of the topic of local currency, it is worth starting the process of involving residents earlier. A good opportunity is the ongoing FrontSh1p project, thanks to which a meeting on this topic was already held with people from organisations and institutions as well as primary school students. The meetings focused on mapping stakeholders and introducing the topic of local currency. Other educational and information activities are also carried out in the commune. It is recommended to organise a few more meetings in individual villages to familiarise residents with the topic before the consultations begin.

Information about consultations (invitation to participate) should be made well in advance. Some regulations provide different periods depending on the form of consultation: e.g. meetings with residents no less than 14 days, and online opinions - at the beginning of the consultation. Others do not differentiate the form of consultation but stipulate that:

"Information on the commencement of public consultations is published no less than 14 days before their commencement date."

To sum up, information should start 14 days before the start of the consultation. It should concern a substantive introduction of the topic of the local currency: the objectives of the introduction, principles, and possible variants.

Information about the commenced consultations should have a wide scope and take into account the territorial specificity and stakeholder groups. Apart from traditional channels (office website, BIP, board in the office), in Parzeczew it is worth considering, for example: social media, village heads and village boards. At the information and education stage, local media are an important partner and stakeholder, in the case of Parzeczew, e.g., Młody Paryż, other local bloggers, and significant people from the commune.

3. Implementation of consultation - schedule (Topic: Local currency, Parzeczew)

Table 7: Schedule of process consultation in Parzeczew

Stage	Actions	Deadline	People, materials, other comments
preparation of consultations	- defining the goal - indication of the host of the process - planning methods and forms of consultations - identification of stakeholder groups - planning information and educational activities - information inside the office	30 days before x	
information and education	preparation of information and educational materials	14 days + x	

	defining access channels		
announcement of consultations	intensification of information and education activities	x	- office website, public information bulletin - social media, - village boards and inside the office
conducting consultations	- organisation of meetings - launching the survey	x+21 days	
collection and analysis of consultation material	- minutes of meetings - survey responses)	30 days from the date of completion of the consultation	
providing feedback	- preparation of content relating to the comments submitted and the decision taken - publication of information through previously used channels	30 days from the end of the consultation	- office website, public information bulletin - social media, - village boards and inside the office
consultation summary	- course evaluation - conclusions from the evaluation - recommendations for implementation in the future	30 days from the date of completion of the consultation	max. 30 days

*X- announcement of consultations

4. Communication of results

The principle of RESPONSIVENESS: "Everyone who submits an opinion is entitled to a substantive response within the deadline given at the beginning of the consultation". This does not oblige the office to send each participant an individual letter; feedback may take the form of a publicly available document (report) with a summary of the opinions

submitted and a substantive response to them. It is necessary to attach the document changed as a result of the consultation and discuss the next steps.

Answers must justify the decisions made and be prepared in a language understandable to those asking questions - sometimes it is better to prepare summary answers to enable a comprehensive overview of the topic. If the organiser received a very large number of opinions and comments during the consultation, he or she may publish collective, clear answers in one place to which citizens who speak have access.

By publishing the results of the consultation, the organiser of the consultations must ensure that people who submitted opinions learn about it by publishing their responses on the publicly accessible portal where the consultations were held (does not apply to Parzeczew). Well-prepared feedback is an investment in future citizen engagement.

When making decisions, the host of the consultation should be guided not by pressure, but by the public interest and the general good. The reasons expressed during consultations, as well as who they are expressed by, should be taken into account. However, concern for the broadly understood public interest should prevail, including the interest of those who did not participate in the consultations. Every decision should be justified. Well-prepared answers become a contribution to public debate - they can be referred to in further discussions.

Providing feedback on the office's website, in the public information bulletin, in social media, through village heads, on village boards, and inside the office.

The consultation should be summarised within the time specified at the beginning of the consultation. A maximum period of 30 days is recommended for making public the analysis of the consultation process. It should take the form of a publicly available document with a summary of the opinions submitted and a substantive reference to them. It is necessary to attach the document changed as a result of the consultation and discuss the next steps.

The answers must justify the decisions made and be prepared in a language understandable to those asking questions - sometimes it is better to prepare collective answers to enable a comprehensive overview of the topic. If the organiser received a very large number of opinions and comments during the consultation, he or she may publish collective, clear answers in one place to which citizens who speak have access.

When publishing the results of the consultation, the organiser of the consultation must ensure that the people who submitted opinions learn about it by publishing their responses on the publicly accessible portal where the consultations were held.

5. Evaluation of the consultation process

In order to improve the office's qualifications as an organiser and host of consultations, it should be summarised after each process. The provision on this subject in the regulations gives a clear signal to residents that the office takes consultations seriously, in GOOD FAITH and is ready to constantly learn how to cooperate with residents. Evaluation of the consultations carried out in terms of relevance, effectiveness, efficiency, usefulness and durability. It involves asking yourself a few questions and "putting the answers down on paper." It also allows you to check the extent of success and draw conclusions for the future. Such a document is an internal document of the municipality office, created for the needs of the organisers of consultations.

5.5 Social Dialogue Council in the circular economy area (in the Parzeczew commune)

Another solution that involves residents in management processes and shaping circularity policies is the Project Dialogue Council for a circular economy. The Social Dialogue Council of the Project (SPDC) in the area of circularity is to be an element of the policy of local government units in the area of circularity, involving various groups of residents in the creation and implementation of circular solutions within the commune. It is based on the concept of the "Ladder of participation", where the highest level is decision-making with the participation of residents. Residents' participation (influence on the government's regulatory decisions) is one of the elements that determine residents' involvement. The participation ladder illustrates the way in which the authorities communicate with residents, but also the scope of residents' decision-making and influence on the authorities' decisions.

According to the "ladder of social participation" theory, public authorities:

1. They make decisions unilaterally; they do not inform residents.
2. Decide unilaterally and independently but inform residents about it.
3. Decide unilaterally and independently but justify these decisions.
4. Before making a decision, they inform them about their plans and they take different opinions and use them to varying degrees to change the content of the decision.
5. Before making a decision, actively seek the opinions of individual citizens, community leaders, and experts.
6. Before making a decision seek opinions by conducting consultations with various social groups and their representations based on the requirements of law or political will.

The type and nature of the Project's Social Dialogue Council depends on:

- territorial size of the territorial unit (smaller area, better knowledge of stakeholders, closer social ties),
- the number of non-governmental organisations, active informal groups,
- previous practices in obtaining opinions by local government units (legal regulations at the local government level, e.g. resolution on conducting consultations, regulations for establishing dialogue bodies),
- tools used for cooperation with residents, such as local initiative, participatory budget, consultations,
- awareness and level of knowledge in the area of e.g. circularity,
- awareness and knowledge about residents' participation.

Social council with a circular policy profile, opinion-giving and consultative competencies strengthens the community to influence the decisions of the authorities, but also strengthens the power to make better and more effective decisions.

Parzeczew is a small commune, where most of the activities are concentrated in individual villages - Rural Women's Circles, and local village associations. There are also Sports Clubs and Volunteer Fire Department units operating in the commune, as well as the Ekohoryzont Association, which has a similar theme.

In the Attachment: [CONSULTATIONS LEGAL BASIS FOR CONSULTATIONS AND THE CREATION OF DIALOGUE BODIES](#) possible forms of dialogue bodies were described along with the legal basis and the most appropriate form for a small commune was proposed, in which there are not enough organisations related to circular economy or environmental activities that could be involved in consulting decisions in the area of the circular economy, in the form of, for example, the Citizens' Dialogue Commission (pursuant to Article 5(2)(5).

Act of 24 April 2003 on public benefit activities and volunteering - *"cooperation of public administration bodies takes the form of creating joint teams of an advisory and initiative nature, composed of representatives of non-governmental organisations and entities listed in Art. 3 section 3 and representatives of the relevant public administration bodies"*.

In larger territorial units, where there are more, thematically diversified non-governmental organisations, a good solution would be to establish a Civil Dialogue Commission at the request of, for example, 5 thematic organisations. Rules for the creation of such committees are determined by the local government unit. In addition to organisations focused on circular economy and/or ecology, the commission also includes officials from relevant departments and councillors.

A process of animation of stakeholder groups was carried out, which made it possible to implement the topic of circular economy in the stakeholder group and to identify entities and people most interested in the topic of circular economy. Animation and information meetings were held from January 2023 onwards. People participating in the meetings were partners involved in the FrontSh1p project (Parzeczew commune, University of Lodz, BZURA Inter-municipal Association, OPUS Center) and invited stakeholders from the commune Parzeczew - LGD PRYM, Dolina Skrzatów and other entities that gradually joined). The process of building the citizen's council of dialogue is described in the attachment.

The aim of these meetings was to introduce the topic of circular economy and initiate discussions on the main problems in the area of management of secondary raw materials, various groups of waste (including plastic, feed&food, wood) and the introduction of local currency, social enterprise in the area of circular economy, information and education and microgrants and other possible tools that could be implemented to reduce the amount of municipal waste and increase the level of circularity of the commune. During the meetings, the participants also defined stakeholder groups for specific areas. The meetings were conducted in an engaging, workshop format. The work took place in groups, at tables.

Below is an example scenario examining stakeholders (in relation to waste groups).

Title: Stakeholder analysis as an element of local entities' involvement in the circular economy

Target group: local authorities, relevant local government units involved in environmental policy, invited NGO representatives

General purpose: analysing what local entities may be involved in circular economy in selected areas

Specific objectives: determining the influence and interest of individual entities in the circular economy in a selected/indicated area (plastic, bio-waste, wood, glass, other)

Duration: 1.5 hours

Useful materials: whiteboard or flipchart, wrapping paper or flipchart paper, markers, prepared stakeholder maps as described in the scenario content

Course of classes: explain to the participants that they will now work with the stakeholder map method. The method is used to identify local entities that may be interested and have an influence on the implementation of various activities in given areas.

Description of the method: Divide the participants into teams of 4-6 people and hand out large papers with a drawing of a stakeholder map. Prepare as many stakeholder maps as there are waste areas you plan to analyse. Write the name of the waste on each large chart paper.

Ask participants to consider what stakeholders in the region (companies, organisations, authorities, private individuals, others) may be interested in and have an influence on the area. Tell them that the participants' task is to place each stakeholder on the chart in the appropriate place in their opinion, which represents the result of the score in the interest and influence category. Explain that the work takes place in 4 rounds of 10 minutes each, so that each group works 10 minutes on each area (participants are in their places, and the cards go around to the next group).

