



DEVELOPERS OF CIRCULAR SOLUTIONS

Topic: CIRC BIO-01-01 Circular Cities and Regions Initiative's project development assistance (CCRI-PDA)

D3.1 Local programmes for fostering circular economy



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D3.1 – Local programmes for fostering circular economy

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Explain Deliverable Dependency/ Connection	D1.1 provides information about the state of the art of the market for Circular Economy at the pilot level (barriers, needs, opportunities, market gaps). The working groups established in D2.2 contribute to the SWOT analysis as well as the definition of the programmes. D1.2 and D1.3 provide evidence to SWOT analysis in the identification of market structure and gaps mapping. D3.1 considers D1.1 information regarding needs and barriers from the pilots.
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1. Introduction

Although various ideas exist to tackle high challenging problems, such as climate change with circular solutions, a common issue for those ideas is their financing. Business models might not fit into ordinary financing schemes since their focus could be very different: Sharing models, closing-the-loop approaches or product-as-a-service ideas are often not bankable or need diverse funding possibilities. With this in mind, the project “DEvelopers of Circular SOLUTIONS (DECISO)” aims to build business plans to foster circular economy (CE) in the following four pilot regions: Hamburg (Germany), Alentejo (Portugal), Northwest Germany (Germany) and Western Macedonia (Greece), covering the sectors waste, water, energy and agri-food.

Considering the findings from Work Package 1 (WP1 - Study and mutual learning) of the DECISO project with the needs and barriers defined in “D1.1 - Market state of the art of circular economy in the pilot areas” as well as the expertise from the working groups, established in each pilot within the task “T2.2 - Establishing local working groups with stakeholders”, Work Package 3 (WP3 - Build the Business Plan in each pilot) aims to build the business plan in each pilot, starting with the task “T3.1 - Co-Define in each pilot with CEE: ambitions of the programme, roles and functions of the actors at local level”.

The **objective** of this deliverable D3.1 is to describe the programmes of the four pilots, their ambition, the roles of the actors involved and the calls for projects of the programmes. Based on those descriptions, the **purpose** of D3.1 is to provide information serving as a foundation for all the tasks in WP3, especially for establishing the Project Development Assistance (PDA). Furthermore, this deliverable offers insights on opportunities and challenges cities and regions are facing when turning circular. The DECISO pilot regions supply data on the funding and financing sources they are using for their programmes.

2. Methodology

According to the Grant Agreement (GA), the following steps (see Figure 1) were taken to define the local programmes:



Figure 1: Steps followed for the development of the descriptions of the programmes in the pilots.



1) Ambition of the programmes

To define the ambition of the programme in each pilot region, the pilots considered the results of D1.1 (market state of the art of CE in the pilot areas), D1.2 (guide to good practices and opportunities at the European and National level) and D1.3 (reports from mobilisation and mutual learning workshops in the pilot areas). To structure this, the pilots were provided with a template for the report on pilot ambitions by the task leader FHH (Annex II). The ambitions of each pilot are serving as a compass, giving the direction during the project's lifetime. These goals must be considered in all decisions and during the development of the programme. The ambitions should not change fundamentally but can be adjusted over time (in close consultation with the working group and the Circular Economy Ecosystem) if new aspects need to be considered.

2) Role of the local actors

The DECISO project is based on the concept of the Circular Economy Ecosystem (CEE), which indicates the mobilization of local actors and the involvement of all stakeholders along a value chain. It is crucial for the success of the programmes to involve local actors from different categories to ensure the inclusion of different perspectives as well as various resources and strengths. This reduces the risks for the programmes. To define the role of the local actors within the programmes, the pilot regions completed a template with the needs/expectations and existing resources/infrastructures of the different actors. With this information, the actors' roles and functions for the programme were defined.

The programmes in the four pilots could not solely be developed by the project beneficiaries, indeed it needed the input and actions of local stakeholders, considering the entire process, from the idea and the development to the implementation and evaluation of the programme. Each stakeholder has specific expectations and fulfils a different role in this process.

To define the role of the local actors, the task leader (FHH) provided the pilots with a template to be filled in with the following information:

- ✓ **Stakeholder category:** as in the stakeholder analysis for each pilot, the stakeholder groups were subdivided into the following nine categories: (1) Citizens, (2) Civil society, (3) Policymakers, (4) Public administration and agencies, (5) Private sector and industry (consultancy, developers, services), (6) Academia and research centres, (7) Spin-offs, (8) Investors and (9) Media.
- ✓ **Needs/expectations:** to play an active role in the development of the programme, each stakeholder's needs and expectations towards the programme must be considered. They may differ between stakeholder categories as well as within the same category.
- ✓ **Existing resources/infrastructures:** for the efficiency of the programme, it is important to figure out, which resources and infrastructure already exist among the local actors. With this, synergies can be more effective.
- ✓ **Role/function in the programme:** based on the ambitions of the programme, the different actors' roles and functions are highly relevant for the fitting level of their engagement.

3) SWOT analysis

The task leader (FHH) provided the pilots with a template (Annex II) for carrying out the SWOT analysis. It includes information for the preparation and the SWOT methodology as well as blanks to be filled in by the pilots for the **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats in the following contexts:



economic/financial, legislative/regulatory, social/demographic, and environmental/technical. A table for an individual fifth context was left blank for the pilots to fill in another context with especially importance to the particular pilot region. With this, the pilots were provided with a suitable template for their individual SWOT analysis.

Questions were provided to the pilots, considering the good practices (D1.2), needs and barriers (D1.1), as well as the stakeholders' role and the ambition of the programme. For a better overview, all contexts were composed in one table to add weighting to all factors.

Finally, the pilots were supplied with suggestions on the next step by the task leader (FHH): turning the results of the SWOT analysis into actionable results. This includes the discussions and validation of the analysis with the stakeholders as a process from the first draft of the SWOT analysis until the review workshop, which took place in each pilot until March 2024 incorporating input from a wide representation of the CEE. The pilots were given the following questions for the discussion with the stakeholders/the working group:

- ✓ How can the use of the identified strengths be maximised?
- ✓ How can the threats identified be overcome?
- ✓ How can the identified weaknesses be overcome?
- ✓ How can it be possible to take advantage by the opportunities identified?

4) Description of the programmes

After defining the ambition of the programme and the role of the local actors in its development as well as after performing a SWOT analysis, each pilot identified competitive elements and, together with their working group (established in T2.2), the pilots co-defined the programmes. The pilots were provided with a questionnaire for the description of the programme by the task leader (FHH), followed by an interview in case of further inquiries with the task leader, WP leader and coordinator.

With the SWOT analysis as a starting point and in collaboration with the working groups (T2.2), the pilots identified competitive elements referring to:

- ✓ Technical aspects: Technical reliability, duration of interventions, etc.
- ✓ Legal/procedural aspects: Simplicity of regulations, activation speed, etc.
- ✓ Financial/economic aspects: financial schemes, payback periods, etc.

This led to the co-definition of the programme in each pilot. Besides the call for projects, the descriptions of the programmes include:

- ✓ (i) value proposition and topics.
- ✓ (ii) key activities.
- ✓ (iii) key skills for the activities' development.
- ✓ (iv) key resources.
- ✓ (v) key partners and roles.
- ✓ (vi) strategic agreements for the implementation of the CE programme.
- ✓ (vii) potential impact on the market.



These programmes will be discussed and validated through one (or more) review workshop(s) that will be held in each pilot area by October 2024 incorporating inputs from a wide range of representatives of the CEE.

3. Pilots’ programmes

The pilots’ programmes are the core part of the DECISO project, defining the key activities, resources, roles etc.; they provide a roadmap for the pilots, coordinating their activities in the second half of the project. In this section, the programmes of the four DECISO pilots Hamburg (Germany), Alentejo (Portugal), Northwest Germany (Germany) and Western Macedonia (Greece) will be described, including the steps taken in developing them.

3.1 Pilot Hamburg (Germany)

Ambition of the programme

The Free and Hanseatic City of Hamburg (FHH) is very active in projects and initiatives related to the circular economy, environment, and sustainability, according to Green Deal policy aims. To deepen the city’s engagement and commitment to the transition towards a circular economic system, the ambition of the DECISO programme in Hamburg consists of three main aspects:

- 1) Improving financing possibilities for local CE projects (start-ups, SME’s).
- 2) Establishing strategic frameworks for CE in Hamburg.
- 3) Strengthening the local CE network (with contact point for advice).

Hamburg’s approach is cross-sectoral and focuses on strategic work as well as on practical support of the CE community (with information on finance and with financial instruments).

Table 1: Ambition of the programme – pilot Hamburg

The ambition of the programme in Hamburg is to strengthen local CE initiatives and project ideas in different sectors with the implementation of financing instruments as well as focusing on established financing schemes for CE projects. Besides the advancement of existing financing schemes for start-ups and new initiatives, established SME’s will be encouraged to focus on CE in their business models. Our pilot aims at fostering the local circular transition by developing and exploiting financing schemes for CE to guide enterprises towards realizing CE potentials and to foster an enabling business ecosystem.

The cities’ strategic frameworks for CE in the finance sector, the procurement guidelines, the master plans of the existing clusters (Food Cluster, Finance Cluster, Renewable Energies Cluster, ...) and the Hamburg Climate Plan should be established and anchored. On this basis, membership of the Circular Cities and Regions Initiative (CCRI) as a CCRI Fellow will be sought.



The loose ends of the different CE projects and initiatives in Hamburg should be bundled to create a strong and visible network. For this, a contact point, both virtual and physical (circularity hub) should be installed to serve as a venue for knowledge exchange and innovation.

The analysis of the effects of the implementation of financial schemes for CE will make concrete recommendations for optimizing and upscaling the financial schemes. The results will be shared and discussed with a broader public to stimulate CE thinking in Hamburg and beyond.

Role of local actors in developing the programme

Various resources and infrastructures regarding CE already exist amongst different stakeholder groups in Hamburg; however, a CE network is not well established yet, but lacking tying up the loose ends and needs to overcome the silo thinking.

For the Hamburg pilot, the following stakeholders (see Annex III) play an important role for developing the programme:

- Public administrations and agencies, as BUKEA (Authority for the Environment, Climate, Energy and Agriculture), Stadtreinigung SRH (Municipal sanitation) and BWI (Authority for Economy and Innovation).
- Private and public investors, as IFB (Investment and Funding Bank Hamburg) and Hamburg Invest. Private investors in Hamburg are increasingly contributing to advancing Circular Economy (CE) initiatives through strategic partnerships and projects. Key players include IFB Innovation Starter GmbH, which supports technology-oriented startups, and the Hamburg Investors Network, which facilitates connections between investors and CE startups. Future steps involve prioritizing CE investments on the Investors Network's agenda and deepening collaboration with "FCH Finance City Hamburg" to enhance financing opportunities. The newly established Pop-Up Circular Hub will further drive investor engagement by hosting events focused on CE financing, aiming to boost sustainable innovation and economic growth in Hamburg.
- Institutes, as HiiCCE (Hamburg Institute for Innovation, Climate Protection and Circular Economy) and HWWI (Hamburg Institute of International Economics).

Within the programme, their roles are different and shift from project to project, varying from participants, advisors, knowledge contributors, and multipliers. In the project Pop-Up Circular Hub, the Fab City Hamburg e.V., HafenCity University and HiiCCE serve as knowledge providers and networkers to strengthen the CE network in Hamburg. The circular city strategy project is led by BUKEA; other stakeholders as HiiCCE, HafenCity University and IFB together with DECISO are acting as advisors in their fields. If the circular furniture project is funded by Horizon Europe, the project will be led by the EU project team of Senate Chancellery of Hamburg. HiiCCE and HWWI will contribute as project partners in the Hamburg pilot.

The Hamburg pilot can use already existing resources amongst the stakeholders for its programme, as:

- Contacts to SMEs/start-ups via "Environmental partnerships" (BUKEA).
- CE knowledge from different institutes.
- Synergies with other CE projects in Hamburg, as CEO ([CIRCULAR ECONOMY OFFICE \(CEO\) CEO | Interreg North Sea](#)), KARMA ([KARMA - Circular Economy in the Construction Sector - Acting Today](#))



[for a Better Future | Interreg Europe - Sharing solutions for better policy](#)), and CIRCuIT (Circular Construction in Regenerative Cities, HORIZON2020 - [About CIRCuIT | Circuit \(circuit-project.eu\)](#)).

SWOT Analysis

The SWOT analysis in Hamburg included the input from five stakeholders' workshops organized between March and December 2023, as well as various focus group meetings and interviews with stakeholders. The analysis included output from the following workshops:

- 22/03/2023: Kick-off Workshop Circular Hubs (organized by Circular Hub Nord, [Veranstaltungen - circular hubs](#)).
- 26/06/2023: DECISO National Participatory Workshop ([DECISO Project](#)).
- 06/09/2023: DECISO Mutual Learning Workshop ([DECISO Project](#)).
- 24/11/2023: Financing and promoting circular business models and innovations ([DECISO Project](#)).
- 07/12/2023: Expert group meeting Circular Economy in Hamburg (organized by BUKEA -Ministry for the Environment, Climate, Energy and Agriculture)

Beside desk research, the input of two studies from 2023¹ and 2021² regarding CE in Hamburg were considered.

