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Summary

List of Acronyms & Abbreviations

CCRI	Circular Cities and Regions Initiative
CSS	Circular Systemic Solution
CEAP	Circular Economy Action Plan
CEIP	Circular Economy Investment Plan
DG RTD	Directorate-General for Research and Innovation (European Commission)
ECESP	European Circular Economy Stakeholder Platform
EU	European Union
FRONTSH1P	Front-runner regions toward a climate neutral and circular economy
GD3.2	Green Deal Call Topic 3.2 (Horizon 2020)
ICLEI	Local Governments for Sustainability
IPR	Intellectual Property Rights
LMS	Learning Management System
KPI	Key Performance Indicator
NGO	Non-Governmental Organisation
SAT	Self-Assessment Tool (under the CCRI methodology)
SME	Small and Medium-sized Enterprise
WP	Work Package

Glossary

Circular Systemic Solution: An integrated and place-based approach to advancing the circular economy, combining technological, social, and governance innovations to address resource use and sustainability challenges at regional level.

Circular Transition: The shift from a linear economic model to one based on circularity, involving systemic changes in how resources are produced, consumed, and reused within local and regional contexts.

Replication Region: A territory where CSSs developed and tested in another context (typically a pilot region) are adapted and implemented, taking into account local governance, socio-economic conditions, and stakeholder configurations.

Pilot Region: The initial area where CSSs are developed, tested, and validated, serving as a reference model for replication in other regions.

Stakeholder Mapping: The process of identifying, classifying, and analysing individuals, organisations, and institutions that are relevant to or affected by a project's activities and outcomes.

Stakeholder Typology: A categorisation method that defines stakeholders based on their level of interest in and influence over the project, typically grouped as Key Players, Context Setters, Subjects, or the Crowd.

Territorial Governance: The systems and processes through which regional and local actors—public, private, and civil society—collaborate to steer transitions such as the shift to a circular economy.

Replication Strategy: A structured plan outlining how a CSS can be adapted and applied in a different regional context, ensuring both technical feasibility and socio-institutional relevance.

Systemic Change: A deep transformation that affects multiple interconnected systems (economic, institutional, environmental, etc.), enabling long-term shifts in practices, mindsets, and structures.

Loop Cluster: An informal collaboration between sister projects funded under the same Horizon call, designed to enhance knowledge sharing, policy alignment, and collective outreach on circular economy issues.

Introduction

The transition to a circular economy is increasingly recognised as a complex, systemic challenge that requires the involvement of diverse actors across governance levels, sectors, and territories. European initiatives such as the Circular Cities and Regions Initiative (CCRI) have placed strong emphasis on localised action, participatory governance, and the development of circular systemic solutions (CSSs) that are rooted in regional strengths and realities. Within this context, the FRONTSH1P project aims to demonstrate how territorial circular transitions can be co-designed, tested, and replicated through inclusive stakeholder engagement and strategic capacity building.

This deliverable contributes to that ambition by exploring how stakeholder networks are mobilised, structured, and sustained to support the development and scaling of circular innovations. It reflects the understanding that stakeholders are not merely passive recipients of technical solutions, but active co-creators of knowledge, processes, and outcomes. Their participation is vital for ensuring that the systemic solutions designed within the project are both context-sensitive and broadly legitimate.

The work presented here also reflects FRONTSH1P's commitment to open learning and horizontal cooperation. The creation of a digital e-learning platform is conceived as a tool not only for disseminating project results, but for building long-term capacity among public authorities, businesses, and civil society actors involved in circular economy implementation. Similarly, the project's collaboration with other EU-funded initiatives, most notably through the LOOP Cluster, responds to the growing need for cross-project alignment and collective policy dialogue at European level.

In line with the participatory ethos of FRONTSH1P, this document is shaped by iterative processes, drawing on regional contributions, multi-stakeholder insights, and evolving project outputs. As such, it serves both as a record of progress and as a foundation for future reflection on how inclusive engagement and knowledge-sharing can accelerate circular transitions across Europe.

Stakeholder Engagement

Methodology

Objectives of Stakeholder Engagement

Stakeholder engagement within the FRONTSH1P project is a foundational pillar supporting the deployment and replication of Circular Systemic Solutions (CSSs) across diverse territorial contexts. Guided by the principles of inclusivity, co-creation, and systemic thinking as promoted by the Circular Cities and Regions Initiative (CCRI), the stakeholder engagement process pursues multiple strategic and operational objectives, which are closely aligned with the goals set out in Task 9.2 of Work Package 9 (WP9) and underpin the scope of Deliverable D9.2. Key objectives include:

- **Build a multi-level, multi-actor stakeholder network**
  The primary objective is to establish and activate a stakeholder network comprising at least 140 members drawn from the quadruple helix of innovation: public authorities, businesses (including SMEs and clusters), academia and research institutions, and civil society organisations. This network ensures a comprehensive representation of interests, knowledge domains, and operational capabilities relevant to the FRONTSH1P systemic solutions and their replication. It is spatially representative covering the four replication regions (Portugal, Greece, Italy, and the Netherlands) and the pilot region of Lodzkie and thematically aligned with the value chains and circular strategies addressed by the project.
- **Facilitate participatory validation and replication of CSSs**
  Stakeholders provide feedback on key findings, validate assumptions, share local knowledge, and test the replicability of circular strategies. Their active participation helps assess the suitability of solutions, identify implementation barriers, and support the co-design of enabling policy and business environments.
- **Create communication and feedback loops throughout the project lifecycle**
  Engagement is continuous and reciprocal, enabled through tools such as stakeholder events, bilateral meetings, surveys, newsletters, and webinars. These feedback mechanisms foster co-ownership and ensure that stakeholder insights contribute to all project phases.
- **Strengthen cross-project synergies and integration with CCRI initiatives**
  Stakeholders interact with related EU projects and CCRI initiatives, co-producing knowledge, informing shared deliverables (e.g. D8.6), and supporting system-wide learning and policy transfer.

- **Ensure broad dissemination and participatory evaluation of results**
  Stakeholders play a leading role in the final dissemination event, contributing to evaluation of results, validation of outputs, and identification of pathways for broader replication.

Conceptual foundation and CCRI alignment

Alignment with the CCRI three-phase methodology

The FRONTSH1P stakeholder engagement methodology is conceptually rooted in the CCRI's systemic approach to enabling territorial circular transitions. The CCRI's operational framework structured into the phases of **map**, **design**, and **implement** serves as the foundational structure for planning and delivering engagement activities.

- In the **MAP** phase, stakeholders are identified and analysed using a dual-axis model based on their level of interest and influence. This enables the assignment of stakeholders into four CCRI categories: Key Players, Context Setters, Subjects, and Crowd.
- The **DESIGN** phase involves engaging stakeholders in the co-definition of CSSs, including the identification of circular value chains and priority actions. Tools such as workshops, co-creation sessions, and regional dialogues are used to translate stakeholder knowledge into solution design.
- During **IMPLEMENT** phase, engagement continues through participation in solution deployment, monitoring of results, and iterative refinements. Stakeholders contribute to adaptive management processes and strategy adjustments.

FRONTSH1P aligns this conceptual structure with additional CCRI instruments, including the Self-Assessment Tool (SAT), Circular Economy Action Plans (CEAPs), and Circular Economy Investment Plans (CEIPs). The engagement process is further enhanced through interaction with CCRI Pilot and Fellow cities, EU-level platforms (e.g. ECESP), and related Horizon Europe projects.

To support tailored engagement strategies, FRONTSH1P adopted the CCRI's stakeholder typology framework. Detailed analysis of this model and its application is presented in the following section, where it is embedded within the mapping and planning process rather than reiterated here.

Stakeholder mapping and analysis

Stakeholder mapping and analysis represent the cornerstone of FRONTSH1P's engagement methodology. This process was implemented regionally using a shared structure—the Stakeholder Engagement Plan then replaced by the Excel-based TOOLBOX 5, produced and

used within the WP8 actions, which harmonised the mapping effort across the five territorial clusters while allowing local contextualisation.

Stakeholder Identification and Sectoral Classification

Each stakeholder was identified based on relevance to regional circular economy strategies and CSSs. The quadruple helix classification system was used to organise them into four primary groups:

- **A**: Academia and research institutions
- **C**: Companies and industry associations
- **G**: Government and public sector bodies
- **S**: Civil society organisations and social enterprises

This classification supports inclusivity and ensures balanced representation across knowledge systems and governance levels.

Influence–Interest Analysis and Engagement Typology

Stakeholders were analysed using the CCRI's influence-interest model:

- **Key Players** (high interest, high influence)
- **Context Setters** (low interest, high influence)
- **Subjects** (high interest, low influence)
- **Crowd** (low interest, low influence)
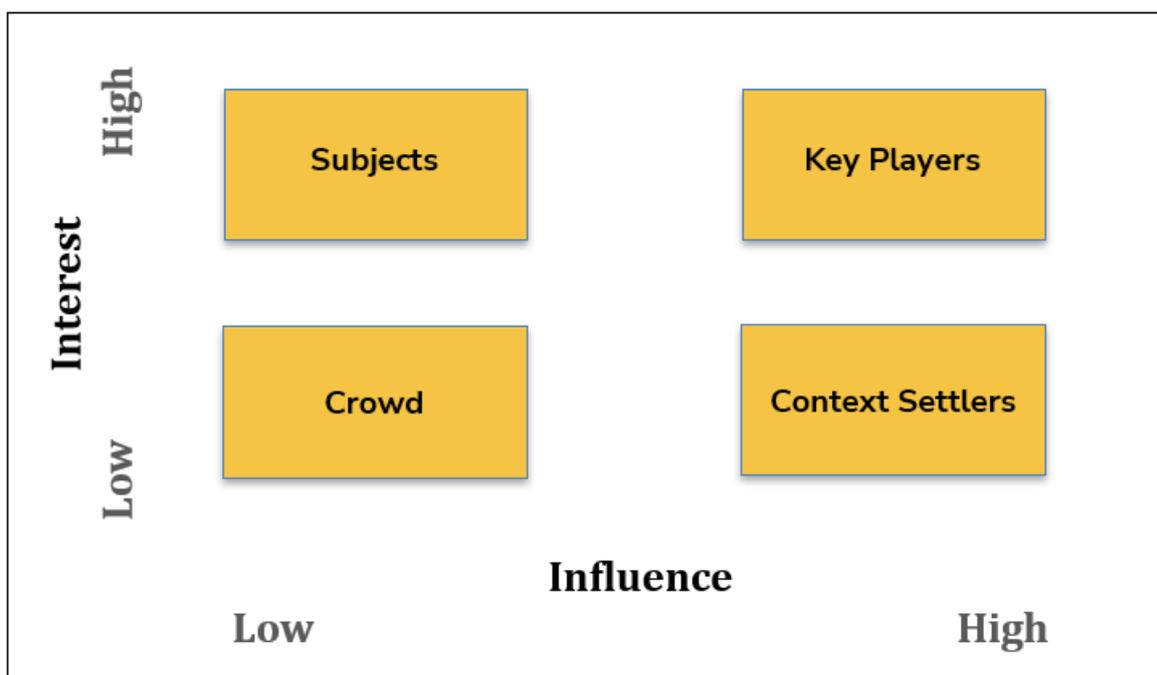
This typology provides a practical guide for determining engagement intensity and methods. In FRONTSH1P, stakeholders are organised by category into separate Excel tabs, ensuring region-specific yet methodologically consistent engagement planning.