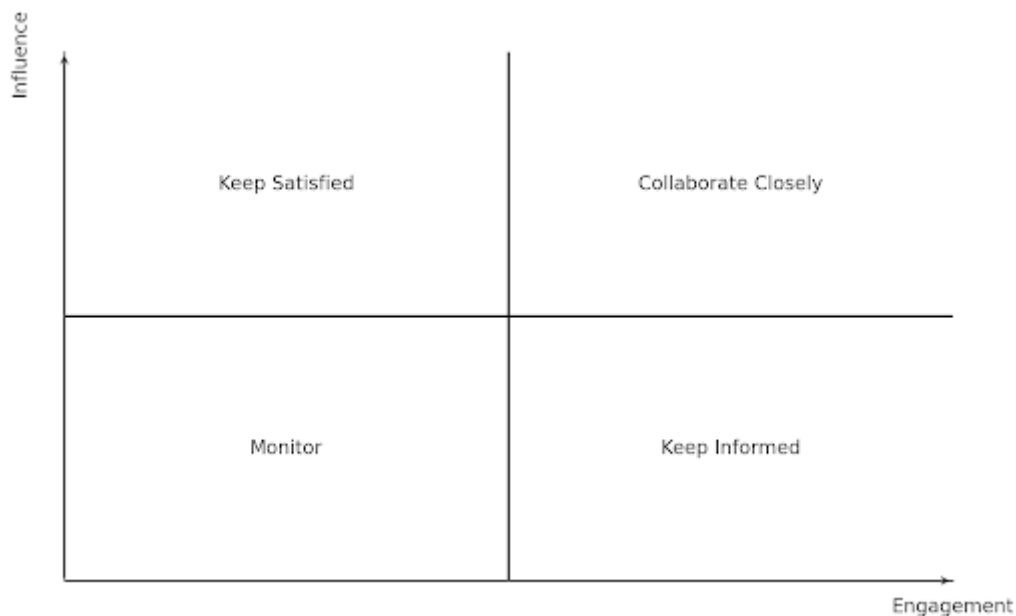


Figure 12: Stakeholder map

After finishing your work, explain to participants what each quadrant of the graph means. Together, analyse which stakeholders are in which quadrant and determine how you should cooperate with those who have the greatest influence and are most engaged in a given area.

Map of stakeholders in the "Plastic" area

Most of the indicated stakeholder groups were among the most interested and able to have the greatest influence (indications from 5 to 10 points on the scale). These were:

- Horticultural Farm - economic impact - e.g. damaged plastic flowerpots can be used for sorting valuable raw materials
- Establishment of municipal economy

- Jankiewicz scrapyard
- Mechanic - plastic car parts
- Primary School and Kindergarten - education, easier access to parents
- Municipal office
- Ekohoryzont Ecological Associations,
- Eagle Without Borders Association
- Peleton-Pumptrack Association
- Football Academy
- Western Shooting Range Association
- Individual households
- Dolina Skrzatów

In the stakeholder group great interest but less influence included:

- Egida - consulting company
- Farmers - gardening foil
- Alexandria - PRIMAVERA water bottling station

In a group medium impact (4) and low interest (1) the waste collection company Strach I Synowie Sp. was found. z o. o.

The map of stakeholders in each topic (plastic, feed&food, local currency, social enterprise) allowed the identification of entities/people most involved and/or having the greatest influence on the issue within a given area.

This information may be useful in creating the Social Project Dialogue Council in the circular economy area in the commune Parzęczew. Proposals for how to create an SPDC are described below.

Workshop scenario on the shape, form and competencies of the proposed dialogue body in the stakeholder group.

Title: **Body of dialogue/ social dialogue council in the area of circular economy in Parzęczew commune**

Target group: local authorities, relevant local government units involved in environmental policy, invited representatives of NGOs, experts - employees of the University of Lodz

General purpose: analysing what participatory solutions, including the establishment of a dialogue body, are possible to implement in the commune Parzęczew

Specific objectives: determining the competencies of the dialogue body and the mode of establishment (who? appoints what? who creates the regulations?)

Duration: 3 hours

Useful materials: whiteboard or flipchart, wrapping paper or flipchart paper, markers, prepared stakeholder maps as described in the scenario content

Course of classes:

1. Introduce participants what the purpose of the meeting is. Give a short presentation on participation, the "Ladder of Participation" and the role of dialogue bodies in municipal management.
2. Invite the participants to discuss the advisability of such solutions in the commune. Parzeczew. All participants take part in the discussion. Conducting a moderated discussion aimed at obtaining an answer to the question: "What can a dialogue council be in the circular economy area in Parzeczew?"
3. Work using the "open space" method: 3 tables with prepared questions and thematic areas for inspiration.

Table 1: Who is the initiator of the Dialogue Council? Who participates in the Dialogue Council? Number of people, duration, terms, competences.

Table 2: What is the composition, the rules of participation, and how are the participants selected: application, recommendations, selection from the candidates.

Table 3: Organisational structure, course of the meetings, who is responsible for the agenda, who is responsible for the work of the dialogue body.

Description of the Open Space method

Prepare three tables on which you can place sheets of flipchart paper with written topics for discussion. Make sure there is a person at each table who will answer any doubts if they arise. The time for proposing solutions is 30 minutes. Participants move freely around the room (from table to table), discuss and provide their suggestions.

The summary of this part of the workshop is a discussion that should answer the question posed earlier.

Conclusions from the workshop: The discussion in the first part already showed concerns and doubts about the advisability of establishing such a body. There were doubts about who would initiate the actions of this body and that education was needed first. There are few grassroots activities in the commune. Most often, various solutions are initiated by the Mayor and the Commune Office, e.g. garage sales/ swap actions. Another doubt was the question - is a structure needed at all? Isn't it too early for such actions?

This topic was also discussed at the tables with questions. The discussion showed that the initiator of such a body could be the mayor, the participants could be heads of the commune, leaders interested in ecology, youth, and entrepreneurs. The Council may have advisory, opinion-giving and educational powers. There is a proposal for a virtual council.

The course of this workshop allowed us to create the most appropriate proposal for the form of the dialogue body for Parzeczew. The Social Dialogue Council, established by order of the mayor, may consist of persons indicated by the Mayor (the most interested, knowledgeable and motivated to work in the council). In attachments [SOCIAL COUNCIL ORDINANCE](#) and [COUNCIL Appendix to Ordinance](#) the legal basis, an ordinance template and an example of the council's operating regulations were indicated.

Summary: proposed steps to establish the Project's Social Dialogue Council in Parzeczew:

1. Organising workshop/animation meetings for local community leaders (scenario above). The purpose of these meetings is to map stakeholders, inform them about plans in the field of circularity and present proposals for creating a dialogue body in this area.
2. Selection of candidates for the council. It is made by the Mayor/Commune Mayor from among a diverse group of stakeholders.
3. Establishment of the Social Dialogue Council by order of the mayor (example in Attachment).
4. Determining the Regulations of operation of the Social Dialogue Council by Order (example attached).

5.6 Inclusive activities in the area of circular economy (CE) with the participation of residents

Introduction of CircuPuncture as a background for engaging residents. Implementation elements may include:

- a) Municipal certification
- b) Self-assessment of residents
- c) Local currency model
- d) Grant fund model

Activities involving residents in the area of circular economy (CE) are the highest form of resident involvement. At this level of the participation ladder for the Frontsh1p project, we combine the levels of co-decision and cooperation. This is where residents are actually included by taking independent initiatives that involve them in the circular economy.

According to the participation ladder model adopted for the FrontSh1p project, the involvement of residents is manifested as real actions taken independently or in the form of joint initiatives undertaken by households for circularity. The FrontSh1p project tests the following tools:

- a) self-assessment of household circularity - the tool aims to assess the household's behaviour and attitudes regarding the implementation of (R) real behaviours in the area of circularity.
- b) "Local currency" - a model of creating a mechanism at the level of the local community (commune, housing estate, street) engaging residents in circular behaviour that creates "exchange value" in the form of local currency. Where the source of income is specific circular behaviour in line with the definition of citizens engagement. As part of the project, a local currency model was developed for the Parzeczew commune (pilot).
- c) Local microgrant program - an activity supported by the local government at the municipal or regional level, which, by committing appropriate financial resources, can stimulate the circular behaviour of residents by engaging them in the preparation and implementation of their own micro-projects in the area of the circular economy.

5.6.1 A tool for self-assessment of household circularity

The purpose of the self-assessment tool, i.e. the questionnaire entitled "My circular household" is to create the opportunity to self-assess the level of circularity of one's own household by determining the place (position) it occupies on a hypothetical circularity scale. In other words, how circular a household is or is not subject to self-assessment. Secondly, in which of the three areas (separated in accordance with the concept of attitude discussed below) can improve its actions.

The tool tested in the current phase of the project took the form of an online survey questionnaire.

The questions in the questionnaire were constructed and standardised in such a way that they could be parameterised and obtain a result that would determine the household's position on the operational circularity scale. This scale is original and was constructed especially for this study.

Assumptions of the research method:

The questions used in the self-assessment form refer to the theory of attitudes (attitude can be called a relatively constant tendency to have a positive or negative attitude towards a given object/phenomenon), divided into three components:

- a) Behavioural - relating to behaviours or their dispositions;

- b) Cognitive - relating to beliefs (thoughts that a person believes in and considers to be true, are subconscious, strong and stable, and are based on assumptions and interpretations), and the individual's knowledge of a given object/phenomenon;
- c) Emotional - feelings and emotions towards a given object/phenomenon.

Each of the three components mentioned above was assigned appropriate questions that indicated a given area.

The concept of attitude clearly defines it as a specific mechanism regulating human behaviour and conduct, therefore, the completed questionnaire revealed the level of circularity of the Respondent (and his household), divided into the above-mentioned three areas. The sum of these components determines the attitude towards the circular economy.

The use of the tool allows you to obtain an answer to the question of how circular the assessed household is (by determining its position on a specially constructed circularity scale) and recommendations on what and in what areas can be improved to make this position higher.

Construction of the self-assessment tool:

The questionnaire contains 21 questions (including 6 questions regarding the respondent's characteristics). It is easy to use - the average time to complete the survey is 13 minutes. The questionnaire is completed by an adult, designated in the household as the household representative, who implicitly has knowledge of the rules, practices and activities of the entire household.