Following the template of the SWOT analysis, the pilot in Hamburg considered the strengths, weaknesses, opportunities, and threats from four contexts: economic/financial, legislative/regulatory, social/demographic, and environmental/technical. No other context was added, since those four contexts reflected the situation in Hamburg well. The main findings for each category are:

Strengths:

- Existing funding opportunities at the city level.
- “Environmental partnership” as a network gathering companies with a focus on internal sustainable development possibilities.
- Public procurement with a stronger focus on sustainability (but could be more circular).
- Functioning networks like Fab City ([Home - Fab City Hamburg](#)), Circular Hub Nord ([circular hubs](#)) on sectoral level.
- Research institutions with a strong focus on CE, e.g. Hamburg University of Technology, Institute for Circular Resource Engineering and Management ([CREM: Welcome \(tuhh.de\)](#)); HiiCCE (Hamburg Institute for Innovation, Climate Protection and Circular Economy - [Institute — HiiCCE](#)); HWWI (Hamburg Institute of International Economics - <https://www.hwwi.org/en/>).

Weaknesses:

- Lack of overview and information about CE funding opportunities on national and European level, lack of venture capital.
- No existing CE platform/network which could support politics.

¹ Wilts, Henning; Erbe, Franziska (Wuppertal Institut) & Peters, Britta (HiiCCE) (2023): Hamburgs Potentiale für zirkuläres Wirtschaften in einer Green Economy.

² Kruse, Mirko; Süner, Isabel (2021): Local Analysis of the Circular Economy in the Free and Hanseatic City of Hamburg.



- CE vision is missing in strategic planning at the city level.
- Mapping of local CE ecosystem and experts missing.
- Lack of knowledge exchange and access to knowledge about CE.

Opportunities:

- Vivid start up scene focusing on the Sustainable Development Goals (SDG) and contributing significantly to the development of CE solutions.
- Cluster politics in Hamburg with eight different clusters such as Renewable Energy Cluster, Finance Cluster, Logistics Cluster, etc.
- Ambitioned institutionalised climate plan.
- Social awareness of climate and environmental protection has increased (due to national/international environmental movements).

Threats:

- Complexity and high effort for fund application for SME; challenges of circular business models.
- Lack of understanding for CE aspects from local authorities.
- Lack of visibility of CE and public marketing.
- Lack of willingness to invest in CE (focus on short-term investment does not favour CE).

Review workshop

The review workshop for the SWOT analysis was held on 12th of Feb. 2024 ([DECISO Project](#)) involving experts from different fields: public administration (1 woman, 1 man), green economy expert (1 woman), finance expert (1 man), start-ups (1 woman) and CE project manager (1 woman) to include a wide range of opinions and expertise.

One point of discussion was the question if there should be a future vision of a CE cluster in Hamburg, since there is a very active cluster scenery in the city. Although this point was mentioned in the SWOT analysis as an opportunity, most of the participants in the review workshop were convinced that a CE cluster is not needed but that CE should be implemented as one topic in all the existing clusters.

The participants agreed that there is a lack of oversight over CE funding opportunities, but mentioned, that counselling and funding should always thought together: information about funding should always be linked to the contact point of advice.

A discussion arose regarding funding opportunities: Since the beginning of the DECISO project, several funding opportunities on city level were established. They all have CE topics covered with their portfolio, but are not exclusively open to CE ideas. The aspects related to establishing new funding instruments on the city level were reviewed; the priority was seen more on the networking aspect, aiming to provide a wider perspective to the programme.

Description of the programme

Before establishing the programme, the Hamburg pilot identified competitive elements, starting with the results of the SWOT analysis: existing and functioning networks that are tackling CE topics, strong focus of research institutions on CE and existing funding opportunities at the local level that are ready to open for CE ideas.

Key activities and topics of the programme in Hamburg include:

- establishing a CE network in the city leading to more funding opportunities (contact point for advice, knowledge sharing, databank for funding opportunities on different levels).
- funding of start-ups with innovative CE ideas via Innovation and Funding Bank Hamburg.



- establishing a circular city strategy in Hamburg: FHH is creating a circular city strategy, with focus on business development, including mission statement and goals, processes, structures and players, instruments, and products:
 - o development of practical action plans for circular business development;
 - o to identify interfaces between the developed circular economy strategy and municipal sustainability goals, and thus ensure connectivity with existing municipal concepts;
- product as a service case: circular furniture project including different actors within the city, tackling the problem of resource wastefulness as well as awareness raising within civil society;
- PMO (Project Management Office) Dashboard for CE projects/actors in Hamburg with knowledge databank, funding databank, project databank.

Table 2 provides a schema of the key activities.

Table 2: Activities of the programme - pilot Hamburg

Key Activity	Description	Time frame	Status
Contact Point for Advice	Within a “Pop-Up Circular Hub” directly opposite of the main station, located in a former shopping mall, a contact point for advice will be installed.	Testes in Nov/Dec 2023 for three weeks, will be opened again Apr-Dec 2024	ongoing
Circular City Strategy for Hamburg	Founded by the Difu (German Institute for Urbanistic), the Environmental Authority is leading the project for a circular city strategy. The project started in autumn 2023 and will continue until spring 2025. The DECISO pilot is contributing to the strategy with advice regarding finances and will coordinate the application for CCRI Fellowship.	First workshop in Dec. 2023, next workshop will take place June 2024.	ongoing
Funding opportunities for CE start-ups in Hamburg	The Investment and Funding Bank Hamburg will fund start-ups with focus on the Sustainable Development Goals (SDGs) including CE start-ups with a newly launched programme “InnoImpact”.	Launched in autumn 2023	ongoing
Circular furniture project	The project will tackle the problem of resource wastefulness in the furniture sector. A broad consortium with 17 partners from five EU member states applied for HORIZON EUROPE funding. If approved, one pilot will be conducted in Hamburg.	Application was sent. If approved, the project will run from autumn 2024 until spring 2028	Applied for funding, waiting for approval
PMO Dashboard for CE	The dashboard will include different databanks for knowledge, project, and funding. As a first step, the CE actors of the City of Hamburg will be invited to join the dashboard. Later on, the dashboard will serve as a platform for all CE actors in Hamburg.	The first ideas have been collected since beginning of 2024 and the implementation is scheduled for summer 2024.	ongoing



The key skills for the development of the different activities may be different depending on the activity. FHH will be involved in all activities with the management skills for executing them. The local actors mentioned above will contribute to the activities with different roles. Key financing sources for the Hamburg pilot include European funding programmes ([Horizon Europe the EU's funding programme for research and innovation \(europa.eu\)](https://europea.eu), [European Regional Development Fund \(ERDF\) - European Commission \(europa.eu\)](https://europea.eu), [Interreg Programmes portal: Find programmes, calls and jobs](https://interreg.eu)), national funding ([Deutsches Institut für Urbanistik | Partner bei der Lösung kommunaler Aufgaben \(difu.de\)](https://www.difu.de)) and local funding ([Hamburger Klimaplan - Leitstelle Klima - hamburg.de](https://www.hamburg.de)). Human resources are allocated among the stakeholders involved in the programme, and especially among the DECISO working group members. Most of the resources already exist, missing resources will be allocated throughout the programme. Other local actors along the value chain might contribute to the programme with their expertise in the different activities. Key partners and roles are mentioned in Annex III; but they will differ from activity to activity, e.g. BUKEA will be involved mostly in all the activities linked to the climate plan, especially the circular strategy. Institutes such as HIICCE and HWWI are involved in developing the circular furniture case. The basis for the topics related to the DECISO programme in Hamburg is the Hamburg Climate Plan ([Hamburger Klimaplan - Leitstelle Klima - hamburg.de](https://www.hamburg.de)), therefore, other strategic agreements for the implementation of the CE programme are not needed now, but this might change on a later stage. Key investors include IFB Innovation Starter GmbH, which supports technology-oriented startups, and the Hamburg Investors Network, facilitating connections between investors and CE startups. Future steps involve prioritizing CE investment on the Investors Network's agenda and deeper collaboration with "FCH Finance City Hamburg" to enhance financing opportunities. The newly established Pop-Up Circular Hub will further catalyse investor engagement by hosting events focused on CE financing, aiming to bolster sustainable innovation and economic growth in Hamburg.

As a potential impact on the market, the pilot expects the following: with the strong established CE network and the circular strategy at the city level, the local CE community will be more visible, encouraging SMEs and start-ups to implement circular business models. The outcome of the circular furniture project will influence public procurement in Hamburg and can be up scaled to other regions. Calls for projects will address not only the vivid start-up landscape in Hamburg but also SMEs and industry from various sectors. The PMO Dashboard illustrates the CE network in Hamburg, encouraging local actors to connect across silos and initiate new project ideas. The pilot in Hamburg is continuously scanning funding programmes and projects at the EU level (Horizon Europe, Interreg, InvestEU, CircularInvest, etc.) and at the national/regional levels (National CE Strategy, #DBUcironomy, Hamburg Climate Plan, ...) for newly released calls for projects, which could be included into the pilot's programme.

[3.2 Pilot Alentejo \(Portugal\)](#)

Ambition of the programme

The Alentejo pilot is managed by the Comissão de Coordenação e Desenvolvimento Regional do Alentejo (CCDRA), which is a public institute in charge of developing the Alentejo region, particularly in the fields of: regional development and strategic planning, environment and nature conservation, management of EU funds, support for local authorities and their associations, and the coordination of decentralized services of the central government.



The DECISO programme in Alentejo aims at the agri-food sector and the ambition is classified into three main aims:

1. Strengthening of regional CE ideas in the agri-food sector.
2. Supporting the local actors in the development of financial schemes for CE in this sector.
3. Become a CCRI Fellow.

Table 3: Ambition of the programme – pilot Alentejo

The ambition of the programme in Alentejo is to strengthen regional initiatives and project ideas in the agri-food sector.

Promote the coordination and development of the main regional actors in the promotion and development of financial schemes suited to the needs of companies in the region's agri-food sector.

Role of local actors in developing the programme

Local actors from different stakeholder categories play an important role in the DECISO programme in Alentejo. The main contributors are:

- Associations/agencies, as CCPAM (Competence Center for Aromatic, Medicinal and seasoning plants) and ADRAL (Agency for Regional Development).
- Public administration, besides CCDRA, as IAPMEI (Agency for the Competitiveness and Innovation).
- Private sector/SMEs and micro companies, as [BeeCircular](#).

Existing resources and infrastructure offered by the local actors are utilized in the programme in Alentejo: using existing networks and a regional forum for CE (FECA – Alentejo Circular Economy Forum), experiences and good practices on financial schemes and experiences on developing CE projects. Although not all stakeholders' groups are the main target group of the programme, they will all have different functions as participants, knowledge contributors, networkers, and distributors of information, see Annex IV.

Engaging private investors is crucial for ensuring the successful financing and implementation of the pilot. The pilot aims to effectively engage private investors through a strategic approach that combines understanding stakeholder needs, organizing informative events, performing comprehensive communication activities and fostering robust networking opportunities. For the implementation phase, a private investor engagement strategy that can be broken down into several key components:

- **Bottom-up approach** in order to understand their needs, motivations, and potential concerns regarding financing circular economy projects.
- **Communication activities and events** since are vital for maintaining investor's interest and building trust, and,
- **Networking** that is essential for the long-term success.

Contacts with financial institutions already started, namely whit Caixa Agrícola bank. Contacts will continue, namely with potential investors and other financial institutions, to integrate public investments in the region.

SWOT Analysis



The SWOT analysis in Alentejo reflects insights in the four contexts (social, economic, legislative and environmental) with a stronger focus on the economic/financial context. The analysis was derived from workshops, focus [groups](#) and interviews developed in WP in 2023 with stakeholders as well as desk research. To conduct the analysis, the pilot considered the contributions of various stakeholders from past project events. This approach facilitated a participatory analysis, incorporating diverse perspectives from components within the circular economy ecosystem of the Agri-food sector. The main outcomes of the four aspects of the SWOT analysis in Alentejo include:

Strengths:

- Rich agricultural resources and traditional farming practices.
- Vivid network for CE: FECA (Alentejo Circular Economy Forum).
- Environmental regulations and EU (regulatory) support.
- Strong engagement of the local community and changing consumer preferences towards sustainable products.

Weaknesses:

- Difficulties to access funding, especially for small scale farmers due to the size of their business and the fact that they are a type of business that are a “family” business model with few employees. This presents some constraints since there is lack of information from the farmers but also, frequently, the funding programmes conditions are complex and difficult. Some support system must be developed.
- Risk of changes in agricultural policies.
- Ageing of the population and the trend of urbanization.
- Limited technological adoption.