Stakeholder Characterisation and Contributions

Each stakeholder profile includes:

- **Strengths and weaknesses**: Internal capacities and limitations
- **Role in the project**: Leadership, technical, financial, or advocacy roles
- **Expected contributions**: e.g., data provision, policy support, pilot testing
- **Resources/tools**: e.g., platforms, materials, or methodologies
- **Territorial scope**: Local, regional, or EU-level involvement
- **Responsible entity**: The partner in charge of coordinating engagement

These fields enable integrated analysis and inform the design of responsive and targeted engagement activities.

Engagement planning and actions

Engagement is translated into practice through structured regional Action Plans. These are built around the stakeholder typologies described above and incorporate logistical and strategic planning dimensions that ensure effectiveness and accountability.

Design and Implementation of Action Plans
Action Plans include:

- **Engagement methods**: Co-creation workshops, focus groups, bilateral consultations, webinars, and public events
- **Timeframes and frequency**: Scheduled engagements aligned with project phases and milestones (e.g., CSS testing, replication strategy design)
- **Assigned responsibility**: Clear designation of responsible entities within the consortium
- **Territorial scope**: Defined implementation area for each stakeholder
- **Expected results and indicators**: Anticipated outcomes and success measures
- **Financing**: Whether engagement is supported through project resources or external funds

This framework allows partners to plan and monitor engagements in line with both regional and project-level goals.

Integration into Project Activities
Stakeholder actions are directly embedded into key FRONTSH1P activities:

- **Co-design and validation of CSSs**
- **Feedback and content design for the e-learning platform**

- **Policy development and tool testing**
- **Cluster coordination and regional circular economy planning**

Engagement is monitored through structured feedback instruments and regional coordination mechanisms. Feedback loops are designed to collect stakeholder insights and adapt strategies accordingly.

Integration with project activities

Stakeholder engagement underpins and interlinks several work packages and deliverables across FRONTSH1P:

- **WP2**: Stakeholders shape the development and assessment of CSSs.
- **WP8**: Stakeholder inputs validate replication approaches and support regional uptake.
- **WP9**: Engagement supports the development of the e-learning platform and dissemination strategy, including the final European event.

Beyond internal integration, the engagement strategy reinforces CCRI synergies by:

- **Connecting with Pilot and Fellow cities** through events and benchmarking
- **Contributing to EU knowledge assets**, particularly D8.6
- **Facilitating interoperability with other initiatives**, including sister projects and thematic platforms such as ACR+, ECESP, and ICLEI Circulars

This ensures that stakeholder engagement contributes to systemic transformation not only at the local level, but also across the European circular economy landscape.

Results by region

Lodzkie (Poland)

The Lodzkie serves as the pilot region for the FRONTSH1P project, hosting the initial implementation of all four Circular Systemic Solutions. The region is characterised by a strong industrial base and an emerging interest in sustainable transition pathways. Stakeholder engagement in Lodzkie focused on aligning public authorities, industrial actors, and research institutions to co-develop circular strategies that address regional challenges in waste management, biomass valorisation, and water reuse.

Região do Norte (Portugal)

The Norte Region of Portugal participates in FRONTSH1P as one of the replication territories, focusing on adapting circular systemic solutions to its regional context. With a strong industrial and agro-food sector, as well as a growing interest in green public procurement

and circular value chains, the region presents both opportunities and challenges for replicating CSSs. Stakeholder engagement in Norte has prioritised institutional actors and local clusters, with a focus on integrating existing initiatives and mobilising regional planning authorities. Special attention has been given to identifying enabling policies and capacity-building needs through collaborative workshops and one-on-one dialogues.

The stakeholder table, listing some of the stakeholders engaged in Região do Norte, is available in Annex 1. More detailed information about stakeholders and supply value chains analysis is available in the Portugal Regional Roadmap: Norte Region.