Testing the tool:

The questionnaire, as a self-diagnosis tool, was subjected to a multi-stage pilot procedure, thanks to which its latest version is understandable, accessible, easy to use and has appropriate diagnostic value - it diagnoses specific attitude components well. The questionnaire was tested in four stages:

- a) The first testing took place among research workers at the University of Lodz,
- b) Second – among deliberately selected residents of Lodz,
- c) The third – among employees of the Commune Office in Parzeczew.
- d) The fourth - last phase of the pilot was carried out in the field, among the school community (parents and teachers), at the Primary School in Parzeczew in January and February 2024.

As a result, 61 completed questionnaires were returned. The group for the pilot was selected deliberately. The school environment was considered a potential source for disseminating and promoting attitudes in the local environment, in this case, pro-ecological attitudes and building awareness of the circular economy.

Test results:

As a result of the pilot study, the following information describing the subject was obtained: Almost all respondents believe that waste should be reused. $\frac{3}{4}$ of the respondents declare that they know the concept of the circular economy, and in general they also know that one of the goals of the circular economy is to extend the life of a product.

- Almost all respondents (59/61) separate waste in their household. Those who do not do so point to the main reasons as: lack of space at home for appropriate containers, lack of time for segregation and lack of willingness on the part of household members. Among the reasons for separating waste (as many as 77/95 indications), the prevailing opinion is that it is a right and sensible action and that it helps protect the environment. This is positive information because it emphasises internal motivation as a manifestation of the respondent's internal control.
- About half (32/61) declare that they do not throw away food at all, 13/61 throw away food 2-3 times a month or less, and 14/61 - about 1-2 times a week. Reducing food waste is mainly related to composting waste and feeding animals, which is typical of rural areas. The main reasons for throwing away food are missing the expiration date and food spoilage.
- Among the pro-ecological practices, three dominate: saving water, gas and electricity in everyday life; taking reusable bags when shopping and paying attention to whether the purchased equipment is energy-saving (but this may also result from savings). Next: consciously refraining from buying things you can do without. In the context of reducing consumption, this bodes well for the future.
- The most frequently mentioned resource-saving behaviours within the household include online shopping; using applications such as vinted, olx; donating clothes and equipment to various institutions, e.g. nursing home, parish, orphanage; drinking tap water/filtering water and using public library.

Self-assessment of circularity is important both for the resident himself and for other stakeholders of the change, e.g. local authorities (if the platform allows for obtaining aggregated results of self-assessment of residents). From the resident's point of view, receiving feedback on the level of circularity of their own household allows them to take a more comprehensive look at their attitude towards the circular economy (as a representative of the household). The self-assessment questionnaire is designed to provide results in three key areas - attitude components, i.e. emotional, cognitive and behavioural. Dividing the results into three areas allows you to reveal possible inconsistencies and indicate a specific area that requires possible improvement or one that is well-built. For example, it is difficult to talk about generating a specific behaviour if emotions, knowledge and beliefs have not been sufficiently strengthened. From the point of view of other stakeholders of the circular economy, e.g. local authorities, collective knowledge about the

attitudes of residents allows for shaping collective actions supporting particular spheres of attitudes, such as the expansion of the circular economy infrastructure, improving or inducing specific behaviours; educational activities; or providing positive stimuli and emotions to residents about the circular economy.

Further work:

It is recommended that the self-assessment questionnaire is a publicly available tool. Further work is planned:

- a) Modification of the tool based on the tests performed
- b) Connecting the tool with IT systems operating locally as well as those created as part of the project
- c) Incorporating the tool into local solutions for the development and promotion of the circular economy, incl self-assessment tool form and key to calculate the household's position on the attitude scale is available under Attachment: [SELF ASSESSMENT TOOL MY CIRCULARITY HOUSEHOLD.](#)

5.6.2 Local currency model for the Parzeczew commune

Introduction

The Local Currency Model is an ongoing initiative designed to support residents in their daily activities and encourage participation in the circular economy. It includes the Prototyping Process and the Final Currency Model. Firstly, we present the Final Currency Model to show the goal we are striving for and then we define the Prototyping Process, which enables us to tailor the model to the local contexts.

We present a framework for implementing a tool to facilitate "R-real" processes within the local community. This model integrates two innovative approaches: design thinking and urban labs. Design thinking is a human-centred problem-solving approach that emphasises understanding user needs, crucial for creating a desirable and effective local currency. Urban labs provide a supportive ecosystem for developing local currencies through multilateral city management. The Local Currency Model described below offers a flexible process for introducing local currency rather than a ready-made solution applicable in all contexts. This model is planned to be tested within a small-town community (Parzeczew) and a neighbourhood city (Lodz).

Final Currency Model

The framework of the model includes the circulation of currency, the technology supporting the currency, rewarded behaviours, rewards, and the entities involved in the process.

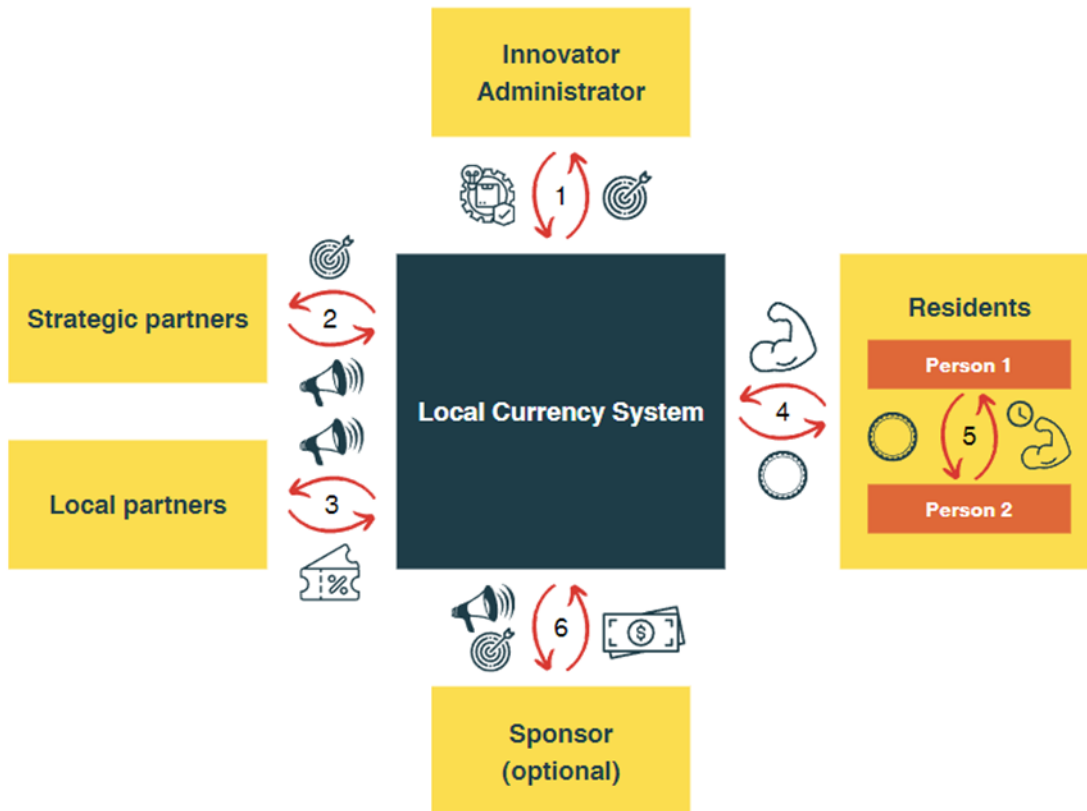


Figure 13: Local Currency System

The currency model is illustrated in the diagram above, which schematically shows the interactions of various actors within the system:

1. **Innovator and administrator:** They are responsible for the development and supervision of the system, ensuring its proper functioning and the adequacy of solutions to the needs and behaviours of the other actors. In return, the Administrator achieves its goals (e.g., social, political, environmental).
2. **Strategic Partner:** This entity's presence in the model improves its image, visibility, and enables promotion. Like the Administrator, they achieve their goals in return.
3. **Local Partners:** They contribute real value to the system in the form of products, services, or discounts on them. In return, they promote themselves among residents. The system can additionally promote sustainable local partners by rewarding users for responsible purchases.

4. Residents: They engage in behaviours within the R-real scope. In return, they receive virtual coins. The verification of behaviours can take place through real-life verification (e.g., visiting a local partner) or through an application (e.g., GPS tracking).
5. Optional Resident Exchanges: Residents can optionally exchange coins among themselves in return for items (secondary circulation of goods) or time (services, e.g., tutoring).
6. Optional External Sponsor Support: The circulation can be supported by an external sponsor, improving their image or achieving organisational goals.

Residents can use the collected coins to purchase rewards offered by the system. The Local Currency Model assumes a Prototyping Process, during which temporary assumptions and functionalities are tested in order to create a stable circulation the final Currency Model tailored to the local context.

R-real Behaviours Powered by Local Currency

To address the R-real principles, based on case studies, workshops, and meetings with stakeholders, the following aims and action examples were defined and are listed below.

Refusal

Aim: Encourage and reward residents for avoiding unnecessary consumption and eliminating harmful products. Promote sustainable choices and conscious consumption habits.

Examples:

- **Cleaning:** Encourages residents to engage in sustainable behaviours like cleaning their surroundings, and raising awareness about the impact of waste.
- **Incentive System for Physical Activity:** Encourages walking and cycling over driving, reducing fuel consumption and emissions.

Reducing

Aim: Incentivise the reduction of overall consumption to decrease the physical flow of materials in economic processes, leading to less waste and lower environmental impact.

Examples:

- **Waterholes:** Install public water dispensers to encourage the use of reusable bottles, reducing single-use plastic consumption.
- **Food-Sharing Points:** Enable food donations to reduce waste.
- **Local Markets:** Promote local products to reduce the carbon footprint from transportation.
- **Biogas Plant:** Use organic waste to produce biogas, reducing greenhouse gas emissions and waste.

Reuse

Aim: Promote the repeated use of goods for their original purpose to extend their lifecycle and reduce the need for new products.

Examples:

- **Exchange Point:** A place for residents to exchange used items like toys, appliances, furniture, clothes, and tools.
- **Exchange Events:** Regular events where residents can swap items they no longer need.
- **Neighbourhood rental:** renting goods (e.g. tools) within the local community instead of buying.

Renovate, Repair and Reuse for New Purposes

Aim: to support the renewal of material goods to restore their functionality, thus prolonging their life and reducing the need for new purchases. Encourage the repair of broken or damaged items instead of discarding them, fostering a culture of fixing rather than replacing.