Opportunities:

- Potential for exporting sustainable products and for sustainable tourism.
- Technological innovation.
- Educational programmes on workforce development.
- EU Circular Action plan.
- Reinforcing access to funding.

Threats:

- Climate change with severity of extreme weather events posing a threat to agriculture.
- Economic viability of new CE practices.
- Uncertain policy situations.
- Challenges regarding bureaucracy.
- Labour shortages challenging agricultural sector.

Review workshop

On March 5th, 2024, a productive review workshop focused on SWOT analysis took place. 17 stakeholders including companies, polytechnic institutes, policymakers, associations, citizens, and knowledge transfer institutions participated. Below is detailed the typology of the participants to the workshops:

Academia: 4 women; company: 2 women; 3 men; research centres: 2 women; 1 man; Local Association of Development: 1 woman; project partners: 2 women CCDRA and 2 Women IRRADIARE.

The discussion revolved around the strengths, weakness, opportunities, and threats related to the economic, technical, social and legislative level, with stakeholders offering valuable insights. Additionally, measures to



address the identified barriers, best practices, and forthcoming steps to enhance circularity within the Alentejo Region's Agri-food sector were deliberated upon.

The following new factors were identified during the workshop:

Strengths	Weaknesses
<p><i>Social/Demographic</i> The level of education of the entrepreneurs in the region is high</p>	<p><i>Economic/Financial</i> Difficulty accessing new technologies. Products with little added value. Little effectiveness in business models. Reduced appreciation of products.</p> <p><i>Legislative/Regulatory</i> Difficulty to understand legislation and having time to respond to bureaucracy by the SME (majority of the companies).</p> <p><i>Social/Demographic</i> Low salary attractiveness.</p> <p><i>Environmental/Technical</i> Little competitiveness in product prices due to logistics costs.</p>
Opportunities	Threats
<p><i>Economic/Financial</i> EU Support</p> <p><i>Environmental/Technical</i> Coordination with other sectors in order to reduce transportation costs.</p>	<p><i>Legislative/Regulatory</i> Difficulty in accessing permission entities.</p> <p><i>Social/Demographic</i> Competitiveness of other sectors, in terms of salaries, especially those related to new technologies.</p> <p><i>Environmental/Technical</i> Decrease in the quality of the soil.</p>

The main priorities were related to the transportation costs which increase the prices making a non-competitive product and the need of thematic forums related to discuss the obligations to fill in all the legislation requirements to be able to labour.

Description of the programme

The pilot in Alentejo highlights the following competitive elements for its programme:

Economic/Financial context

- EU Support: Access to European Union (EU) funding and support programs can provide financial assistance and resources to enhance the competitiveness of the agri-food industry. CCDRA has experienced in EU projects and will provide support in collaboration with IrRADIARE to develop new projects in the region from planning to implementation.
- FECA - Alentejo Circular Economy Forum, is a space for discussion and exchange of ideas on how to promote the transition to a circular economy model in the Alentejo region.

Legislative/Regulatory context

- Environmental responsibility and social responsibility as common values in the agri-food sector in Alentejo. Creating socially responsible and sustainable practices help organizations meet current needs without compromising the ability to meet future needs. Having these regulations on place it is very important for the sector.
- Environmental Regulations: Stringent environmental regulations can promote sustainable farming practices and eco-friendly production methods, aligning with the growing consumer demand for environmentally conscious products.



Social/Demographic context

- Community Engagement: Strong ties between local communities and the agri-food sector can foster community support, creating a positive environment for collaborative initiatives and sustainable practices.
- Knowledge sharing, the producers are part of a local community and interchange knowledge about best practices in the agri-food sector, for example the FECA is a space for networking that promotes that.

Environmental/Technical context

- Innovative digital solutions to manage the efficiency of agri-food supply chains and detect disruptions in material, information, or financial flows, thus reducing risks of supply chain delays or failures, and ensuring sustainability.

The value proposition of the programme is related to the circular agri-food sector. The programme will be identifying potential circular economy projects relevant to the regional context and aligning with smart specialisation strategy and local priorities. It will highlight the latest regional best practices to include circular practices in the agri-food sector and facilitate dialogue and collaboration among various stakeholders and identify funding sources for project implementation.

Therefore, the topics tackled in the programme will be related to the circular agri-food sector, including sustainable production, packaging, logistics and waste management (depending on the call requirements). The key activities, key skills and key resources will be defined regarding the different requirements of the identified calls. In particular, during the next period the plan is to apply for Interreg SUDOE and LIFE programme.

Key activities include stakeholders’ meetings to identify good practices and projects opportunities and the identification of potential finance instruments to support potential projects. Resources needed to execute the programme are: staff to develop/identify the financial resources available to agri-sector and to prepare the meetings; financial resource to develop the financial scheme. All the logistics needed to develop the meetings do already exist.

Table 4: Activities of the programme - pilot Alentejo

Key Activity	Description	Time frame	Status
FECA	Alentejo Circular Economy Forum (FECA), is a space for the discussion of good practices and ideas exchange on how to promote the transition to a circular economy model in the Alentejo region. It will be an important part of the circular economy programme since it will guarantee the involvement of different stakeholders in the programme.	It is a permanent activity in the region	Ongoing
Identification of funding opportunities	CCDRA, in cooperation with IrRADIARE, are working on the identifications of funding opportunities for the circular agri-food sector in the region and sharing the knowledge in what regards different European and National programmes	From 2023 to be maintained in the future	Ongoing



Networking	Networking with different stakeholders related to the circular agri-food sector is fundamental to enhance the knowledge in the territory.	Permanent	Ongoing
Following ongoing projects	CCDRA is following projects related to sustainability	Permanent	Ongoing
Support in the preparation of proposals	CCDRA, in cooperation with IrRADIARE, are giving support to different entities in what regards the appliance to new funds and the promotion of circularity in the region	2024- 2026	Ongoing
Contacts with private investors and study of possible synergies with the public.	CCDRA, in cooperation with IrRADIARE, is working on the identification and stays in contact with financial entities and private investors. Also, they are studying possible synergies with the public sector.	2024- 2026	Ongoing

University, SMEs of the agri-food sector, funding programmes representatives on a local level and business associations will serve as key partners of the programme (also mentioned in Annex IV). They will contribute to the agri-food circular economy ecosystem in the Alentejo region by sharing their expertise and good practices and contributing to the implementation of new business models.

FECA - Alentejo Circular Economy Forum, is a space for discussion and the exchange of ideas on how to promote the transition to a circular economy model in the Alentejo region will be an important part of the circular economy programme that will guarantee the involvement of different stakeholders in the programme.

Specific strategic agreements for the circular ecosystem programme are not defined yet, but a model will be developed during 2024.

Ultimately, the initiative aims to significantly influence the regional/local market by convening carefully chosen stakeholders in order to secure funding within the circular agri-food sector and assisting them in adopting innovative funding strategies. This endeavour will contribute to the region's sustainability, acknowledging the considerable impact of the agri-food sector.

To this end, in addition to the Alentejo 2030 operational programme, the following funding programs have been identified: Portuguese Recovery and Resilience Plan (thematic priorities Climate transition and resilience, innovation and business capitalisation), Portugal 2020/2030, Portuguese Environmental Fund, Life Program (Circular Economy and Quality of Life and Adaptation and Mitigation of Climate Change) and, finally, Interreg SUDOE (Priority Axis 5 Environment and Resource Efficiency).

3.3 Pilot Northwest Germany (Germany)

Ambition of the programme

In Northwest Germany, the DECISO pilot is managed by the Oldenburgisch-Ostfriesischer Wasserverband (OO WV), which is one of the largest water service providers in Germany. The OO WV delivers drinking water from groundwater resources to about 1.1 Mio. Private, industrial, and agricultural customers within an area of 7,860 km². An essential element of the long-term vision of the OOWV is the sustainable management of



the available water resources, which is also reflected in the ambitions of the DECISO programme focusing on rainwater.

The ambition of OOWV's pilot is the **establishment of a concept for a rainwater agency** in the region, deriving from the perception that rainwater is an underutilized resource with a huge potential. With this concept, three aspects should be addressed:

1. Empowering actors to implement rainwater harvesting projects.
2. Providing services for project developers within the agency.
3. Contributing to the circularity of the local water supply.

Table 5: Ambition of the programme – pilot Northwest Germany

The aim is to implement effective strategies for managing rainwater, promoting sustainable water practices, and improving the regional water cycle. This is achieved through collaboration with stakeholders, innovation, and expert advice. The goal is to unlock untapped potential and promote the resilience and sustainability of the region's water system.

Role of local actors in developing the programme

Since the usage of rainwater is an important topic for almost all stakeholder categories, the pilot in Northwest Germany includes different local actors in its programme (Annex V). Main contributors are:

- Citizens/civil society and the private sector as major target group for the usage of rainwater.
- Public administration and policymakers as essential players to promote sustainable water management.
- Academia, as the local universities for developing new rainwater ideas and supporting the programme with innovations.

The needs of the stakeholders, like information on funding, installation of technologies, and awareness raising are addressed in the programme through OOWV information points. OOWV meets the need of support with the implementation of rainwater concepts, via planning for water-sensitive urban development solutions and digital rain information.

Private investors are not a primary stakeholder for the OOWV (Oldenburgisch-Ostfriesischer Wasserverband) in this project. However, OOWV is making efforts to engage them by exploring whether high-volume water users are open to using alternative water resources and in this direction a first agreement has been signed with a high-volume water user for a research project to experiment the use of rain water. This process is challenging as it involves sensitive information related to production processes, making private partnerships difficult to establish. Despite these challenges, OOWV continues to investigate and foster potential collaborations with private companies to advance sustainable water management solutions.

SWOT Analysis

The pilot in Northwest Germany conducted the SWOT analysis with the input from workshops, focus groups, interviews and desk research with focusing on the economic/financial and the environmental/technical contexts.

- 26/04/2023: DECISO National Participatory Workshop ([Link](#))
- 10/05/2023 Financing local circular economy initiatives - Hoop Project ([Link](#))
- 23/08/2023: DECISO Mutual Learning Workshop ([Link](#))



Main results from the analysis are the following:

Strengths:

- Co-financing business cases (e.g. large rainwater retention basins) with high volume customers/large water consumers.
- Regional financial schemes available for the implementation of business cases.
- Good technical solutions for rainwater harvesting are available and are being sold on the market (e.g. rainwater tanks, green roofs, permeable pavement).
- Availability of good practice examples for rainwater harvesting.
- Rainwater harvesting as a behavioural change of civil society towards climate change mitigation.

Weaknesses:

- Rainwater harvesting competes with a low water price.
- Fragmented responsibility for rainwater discharge management at a local level.
- Water management solutions may conflict with environmental law.
- Practical examples are mainly available in more arid countries or in Southern Europe. The pilot region does not have many applicable examples at a local/regional level.
- Measures in water management can create complex interactions because of the multi-stakeholder involvement and fragmented responsibilities of authorities.

Opportunities:

- New solutions and business cases will increase water availability and positively impact the economic and sustainable development of the region.
- Consumers are increasingly demanding sustainable production. Rainwater harvesting reduces the water footprint, resulting in a better CRSD (Corporate Sustainability Reporting Directive) report.
- High potential for transferability to other regions, especially Northern Europe.
- Water sensitive measures will improve the environmental condition/status of cities and regions.

Threats:

- Return on investment costs for rainwater harvesting measures are low and therefore only accessible to parts of society.
- Population growth will put more pressure on conventional water resources, increasing the need for alternative water resources (rainwater, etc.).
- Rainfall events have changed in intensity and duration. Rainwater harvesting and storage will be a challenge and be subject to new boundary conditions due to climate change.

Review workshop

Following the comprehensive SWOT analysis conducted for the Northwest Germany pilot, a review workshop was organised (30th of November 2023 - [Link](#)) to refine and prioritise strategic actions for advancing rainwater harvesting initiatives in the OOWV region. Based on insights gathered from stakeholders and experts, the workshop identified key priorities and proposed recommendations to address challenges and capitalise on opportunities. The following outcomes were identified within the workshop, including organisational improvements, project identification strategies, and collaborative approaches to accelerate the implementation of rainwater harvesting projects.

Organizational Structure:



- Identify key internal structures and stakeholders for the identification, co-ordination, implementation and monitoring of stormwater utility initiatives.
- Define roles, responsibilities, and reporting structures to ensure effective implementation and management.

Project Identification and Launch:

- Utilise internal resources within the OOWV to identify potential rainwater harvesting projects and assess their feasibility.
- Leverage the extensive network of potential project partners outside the OOWV, including local municipalities, industry, research institutions, and NGOs, to support project identification and initiation.