Stereá Elláda (Greece)

Central Greece engages in the FRONTSH1P project as a replication region with a focus on circular business models in the agro-industrial and waste sectors. The region is marked by high potential for innovation but faces challenges related to policy integration and limited inter-sectoral coordination. Stakeholder engagement efforts have concentrated on SMEs, local public administrations, and innovation hubs, seeking to promote co-design of circular strategies and test digital tools for stakeholder interaction. Regional partners have tailored the TOOLBOX methodology to account for fragmented governance structures and to ensure inclusiveness across municipal levels.

The stakeholder table, listing some of the stakeholders engaged in Stereá Elláda, is available in Annex 1. More detailed information about stakeholders mapping in terms of location, as well as in interest in the value chains, is included in the Greek Regional Roadmap: Central Region and Lavadia Municipality.

Campania (Italy)

In Campania, stakeholder engagement within FRONTSH1P focuses on replicating CSSs with particular emphasis on food systems and bio-based value chains. The region combines dynamic agricultural networks with environmental management challenges, offering a fertile ground for circular experimentation. Engagement activities have included regional development agencies, producer cooperatives, and civic platforms, reflecting Campania's tradition of territorial innovation. The TOOLBOX structure was used to map formal and informal networks, enabling the identification of strategic actors for piloting replication approaches in rural-urban interfaces.

The stakeholder table, listing some of the stakeholders engaged in Campania, is available in Annex 1. More detailed information about stakeholders and supply value chains analysis is available in the Italian Regional Roadmap: Campania Region and GAL Irpinia.

Friesland Region (Netherlands)

Friesland, a frontrunner in regional circular economy planning, engages in FRONTSH1P to expand and validate CSSs with a specific focus on plastics and rubber value chains, in line with existing regional strategies on circular materials. The region is known for its systemic approaches to circularity and has developed a mature ecosystem around circular plastics, involving public institutions, clusters, knowledge centres, and companies. Stakeholder engagement here has drawn upon mature networks involving public institutions, cooperatives, and regional platforms, with a focus on cross-sector collaboration. The mapping and engagement processes have aimed to bridge strategic actors with grassroots initiatives, ensuring that replication efforts are inclusive and grounded in territorial knowledge.

The stakeholder table, listing some of the stakeholders engaged in Friesland, is available in Annex 1. More detailed information is included in the [Netherlands Regional Roadmap: Friesland Province](#).

Cross-regional comparison

The stakeholder engagement processes across the five regions follow a common conceptual framework aligned with the CCRI methodology and the stakeholder mapping approach based on influence and interest. However, detailed stakeholder profiles and engagement parameters (e.g., strengths, weaknesses, specific engagement methods) are not fully documented in Annex I. Consequently, the comparison below focuses on differences in engagement priorities and stakeholder groups, as described in the regional narratives.

While this common framework provides methodological coherence, the regional analyses reveal important differences in how stakeholder engagement is prioritised and implemented across territories.

A first distinguishing element concerns the different roles of the pilot and replication regions within the project structure. In the pilot region of Lodzkie, stakeholder engagement is closely linked to the initial development and implementation of the Circular Systemic Solutions (CSSs). This requires strong coordination between public authorities, industrial actors, and research institutions in order to support the design and testing of circular strategies. In contrast, the replication regions focus primarily on adapting and validating the solutions developed in the pilot context. As a result, stakeholder engagement in these regions is more oriented towards contextualising existing approaches within local governance systems, economic structures, and sectoral priorities.

Another difference emerges in the types of stakeholders that are prioritised within regional engagement processes. In some regions, engagement focuses primarily on institutional actors and governance structures. For example, in the Portuguese region of Norte, particular attention is given to regional authorities and institutional stakeholders in order to facilitate policy alignment and integration with existing regional strategies. In other regions, stakeholder engagement is more strongly linked to economic actors and innovation ecosystems. In Stereá Elláda, engagement emphasises SMEs, local administrations, and innovation hubs, reflecting the importance of entrepreneurial actors in supporting circular business models in agro-industrial sectors. In Campania, engagement involves development agencies, producer cooperatives, and civic platforms, illustrating the relevance of territorial networks and agricultural value chains in shaping circular initiatives.

The regional comparison also highlights differences in the maturity of existing stakeholder ecosystems related to the circular economy. In some territories, engagement activities focus primarily on mobilising stakeholders and strengthening cooperation among actors that were not previously connected through circular economy initiatives. In others, stakeholder engagement builds on already established networks and policy frameworks. The Friesland region represents a case where existing circular economy strategies and collaborative platforms provide a strong foundation for engagement activities. In this context, stakeholder interaction focuses less on network creation and more on strengthening collaboration across sectors and integrating existing initiatives into the project's objectives.

Sectoral orientation also plays an important role in shaping stakeholder engagement across the regions. The engagement processes tend to reflect the dominant economic activities and resource systems within each territory. Industrial transformation and resource management are central considerations in Lodzkie, while agro-food and bio-based value chains play a prominent role in Campania and Norte. In Stereá Elláda, engagement is linked to agro-industrial activities and waste management, whereas in Friesland it is connected to water management and agro-ecological systems. This alignment between stakeholder engagement and regional economic structures illustrates the place-based nature of the project's approach to circular transition.