Examples:

- **Repair Point:** a facility where residents can donate items for repair and restoration, offering workshops for repairing and renovating items. This facility encourages finding new uses for already-used items through exchange and repair services.
- **Workshop:** educating people about repairing or upcycling stuff (e.g. sewing workshop).

Recycling

Aim: Promote the processing of material goods into new raw materials to be used in the production of new products, thus closing the loop in the material cycle.

Examples:

- **Incentives for collecting selective waste:** Enhance waste segregation facilities to promote recycling.
- **Paid Disposal for Problematic Waste:** Provide facilities for the paid disposal of items like used tyres, asbestos, and e-waste, encouraging recycling and responsible disposal.

Prototyping Process

To develop a local currency model that effectively addresses the unique needs of different communities, a structured prototyping process is essential. This process should be adaptable to various local contexts while maintaining a focus on fostering sustainability and community engagement. Below is a proposed universal prototyping process, which will be

implemented while prototyping and developing Local Currency Models in Parzeczew and Lodz.

The implementation is planned as a three-stage process:

1. **Conceptualisation:** Understand the community's needs, motivations, and pain points (Empathise), articulate problems (Define), generate ideas (Ideate), and build tangible representations to explore feasibility (Prototype). Initially, an analogue currency will be introduced to test functionalities, with digital solutions proposed in the final stage.
2. **Iterative Testing:** Use the local currency during regular local events ("local markets") to ensure continuous design iteration and respond to ideas proposed by the local government.
3. **Summary and Upscaling:** Analyse results, refine the model, and scale up the initiative based on feedback and testing outcomes.

Conceptualisation Phase

This phase aims to understand the community's needs, motivations, and challenges, and to define the scope of the local currency. With this phase, the following deliverables are developed: a report on community needs and preferences, a conceptual model of the local currency, an initial design of analogue currency and event concepts. The following activities are recommended for implementation:

- **Workshops and Interviews:** Engage with key stakeholders through workshops, individual meetings, and interviews to gather insights into local needs and expectations.
- **Data Collection:** Community meetings to identify pain points, desires, and potential barriers to adoption.
- **Problem Definition:** Clearly articulate the problems to be addressed by the local currency, focusing on sustainability, community involvement, and economic support.
- **Ideation:** Brainstorm potential solutions and ideas for the currency's design, structure, and operational model.
- **Prototyping:** Develop tangible prototypes of the currency system, starting with analogue solutions that can be later digitised.

Iterative Testing Phase

To effectively test solutions, we recommend organising events for residents to test their behaviours. A series of events where the local currency will be introduced enables it to implement a structured approach focusing on specific activities, feedback collection, and data analysis. Each event can serve as a testing ground for different aspects of the local currency system, allowing us to gather insights and make improvements iteratively.

The aim of this phase is to test and refine the local currency model through real-world applications and continuous feedback. In order to reach that aims, the following activities ought to be taken:

- **Event Planning:** Organise monthly events featuring locally chosen activities supporting R-real principles.
- **Implementation:** Introduce analogue currency at these events to test its functionality, user engagement, and impact on local activities.
- **Feedback Collection:** Use surveys, feedback forms, interviews, and observational data to gather insights on participants' experiences, behaviours, and suggestions.
- **Data Analysis:** Track the volume of coins circulated, the types of transactions, participation rates, and the effectiveness of various functionalities.
- **Iteration:** Adjust the model based on feedback and retest.

To ensure the local currency initiative aligns with eco-friendly practices, zero-waste coins for transactions during the events should be utilised. These coins can be created using sustainable methods such as 3D printing with filament made from recycled plastic bottles or repurposing leaky, damaged jar caps with an imprinted unique pattern for each event to prevent forgery, or using paper printed on one side with non-sensitive information from the municipality, which will be stamped with a unique design for each event.

Summary and upscaling

Based on the findings and results of the previous phase, a comprehensive model for digital currency can be prepared. This model includes detailed mock-ups and technological requirements to facilitate the integration of the local currency into a digital application. In addition to developing the digital currency model, future scenarios for the currency's development in a local context can be created. These scenarios can explore various pathways for expanding the currency's use, incorporating more local businesses, services, and community activities. It is also worth considering how the currency can evolve to address emerging needs and opportunities within the community.

The aim of this phase is to analyse the findings, refine the currency model, and plan for digital implementation and expansion. This phase includes the following activities:

- **Analysis:** Review the outcomes of the testing phase, identifying successful features, areas for improvement, and user feedback.
- **Model Refinement:** Develop detailed mock-ups and technological requirements for the digital version of the currency, integrating feedback from the analogue testing phase.
- **Future Scenarios:** Explore various scenarios for expanding the currency's use, incorporating more local businesses, services, and community activities. Consider the evolution of the currency to address emerging needs and opportunities.

- Replication Strategy: Develop a roadmap for implementing the currency model in other cities and contexts, detailing necessary steps, adaptations, and considerations for replication.

Deliverables:

- Comprehensive digital currency model with mock-ups and technical specifications.
- Scenario plans for future development and expansion.
- Replication guide for introducing the currency in other communities.

Local Currency Model in a Nutshell

The Local Currency Model is an initiative designed to support residents and promote circular economy participation. It consists of a Prototyping Process and a Final Currency Model. Initially, the goal is to present a flexible, adaptable framework for local contexts. The model integrates design thinking and urban labs to understand user needs and create a supportive ecosystem for developing local currencies. It includes currency circulation, supporting technology, rewarded behaviours, rewards, and involved entities.

Key roles in the system include Innovator and Administrator, Strategic Partner, Local Partners, and Residents. Residents earn virtual coins for engaging in R-real behaviours, which can be verified through real-life interactions or an app. R-real behaviours, powered by the local currency, aim to promote sustainable consumption, reduce overall consumption, encourage reuse, renovate and repair goods, and promote recycling. The collected coins can be used for rewards offered by the system.

The Prototyping Process is essential for tailoring the model to different communities, focusing on sustainability and community engagement. It includes three stages: Conceptualisation, Iterative Testing, and Summary and Upscaling. The Conceptualisation phase involves understanding community needs, defining problems, brainstorming solutions, and developing prototypes. Iterative Testing involves organising events to test the currency, gather feedback, and refine the model. The final phase involves analysing results, developing a digital currency model, exploring future scenarios, and planning for replication in other cities and contexts.

5.6.3 Local Microgrant Programme

What is the purpose of the tool?

The aim of the tool is to involve residents in taking their own grassroots initiatives involving the local community in activities for the circular economy.

The idea behind microgrants is for residents (households) to implement projects together for the benefit of the local community. This means that initiatives are taken by, among others: 3 households. In the case of the microgrant mechanism, this condition is of key importance in the context of creating projects involving the local community.

Working together, min. 3 households, as informal groups, should invite other community residents to participate in the project. This is a key condition for influencing residents through joint ventures.

What is a microgrant?

A microgrant is financial resources transferred to a group of residents for the implementation of grassroots projects worth from EUR 1,000 to EUR 3,000. The funds are a tool to support residents' ideas. The essence of a microgrant is to launch an initiative. Due to the fact that the funds are small, the microgrant is intended to stimulate the creativity of residents and implement projects that are within their organisational reach. The implementation of expenditure under the programme should be informalised so that residents can spend funds on projects in a simple and purposeful way.

What can a microgrant be used for?

Actions that local communities can take should concern the implementation of the idea of "citizen engagement" in the circular economy. In the context of residents' projects, it is crucial to promote activities that can be easily adapted and replicated by other households and communities, thus creating a broad-based change towards sustainable development. Taking into account the essence of the FrontSh1p project, residents' projects should focus on the topic of waste:

- a) Plastic
- b) Wooden packaging
- c) Food and feed
- d) Water and sewage

Residents' undertakings should support real initiatives in households and the local community (R) (and not just declarative) actions such as:

1. Refusal (e.g. unnecessary consumption of goods; elimination of unnecessary/harmful consumption).
2. Reduction (consumption of goods to reduce the physical flow of matter in economic processes).
3. Reuse (multiplication of the use of material goods for their current purpose).
4. Renovation (renewing material goods to restore their original functionality and extend their life).
5. Repair (repair of broken or damaged material goods).

6. Reuse (finding new uses and functionalities for material objects already used in accordance with their original purpose).
7. Recycling (processing material goods into new, secondary raw materials),
8. as well as activities not directly related to, but supporting such practices:
9. Sharing (using one item/material good together with other households to increase the intensity and efficiency of use).
10. Leasing (systems for renting material goods).
11. Separation and selective collection in the local waste management system.

Residents can implement various projects for informational and educational purposes, but also to create lasting local solutions that strengthen the idea of circularity.

Examples of projects that residents can undertake:

1. Creation of food sharing/ fair-share points.
2. Food waste prevention workshops.
3. Building a circular community garden (from composters to collecting water to growing eco-vegetables).
4. Creating a repair café (repairing things, giving them a new life).
5. Neighbourhood swaps, garage sales.
6. Neighbourly equipment rental.
7. Creation of a system for collecting and using rainwater in tenement houses.

The essence of microgrants is that residents create the project themselves in response to local needs, taking into account their resources and capabilities. This is the greatest value of the program - it stimulates creativity among the participants. The essence of microgrants is that the projects, as small undertakings, become an inspiration for other residents to be able to multiply activities to others, e.g. streets, housing estates, and communes.

Who organises the Local Microgrant Program?

In the presented Program model, the initiator and organiser is a local government unit. In our assumption, it is the local government that, as part of the implementation of the definition of "citizen engagement", creates the conditions and environment for residents to take specific actions. In the model, the local government (commune) and regional government (provincial government) undertake various activities aimed at involving residents as part of their tasks.

The Local Micro-Gant Program can be implemented at each level of local government. The goals of the regional programme will be more promotional and educational in nature for the development of the tool. At the municipal level, it may become an ideal tool for implementing specific projects that strengthen municipal circularity development programmes, including the municipal circular model.

The role of the local government in the Local Microgrant Program model is to set the main goals for the program and cooperate with local partners.

The microgrant program should not be directly implemented by the municipality itself. Therefore, we recommend selecting programme operators as part of the model.

The role of programme operators may be played by local non-governmental organisations working with local communities and statutorily involved in supporting neighbourhood activities. The microgrant program will be an important tool to support such activities. For the local government, the operator is a partner in implementing activities.

Selecting an operator is crucial to ensuring:

1. Increasing community engagement

Non-governmental organisations often have close relationships with the local community, which can contribute to greater involvement of residents.