Economic/Financial Context:

- Explore innovative financing mechanisms, such as public-private partnerships and grant funding, to support the implementation of rainwater harvesting projects.
- Explore business models and investment strategies to attract external funding and ensure the financial sustainability of rainwater harvesting initiatives.

Legislative/Regulatory Context:

- Advocate for supportive policies and regulations at the regional and national levels to incentivize rainwater harvesting and remove barriers to implementation.
- Work with regulators and policymakers to streamline permitting processes and ensure compliance with relevant regulations.

Social/Demographic Context:

- Engage with local communities and stakeholders through outreach and education initiatives to raise awareness of the benefits of rainwater harvesting and foster public support.
- Work with educational institutions and vocational training centres to develop training programmes and capacity building initiatives on rainwater management and harvesting.

Environmental/Technical Context:

- Pilot innovative approaches and demonstrate the effectiveness of rainwater harvesting systems in mitigating flood risk and enhancing overall water resource management.

By focusing on these strategic priorities and leveraging internal resources and external partnerships, the Northwest Germany pilot can accelerate the implementation of rainwater harvesting initiatives and achieve its goals of enhancing water circularity and promoting sustainable resource management in the region.

Description of the programme

The programme in the pilot region Northwest Germany will focus on exploring innovative rainwater use solutions, creating a network with local stakeholders, matching suitable financing schemes, and establishing OOWV as a regional expert for rainwater solutions. This will enhance water circularity, promote sustainable resource management, and position the region as a leader in effective rainwater utilization, benefiting the local population, industries, and ecosystems alike.

At its core lies a commitment to fostering sustainability, enhancing resource efficiency, and positioning the region as a lighthouse in effective rainwater utilization. Central to the programme is the encouragement and initiation of research. These efforts will lay the groundwork for a comprehensive and sustainable approach to rainwater harvesting across the region. By delving into the latest innovations and methodologies, the



programme seeks to develop a robust framework that can be scaled and adapted to suit the diverse needs of the local communities.

Moreover, the programme recognizes the pivotal role of collaboration in driving meaningful change. Through proactive networking with municipalities and local stakeholders, including small and medium enterprises (SMEs), the programme aims to cultivate a shared vision for rainwater use. By harnessing OOWV’s expertise and forging strategic partnerships, the pilot can collectively identify practical use-cases and establish consortia to drive implementation forward.

The programme aims to embed rainwater management through a series of activities. Key activities include:

- Encouraging and initiating research to build the foundation for a region wide sustainable and effective rainwater harvesting.
- Networking with municipalities in the pilot to foster rainwater use in the region, identifying use-cases and forming consortia. Leverage OOWV’s own expertise.
- Networking with local and regional stakeholders (SMEs) to foster rainwater use in the region, identifying use-cases and form consortia.
- Finding financial resources for project implementation through grant funded projects (EU or national funded programmes, as explained below).
- Expand the existing network beyond the pilot area. This is needed for knowledge exchange and to catalyse innovation and boost transformation. Create a working group with other rainwater agencies on a national level.

Table 6: Activities of the programme - pilot Northwest Germany

Key Activity	Description	Time frame	Status
Strategic Agreements	Cooperation agreements with e.g. industrial clients	End 2023 – open ended	Started and ongoing
Finance	Securing financial resources to launch projects	End 2023 – open ended	Started and ongoing
Networking	Looking for knowledge exchange lessons learned to impact the pilot region and beyond.	End 2023 – open ended	Started and ongoing

The key skills needed for the activities described above are provided by OOWV. Other stakeholders (universities, research institute, agencies, municipalities, and industrial clients) will contribute to the activities with different roles and commitments depending on the relevant circumstances.

Securing financial resources is essential to realizing the programme's objectives. By actively pursuing grant-funded projects and other funding avenues, the programme seeks to overcome financial barriers and facilitate the execution of rainwater solutions on the ground. Key financing sources for the Northwest Germany pilot include European funding programmes ([Horizon Europe the EU’s funding programme for research and innovation \(europa.eu\)](#), [European Regional Development Fund \(ERDF\) - European Commission \(europa.eu\)](#), [Interreg Programmes portal: Find programmes, calls and jobs](#)), national funding ([FONA, Deutsche Bundesstiftung Umwelt](#)). Already one grant fund has been secured by the pilot project via the Deutsche Bundesstiftung Umwelt.

The distribution of human resources is coordinated among the stakeholders engaged in the programme, with a particular focus on members of the DECISO working group. The majority of required resources are currently available, and any deficiencies will be addressed and allocated as the programme progresses. Additionally, various local actors within future project teams may contribute their expertise to support different programme activities.



Key partners and roles are mentioned in Annex V; but they will differ from activity to activity, e.g. IWAG will be able to provide technical expertise in certain project proposals but might not be involved in another application when a certain nice require knowledge that is not available. The same goes for the ARSU who poses a fast knowledge of strategic expertise but might not be involved in certain projects. In addition, the pilot receives support from network partners such as the Berliner Regenwasseragentur, Zukunftsinitiative Klima.Werk, RISA Hamburg, municipalities, and industrial clients, who contribute their knowledge and experience. Strategic agreements will be concluded as cooperation agreements with e.g. industrial clients. The programme will have an impact on the local market by: increasing in rainwater use, protecting groundwater resources, reducing water footprint, reinforcing more sustainable industries in the region, establishing of rainwater as an alternative water resource, and developing new concepts of use. Through a "Rainwater Agencies Exchange" there will be scale-up and impact at the national level.

3.4 Pilot Western Macedonia (Greece)

Ambition of the programme

Within the DECISO pilot in Western Macedonia, the promoter Municipal District Heating Company of the Wider Region of Amynteo (MDHA) is focusing on the implementation of a CE project exploiting biomass and residues/wastes. The ambition of the pilot is derived from the local CE action plan, focusing on raw material for the biomass district heating unit of Amynteo, which can be by-products from agriculture, residual biomass, wastes, and secondary fuels.

Table 7: Ambition of the programme – pilot Western Macedonia

To implement actions for the energy utilization of agricultural biomass, other possible residual biomass streams, wastes and secondary fuels for the biomass district heating unit of Amynteo.

This ambition is coming from the Circular Economy Action Plan of the Municipality of Amynteo.

It focuses on products of agricultural origin, other residual biomass, wastes and secondary fuels with the aim of being raw material for MDHCA's thermal energy production units.

This ambition is shared, discussed, and agreed among the local stakeholders interested in the issue.

MDHCA is exploring all possible available funds to implement the pilot, willing to start during 2024.

The pilot is expected to be funded by the Greek Green Fund budget <https://prasinotameio.gr/>

Role of local actors in developing the programme

In the pilot of Western Macedonia, the following stakeholder groups mainly contribute to the programme (Annex VI):

- Policymakers and public administration, as local associations, municipalities, and chambers, with their role as being part of the consultation groups on new legislation and as district heating producers.
- Private sector, as Public Power Corporation, HELECTOR S.A. <https://ellaktor.com/en/ellaktor-group/ellaktor-group/the-group/group-companies/helector/> and Amynteo Agricultural Cooperative



<https://www.amyntaswines.gr/> act as providers of thermal energy, suppliers for biomass and operator of the regional waste management unit.

- Academia, as University of Western Macedonia, CERTH, and the Environmental Center of Western Macedonia Region with their knowledge support on CE topics.
- Investor, that could possibly be involved in future activities, is HELEKTOR SA, the Waste Management arm of the ELLAKTOR Group, is a leading private investor in South Eastern Europe and the private investor involved in the project. Known for its comprehensive waste management solutions, HELEKTOR is the top player in Greece and Cyprus, offering services like biological treatment, recycling, and energy recovery. They participated in the DECISO project and presented a case study on biomass energy utilization at a workshop on December 12, 2023. HELEKTOR also supports the DECISO partner MDHA and will engage in various Circular Economy (CE) projects, including the major Circular Economy Park in Western Macedonia.

SWOT Analysis

The SWOT analysis from the pilot in Western Macedonia was prepared with the input from workshops, focus groups interviews and desk research focusing on the economic/financial and the environmental/technical contexts. On 03/07/2023 a national participatory workshop took place online with participants from Academia (4 people), Industry (5 people), and Government sectors (3 people). One was organised online on 30/11/2023 and was attended by 4 people from Academia, 3 from Industry, 1 from Civil Society and 1 from the Government sector. Moreover, on 23/02/2023 a SWOT Analysis workshop was organised in Kozani and attended by 2 people from Industry, 1 from spin-off, 1 from private company, 3 from Academia and 1 from Civil Society. Two focus groups were conducted, one on 30/03/2023 and the other on 20/09/2023. Both focus groups were related to the identification of needs and opportunities on circular economy items and for the energy utilization of residual biomass and other potential residual streams. Four persons from Academia and 3 from industry attended the first one, while five persons from Academia and three from Industry attended the second one. More information can be found at the following [link](#).

Main results from the SWOT analysis are the following:

Strengths:

- Long-term experience of MDHCA in the operation of district heating facilities that could be enriched from the identified good practices.
- Strong relations / collaboration of the University of Western Macedonia (UoWM) with the pilot partner and stakeholders.
- Available strategies for integrating CE initiatives at both local and regional levels.
- The good practices identified have a strong partially transfer potential.
- Specialized work force in the fields of energy & waste management.

Weaknesses:

- Low innovation index of the Region of Western Macedonia; low degree of integration of research into market; low attraction of investments (foreign and domestic – non-regional).
- Absence of economic activities linked to the new energy direction of the region (RES, hydrogen, and CE activities).
- Lack of know-how in the implementation of projects using financial tools and loans.



- Lack of personnel and equipment of the competent services to monitor the projects / actions to comply with the approved environmental conditions.

Opportunities:

- University of Western Macedonia (UoWM) participation in CE research and applied projects.
- Recent national legislation on energy recovery from waste is a valuable guide for the country's institutional developments in this area.
- Local and regional stakeholders' confirmation for supporting CE initiatives coming from DHCMA.
- Current initiatives in the circular economy, including the expected approval by the Green Fund of a significant project focused on agricultural biomass.

Threats:

- Delays in the financing procedures of Research & Technological Development actions from public and private capital sources.
- Bureaucracy.
- Delays in adapting legislation in national level to recent EU directions and guides.
- Lack of new scientific potential that will participate in the actions of post lignite, due to brain drain.
- Absence of a circular economy culture in regional companies.

Review workshop

The pilot reviewed and validated the findings of the SWOT analysis in a workshop on 23rd of February 2024. MDHCA has established strong and continuous collaboration with the 3 stakeholders who participated in this workshop. The SWOT analysis presented is a result of this collaboration and of the stakeholders' feedback. During the workshop, all the different contexts (Economic, Environment, Legislative, Demographic) of the SWOT Analysis were presented to participants and no facts and data were updated.

Weighting and priorities

1. **Economic/Financial Context:** Focus on leveraging geographical location, existing waste management operations, and strong academic-industry relations, while addressing challenges like low innovation and investment attraction.
2. **Legislative/Regulatory Context:** Exploit available strategies for integrating Circular Economy initiatives and the establishment of a Circular Economy Park, counteracting low integration with academic institutions and absence of new energy activities.
3. **Social/Demographic Context:** Utilize the specialized workforce and regional energy expertise, overcoming low interest in CE projects and lack of financial project implementation know-how.
4. **Environmental/Technical Context:** Take advantage of the region's geographical features and existing infrastructure, addressing the lack of monitoring compliance with environmental conditions.

Description of the programme

The programme in Pilot Region Western Macedonia is designed to integrate circular economy principles with a strong emphasis on energy and waste management, aligning with the broader European Union goals for sustainable development and energy efficiency.

Competitive elements the pilot wants to highlight in the programme are:

- **Technical:** MDHCA resources and infrastructures, DIADYMA SA infrastructures, MDHCA and DIADYMA SA strategic plans. The main object of the company is the design, implementation, and operation of the regional Integrated Waste Management System (IWMS) of Western Macedonia. (<https://diadyma.gr/en/>)



- **Legal/procedural:** the upcoming establishment of a Circular Economy Park in the Region of Western Macedonia, Greece; the recently updated national legislation on energy recovery from waste; the plan of the Greek Ministry of Environment regarding the handling of residual forest biomass resulting from recent fires; the Circular Economy Action Plan of the Municipality of Amynteo.
- **Financial/economic:** available funds through the Just Transition Operational Program 2021-2027 and other national and EU funds for CO projects.
- **Other:** specialized work force in the fields of energy & waste management; existing equipment.

Cheap and clean thermal energy for heating purposes, skilled workforce, and the utilization of Just transition funds for CE projects will be offered as value proposition to the pilot’s stakeholders/customers. Topics, which are going to be tackled in the programme, include: energy poverty prevention, the utilization of residual forest biomass resulting from fires, and the use of secondary / alternative fuels for energy production.