Overall, the comparative analysis indicates that stakeholder engagement within the project is inherently context-dependent. While the CCRI methodological framework ensures a common structure for stakeholder mapping and participation, the practical implementation of engagement activities varies according to regional governance arrangements, economic specialisations, and the maturity of existing circular economy ecosystems. These differences highlight the importance of adapting stakeholder engagement strategies to territorial conditions in order to support the effective development and replication of Circular Systemic Solutions across diverse regional contexts.

FRONTSH1P e-Learning Platform

Introduction

The FRONTSH1P e-Learning Platform has been developed as a core component of the project's broader strategy to promote sustainable, circular economy practices across European regions. The platform serves as a lifelong learning tool aimed at building capacity, empowering citizens, and facilitating knowledge transfer around circular economy principles and their practical applications.

The primary goal of the e-learning platform is to raise awareness and foster understanding of the circular economy, helping citizens and organisations transition from linear, wasteful models to regenerative, resource-efficient systems. It translates the technical actions and innovations of the FRONTSH1P project into accessible learning modules, ensuring that the project's impact extends beyond the immediate consortium to benefit a wide range of learners across Europe.

Aligned with FRONTSH1P's vision, the platform aims to support 30,000 e-learning activities by European citizens. This ambitious target reflects the project's commitment to scaling impact, promoting social inclusion, and enabling a just transition towards circularity. Special attention is given to vulnerable groups, including long-term unemployed, elderly populations, and low-skilled workers; And women—who often face barriers to accessing training opportunities in emerging green sectors.

Design and Methodology

The design process was guided by a **co-creation** philosophy, where the input of consortium partners was critical in shaping the platform's content, structure, and functionalities.

Technical leadership for the platform's development was provided by TUL (Lodz University of Technology), who selected Moodle as the Learning Management System (LMS) due to its flexibility, scalability, and proven track record in e-learning environments. The choice of Moodle was guided by several factors:

- Its proven scalability and flexibility for hosting a wide range of courses and learning formats.
- Its **modular architecture**, which allows the integration of quizzes, multimedia content, assessments, and certificates within a single learning environment.
- Its ability to support **multilingual content**, a key requirement for reaching European learners across diverse language backgrounds.

Conceptual and pedagogical support was offered by EURADA and other consortium partners, ensuring that the learning materials aligned with best practices in adult learning, capacity building, and the principles of the circular economy.

This collaborative approach was facilitated through several key activities:

1) A **World Café discussion** during the General Assembly in Leeuwarden served as a pivotal moment for gathering partner feedback. This interactive session helped identify the types of content partners could contribute, and potential topics they wished to see covered.

2) An **online consultation form** was launched to collect information from partners about available learning materials, including content developed in previous European projects or within their organisations. This allowed the platform to incorporate diverse, high-quality resources while respecting IPR considerations.

3) **An Introductory Workshop** was held in January 2024, during which the scope of the learning platform and the upcoming steps were clarified for all partners. TUL presented the platform's functionalities in detail, offering a step-by-step walkthrough of the main features. A recording of the demonstration was subsequently made available to ensure that partners could revisit the instructions at their convenience and share them within their organisations.

4) **Useful materials,** such as Concept Note and Course Creation Instructions, were made available to guide partners in developing and uploading their content.

This collaborative framework ensured that the platform not only met the technical and pedagogical standards of a modern e-learning system but also reflected the shared knowledge and expertise of the FRONTSH1P consortium. The co-creation process also surfaced several challenges:

- **Audience Engagement**: Competing with established, large-scale e-learning platforms demands high-quality, engaging content. To address this, the FRONTSH1P team committed to **continuous improvement** through **user feedback** and iterative updates.

- **Content Relevance**: Ensuring the learning materials resonate with diverse audiences necessitated tailoring content to different stakeholder groups, balancing depth and accessibility.

To achieve its ambitious goal of supporting 30,000 e-learning activities across Europe, the platform was designed with a strong focus on accessibility, inclusivity, and engagement. Some of the content is already available in Polish and English, with the potential to expand into other European languages to further broaden its reach. Accessibility has been a key design principle in order to ensure compatibility with mobile devices, reflecting the growing need for flexible, on-the-go learning. To enhance user engagement and motivation, the platform also integrates gamification elements such as quizzes, interactive learning activities, and progress tracking. These design choices reflect the project's commitment to reaching a diverse audience, presenting content of different degree of technicalities according to the needs of different user groups, i.e. students, businesses, policy-makers, etc.

The platform's content is primarily built on the actions of the FRONTSH1P project, ensuring that the platform acts as a dissemination and knowledge transfer tool for the project's results.

Structure and Content

The content of the FRONTSH1P e-Learning Platform is structured around a comprehensive curriculum designed to provide learners with an understanding of the circular economy and its practical applications across sectors and stakeholder groups. The platform's modular approach allows users to explore specific topics in a self-paced, flexible manner, making it accessible to learners with varying levels of prior knowledge and different learning objectives.