2. Specialist knowledge and experience

The operator provides support for residents at the stage of informing them about the programme, advises on the preparation of projects, provides substantive support during implementation (e.g. legal), monitors implementation and settles microgrants. This specialised knowledge is not often available in local government. The operator significantly relieves the local government in implementing initiatives. Among others taking over the settlement of projects.

3. Flexibility and ability to respond quickly

Non-governmental organisations are often more flexible than public institutions, which allows them to respond faster to changing needs and circumstances. In the case of Local Microgrant Programs implemented on the basis of e.g. subsidies, the operator has greater flexibility in financing local activities than the local government, which is obliged to apply specific legal procedures.

4. Cost-effectiveness

Cooperation with the operator may be more cost-effective for local governments, thanks to the transfer of operational costs related to programme management to the organisation and the possibility of using volunteering. It is assumed that the cost of operating the programme is up to 20% of the programme value. However, it should be remembered that in the case of non-governmental organisations, this often gives the opportunity to combine the programme with other projects strengthening the local community. As a result, the operator is able to create synergy among activities.

5. Access to additional sources of financing

Non-governmental organisations often have access to additional sources of financing (e.g. EU funds, and international grants), which may increase the available resources for implemented projects. Financial support for local government funds is also possible with business partners, for whom co-creating the programme may be an element of building corporate social responsibility, strengthening relationships with the local community, and including activities in their marketing policy.

6. Promotion of transparency and simplification of the system of financing local initiatives

The operator running the microgrant programme is obliged to implement a transparent procedure. However, compared to local government, it is not as limited by formal requirements. In the model, we recommend that the operator conduct a two-stage project selection procedure. Focusing not so much on the ability to complete applications, but on the actual idea. In the model, we recommend the collection of flashcards and conversations with the groups preparing the project.

7. Development of social capital

Cooperation with non-governmental organisations as operators is an element of building social capital and implementing the principle of subsidiarity and partnership. Such action should contribute to building a network of cooperation between local governments and residents, which is the essence of building social capital.

8. Support for innovation and creativity

Non-governmental organisations are often open to innovative ideas and creative solutions to social problems, which may contribute to the development of innovative projects and initiatives. The operator, as we indicated above, has greater opportunities for a flexible approach to procedures, which is a factor in strengthening innovation.

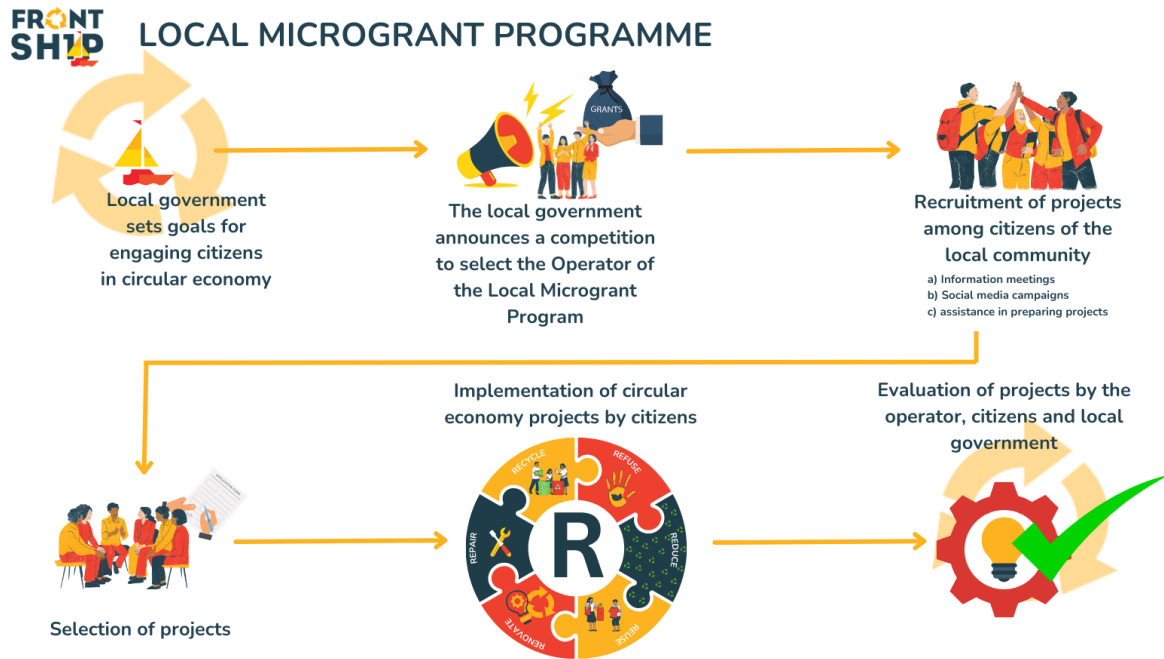


Figure 14: Local Microgrant Programme

What is the legal basis for the implementation of the Local Microgrant Program?

The Local Microgrant Program should be implemented based on national regulations.

In Poland, the basis for financing such activities is:

1. In the case of a system based on subsidies - the Act on public benefit activities and volunteering
2. In the case of the purchase of services - Public Procurement Law

The subsidy system assumes the transfer of targeted funds to finance and co-finance the project. In Polish regulations, the rules for selecting Operators are regulated by Art. 16a of the Act. On this basis, we have prepared model regulations for selecting the Operator included in the Attachment: [LOCAL MICROGRANT REGULATION OPERATOR](#). The Act on public benefit activities and volunteering is the basic legal act in Poland regulating the relations between local government and non-governmental organisations.

However, the legal system of public finances also allows one to choose a different financing path, which is the purchase of a service. The basic difference between both legal bases is that the service purchase system opens the procedure not only to non-governmental organisations but also to other contractors, e.g. companies. The purchase of services is also subject to the tax on goods and services (VAT), which significantly increases the cost of the service for programmes implemented above PLN 200,000.

What are the operator's tasks?

The presented model assumes the selection of the operator, which should be a non-governmental organisation specialising in supporting local communities and for which topics related to sustainable development are an important area of activity. The operator's role is to provide services as close to residents as possible and work with them at every stage of implementing their ideas. This role is crucial and therefore when choosing the operator in the competition procedure, the local government should precisely define the operator's tasks.

The key task of the operator is to organise a competition for the selection of implementers of local initiatives. The operator is responsible for preparing the procedure, including regulations, templates of documents applicable at the recruitment stage (application template), implementation (contract template and implementation rules), and settlement (report template). The operator should provide a safe and simple IT system for collecting applications, e.g. a generator.

The operator's role is also to organise the process of selecting contractors and signing contracts with them for the implementation of activities, monitoring and settlement of projects.

At each stage of the implementation of the Microgrant Program, the operator should carry out the following activities:

- a) promotion and information - activities should include the stage of informing about the programme, its goals and implementation principles. Here, proven forms of conducting activities are local information meetings, webinars, and social media campaigns. At the stage of project implementation, promotional activities should focus on showing the residents' initiatives, encouraging them to participate in these projects and promoting them as good practices inspiring the local community to participate in subsequent editions or launch their own programs. When conducting information and promotional activities, the operator should cooperate with local media and promotion departments of local government units.
- b) consulting - the operator is obliged to provide support at every stage of programme implementation to advisors whose task is to assist in the development, implementation and settlement of the grant. We recommend that, as part of the implementation of the programme, the operator should provide groups of counsellors, i.e. people who accompany residents during the implementation of the project at every stage and are the first contact persons in problematic matters during the implementation of activities.
- c) evaluation - the operator should assess the implementation of the programme, the effectiveness of the programme and the projects on changes in the attitudes of the local community or the level of knowledge regarding the inclusion of residents in

the circular economy. The evaluation should indicate the directions of programme development in subsequent editions.

- d) settlement of the programme - this is the operator's responsibility towards the grantor, i.e. the local government/company. The operator is obliged to present a report on the implementation of the Microgrant Program and its effects.

How to select implementers?

One of the key tasks indicated above is to ensure that the operator handles the recruitment of applications to be submitted by residents.

As part of the Local Microgrant Program model, we recommend:

1. Creating a simple online tool for recruitment and project management.
2. Implementation of a two-stage selection of projects.
3. Determining precise project selection criteria.

IT tools currently available on the market allow you to quickly and easily organise online recruitment.

Two-stage recruitment should be based on:

Stage 1: recruitment of project ideas - at this stage, applicants present short descriptions of their projects via an online form. The description of the project should indicate the target group, its purpose, a short description of activities in the context of implementing the citizens' engagement idea and a framework cost estimate. The essence of the first stage is to collect ideas in a simple and accessible form. The forms should be assessed by the operator based on clear criteria.

Stage 2: interviews with potential implementers - the operator's task is to organise meetings of the project evaluation committee with potential implementers selected from stage 1. The interviews are aimed at meeting the authors of the project directly and discussing design concepts with them. This form is intended to allow the selection of implementers who actually have an idea for citizen engagement in the circular economy. The conversations increase the chances of those residents who have no experience in writing applications but want to actually implement grassroots initiatives.

The assessment of the first and second stages of implementation is based on criteria that promote initiatives involving residents in the circular economy, e.g.:

Table 8: Example of criteria that promote initiatives involving residents in the circular economy

No.	Criterion	Score Rating	Description Criterion
1	Contribution to waste reduction	0-5	Projects that reduce the amount of waste generated by households, e.g. by promoting the reuse of materials.
2	Saving resources	0-5	Initiatives promoting the saving of key resources (water, energy), contributing to environmental protection.
3	Innovation and creativity	0-5	Projects introducing new, creative solutions to known problems, promoting innovation in the circular economy.
4	Ability to replicate and scale	0-5	Initiatives easily adaptable and replicated by other households or communities, with the potential to scale.
5	Community involvement	0-5	Projects that engage residents and promote cooperation in the community, supporting a culture of sharing and joint action.
6	Measurability of effects	0-5	Proposals with clear success indicators and methods for measuring them, allowing for the assessment of real environmental impact.
7	Management of plastic waste	0-5	Initiatives focused on reducing plastic use, promoting plastic reuse and local recycling activities.
8	Water and sewage management	0-5	Projects related to water resources management, water conservation, wastewater treatment and reuse.
9	Reducing food waste	0-5	Actions to reduce food waste, including composting organic waste and sharing unused food.

10	Wooden packaging waste	0-5	Initiatives to reduce waste from wooden packaging, promoting its reuse and recycling.
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**Source: own study*

An alternative way to select projects that move to the second stage may be a voting system for residents.