The pilot programme in Western Macedonia will execute the following key activities included in Table 8:

Table 8: Activities of the programme - pilot Western Macedonia

Key Activity	Description	Time frame	Status
Consulting services	Consulting services for the maturation of the energy utilization actions of rural biomass and other possible residual streams for the Amynteo biomass district heating unit.	Mid 2024 – End 2026	Preparation of the technical content
Supply of equipment	Supply of the equipment for the utilization of agricultural biomass and other possible residual streams for the Amynteo biomass district heating unit.	End 2024 – Mid 2025	The technical specifications will be prepared by an external company that will take over the Consulting services activity
Installation of equipment	Supply and installation of equipment and technological conversions for the utilization of agricultural biomass and other possible residual streams for the Amynteo biomass district heating unit.	Mid 2025 – End 2026	After the supply of equipment is delivered

For those, various key skills will be needed, especially **technical skills** (electrical engineering, mechanical engineering, energy systems, energy efficiency, equipment handling, equipment maintenance, non-fossil fuels energy production) that will be funded by the National Green Fund and **generic skills** (co-operation - working efficiently, communication, teamwork, positive attitude, foreign language). The pilot will be provided with those skills by stakeholder groups as academia (UoWM <https://www.uowm.gr/>, spin-off INNORA <https://innora.net/en/>), VET providers (Lifelong Learning Center of UoWM <https://www.uowm.gr/en/study/lifelong-learning/>) and the public-private sector (DIADYMA SA <https://diadyma.gr/en>, HELAKTOR <https://ellaktor.com/en/>, EKI <https://hecc.gr/>).



Key resources, including skilled staff, a public relations network, needed equipment, non-fossil fuel and the financial resources (with the approval from the National Green Fund) does already exist within the pilot, and will be provided by different stakeholders.

The pilot will work closely together with the following key partners with their particular roles:

- HELACTOR (that belongs to ELLAKTOR Group that is an infrastructure group with international presence in 4 countries and a diversified portfolio of activities focusing on the sectors of Concessions, Environment as well as Real Estate Development – Management. (consulting: combustion equipment/retrofitting of existing equipment). ELLAKTOR Group's core mission encompasses the delivery of superior infrastructure, energy, and environmental projects. It aims to foster a circular economy by introducing novel waste management solutions and expanding its presence in the alternative energy sector.
- DIADYMA SA (consulting: collection - transport - combustion equipment, consulting: legislation, secondary fuels' provider). The main object of the company is the design, implementation, and operation of the regional Integrated Waste Management System (IWMS) of Western Macedonia, with the implementation of sustainable management methods, to achieve the objectives of National and European legislation, minimizing the cost for the citizens.
- DIRECTORATE OF FORESTS - REGIONAL UNITY OF KOZANI- GREEK MINISTRY OF ENVIRONMENT AND ENERGY (consulting: collection - transport equipment, consulting: legislation, forest biomass provider).
- AMYNDEON OENOS, wine cluster (consulting: collection - transport equipment, winery biomass residues provider)
- INNORA, spin off company of the UoWM (consulting: energy production and storage).
- University of Western Macedonia (consulting, dissemination).
- JUST TRANSITION INSTITUTE GREECE, Institute for the climate change & just transition (supporting/ promoting/ implementing actions towards sustainable development during the period of transformation & regeneration of the economy, dissemination).
- TECHNICAL CHAMBER OF GREECE, West Macedonia Department (support, consulting: legislation, dissemination).

Partnerships with those key stakeholders such as HELACTOR, DIADYMA SA, and the Greek Ministry of Environment underscore the collaborative effort required to achieve the programme's goals. Strategic agreements with the Greek Green Fund are in place to secure funding for actions related to the energy utilization of biomass, showcasing the programme's commitment to leveraging financial mechanisms for sustainable energy solutions.

The expected outcomes of the programme and its potential impact on the market aim to increase the production of biomass energy, reduce energy tariffs for local communities, and provide economic and social benefits to regions facing challenges due to the transition towards a greener economy. This comprehensive approach, as outlined in the responses provided in the questionnaire, demonstrates the programme's ambition to not only address immediate energy and waste management needs but also contribute to the long-term resilience and sustainability of the Pilot Region West Macedonia.

Calls for projects from the ongoing programmes are:

- Greek Green Fund (national level), <https://prasinotameio.gr/>
- Just Transition Program 2021-2027 (national level) <https://eydam.gr/en/>



- Western Macedonia Regional Operation Plan 2021-2027 (regional level) <https://www.pepdym.gr/#>

4. Discussion

Although the four DECISO pilots are covering different areas and sectors with their programmes, their strategy for fostering financing sources for CE project ideas are similar. The programmes include a diversified portfolio of financial instruments, coming from European, national, and local sources.

Ambitions of the programmes

One of the main differences in the pilots' programme is the focus on the diverse sectors, having the pilot in Alentejo focusing on the agri-food sector, the pilot in Northwest German addressing the water/rainwater sector and the pilot in Western Macedonia concentrating on raw material for biomass heating. The approach of the pilot in Hamburg differs from the other pilots since it is inter-sectoral and focusing on comprehensive strategies. Besides this, the core ambitions of the pilots are consistent: tackling problems as unsustainable materials, scarcity of resources, wasted end-of-life value, premature product lives and unexploited customer engagement. All programmes aim to strengthen the local CE community and contribute to the local CE network.

Local actors

The role of the local stakeholders differs from pilot to pilot. Whereas Citizens are not the main target group in the pilots in Hamburg and Alentejo, they are playing important roles as users of the developed products (Northwest Germany) and the district heating (Western Macedonia). The civil society is involved in all pilots via associations and institutes to participate in the programme and contribute with their knowledge, experiences, and their CE network.

Policymakers and/or public administrations/agencies are the main actors in the programmes of all pilots, contributing mainly to the (strategic) frameworks and the local CE network and, serving as consultants and producers (Western Macedonia). Private sector companies, including start-ups, micro companies, and SMEs, are involved in all pilots at different levels: in Hamburg, Northwest Germany and Alentejo they are seen as (main) target group for financial schemes and as multipliers whereas in Western Macedonia, the involved companies serve as suppliers and providers for the biomass heating.

All pilots involve the local universities and research centres in their programmes, contributing latest academic knowledge on CE topics and innovation, addressing also their need of support with financing instruments (i. a. to encourage their students to become CE entrepreneurs).

Investors, both public and private, play a crucial role in the pilot in Northwest Germany and especially in Hamburg as developers of financing instruments for CE ideas. In Western Macedonia, an investor is already included in the project and there are ideas of including other private investors in the future. In Alentejo, there exist detailed plans to involve private investors in the second half of the project. Various media in the pilot regions serve as distributors of information but are not mainly involved in the programmes.

SWOT analysis

Starting from June 2023, the four pilots conducted a SWOT analysis using workshops, focus groups, interviews, and desk research methods. In Hamburg, outcomes of two studies analysing the city's CE landscape in different years, were included in the analysis. They were presented to a wide range of the local



CE community between November 2023 and February 2024 during the review workshops in the pilots. Changes and shifts of focal points were discussed, new facts were added, and existing facts were updated. The template provided by the task lead (FHH) suggested grouping the aspects of the analysis into four contexts:

- economic/financial
- legislative/regulatory
- social/demographic
- environmental/technical

In case the four mentioned contexts were not sufficient, a fifth free to choose context was provided, but was not used by the pilots. All four contexts were considered by the pilots with a slight focus on the economic/financial and the environmental/technical aspects. Since the pre-conditions in the pilot areas as well as the topics of the pilots are very different, a direct comparison of the SWOT analyses might not be useful. However, some aspects are important in several pilots.

Strengths

The strengths focus on the positive internal characteristics of the programme. In Hamburg, strengths exist mostly due to existing resources as infrastructure, networks, and funding opportunities. The pilot in Alentejo mentioned those existing resources in terms of qualified personnel, a CE forum and existing regulations as well, but also put a focus on technological/organisational innovation and community engagement. In Northwest Germany, the pilot programmes' strengths specify, i. a. available technical solutions, existing financial schemes and enforced regulations on rainwater. In Western Macedonia, available strategies and good practices, geographical and natural advantages of the region and existing resources and infrastructures among the local actors serve as the strengths of this pilot.

Weaknesses

The weaknesses focus on negative internal characteristics. Despite the already existing resources, the pilot in Hamburg pointed out several gaps as the lack of information and support, lack of knowledge exchange and the lack of venture capital for CE start-ups. For Alentejo, the weaknesses can be found mostly in the economic/financial context, focusing on the difficulties accessing funding and new technologies, little effectiveness of the business models and, especially for the agri-food sector, the low salary attractiveness and labour shortages. In Northwest Germany, the deficient availability of areas for the programme, lack of good practice from the region, and a difficult regulatory situation serve as negative internal aspects. The pilot in Western Macedonia lists gaps including the lack of know-how and low interconnection with academic research institutions, low innovation index and interest in CE projects as well as the lack of skilled workforce as weaknesses.

Opportunities

The opportunities give an overview over the positive external elements the programmes could exploit to its advantage. The pilot in Hamburg sees potentialities in the rising awareness of climate protection and changing consumer behaviours, as well as in the possibility to open existing funding instruments and



networks for CE topics. On the regulatory side, the ambitious climate plan, a planned SDG report and the updating of the procurement guidelines are seen as chances for the Hamburg programme. The potential for the pilot in Alentejo lies in the programmes as educational programmes and the EU circular action plan, as well as in the access to (EU) funding and technological innovation. For Northwest Germany, as it was also mentioned in Hamburg, a changing consumer behaviour towards more sustainability, here: towards a reduced water footprint, serves as opportunity for the programme. Besides this, new business cases and solutions as well as water sensitive measures are mentioned. The pilot in Western Macedonia focusses on potential coming from more research on CE in the region, available national and EU funds for the pilot topic, and new CE initiatives and regulatory plans favouring CE.

Threats

The threats focus on the negative external elements which could cause obstacles for the programme. For the pilot in Hamburg, especially the lack of a common understanding and definition of CE is an obstacle, followed by the complexity of available funding and the lack of willingness to invest in CE projects. For the agri-food sector in Alentejo, climate change, pandemics and other global crises serve as negative external influences, as well as labour shortage and trade barriers. Also, for the pilot in Northwest Germany, climate change with regard to rainwater events has a huge negative input on the programme. Furthermore, the return on investment for rainwater measures is low and therefore only available for parts of the society. A low investment attraction, bureaucracy and unclear planning situations as well as brain drain, the decline of the population and a lack of CE culture in regional companies hinder the pilot in Western Macedonia.

Despite the existing diversity of the analysed factors, all pilots discussed within their SWOT analysis profound factors important for the success of their programme. Some of the pilots decided with their CEE to regularly update the analysis, taking into account the current situation and market changes.

Pilots' programmes

To design the programmes and their topics, the pilots identified **competitive elements** based on the findings of the SWOT analysis, which included existing networks, funding opportunities and strong focus of research institutions (Hamburg), community engagement, existing CE Forum, environmental regulations and innovative digital solutions (Alentejo), extensive network of potential partners, available financial schemes and good practices (Northwest Germany) and existing resources and infrastructures, available funds and specialized workforce (Western Macedonia).

Based on this, the pilots developed **topics and key activities** for their programmes. In Hamburg, the focus lies more on cross-sectoral activities as strengthening the CE network, the funding of CE start-ups and the CE strategies on the local level, but also includes sector specific activities, i. a. in the furniture sector with the application for funding of a HORIZON EUROPE project. The pilot in Alentejo defined the topics of the programme within the agri-food sector as sustainable production, packaging, logistics and waste management. Key activities include stakeholder engagement and the identification of funding instruments. In Northwest Germany, the DECISO pilot plans similar activities: securing financial resources, knowledge exchange within the CE network and strategic agreements with stakeholders/clients. The pilot in Western Macedonia will execute activities as consulting services, the supply of equipment for the utilization of agricultural biomass and the installation of this equipment in its programme. The status of the key activities



in the pilots is very different; some have already started, and others are waiting for funding or are going to be implemented at a later stage.

Key financing sources for the activities of the programmes and **call for projects** include diverse sources on the European, national, and regional level:

- European: HORIZON EUROPE, ERDF, INTERREG
- national: Just Transition Programme, Greek Green Fund (Greece); FONA, DBU, difu (Germany); Portugal 2020/2030, Portuguese Environment Fund, Portuguese Recovery and Resilience Plan (Portugal)
- Regional: Western Macedonia Regional Operation Plan 2021-2027 (Greece); Operational Programme Alentejo 2030 (Portugal); Hamburg Climate Plan (Germany)

The pilots diversified the funding sources and applied/are applying for funds on different levels based on the scope of their activities.

Key resources and skills the pilots need for developing and conducting their activities of the programmes include especially skilled workforce with management and technical skills. They vary, also within one pilot’s programme, from activity to activity.

Key partners and their roles are discussed in the section “local actors”.