The platform offers a series of short courses, each designed to be concise and focused, with a recommended learning time of under 30 minutes per module. This micro-learning approach reflects best practices in adult education, ensuring that learners can engage with content in manageable, focused segments that fit into their busy lives.
Each course includes both multimedia learning materials, such as slides and videos, to cater to different learning styles, and interactive assessments, including quizzes, assignments, and case studies, to reinforce learning outcomes and encourage active engagement.

This design enables learners to build their knowledge progressively, moving from fundamental concepts to more advanced topics, while also fostering practical understanding through real-world examples and case studies.

The content was originally structured into seven core modules, each intended to address a specific dimension of the circular economy. This modular structure was designed based on the thematic priorities of the FRONTSH1P project and the domain expertise of the consortium partners. The planned modules included:

- Course 1: Introduction to the Circular Economy
- Course 2: Circular Economy Principles
- Course 3: Circular Business Models
- Course 4: Circular Systemic Solutions
- Course 5: Governance for Circularity
- Course 6: Circular Finance
- Course 7: Challenges and Solutions

By structuring the content in this way, the platform aimed to address the diverse learning needs of its target audiences, ensuring that users can gain both theoretical knowledge and practical insights to support the transition to a circular economy.

Results and Impact

The initial structure envisioned the development of seven comprehensive modules, each addressing a critical dimension of the circular economy—such as Circular Economy Principles, Circular Business Models, Governance for Circularity, and Circular Finance—reflecting both the thematic priorities of the FRONTSH1P project and the expertise of the consortium partners. However, this original plan proved to be overly ambitious, as it did not sufficiently account for the substantial workload that partners were already undertaking within their respective work packages. In response to these practical constraints, the content structure was revised to ensure both feasibility and quality. The final deliverable comprises four consolidated chapters, encompassing a total of 16 courses. This streamlined approach preserves the core thematic intent of the initial framework while aligning more effectively with the available resources and capacities across the consortium.
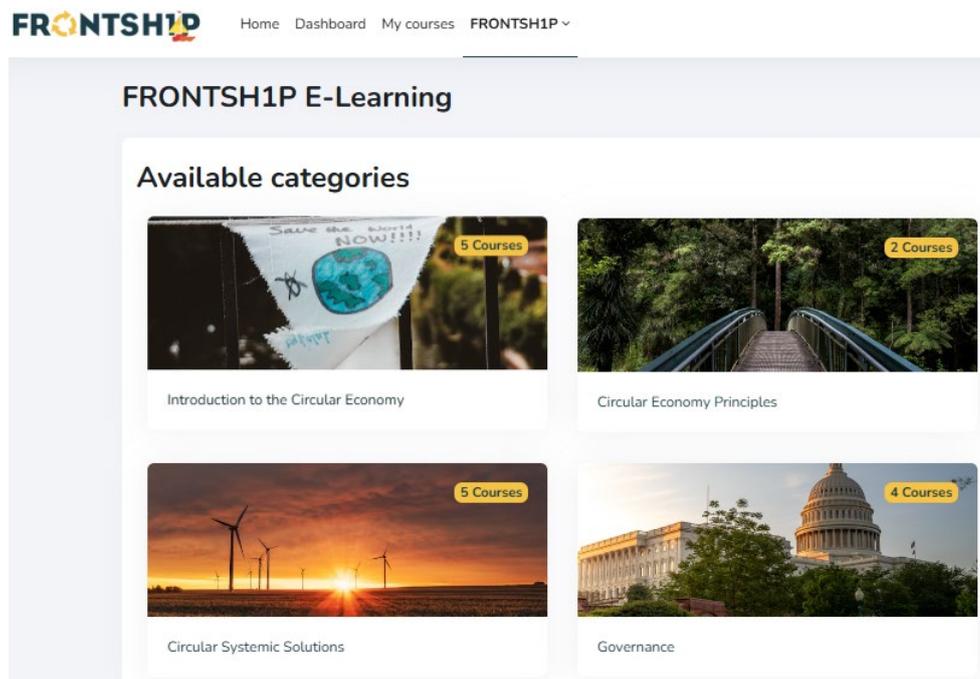
The chapters and their corresponding course topics are as follows:

1. **Introduction to Circular Economy**

   - Circular economy vs. linear economy and their environmental impacts

   - Key principles: Reduce, Reuse, Repair, Recycle, and Rethink

   - Importance and benefits of the circular economy

   - Case studies of circular economy initiatives

   - Biotechnology and circular (bio)technology in everyday life

2. **Circular Economy Principles**

  - Global megatrends influencing the transition to circularity

3. **Circular Systemic Solutions**

  - Implementing the circular economy in practice

  - Local and regional dimensions, including waste management

  - Cross-sectoral demonstration projects

  - Multidimensional circular systemic solutions (CSSs)

  - Community-based innovation schemes

4. **Governance**

  - Policy and regulatory frameworks

  - Circular territorial clusters

  - Circular Economy Action Plans

  - Integration of circularity within organisational governance structures

Between the launch of the FRONTSH1P e-learning platform and May 2025, when data have been extracted by the competent partner, the platform has recorded active engagement from **63 unique users**. The **main course page** has been accessed **29,546 times**, indicating high visibility and interest in the course content. Furthermore, users have interacted directly with **individual course modules** a total of **2,298 times**, reflecting meaningful participation beyond simple page visits. Additionally, the **dashboard has been viewed 595 times**, showing that users are actively tracking their progress or accessing key navigation features. Overall, these figures demonstrate a decent user interaction and a positive level of engagement with the FRONTSH1P training environment.