The operator organises meetings with potential project promoters, and then a vote takes place. Voting should be preferential, which allows residents to select projects according to preferences based on points, e.g. from 1 to 5 points. where you can choose 5 projects, each of them having a different weight, e.g. the most interesting one gets 5 points, and the least preferred but selected one gets 1 point. The number of points should depend on the number of projects available to choose from in a given community. This voting model allows the wider community to be involved in the selection of projects.

Summary

The Local Microgrant Program is placed at the top of the participation ladder as a co-implementation tool. It offers a unique opportunity to engage residents in activities related to the circular economy. Co-implementation in this context means that residents not only participate in decision-making, but also actively cooperate in the implementation of projects. The programme enables residents to have a real influence on the creation of projects at the level of their communities. It can be a source of local innovations related to the circular economy to the extent it is possible in every household. The projects implemented through local cooperation build social bonds and thus involve communities in taking care of the environment and begin to think effectively about managing their resources. Looking at the experience of using the microgrant model for other purposes, they often become a source of inspiration for implementing larger projects, emerging startups, and engaging new partners. They are a source of inspiration for other communities. Local governments and companies creating the program with small resources can create a significant change in residents' attitudes by giving them the actual method of introducing changes in their surroundings.

5.7 Model of development of social enterprises within the idea of circular economy (CE)

The social economy (SE) in Europe accounts for over 10% of GDP and is growing steadily in the EU. The European definition of the "social economy" is not just a purely technical and legal matter. It is up to each Member State to decide, in accordance with its own

constitutional, territorial, social and economic structure, law and economic ecosystem, how the SE is embedded. The Social Economy Action Plan sets out some guidelines which, however, remain at the discretion of the member states:

1. Acceptance of the multitude of legal forms that may be adopted by social economy entities, some of which are even innovative in relation to the legal traditions of individual Member States.
2. Strengthening the fundamental importance of people, as well as social and/or ecological, carrying out activities in the interest of members/users ("collective interest") or society at large ("general interest") and democratic and/or participatory management.
3. Increasing the diversity of operating models available to social economy entities (economic activity; interaction between work and volunteering; activities consisting solely in providing goods, money or services; reciprocity).
4. Guarantee of independence from public authorities, but without excluding forms of integration and partnership.

Most SE entities use the assumptions of the Circular Economy as a key principle in their activities. They successfully combine business activities with social and solidarity goals. Circular Economy is a key principle embedded in the assumptions of the Social and Solidarity Economy. The Circular Economy requires cooperation instead of competition, based on formal and informal multi-sector local partnerships between local governments and their units, enterprises, social enterprises, non-governmental organisations and other members of local communities. The growing influence of the Social Economy in the EU and their Circular Economy activities should be explored and disseminated in the future. There is still a lot to do in societies to change their behaviour and recognise the importance of the circular economy.

As shown by the analysis data of P. Piechocki, *"Circular Economy examples in Poland and Beyond: Recommendations for Social Economy entities working in field of packaging, use and processing of plastics, use of agri-food waste, wastewater, water etc. based on desk research."*, Eastern European countries, including Poland, are involved in CE to a lesser extent than Ireland, France, Great Britain, Portugal, Sweden and Spain.

Currently, a platform is being created (law, culture, economics - availability of funds) to increase possible business solutions in the CE area. In this area, the business and legal framework for CE play a key role.

The role of business: creating CE business models, i.e.:

- creating business models based on sharing (e.g. car sharing, leasing, subscription)

- models, e.g. renting furniture, clothes - Patagonia),
- reducing your ecological footprint (investing in renewable energy, giving up on non-recyclable packaging),
- closing the loop for used raw materials, products and packaging - increasing material efficiency (better waste sorting, eco-design, recycling levels)
- increasing competitiveness by implementing innovations (using waste to produce products - customer advocacy)
- motivating customers to make more ecological choices (price incentives, special product labelling)

The role of legislators - a key role in creating system change:

- building a legal framework for business and consumers, creating a legislative base (Global Plastics Treaty),
- creating mechanisms that motivate and/or oblige entities to, e.g. use recycling, achieve specific recycling goals,
- creating reporting obligations (e.g. BDO),
- ban on placing products on the market that have a negative impact on the environment (SUP Directive),
- unification of definitions, unification of rights in various markets → achieving economies of scale,
- extending the responsibility of producers to manage the products and packaging they introduce to the market in the last phase of their life cycle (deposit system, collection and management of waste electrical and electronic equipment).

When the above-mentioned conditions occur, there is also an opportunity to increase the role of social enterprises in the CE area.

The OPUS Center as a Social Economy Support Center sees an opportunity for this type of entrepreneurship through:

1. Cooperation with local government units: enabling activities in the field of CE, cooperation in the minimisation of municipal waste, and undertaking common activities in this area (e.g. Selective Waste Collection Points, furniture renovation, supporting the "second-hand" circulation). A good example of such activities is "Dom pod Cisem": <https://www.dompodcisem.pl/strefa-rzeczy-uzywanych>
2. Cooperation with business (production companies): joint activities in the field of closing production processes, including social enterprises in the production processes of companies, e.g. a wooden furniture factory, a pallet factory can outsource the repair of pallets or e.g. furniture and put them back into circulation to a social enterprise. Examples of such business models were developed by UNIBZ (which is also a good example of cooperation between scientific units).
3. Supporting these processes through education, promoting changes and entering

social entrepreneurship into new industries related to CE. To increase the involvement of communities, including social enterprises in CE, it is necessary to educate about it and show examples of various solutions both in Poland, Europe and around the world as possible business activities. Traditional business and SE support centres are entities that should and do implement such education. During information meetings and webinars, the OPUS Center inspires current and future social entrepreneurs by providing examples described in P. Piechocki's analysis (FrontSh1p) as well as its own examples from other sources (*webinar "Circular Economy as an Opportunity for the Development of Social Entrepreneurship", March 26, 2024*). The situation in the CE area is changing dynamically. Every year, the "Circularity Leader" competition organised by STENA RECYCLING brings new ideas for circular solutions in business. It is a source of inspiration and new ideas for circular business solutions, also in the area of social entrepreneurship.

Conditions in Poland make it difficult to implement many projects described in the analysis and collected in the case study.

1. Legal requirements: Social Economy Act - defines categories of social services and categories of disadvantaged groups that are recommended for employment so that the enterprise can be supported through systemic mechanisms.
2. High threshold for entry into circular business- investments exceeding possible subsidies for job creation, poor financial condition of the SE sector.
3. Required profitability of the project to maintain employment of at least 3 people (Social Economy Act).
4. Still low trust and inter-sectoral cooperation (local government/business).
5. Low consumer awareness, especially in smaller towns.

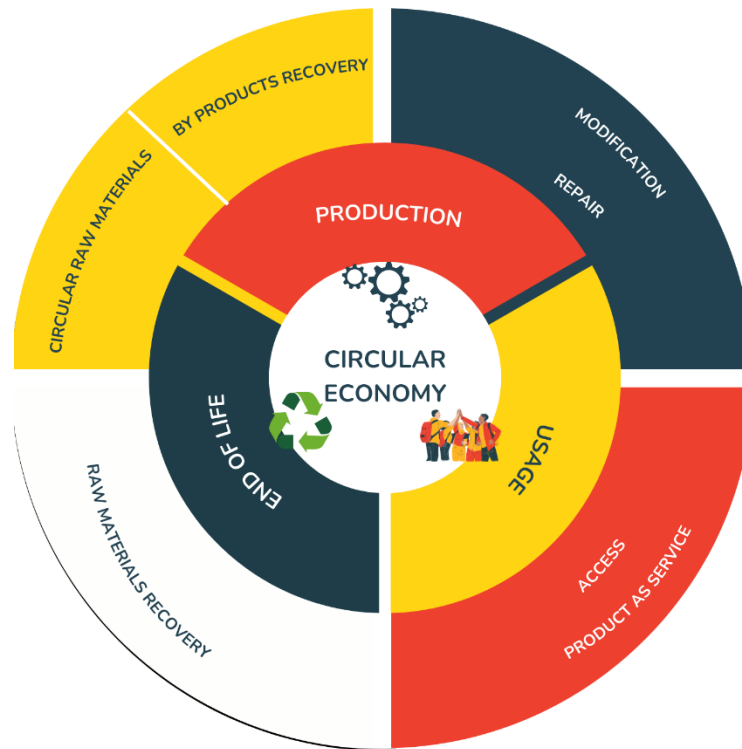


Figure 15: Circular business models are created based on the circular model CE wheel model: ProjectR2π, commissioned by the European Commission under the EU Horizon 2020 program. <https://gozwpraktyce.pl/modele-biznesowe/>

Analysis of selected business models in terms of their use in social enterprises

In Poland, there are still too few social enterprises that implement their activities in a circular model. Therefore, the analysis below concerns possible solutions in commercial enterprises and includes a commentary on the implementation of this model in the area of social economy.

1. Circular raw materials: a model based on circular raw materials, i.e. those that can be used in a closed loop. In other words, raw materials that are obtained from recycling or are renewable and at the same time can be returned to technical or biological cycles.
2. Recovery of by-products: recovery of by-products is a business model at the production stage of the circular economy cycle. It involves an activity whereby residual or secondary products of one process (or value chain) become an input for another process (or value chain).
3. Modification: Modification is a business model at the production stage of the circular economy cycle. It involves extending the life of a product by modifying it.
4. Repair: at the production stage, it involves extending the life of the product by repairing it, refreshing it or improving its aesthetics, without extending its warranty.

5. Access: at the use stage, it involves providing the end user with access to the product/resource instead of owning it.
6. Product as a service: at the use stage, it involves providing the end user with access to the functionality of the product/resource instead of the product/resource.
7. Recovery of raw materials: at the end of the product life stage, it involves the recovery of used materials or products for use in new products, processes or value chains.

Examples and conditions of implementation in social enterprises (based on the study-Przemysław Piechocki *“Recommendations for Social Economy entities operating in the field of packaging, use and processing of plastics, use of agri-food waste, sewage, water, etc. based on desk research”*):

- (PLASTIC) **Rekopack-Zawal** S.K.A. is based in the Konin Industrial Zone at Gajowa Street. The basic business profile is the recycling of plastics. The company has its own transporting service that transports waste for recycling. The main material recycled is plastic packaging waste of the following types: LDPE – Low-Density Polyethylene, i.e. polyethylene with low particle density, e.g. foils and HDPE. The entity has been on the market for 20 years, initially as a family company, today as a limited joint-stock partnership. The company deals with High Density Polyethylene (HDPE), containers, and bottles with high density. Rekopack has a production line that processes approximately 8,000. tons of waste per year. Instead of going to landfill, it is processed into granules. Construction foils, food foils and garbage bags are produced from it. Granulates also form the basis for the production of other products when used in injection pumps.