The topic “**Strategic agreements for the implementation of the CE programme**” is handled differently amongst the pilots. In Hamburg and Alentejo, strategic agreements are not defined yet, but in Alentejo a model will be developed during 2024.

The **potential impact on the market** is described by the pilots as more visibility of CE topics in the region. Furthermore, the planned strategies are supposed to encourage enterprises to implement circular business models. The programmes aim to significantly influence the regional market by secure funding and assist stakeholders.

To have an overview over all cases in the pilots, the activities are summarized in the following table. More detailed insights into the projects of the pilots are given in Deliverable 3.2.

Table 9: Activities of the programmes, all pilots

Key Activity	Description	Time frame	Status
Hamburg: Contact Point for Advice	Within a “Pop-Up Circular Hub” directly opposite of the main station, located in a former shopping mall, a contact point for advice will be installed.	Testes in Nov/Dec 2023 for three weeks, will be opened again Apr-Dec 2024	ongoing
Hamburg: Circular City Strategy for Hamburg	Founded by the Difu (German Institute for Urbanistic), the Environmental Authority is leading the project for a circular city strategy. The project started in autumn 2023 and will continue until spring 2025. The DECISO pilot is contributing to the strategy with advice regarding finances and will coordinate the application for CCRI Fellowship.	First workshop in Dec. 2023, next workshop will take place June 2024.	ongoing
Hamburg: Funding opportunities for CE start-	The Investment and Funding Bank Hamburg will fund start-ups with focus on the Sustainable Development Goals (SDGs) including CE start-	Launched in autumn 2023	ongoing



ups Hamburg	in ups with a newly launched programme "InnoImpact".		
Hamburg: Circular furniture project	The project will tackle the problem of resource wastefulness in the furniture sector. A broad consortium with 17 partners from five EU member states applied for HORIZON EUROPE funding. If approved, one pilot will be conducted in Hamburg.	Application was sent. If approved, the project will run from autumn 2024 until spring 2028	Applied for funding, waiting for approval
Hamburg: PMO Dashboard for CE	The dashboard will include different databanks for knowledge, project, and funding. As a first step, the CE actors of the City of Hamburg will be invited to join the dashboard. Later on, the dashboard will serve as a platform for all CE actors in Hamburg.	The first ideas have been collected since beginning of 2024 and the implementation is scheduled for summer 2024.	ongoing
Alentejo: FECA	Alentejo Circular Economy Forum (FECA), is a space for the discussion of good practices and ideas exchange on how to promote the transition to a circular economy model in the Alentejo region. It will be an important part of the circular economy programme since it will guarantee the involvement of different stakeholders in the programme.	It is a permanent activity in the region	Ongoing
Alentejo: Identification of funding opportunities	CCDRA, in cooperation with IrRADIARE, are working on the identifications of funding opportunities for the circular agri-food sector in the region and sharing the knowledge in what regards different European and National programmes	From 2023 to be maintained in the future	Ongoing
Alentejo: Networking	Networking with different stakeholders related to the circular agri-food sector is fundamental to enhance the knowledge in the territory.	Permanent	Ongoing
Alentejo: Following ongoing projects	CCDRA is following projects related to sustainability	Permanent	Ongoing
Alentejo: Support in the preparation of proposals	CCDRA, in cooperation with IrRADIARE, are giving support to different entities in what regards the appliance to new funds and the promotion of circularity in the region	2024- 2026	Ongoing
Contacts with private investors and study of possible	CCDRA, in cooperation with IrRADIARE, is working on the identification and stays in contact with financial entities and private investors. Also they are studying possible synergies with the public sector.	2024- 2026	Ongoing



synergies with the public.			
NW Germany: Strategic Agreements	Cooperation agreements with e.g. industrial clients	End 2023 – open ended	Started and ongoing
NW Germany: Finance	Securing financial resources to launch projects	End 2023 – open ended	Started and ongoing
NW Germany: Networking	Looking for knowledge exchange lessons learned to impact the pilot region and beyond.	End 2023 – open ended	Started and ongoing
W. Macedonia: Consulting services	Consulting services for the maturation of the energy utilization actions of rural biomass and other possible residual streams for the Amynteo biomass district heating unit.	Mid 2024 – End 2026	Preparation of the technical content
W. Macedonia: Supply of equipment	Supply of the equipment for the utilization of agricultural biomass and other possible residual streams for the Amynteo biomass district heating unit.	End 2024 – Mid 2025	The technical specifications will be prepared by an external company that will take over the Consulting services activity
W. Macedonia: Installation of equipment	Supply and installation of equipment and technological conversions for the utilization of agricultural biomass and other possible residual streams for the Amynteo biomass district heating unit.	Mid 2025 – End 2026	After the supply of equipment is delivered

5. Conclusion

The DECISO pilots, though operating in varied sectors, share similar strategies for financing CE projects in their programmes. Common goals include bolstering local CE communities and networks. Stakeholders, including citizens, policymakers, private companies, universities, and investors, play distinct roles across the pilots. A SWOT analysis was conducted in each pilot, highlighting internal strengths and weaknesses and external opportunities and threats. Opportunities include rising awareness of climate protection and changing consumer behaviours, while threats include lack of common understanding of CE and external influences like climate change. The pilots designed their programmes based on the SWOT findings, focusing on the topic of their pilot, and securing financial resources. Funding sources range from European to regional levels and are crucial for programme implementation. The potential impact includes increased visibility of CE topics and encouraging circular business models, aiming to influence regional markets positively.



6. Bibliography

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2. Study: Kruse, Mirko; Sünner, Isabel (2021): Local Analysis of the Circular Economy in the Free and Hanseatic City of Hamburg. Hamburg Institute of International Economics (HWWI).



Annexes

Annex I - List of partners' abbreviations

The following table presents the meanings of the partners abbreviations used.

Table 10 – Partners' abbreviations used

ABBREVIATION	PARTNER
CNR	Consiglio Nazionale delle Ricerche
CCDRA	Comissão de Coordenação e Desenvolvimento Regional do Alentejo
IRRADIARE	IrRADIARE Investigação e desenvolvimento em engenharia e ambiente, Lda.
MDHA	Dimotiki Epixeirisi Tilethermansis Evriteris Perioxis Amyntaiou
PDM	Panepistimio Dytikis Makedonias
FHH	Freie und Hansestadt Hamburg
OOWV	Oldenburgisch-Ostfriesischer Wasserverband
OV	Officinae Verdi Group SpA
ACR+	Association des villes et des régions pour une gestion durable des ressources
KOYS	KOYS srls



Annex II – Template for report on pilot ambitions

Stakeholders/Local Actors

Category	Stakeholder Information	Needs/Expectations	Existing resources/infrastructures	Role/Function in the programme
Citizens				
Civil Society				
Policymakers				
Public Administrations and Agencies				
Private sector and industry (consultancy, developers, services)				
Academia / Research Centers				
Spin-offs				
Investors				
Media				

Ambition of the programme



Annex III – Role of the local actors – pilot Hamburg

Category	Stakeholder Information	Needs/Expectations	Existing resources/infrastructures	Role/Function in the programme
Citizens	Not main target group	Need knowledge, awareness of CE topics		Interested citizens will be participants in workshops
Civil Society	Associations interested in CE: Cradle to Cradle e.V. FoodActive e.V. Fab City Hamburg e.V.	Expect politicians to support CE transition via legislative, need financial support, platforms for networking, awareness rising	Innovative players, intersection between interested citizens, science, etc. Fab City: collective of initiatives, enterprises and institution	Participants in workshops, contributing knowledge, time, ideas, networks, ... Fab City: advance circular production, open-source technologies close to citizens, pushing participation of citizens
Policymakers	Free and Hanseatic City of Hamburg	Expect: policy recommendations from the project Need: impulses from experts to change/upgrade political frameworks	Legislative power, can thrive CE topic in different frameworks, as a City-State, state and district level are closer (both politically and spatially): easier to upscale s.th. to regional level	Creator of strategic frameworks, i.a. sustainable procurement guidelines, Hamburg Climate Plan, Master Plan for Finance Sector, ...
Public Administrations and Agencies	BUKEA (Authority for the Environment, Climate, Energy and Agriculture) Stadtreinigung SRH (Municipal sanitation) BWI (Authority for Economy and Innovation)	Need dialog between authorities Expect to be involved in the project implementation	BUKEA: contact to enterprises via “Environmental partnerships”, experts in different fields of CE SRH: experts in CE regarding waste; implementing different CE projects BWI: experts in CE regarding food, implementing CE projects	Contribute knowledge with experts for CE Contacts to regional/national CE programmes/projects Awareness rising for citizens (i.a. regarding waste)
Private sector and industry (consultancy, developers, services)	SMEs + Start-ups Start-up City Hamburg Clusters (Food Cluster, Finance Cluster) ZEWU (Centre for energy, water and environmental technology)	SMEs + Start-ups: need financing schemes and knowledge on CE methods, about financing schemes; mostly not circular in their business models; expect job creation potential	SMEs + Start-ups: have project ideas for CE Start-up City Hamburg: network of start-ups, ecosystem for start-ups, providing information about Clusters: have a network of enterprises in their cluster	SME + Start-ups: users of financing schemes to strengthen their business with fostering circular transition Start-up City Hamburg: multiplier for CE ideas in start-up



		Clusters: need knowledge regarding CE ZEWU: need information about financing instruments for the enterprises they advise	ZEWU: provide knowledge in consulting; know which CE topics are relevant for enterprises	scene, multiplier for financing schemes Clusters: multiplier of CE into enterprises ZEWU: multiplier of information about financing schemes
Academia / Research Centers	TUHH (Hamburg University of Technology) HCU (Harbour City University)	Need information about financing instruments (to encourage their students to become entrepreneurs), expect information about (EU) funds in CE field to apply for funding with project ideas	ThinkThanks: CREM (Institut für Circular Resource Engineering and Management) Nice ² (Hafen City University) ThinkThanks in the field of CE, research	Contribute academic knowledge, contribute research and innovation in different fields regarding CE
Spin-offs	HiiCCE (Hamburg Institute for Innovation, Climate Protection and Circular Economy) Circular Hub Nord	Networking with other CE projects, establishing CE forum	HiiCCE: Intersection between university (TUHH) and Stadtreinigung SRH (Municipal sanitation) Circular Hub Nord: contacts to other circular hubs in other regions, knowledge of circular solutions	HiiCCE: Knowledge transfer, networking Circular Hub Nord: Intersection between public authorities and start up scene, content-related contact points for knowledge exchange
Investors	Public investors IFB (Investment and Funding Bank Hamburg) Hamburg Invest Hamburg Investors Network IFB Innovation Starter GmbH FCH – Finance City Hamburg	Knowledge of the transition towards CE Policy recommendations for CE Profitable ideas of start-ups, SMEs for circular solutions	Existing funding programmes, enabling and scouting teams, years of experience in promoting innovative ideas	Booster CE with further development of existing funding schemes and invention of new funding schemes designed for CE pilot Participants of workshops to establish CE as a pilot sector in financing schemes MOUs with private finance partners
Media	Various media based in Hamburg		Potential to boost CE topic through different channels	Distributor of information





Annex IV – Role of the local actors – pilot Alentejo

Category	Stakeholder Information	Needs/Expectations	Existing resources/infrastructures	Role/Function in the programme
Citizens	Not main target group	Need information and awareness on CE topics		Interested citizens can participate in workshops and can send contributions
Civil Society	Associations interested in CE: CCPAM (competence center for aromatic, medicinal and seasoning plants) ADRAL (Agency for Regional Development)	Expect politicians to support CE transition and legislative initiatives to promote CE Need financial support, awareness rising Expect to be involved in the project implementation	ADRAL responsible for develop projects on CE issue	Participants in workshops, contributing knowledge, contacts, experience, time, ideas Contribute with experiences on the subject Contacts to regional/national/international CE programmes/projects
Policy makers	-	Expect: policy recommendations from the project Need: good practices from experts to follow the examples		-
Public Administrations and Agencies	CCDR Alentejo DRAPAL (Regional Department for Agriculture)	Need awareness and competences about CE Expect to be involved in the project implementation Identify financial scheme good practices to support CE projects Create opportunities for entrepreneurs and SMEs; Demonstrate the benefit of CE solutions.	CCDR responsible for Regional Operational Programme that can contribute with good practices on financial schemes Have a regional forum for CE (FECA)	Creator of strategic frameworks Contribute with experiences on the subject Contacts to regional/national/international CE programmes/projects
Private sector and industry (consultancy,	SMEs and micro companies BeeCircular (company)	Need training and skills in understanding how to introduce CE in their companies and	CCPAM have a network which promote CE (EPAM)	SMEs and micro companies: give ideas and information about the needs to foster the business transition to CE. Will be the users of financing schemes



developers, services)		financing schemes to foster the transition to CE Optimized condition for the deployment of CE solutions		
Academia / Research Centers	University of Beira Interior	Networking with other CE-projects, Policy recommendations for CE Financial support to participate and develop specific knowledge		Contribute academic knowledge, contribute research and innovation in different fields regarding CE
Spin-offs	Not main target group			Interested spin-offs can participate in workshops and can send contributions
Investors	Financial institutions (such as Caixa Agrícola bank)	Knowledge of the transition towards CE Profitable ideas of start-ups, SMEs for circular solutions	Experience in promoting innovative ideas	Booster CE with further development of existing funding schemes and invention of new funding schemes designed for CE pilot Participants of workshops to establish CE as a pilot sector in financing schemes
Media	Various media based in Alentejo		Potential to boost CE topic through different channels	Distributor of information