Other Initiatives

The FRONTSH1P project has engaged with other EU projects and CCRI initiatives through a range of activities, including webinars, workshops, and conferences.

FRONTSH1P has actively shared its progress and results in those occasions often engaging audiences from diverse sectors—academia, industry, policymakers, and civil society. These interactions have involved:

- **Presenting project findings** (e.g., outcomes from demonstration actions like waste management, gasification, and system-level circularity solutions).
- Sharing insights on **barriers and solutions for circular economy implementation**, including challenges in financing, governance, and stakeholder engagement.
- Contributing to the **dissemination of circular economy knowledge** by offering case studies, success stories, and best practices emerging from the FRONTSH1P project.

By engaging with the Circular Cities and Regions Initiative (CCRI) and other European networks, FRONTSH1P has strengthened its strategic positioning within the European circular economy landscape. Through participation in dialogues, events, and collaborative actions, the project has demonstrated the replicability and scalability of its solutions across regions, contributing to the shared goal of systemic change. These interactions have also opened pathways for knowledge exchange, pilot replication, and joint dissemination by fostering relationships with municipalities, regional authorities, and other stakeholders within the CCRI ecosystem. In doing so, FRONTSH1P has positioned itself as a trusted contributor to pan-European discussions on the circular economy, particularly in areas such as regional circular strategies, industrial symbiosis, and citizen engagement, offering insights that are both practical and grounded in real-world demonstration actions.

The Loop Cluster

Nature and scope of the initiative

The LOOP Cluster is a strategic cooperation platform formed by four sister projects Agro2Circular, CIRCULAR FOAM, EcoeFISHent, and FRONTSH1P all funded under the Horizon 2020 Green Deal Call (topic GD3.2). These projects collectively represent 136 partners and more than €61 million in EU funding and are united by their shared mission to demonstrate systemic solutions for the territorial deployment of the circular economy across diverse European regions.

The cluster was initiated in May 2022, during the FRONTSH1P General Assembly in Genoa, as a bottom-up initiative driven by a shared recognition of the challenges and opportunities in circular economy implementation. Under the coordination of EURADA (FRONTSH1P's

Communication and Dissemination partner), the LOOP Cluster has since evolved into a space for deep collaboration, knowledge exchange, and joint action, anchored in a regular rhythm of meetings and joint events.

Fundamentally, the LOOP Cluster serves as a voluntary alliance among projects that responded to the same Green Deal topic, and which have been formally recognised as contributors to the CCRI. It embodies a common aspiration to go beyond project silos and enhance collective impact through:

- Regular coordination meetings (online and physical),
- Joint participation in EU-level events such as the EU Circular Week and EU Green Week,
- Development of a joint manifesto expressing shared lessons and policy messages.

The cluster is also a platform for exploring synergies on thematic areas such as replication, circular policy implementation, platform development, and dissemination.

By consolidating the efforts of these four projects, the LOOP Cluster aspires to catalyse systemic change, accelerate territorial circular transitions, and strengthen the policy voice of regional demonstrators at the European level.

Frontsh1p's role

FRONTSH1P has played a catalytic and facilitative role in the establishment and development of the LOOP Cluster. As the originating project of the initiative, FRONTSH1P initiated the proposal for cross-project collaboration, where it invited fellow projects funded under the same call to establish a voluntary cluster aimed at long-term coordination and joint policy positioning.

EURADA hosted and moderated the initial meetings and ensured continuity through structured agendas, shared documentation, and follow-up activities. FRONTSH1P also provided early thought leadership on the manifesto development process and served as a bridge to CCRI-related discussions, leveraging its internal expertise on stakeholder engagement and regional transitions.

In the internal structure of the LOOP Cluster, FRONTSH1P has:

- Contributed to shaping the shared thematic focus of the cluster (e.g., systemic replication, territorial policy uptake, circular business models),
- Represented the cluster in external conferences and dissemination events, such as "Loops – A Webinar Series on Horizon 2020" organised by the project partner Veltha (September 2024), and the final conference of Agro2Circular (March 2025), the CCRI 4th Coordination Workshop (June 2025)
- Participated in drafting the joint Letter of Intent and the LOOP Manifesto, offering insights from its own implementation and replication efforts.

Moreover, FRONTSH1P's operational and geographic diversity spanning five regions with different circular economy profiles has enriched the LOOP dialogue, bringing in lessons from varied territorial settings. Its structured stakeholder engagement approach and emphasis on policy integration have been shared with LOOP partners as replicable models.

In summary, FRONTSH1P's role in the LOOP Cluster combines coordination, content contribution, and external advocacy, reinforcing its broader commitment to cross-project synergy and systemic policy alignment.

Outputs and added value

The LOOP Cluster has produced a central collective output a joint manifesto that synthesises the shared insights, operational experiences, and strategic recommendations of the participating initiatives. This document serves both as a unifying declaration of purpose and as an instrument for policy engagement at the European level.