Setting up a similar social enterprise may be difficult locally as it requires experience and quite large investments, but it could start by organising smaller local entities that would enter into an agreement with a similar company locally that collects, manages and transports plastic waste to a recycler, this model could be implemented locally.

- **Wienerberger** is part of a global supplier of building materials and infrastructure solutions, producing high-quality ceramic construction bricks, ceramic facade solutions, ceramic roof tiles, ceramic and concrete slabs and paving stones, as well as ceramic and plastic pipe systems. The natural origin of ceramic products means that they can be recycled, i.e. processed, which significantly reduces the burden of waste on the environment. All this makes the entire life cycle of ceramics - from the raw material, through the processing phase, to usage, to waste management - environmentally friendly.

Setting up a similar social enterprise may be difficult locally as it requires experience and quite a large investment, but it could start by organising smaller local entities to enter into an agreement with a similar company locally that collects, manages and transports used products to a recycler, this model could be implemented locally.

- (WOOD) **Regalia - Polska Manufaktura** produces furniture from old wood and recycled metal. Regalia - Polska Manufaktura is an experienced manufacturer of old wood furniture and recycled metal, present on the Polish market since 2007. Its offer also includes old boards, old beams, old bricks and interior design elements. All products are made only from authentic old wood and reclaimed metal, without cutting down a single new tree. The business concept of Regalia - Polska Manufaktura is based on the sale of a high-quality product that is made to the customer's special order, resulting in a unique product. Manufaktura is a small production plant in which the creation of the final product is based on the division of labour, with a specific specialised craftsman assigned to each stage. Demolition works are performed manually, without the use of machines.

It is not actually a social enterprise, but it can be an inspiration for local initiative groups that would like to launch their own social enterprise, especially in the field of wood processing businesses. <https://sklep.regalia.eu/79-stoly-ze-starego-drewna>

- (PLASTIC) **Packman** - manufacturer of biodegradable, heat-sealable containers. PackMan focused on multi-level development and investments in the ecological future of the company and since 2020 it has been a manufacturer of ecological sealable containers used in dietary catering. Eco-friendly containers with cellulose seals are intended for contact with food are 100% biodegradable and have certificates and a declaration of conformity. Biodegradable plastics open up new opportunities in the economy by reducing the consumption of fossil fuels, contribute to reducing climate change and are recyclable in waste treatment plants.

Biodegradable pots, utensils etc. continue to gain more and more market share, especially where disposable products have been used in the past. This idea may be an inspiration for one part, but for another, it may be an idea for cooperation with local social enterprises that want to be circular, for example in the food and catering industry. The business model itself assumes large investments, which may, however, be a limitation for beginner social enterprises. <https://packman.com.pl/bio-pojemnik-do-zgrzewu-3d-12897?c=148>

- (FEED&FOOD) **Ze Smakiem Foundation** supports the development of rural areas and promotes the idea of life in harmony with nature and yourself. The kitchen incubator of the Ze Smakiem Foundation is a space with equipment that can be

rented to residents, farmers, entrepreneurs and non-governmental organisations who want to process fruit and vegetables. With a view to supporting the development of rural areas. The Incubator produces natural jams, preserves, pickles, pasteurised fruit and vegetable juices and sourdough bread, which are then sold. Moreover, it is a place created for educational institutions, children and youth, and rural housewives' groups to organize culinary workshops and exchange experiences. The business concept of Fundacja z Smakiem focuses on renting a professionally equipped kitchen that meets Sanitary Inspection's requirements, processing fruit and vegetables at the customer's request and selling preserves (including jams, fruit preserves, and juices). The incubator equipment includes a dryer for fruits, vegetables and mushrooms (20 shelves), electric frying pans, a bread oven with chamotte, a dishwasher with a steaming function, a gas stove, an electric stove, refrigerators, a juicer, a pasteuriser with a bottle adapter, fruit and vegetable slicer, slicers and small kitchen equipment (pots, bowls, boards, etc.). Residents, farmers and entrepreneurs from nearby areas can rent the Incubator's rooms by the hour or commission a Foundation employee to process fruit and vegetables or bake bread. Moreover, it is a place to exchange various products for appropriate use by others. Customers get what they need: a place to act and collaborate.

Creating a kitchen incubator as a social enterprise is a great idea for organising and focusing the local community in rural areas that want to work circularly in the food and catering industry. It could work in cooperation with local authorities and non-governmental organisations. The investment in equipment is quite large, but it is possible to obtain regional funds.

- (FEED&FOOD) **Ecobean** is an initiative that brings together interested partners to find innovative ways to turn used coffee grounds into something that can be recycled later, so that this production dependency loop does not exhaust itself. In this way, the coffee industry has the opportunity to significantly reduce its carbon footprint. The creators of the EcoBean start-up came up with an idea on how to manage the huge amount of coffee grounds generated by businesses, which do not have to go to the landfill. They argue that it is a valuable raw material that can be processed, for example, into coffee oil, antioxidants, lignin, ecological briquettes for the fireplace, tiles, biodegradable flowerpots, cups and packaging, or straws. The first product based on coffee grounds offered by EcoBean is an ecological fireplace briquette. As noted, coffee briquettes have many advantages, including producing up to 20% more energy than wood briquettes, and leaving less ash and burning longer. Grounds are often used as a filler or building material because they can replace plastic to some extent. Coffee grounds are a biodegradable building material

from which EcoBean offers flowerpots. Antioxidants from coffee grounds are perfectly suitable for use in the cosmetics industry.

Coffee is the second largest commodity in the world. There is no local community in Poland that does not consume coffee. In every local community, there is a place for a social enterprise that could sensibly manage coffee waste. In the case of similar, innovative ideas, it would be helpful to cooperate with research centres that would contribute to the development and implementation of the idea. <https://ecobean.pl/products/>

- WOSHWOSH** It can be an inspiration for local communities on how they can transform old, well-respected business activities into new, circular models of social enterprises. In this case, the model shows that WoshWosh is the world's first footwear shipping company that gives a second life to shoes by renewing, cleaning and repairing them. The average cost of buying new shoes is over 40 Euro. WoshWosh will clean and disinfect them for EUR 4.00. WoshWosh is the first company in the world that give new life to footwear by renovating, cleaning and repairing it. Since 2015, it has been offering its services to individual clients, and since 2018 also to business clients - in the field of cleaning and disinfection of work shoes. Work shoes are cleaned and disinfected mechanically, so even with a large number of shoes, the process is very efficient. Importantly, the cleaning offered by WoshWosh is safe for any type of protective or work footwear. This is confirmed by laboratory work of the Central Institute for Labor Protection - National Research Institute (CIOP-PIB). In addition to its activities, WoshWosh undertakes initiatives to raise awareness of circularity in both society and business. In 2021, the company organised a collection of footwear, which was then regenerated and refurbished for reuse. In total, over 50,000 pairs of shoes were recycled in this way. For its activities, WoshWosh received an award in the Stena Circular Economy Award competition in the "promotion of the circular economy idea" category.

This idea of entrepreneurship can be an inspiration for local communities on how they can transform old, well-respected business activities into new, circular models of social enterprises. The investments are not large, and the business process itself is not complicated and requires human work, which is important in the case of creating jobs for marginalised people. The company encountered a problem with demand in the local market. <https://woshwosh.com/>

- REPACK** RePack reusable packaging helps reduce quantity waste in e-commerce. End customers receive a discount for returning packaging by post, which ensures a high return rate. Packaging products are the property of the company RePack, and online sellers pay a fee for their use. Online store customers can choose this new

packaging product as their delivery method. The packaging can be returned free of charge to any public mailbox. Each packaging product can be used up to 20 times, which translates into an 80% reduction in carbon footprint compared to single-use plastic packaging. The service model significantly reduces the amount of packaging waste. RePack has leasing agreements with participating online stores. The store pays RePack every time a customer chooses a delivery method. The consumer pays an additional fee of up to 4 euros depending on the store. RePack also receives a commission for customers referred to online stores through promotional coupons. From a store perspective, the service model promotes customer engagement. Stores can mark themselves as zero-waste operators. For each returned packaging product, the consumer receives a coupon that can be used in any online store participating in the project.

This is a complete circular business model that is worth getting to know for people who are thinking about transforming social business from linear to circular. <https://www.repack.com/>

- (WOOD and others) **Dom pod Cisem**: social/service and production enterprise - renovation, sale of old furniture and other interior furnishing items, repair, renovation, plumbing, electrical services, cooperation with the Municipal Facility (Selective Waste Collection Point), contract for the Selective Municipal Waste Collection Point with Elbląg. A good example of cooperation with the authorities. The local government contracts the organisation for the service of running a Selective Waste Collection Point, the organisation selects reusable furniture and other devices, repairs and sells them, thus extending their "life".

It is a ready-made business model, it does not require large investments, and it provides a lot of space for working with disadvantaged people. <https://www.dompodcisem.pl/>

- (FEED&FOOD) **Rebread**: the idea was born in a small, family bakery. The whole idea supports producers and consumers in not wasting bread. The inspiration came from an Austrian bakery Therese Mölk Bakery, which since 2019 has been processing surplus bread into craft alcohol in its own distillery. This is how KRAST was created - a craft distillate from stale bread, which took its name from krast - dried and crumbled bread. After alcohol, new ideas began to appear: bases for cosmetics, non-alcoholic drinks, biodegradable packaging and foils. Recipes and technologies have been developed and the company shares the KNOW HOW so that they can be introduced in many places around the world at the same time. The company conducts training on the use of bread, which opens ways to the search for applications for side streams from one's own business with the analysis of business models supporting climate transformation, and provides consulting services (circular

recipes, extending the shelf life of bread). The company also licenses recipes for spirit, breadbucha and others, and organises a community around the idea. The company was supported by European funds from the European Regional Development Fund, European funds under the Smart Growth program and funds from the private company AUGERE HFF, financing innovative business solutions. It cooperates with many partners, including the laboratory from Hugo Kołłątaj's University of Agriculture in Krakow and also with Sygnis in the production of biofilament from Krast (crumbled bread): Rebread [\[CASE STUDY\] Reclaim the bread! How did we make 3D printing filament with stale bread? - Sygnis S.A.](#)

The success of the described company is due to great ideas, the need and extensive cooperation with partners - business, science and public entities.