Annex V – Role of the local actors – pilot Northwest Germany

Category	Stakeholder Information	Needs/Expectations	Existing resources/infrastructures	Role/Function in the programme
Citizens	Major target group; all citizens can contribute, they can use rainwater in a multiple way	Citizens must be informed about their possibilities; They need help with implementation (awareness rising, funding, installation of technology)	- OOWV education centers/information points - Fee reduction in the case of area decoupling	User of products that are to be developed
Civil Society	Same as citizens			
Policymakers	Major target group	politics can create the local framework conditions; however, superordinate funding structures are needed to support and coordinate the implementation of ideas.	- in some places are political resolutions in place to promote sustainable surface water management - local funding regimes for unsealing, green roofs, rain buckets	The need to support / create a friendly environment for rainwater use
Public Administrations and Agencies	the municipalities or cities are essential players for the use of rainwater	the administration needs support in the implementation of rainwater concepts (financial, technical, ideas)	OOWV provides digital rain information, OOWV prepares planning for water-sensitive urban development solutions	Use the program actively to promote rainwater harvesting in the community
Private sector and industry (consultancy, developers, services)	in the OOWV association area are many companies that can use rainwater as an alternative resource	need technical advice and support in the implementation of the project; need funding as an incentive to try new technologies/ideas	OOWV conducts consultations on technical solutions for rainwater utilization	Essential users to advance rainwater harvesting
Academia / Research Centers	University Oldenburg, University of Applied Sciences Oldenburg		Developers of new rainwater ideas	Can support the program with innovation



Spin-offs	-	-	-	-
Investors	Developers of commercial areas and residential districts	Need funding as an incentive to try new technologies/ideas	First ideas/areas of development are identified	
Media	Information distributor	-	-	Information distributor



Annex VI – Role of the local actors – pilot Western Macedonia

Category	Stakeholder Information	Needs/Expectations	Existing resources/infrastructures	Role/Function in the programme
Citizens	-	The main need/expectation is to be provided with cheap and clean thermal energy for heating purposes in the years to come	-	District heating Users
Civil Society	Just Transition Institute Greece	To combine circular economy solutions with Just Transition skills for the regional workforce that needs reskilling to overcome the decarbonization effects	No	The Institute has a role of overseeing the programme needs with Just Transition Policies in the region, on behalf of the civil society
Policymakers	<ul style="list-style-type: none"> - Municipality of Amynteo - Local communities' Presidents of Amynteo, Levea and Filotas - Regional Association of Local Governments of Western Macedonia - Florina Chamber of Commerce - Florina Prefecture Vice-Governor - DIADYMA SA - Western Macedonia Technical Chamber Department 	<p>Recent national legislation favors the energy utilization of wastes.</p> <p>There are even many related financing opportunities available until 2030.</p> <p>It must be immediately decided at a political level what will be done with waste management, at what percentage will this be utilized for all potential uses (cement industry, waste units, other uses) which is a difficult issue, although technologically it is already applied in many countries .</p> <p>Bridging the legislative and institutional gap</p>	DIADYMA Waste Management premises in regional level	<p>All policymakers are mostly part of the consultation groups on new legislation in local, regional and national level.</p> <p>DIADYMA SA has a specific role being the Integrated Waste Management System (IWMS), of the local governments (municipalities) of Western Macedonia region regarding the fulfillment of its responsibilities, on waste management and the protection of the environment.</p> <p>Chambers can be the link with representatives from the Hellenic Ministry of Environment & Energy.</p>



Public Administrations and Agencies	<ul style="list-style-type: none"> - Municipality of Eordaia - Municipal District Heating Company of Ptolemaida - Municipal Water Supply and Sewerage Company of Kozani - Forest Directorate of Western Macedonia 	<p>Based on the new context and decarbonisation that creates new conditions for the operation of district heating companies, all of them started to explore alternative solutions and are currently at the stage of exploring a comprehensive solution based on EU Directive 27 of 2012, for what will to be done in the coming years, a fact that has started by MDHCA and now been transferred to the regional level and to the other companies that provide district heating.</p>	<p>District heating companies premises in municipality level</p>	<p>District heating producers</p>
Private sector and industry (consultancy, developers, services)	<ul style="list-style-type: none"> - Amynteo Agricultural Cooperative - ELLACTOR S.A. - HELECTOR S.A. - Public Power Corporation S.A. - Amynteo Wine Cluster - HellaBiom 	<p>To combine circular economy solutions with Just Transition funds.</p> <p>HELECTOR S.A. is involved in collaborations with both DIADYMA and MDHCA, so it is directly interested in its participation in the DECISO project and in any related initiative.</p> <p>To use alternative fuels for thermal and electric power co-generation</p> <p>Development of an Environmental licensing framework</p>		<p>Amynteo Agricultural Cooperative & Amynteo Wine Cluster could supply agricultural biomass.</p> <p>HELECTOR S.A. is responsible for the operation of regional waste management unit.</p> <p>Public Power Corporation S.A. is the thermal energy provider</p>
Academia / Research Centers	<ol style="list-style-type: none"> 1. University of Western Macedonia 2. CERTH 3. Environmental Center of Western Macedonia Region 	<p>Expectations are mostly to increase the level of involvement of the University and CERTH in the circular economy regional ecosystem</p>	<p>-</p>	<p>To support all the regional and local level stakeholders with inputs on circular economy issues.</p>
Spin-offs	<p>INNORA</p>	<p>Expectations for renewable energy and energy storage units combined with circular economy aspects</p>	<p>-</p>	<p>INNORA can offer Innovative and revolutionary solutions for effective energy management to the electricity grid, to electric vehicles charging stations</p>



				networks, to buildings and the industry, and to Renewable Energy Sources and energy storage facilities.
Investors	- ELLACTOR S.A., HELECTOR S.A	Possible Involvement in CE WM PARK	-	HELECTOR S.A. is responsible for the operation of the regional waste management unit.
Media	-	-	-	-



Annex VII – Template for report on SWOT analysis



Topic: CIRCIO-01-01 Circular Cities and Regions Initiative’s project development assistance (CCRI-PDA)

SWOT analysis in pilot XX

Task 3.1

Document details

Version	Date	Authors
V1		

1. Preparation and SWOT methodology

In this report an analysis of the strengths, weaknesses, opportunities, and threats (SWOT analysis) of the programme in each pilot is carried out. The analysis is based on the ambition



of the programme and the role of the local stakeholders, such as citizens, civil society, policymakers, public administration and agencies, private sector and industry, academia/research centres, spin-offs, investors and media.

It takes into account the information collected on previous deliverables: from WP1 (D1.1 – Market state of the art of circular economy in the pilot areas, D1.2 – Guide to good practices and opportunities at the European and National level, D1.3 – Reports from mobilisation and mutual learning workshops in the pilot areas) and from WP3: Task 3.1 Co-Define in each pilot with CEE: ambition of the Programme, roles and functions of the actors at local level

The SWOT analysis will identify the advantages, disadvantages, capabilities, gaps and potential effects of the programme in each pilot. The economic/financial, legislative/regulatory, social/demographic, environmental/technical context will be taken into account to ascertain the potential value for the territories.

The structure of the SWOT Analysis is open, meaning that every pilot region is free to report and analyse points of interest with the required level of detail. The authors providing data in the SWOT Analysis area have the capability to classify the entries with respect to the type of contexts mentioned above.

The analysis will give detailed information about:

- **Strengths:** positive internal characteristics of the programme that give it an advantage.
- **Weaknesses:** negative internal characteristics of the programme that are a disadvantage.
- **Opportunities:** positive external elements that the programme could exploit to its advantage.
- **Threats:** negative external elements that could cause trouble for the programme.

Questions to consider when filling in the analysis:

- Which opportunities could be derived from the good practices?
- Which resources/infrastructures of the programme’s stakeholders exist?
- Which needs/expectations of the stakeholders need to be considered?
- How stakeholders can contribute to the programme?

2. SWOT analysis

2.1 Economic/Financial context

Internal

Strengths	Weaknesses

External



Opportunities	Threats

2.2 Legislative/Regulatory context

Internal

Strengths	Weaknesses

External

Opportunities	Threats

2.3 Social/Demographic context

Internal

Strengths	Weaknesses



External

Opportunities	Threats

2.4 Environmental/Technical context

Internal

Strengths	Weaknesses

External

Opportunities	Threats

2.5 ... context

Internal

Strengths	Weaknesses



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External

Opportunities	Threats

3. Overview and next steps

For a better overview, all contexts are composed in this table:

Strengths	Weaknesses
Economic/Financial <ul style="list-style-type: none"> • ... • ... 	Economic/Financial <ul style="list-style-type: none"> • ... • ...
Legislative/Regulatory <ul style="list-style-type: none"> • ... • ... 	Legislative/Regulatory <ul style="list-style-type: none"> • ... • ...
Social/Demographic <ul style="list-style-type: none"> • ... • ... 	Social/Demographic <ul style="list-style-type: none"> • ... • ...
Environmental/Technical <ul style="list-style-type: none"> • ... • ... 	Environmental/Technical <ul style="list-style-type: none"> • ... • ...
Opportunities	Threats
Economic/Financial <ul style="list-style-type: none"> • ... • ... 	Economic/Financial <ul style="list-style-type: none"> • ... • ...
Legislative/Regulatory <ul style="list-style-type: none"> • ... • ... 	Legislative/Regulatory <ul style="list-style-type: none"> • ... • ...



<p>Social/Demographic</p> <ul style="list-style-type: none"> • ... • ... <p>Environmental/Technical</p> <ul style="list-style-type: none"> • ... • ... 	<p>Social/Demographic</p> <ul style="list-style-type: none"> • ... • ... <p>Environmental/Technical</p> <ul style="list-style-type: none"> • ... • ...
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Next steps

As a next step, the process of turning the results of the SWOT Analysis into something actionable begins.

Encourage discussions with the stakeholders about the analysis by asking:

- How we can maximize the use of our strengths?
- How we can overcome the identified threats?
- How we can overcome the identified weaknesses?
- How we can take advantage by our opportunities?

4. Annex 1: Ambitions of the programme

Link to the document “pilot ambitions”:



Annex VIII – SWOT analysis – pilot Hamburg

Strengths	Weaknesses
<p>Economic/Financial</p> <ul style="list-style-type: none"> • Good experiences of SMEs/start-ups with support from IFB, EEN,.. • InnolImpact funding opportunity for CE ideas • Umweltpartnerschaft Hamburg: Network of 1,550 enterprises, promotion of voluntary corporate environmental and climate protection <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Stilbruch: used furnitures, clothes, books etc. are collected at public waste collection places and sold in Stilbruch stores • Public procurement focuses more on sustainability <p>Social/Demographic</p> <ul style="list-style-type: none"> • Circular Hub Nord as one organization for matchmaking • Existing and functioning networks (foodactive, Fab City, Fashion for good) • Sharing Economy/circular practices amongst consumers is a tradition in Hamburg <p>Environmental/Technical</p> <ul style="list-style-type: none"> • Research institutions strongly focus on CE: Universities, HiCCCE, ... 	<p>Economic/Financial</p> <ul style="list-style-type: none"> • Lack of overview/information about funding (new calls with CE aspects) • Lack of support with the development of innovative business models • Lack of venture capital <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Public procurement still not focused enough on CE • No existing platform for CE in Hamburg influencing politics/CE strategy • CE doesn't play a role in the strategic planning of City of Hamburg <p>Social/Demographic</p> <ul style="list-style-type: none"> • Lack of education/information approaches about CE • Lack of working network (of potential partners for future projects) and room for discussions • Mapping of local CE ecosystem and its experts missing <p>Environmental/Technical</p> <ul style="list-style-type: none"> • Lack of knowledge exchange, lack of access to knowledge about CE • Lack of possibilities for exchange on an expert level • Exchange between sectors is missing
Opportunities	Threats
<p>Economic/Financial</p> <ul style="list-style-type: none"> • Lots of young founders want to shape consumption greener and more social • PROFI Umwelt funding instrument could be further opened for circular topics <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Ambitioned institutionalised climate plan • Start-ups significantly contribute to the development of solutions for CE • Politics of clusters in Hamburg, at the moment 8 different clusters • Status of circular initiatives in Hamburg could appear in the planned SDG sustainability report <p>Social/Demographic</p> <ul style="list-style-type: none"> • Changing lifestyles and consumer behaviours • Social awareness of climate and environmental protection has increased • Chances through knowledge management <p>Environmental/Technical</p> <ul style="list-style-type: none"> • New Centre for Resources and Energy (Zentrum für Ressourcen und Energie) will be built. • Idea: use synergies between hubs • Sustainable Procurement Guidelines are on their way 	<p>Economic/Financial</p> <ul style="list-style-type: none"> • Complexity and high effort for fund application for SME • Challenges of circular business models for SMEs (f.e. Product-as-a-service) • Focus of CE funding on technology and process optimization, not on research, business models <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Regulation of the definition of WASTE hinders repurpose/remanufacturing • Understanding of CE from local authorities is missing • Lack of definition/roadmap/compass <p>Social/Demographic</p> <ul style="list-style-type: none"> • Hard to motivate SME to change to CE • Visibility of CE is missing; lack of public marketing; impact SMEs are not visible enough • Lack of room/place for cross innovation activities <p>Environmental/Technical</p> <ul style="list-style-type: none"> • In some sectors, the focus is often too local/national, but needs a more global focus (f.e. textiles). • Lack of willingness to invest in CE (focus on short-term investments do not favour CE) • Common understanding of the term circular economy must be established