- (FEED&FOOD) **Permafungi** is a social cooperative settled in Brussels that recycles urban waste: coffee grounds. The idea behind this project was based on two observations – an abundance of urban waste and a quite high unemployment rate among young people. Several researchers have been launched in 2013 to recycle coffee grounds in order to grow oyster mushrooms, while providing a sustainable and stable job to young people in Brussels. With the coffee grounds gathered by bike, we produce one ton of fresh oyster mushrooms and ten tons of organic fertiliser by recycling 5 tonnes of coffee grounds. All of it is in a circular economy! Moreover, guided tours and training were made available, as well as production kits in order to grow mushrooms and recycle your own coffee grounds at home! <https://www.permafungi.be/en/project/>

The idea seems great, fully circular, taking into account the availability of raw materials, the possibility of investing at the level of subsidies to create jobs and the creation of jobs giving satisfaction and decent remuneration. Also possible to implement in Polish conditions and surroundings.

- **Podzielnia** Podzielnia is the first free shop of this type in Poland. Everything is free, for customers and the environment. The main idea is to reduce the amount of waste by sharing various material goods or services, promoting the process of upcycling or processing old ones by giving them new quality. Giveboxes are leading products that were built with the local community during workshops. It is non-commercial. It is visited by several hundred guests and customers every day, the nature of obtaining income comes from local communities, local financing, crowdfunding, organising training and workshops, and submitting tender applications for various offers.

- Municipal Services Cooperative in Rzgów** the Komunalka Rzgów social cooperative was established in 2016. The cooperative currently employs people in the most difficult life situations in the local community, including the long-term unemployed and disabled people. The main activity of the cooperative is the collection of mixed and separated waste from residents of the Rzgów commune. In addition, the company operates in the field of green area maintenance and cleaning services, provides courier services and repairs roads using destructive materials from waste. The social cooperative receives income from the local commune based on public procurement. Through involvement in public procurement, the social cooperative Komunalka Rzgów is strengthened, which helps ensure the sustainability of their programmes and projects. The cooperative employs people who are members of a socially marginalised group. Integrating people from marginalised groups into the labour market, as well as improving recycling, reuse and recovery, brings huge benefits to the local community. Replication or transferability of this good practice is possible for other organisations, other sectors or other local municipalities.

According to Polish law, each commune in Poland is responsible for waste management in its area, so theoretically each commune should be interested in organising it locally, giving the most sensitive groups of people a chance to work. Additionally, the commune will have a greater influence on how waste management is organised. This model can be replicated directly in another commune, although it is not innovative and concerns the end of product life, however extended, for example, by a Selective Waste Collection Point such as Dom pod Cisem, it would gain in quality and circularity.

- (including WOOD) **Social Cooperative Together for the Environment** The Social Cooperative "Together for the Environment" was established by the Ostrowite Commune and the Powidz Commune. The main goal of the initiative group was to create an inter-municipal entity that would carry out tasks in the field of municipal waste management and at the same time allow for the social activation of residents of both municipalities. Activities were similar to the idea described above. An interesting element is that the idea involves several neighbouring communes. In addition to collecting waste from the commune, the cooperative produces energy biomass from wood from felling, the care for forest trees and sawmill residues, etc. The entity also offers wood, bio-waste and bulky waste services, and cleans abandoned and polluted post-industrial areas and reclaims them. <https://dlasrodowiska.com/uslugi/>

To sum up, several of the business models described above are possible to implement in the area of social entrepreneurship, but this requires certain conditions to be met:

- access to capital (investment financing)

- creativity (niche, innovative ideas)
- cross-sector cooperation (government, business, NGO sector)
- projects that provide the opportunity to employ several people (profitability)

The development of circular social entrepreneurship in a given area depends on many factors. It is necessary to create a general climate open to innovation and cooperation among many actors in social life.

Local government units play an important role in this aspect - the ones that appreciate the role of the social economy, not only in the development of circularity but also in solving social problems related to unemployment, disability, homelessness, etc. They are also open to cooperation with the Social Economy sector - public procurement, providing space, and cooperation in the implementation of social policies. They initiate platforms for cross-sector cooperation.

Another factor is **support infrastructure** - these are Social Economy Support Centres, other business support institutions and loan funds, financial institutions, and banks. These institutions play a role in inspiring new business solutions and supporting mutual cooperation. These entities may also offer financial support and capital for the development of new ventures.

The **role of business** can also be multi-threaded, from capital support (e.g. joint venture) to cooperation in the implementation of a business model with the participation of a social enterprise. Businesses can also inspire and educate in the use of circular business mechanisms in the activities of a social enterprise.

All the above-mentioned elements can synergistically influence the development of social entrepreneurship. They are important cooperation networks, exchange of information, experiences and mutual benefits. Various platforms for intersectoral cooperation and information exchange play an important role.



SOCIAL ENTERPRISE IN CIRCULAR ECONOMY

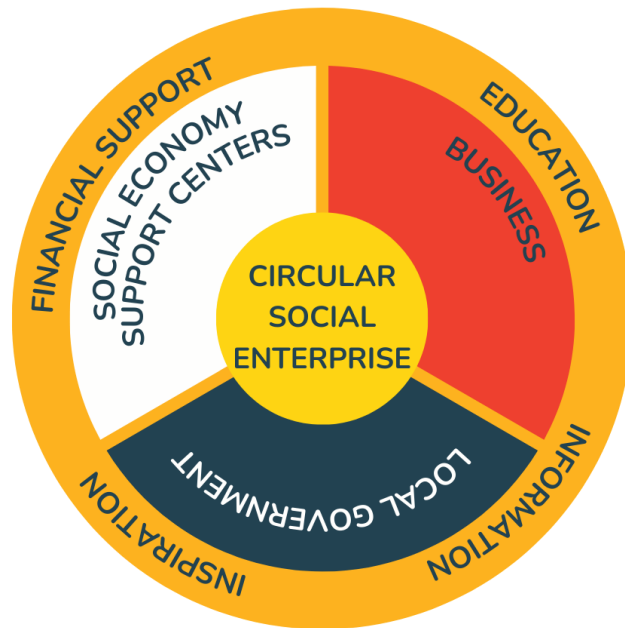


Figure 16: Social enterprise in circular economy

6. Recommendations for replication regions

The inclusion of issues related to circularity into regional and local policy, including the involvement of residents as active stakeholders in the process, was reflected in the Replication Strategy prepared as part of the project.

The replication strategy in Frontsh1p project enables the methods and experiences gained in Łódzkie region during the development of the Circular Economy Action Plan to be used and transferred to other regions in Europe. The creation and replication of action plans are expected to contribute to the decarbonisation and regeneration of these areas and allow new technologies to be demonstrated there. The aim of the replication strategy is, among other things, to support different territorial areas in implementing local and supra-local circular solutions to improve the quality of life of communities, transfer knowledge, scale innovation in a circular economy, facilitate collaboration between different stakeholder groups, increase resilience to change, and support sustainable development.

The replication strategy is a practical document, which guides the user through the whole process of preparing and implementing circular actions. The document is based on a description of the different steps that stakeholders or different territories should take to address the challenges of the circular economy

The document includes a catalogue of further tasks to be undertaken in order to

implement solutions for the circular economy. It consists of several parts. It begins with a brief characterisation of replication, a description of the benefits of implementing circular solutions, which is also expanded to include a characterisation of the risks and threats that can be encountered in this area. The document also describes the Circupuncture model, a document that allows the necessary actions to be planned and implemented. In the final section, the replication strategy is complemented by the necessary tools, documents whose essence is to support the user in the process.

The core of the document, however, is its practical section entitled 'Just do it'. This is the manual, which guides the user through the entire process related to the preparation and implementation of circular economy solutions, containing tips, next steps, complemented by practical tools and solutions. This section contains a description of good practices, actions taken towards a circular economy in the Łódzkie Region (which will be extended to include a description of practices acquired by other regions).

This section is divided into four main stages relevant to the overall process, i.e.

- Analysis of conditions
- Resources Missions and CS.
- Challenges
- Action Plan
- Social engagement as a key element in building a circular economy

One of the biggest challenges hindering the transition to a circular economy is, besides the linear nature of the economy, the lack of awareness of the effects it brings. The dominant economic model is based on the TAKE – MAKE - USE – DISPOSE model, where objects are used and thrown away. To change this, actions must be taken to increase awareness of the importance of the circular economy for current and future generations. The final, fifth part, which is horizontal in nature, describes the activities undertaken by OPUS, the municipality of Parzeczew and the Inter-Municipal Union BZURA in the field of social inclusion.

This section consists of a description of the next steps needed in the 'Ladder of participation' scheme, i.e. the ladder of stakeholder participation and how to involve them. It describes the methods applied and the tools that can be used. This part has been prepared on the basis of the experiences gathered during the project and described in the Report 7.1.

7. Attachments

1. [TECHNICAL_REPORT_CSS Leaders Survey](#)
2. [CSS1_Characteristics of the specifics of the expected household practices](#)
3. [CSS2_Characteristics of the specifics of the expected household practices](#)
4. [CSS3_Characteristics of the specifics of the expected household practices](#)
5. [CSS4_Characteristics of the specifics of the expected household practices](#)
6. [ACTION_REACTION](#)
7. [REGULATION_SWAP_ACTION](#)
8. [RULES OF THE COMPETITION FOR PRIMARY SCHOOLS CIRCULAR BAND.](#)
9. [RULES OF THE COMPETITION MASTER OF CIRCULAR CUISINE\)](#)
10. [SCENARIO_PRIMARY_SCHOOL_5-6_YOUR FOOTPRINT IN NATURE](#)
11. [SCENARIO_PRIMARY_SCHOOL_7-8_ECOCAREER](#)
12. [SCENARIO_NGO THE FUTURE OF A SUSTAINABLE ORGANIZATION.](#)
13. [SCENARIO_LOCAL LEADERS AND TEACHERS to the Report.](#)
14. [CONSULTATIONS_LEGAL BASIS FOR CONSULTATIONS AND THE CREATION OF DIALOGUE BODIES.](#)
15. [CONSULTATIONS_RESOLUTION - example.](#)
16. [SOCIAL COUNCIL_ORDINANCE](#)
17. [COUNCIL Appendix to Ordinance](#)
18. [SELF_ASSESSMENT_TOOL_MY CIRCULARITY HOUSEHOLD.](#)
19. [LOCAL MICROGRANT_REGULATION_OPERATOR.](#)