Annex IX – SWOT analysis – pilot Alentejo

Strengths	Weaknesses
<p>Economic/Financial</p> <ul style="list-style-type: none"> Rich Agricultural Resources Traditional Farming Practices EU Support FECA - Alentejo Circular Economy Forum Organisational innovation of the sector <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> EU Regulatory Support Quality Standards Environmental Regulations Environmental responsibility and social responsibility <p>Social/Demographic</p> <ul style="list-style-type: none"> Cultural Heritage Local Employment Community Engagement Knowledge sharing between producers. Circularity as an intrinsic Alentejo element. The owners of the most companies are qualified <p>Environmental/Technical</p> <ul style="list-style-type: none"> Labor Shortages Changing Consumer Preferences Social Resistance to Change. Innovative digital solutions Technological innovations 	<p>Economic/Financial</p> <ul style="list-style-type: none"> Dependency on Weather Conditions Limited Technological Adoption Small-scale Farming Market Fragmentation Difficulty to access funding Difficulty accessing new technologies Products with little added value Little effectiveness in business models Reduced appreciation of products <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> Complex Regulatory Compliance Risk of Policy Changes Difficulty to understand legislation and having time to respond to bureaucracy by the SME (majority of the companies) <p>Social/Demographic</p> <ul style="list-style-type: none"> Aging Population Urbanization Trends Low salary attractiveness <p>Environmental/Technical</p> <ul style="list-style-type: none"> Water Scarcity Limited Technological Adoption Little competitiveness in product prices due to logistics costs
Opportunities	Threats
<p>Economic/Financial</p> <ul style="list-style-type: none"> EU Support Export Potential Diversification of Products Technological Innovation Sustainable Practices Tourism Potential <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> Access to Funding The EU's new circular action plan <p>Social/Demographic</p> <ul style="list-style-type: none"> Educational Programs Promotion of Healthy Lifestyles Diversity and Inclusion <p>Environmental/Technical</p> <ul style="list-style-type: none"> Precision Agriculture Sustainable Practices Coordination with other sectors in order to reduce transport costs 	<p>Economic/Financial</p> <ul style="list-style-type: none"> Market Competition Trade Barriers Climate Change Pandemics and Global Crises Economic viability of new circular economy practices <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> Policy Uncertainty Bureaucratic Challenges Difficulty in accessing permission entities <p>Social/Demographic</p> <ul style="list-style-type: none"> Labor Shortages Changing Consumer Preferences Social Resistance to Change Competitiveness of other sectors, in terms of salaries, especially those related to new technologies <p>Environmental/Technical</p> <ul style="list-style-type: none"> Climate Change Risks Pesticide and Chemical Usage Resource Depletion Decrease in the quality of the soil



Annex X – SWOT analysis – pilot Northwest Germany

Strengths	Weaknesses
<p>Economic/Financial</p> <ul style="list-style-type: none"> ● Piloting and implementation of new operator models, „fit for purpose“. Co-financing business cases with high volume customers/Large water consumers. ● Incentive financing for the implementation of measures to reduce rainwater runoff ● Regional financial schemes are available for the implementation of business cases. <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> ● DWA -A 102 Discharge of rainwater runoff <p>Social/Demographic</p> <ul style="list-style-type: none"> ● People are motivated to use rainwater on a local level. It is seen as a climate mitigation and adaptation measure. ● The pilot theme allows each citizen to implement measures individually, ensuring scalability and flexibility. <p>Environmental/Technical</p> <ul style="list-style-type: none"> ● Good technical solutions for rainwater treatment are available and are being sold on the market. ● Good examples of rainwater harvesting practices are available. 	<p>Economic/Financial</p> <ul style="list-style-type: none"> ● Rainwater harvesting competes with a low water price ● The availability of space is difficult due to the high cost per square meter. This restricts or complicates the realization of rainwater harvesting projects or initiatives. Areas can have multiple uses. Therefore, a combined concept has to be developed and implemented. <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> ● Fragmented responsibility for rainwater discharge management on a local level. ● Water management solutions may conflict with environmental law. <p>Environmental/Technical</p> <ul style="list-style-type: none"> ● Practical examples are mainly available in more arid countries or in Southern Europe. The pilot region does not have a large number of applicable examples at a local/regional level. ● Measures in water management can create complex interactions
Opportunities	Threats
<p>Economic/Financial</p> <ul style="list-style-type: none"> ● New solutions and business cases will increase water availability and positively influence the economic and sustainable development of the region. <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> ● Consumers are increasingly demanding sustainable production. Rainwater harvesting reduces the water footprint, resulting in a better CRSD (Corporate sustainability reporting directive) report <p>Social/Demographic</p> <ul style="list-style-type: none"> ● Water sensitive measures will increase wellbeing and living comfort in cities and regions. Due to infiltration, evaporation, storage and use which will buffer negative impacts of climate change. ● High potential for transferability to different regions, especially Northern Europe. <p>Environmental/Technical</p> <ul style="list-style-type: none"> ● Water sensitive measures will increase environmental condition/status in cities and regions. Due to infiltration, evaporation, storage and use which will buffer the negative impacts of climate change. 	<p>Economic/Financial</p> <ul style="list-style-type: none"> ● Return on investment cost for rainwater measures low and therefore only accessible to parts of society <p>Social/Demographic</p> <ul style="list-style-type: none"> ● Population growth will put more pressure on conventional water resources, increasing the need for alternative water resources (rainwater, etc.) <p>Environmental/Technical</p> <ul style="list-style-type: none"> ● Rainwater events have changed in intensity and duration. There is a challenge in rainwater harvesting and storage. New boundary conditions due to climate change.



Annex XI – SWOT analysis – pilot Western Macedonia

Strengths	Weaknesses
<p>Economic/Financial</p> <ul style="list-style-type: none"> • Geographical location of the Region – focal point (proximity to the Region of Thessaloniki, Epirus & the Western Balkans). • DIADYMA S.A operation in regional level as a waste management Agency • Long-term experience of MDHCA in the operation of district heating facilities that could be enriched from the identified good practices • Strong relations/collaboration of UoWM with the pilot partner and stakeholders <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Available strategies for integrating CE initiatives at both local and regional levels, encompassing scientific, technocratic, and autonomous interests • Good practices identified are those which are not only successful, but also particularly relevant to MDHCA's operation • Good practices identified relevant to MDHCA's operation with strong partially transfer potential • The upcoming establishment of a Circular Economy Park in the Region of Western Macedonia <p>Social/Demographic</p> <ul style="list-style-type: none"> • Specialized work force in the fields of energy & waste management • West Macedonia is the energy centre of Greece for more than 50 years, mineral wealth & specialization and know-how in the energy sector <p>Environmental/Technical</p> <ul style="list-style-type: none"> • Singularity of the natural (diverse landscape, combination of mountain and water bodies) • MDHCA resources & infrastructures, DIADYMA infrastructures 	<p>Economic/Financial</p> <ul style="list-style-type: none"> • Proximity to the cities of Thessaloniki and Ioannina which operate as competitive poles in RTDI actions • Low innovation index of the Region of Western Macedonia. Low degree of integration of research into market, low attraction of investments (foreign and domestic – non-Regional) • High rates of unemployment, especially youth unemployment • Limited spatial scale of development of business activities <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Low interconnection with academic - research institutions that led to low rates of integration of technological innovation and inability to diversify the traditional production methods • Absence of economic activities linked to the new energy direction of the region (RES, hydrogen and CE activities) <p>Social/Demographic</p> <ul style="list-style-type: none"> • Low interest in CE projects • Lack of know-how in the implementation of projects using financial tools and loans <p>Environmental/Technical</p> <ul style="list-style-type: none"> • Lack of personnel and equipment of the competent services to monitor the projects / actions in order to comply with the approved environmental conditions
Opportunities	Threats
<p>Economic/Financial</p> <ul style="list-style-type: none"> • University of Western Macedonia (UoWM) participation in CE research and applied projects • Initiatives of the Institute for Sustainable Development and Natural Resources • Operation of the UoWM and the Institute of Chemical Processes and Energy Resources (IDEP) with research expertise in energy and integrated waste management subjects • RES and CE projects potentials and investments in Western Macedonia • Available funds through the Just Transition Operational Program 2021-2027 and other national and EU funds for CO projects <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Recent national legislation on energy recovery from waste is a valuable guide for the country's institutional developments in this area • Ministry of Environment's plans to handle residual forest biomass resulting from recent fires 	<p>Economic/Financial</p> <ul style="list-style-type: none"> • Bureaucracy • Delays in the financing procedures of Research & Technological Development actions from public and private capital sources • Very low investment attraction <p>Legislative/Regulatory</p> <ul style="list-style-type: none"> • Bureaucracy • Delays in adapting legislation in national level to recent EU directions and guides • Fuzzy, multi-participatory and multi-level just transition governance system • Unclear planning of the smooth operation and sustainability of district heating systems in the post-lignite era <p>Social/Demographic</p> <ul style="list-style-type: none"> • Lack of new scientific potential that will participate in the actions of post lignite, due to brain drain • Population decline • Lack of alliances in the unified management of claims – consultations between social and economic partners



<ul style="list-style-type: none"> • MDHCA's initial forays into utilizing residual biomass and their expectations for the upcoming institutional framework <p>Social/Demographic</p> <ul style="list-style-type: none"> • Local and regional stakeholders' confirmation for supporting CE initiatives coming from DHCMA <p>Environmental/Technical</p> <ul style="list-style-type: none"> • Current initiatives in the circular economy, including the expected approval by the Green Fund of a significant project focused on agricultural biomass • Possible involvement of private companies in discussions regarding the use of residual biomass from forests • Circular Economy Park planned to be established the next years 	<p>Environmental/Technical</p> <ul style="list-style-type: none"> • Absence of a circular economy culture in regional companies • Lack of trained personnel
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Description of the Programme

Questionnaire for Pilot Regions

Identification of competitive elements

- Competitive Elements:
 - Starting from the SWOT analysis in your pilot, which are the competitive elements, you want to highlight in your pilot?
 - Technical (technical reliability, duration of interventions, etc.)
 - Legal/procedural (simplicity of regulations, activation speed, etc.)
 - Financial/economic aspects (financial schemes, payback periods, etc.)
 - Other

Description of the Programme

1. Value proposition and topics (referring to: ambitions of the programme)
 - a. Which value proposition are you going to offer your customers/stakeholders?
 - b. Which topics are you going to tackle in your programme?
2. Key activities
 - a. Which activities do you want to execute in your programme?
3. Key skills for the activity's development
 - a. Which skills do you need for those activities?
 - b. Who could provide you with those skills?
4. Key resources (also referring to [financial] resources already mentioned in the GA)
 - a. Which resources (staff, financial, technical, ...) would you need for the programme?
 - b. Which of these resources do already exist?
 - c. Which of the local actors could provide you with the (missing) resources?
5. Key partners and roles (referring to: roles and functions of local actors?)
 - a. Which stakeholders/local actors will be involved in your programme?
 - b. Which role will they play?
6. Strategic agreements for the implementation of the CE programme
 - a. What kind of strategic agreements do you expect from/need for the programme?
 - b. With whom do you plan to sign a strategic agreement?
 - c. What would be the content of this agreement?
7. Potential impact on the market
 - a. Which impact do you expect from your programme on the local/regional market?



- b. Would there also be an impact on the national/European level (scale-up of the programme)?

8. Additional information

Please feel free to provide any additional information, suggestions, or comments that you believe are relevant for the description of your programme.