The manifesto articulates a common agenda around four key themes:

- Strengthening territorial governance for circular transitions,
- Fostering stakeholder capacity-building and engagement at local and regional scales,
- Enhancing interoperability and coordination across EU-funded initiatives,
- Advancing policy and funding mechanisms that support systemic circular innovation.

FRONTSH1P contributed significantly to shaping the content and structure of the manifesto. Drawing on its stakeholder engagement framework and multi-regional replication strategies, the project introduced concrete perspectives on governance models, digital learning tools, and context-sensitive replication processes. These contributions helped ensure the manifesto reflects grounded practice as well as strategic vision.

The LOOP Cluster joint manifesto is currently under development and remains subject to revision, as the four projects involved are concluding at different times and incorporating final outcomes into the document. However, a provisional version of the manifesto is provided in Annex II of this deliverable for reference.

The document has been positioned as a living statement, intended not only for internal alignment among the cluster members, but also as a tool for external advocacy. It has been showcased at high-level dissemination events (i.e. the Circularity Festival – CIRCULAB held in Parzęczew in June 2025) and is intended to influence ongoing dialogues within the CCRI and Horizon Europe platforms.

As a shared achievement, the LOOP Manifesto underscores the added value of structured inter-project collaboration and demonstrates how jointly developed knowledge can inform EU policy and amplify regional impact.

Added value and synergies

Beyond shared outputs, the LOOP Cluster has generated significant added value through its informal structure and focus on **practical cooperation over formal integration**. The cluster

enables the participating projects to **leverage complementarities** in technical focus, territorial scale, and stakeholder ecosystems without duplicating efforts or diluting individual project mandates.

One of the key strengths of the LOOP collaboration lies in its capacity to act as a **collective amplifier**. By aligning timelines, events, and communication efforts, the cluster has enhanced visibility not only for each project, but for the entire GD3.2 funding line. This joint presence has been particularly impactful in policy-related forums, where the cluster provides a coherent voice that represents a broad cross-section of regions, sectors, and implementation models.

The initiative has also fostered **peer-to-peer learning** among technical teams, including exchange on:

- Replication methodologies,
- Circular value chain modelling,
- Impact assessment approaches,
- Use of digital tools and platforms.

Such exchanges have helped refine practices within individual projects while creating informal knowledge spillovers.

Additionally, the LOOP framework has served as a testbed for multi-project governance coordination, offering early lessons on how Horizon-funded demonstrators can align strategically across administrative and thematic boundaries. This informal governance experience is especially valuable in view of future clustering ambitions under Horizon Europe and the European Mission on Climate-Neutral and Smart Cities.

In this sense, LOOP demonstrates that strategic clustering when grounded in shared goals, mutual respect, and voluntary collaboration can produce both immediate operational benefits and longer-term systemic impact.

Future pathways

As the constituent projects of the LOOP Cluster approach their respective completion phases, the groundwork laid through this collaboration offers a promising platform for sustained cooperation beyond the project lifecycle. Discussions among partners have already pointed toward maintaining the cluster as a thematic alliance, potentially under a new coordination framework aligned with future EU programmes or policy platforms.

Several forward-looking opportunities are being considered:

- Joint dissemination of final project outcomes through cluster-wide channels and thematic briefings for EU institutions.
- Development of a permanent knowledge repository, allowing stakeholders and policy actors to access tools, results, and lessons from all four projects in one consolidated space.

- Continued interaction with CCRI coordination bodies and EU networks, contributing policy-relevant insights from a multi-project, multi-region perspective.
- Exploration of follow-up proposals or joint participation in new Horizon Europe calls, building on the shared thematic ground and collaborative experience.

The LOOP Cluster's open, agile approach provides a scalable model for post-project cooperation that avoids institutional rigidity while enabling targeted collective action. As such, its continuation could serve as a blueprint for future clustering efforts, particularly in complex policy domains such as the circular economy, where systemic change depends on sustained collaboration across projects, regions, and stakeholder groups.

Participation in CCRI-related events

Throughout the course of the FRONTSH1P project, the consortium actively participated in key events organised within the framework of the CCRI. These events provided valuable opportunities to showcase the project's systemic solutions, share insights with other CCRI-linked initiatives, and contribute to broader policy discussions on the transition to a circular economy.

One of the early contributions took place during the Circular Economy Stakeholder Conference held online in March 2022, where FRONTSH1P was present through a dedicated virtual booth. This format allowed interaction with stakeholders from across Europe and helped raise awareness of the project's territorial focus and engagement strategy.

In October and November 2023, FRONTSH1P was invited to participate in the 1st CCRI General Conference and the 1st and 2nd CCRI Coordination and Support Workshops, both held in Brussels. These high-level events gathered policy makers, researchers, and regional authorities to explore the operationalisation of circular systemic strategies. FRONTSH1P representatives contributed to the dialogue, particularly by sharing experiences from the pilot region of Lodzkie and the replication contexts.

In the same period, the project took part in a panel session during the CCRI side event at the ECOMONDO Fair in Rimini and hosted a dedicated stand, reinforcing the project's visibility within the wider European green innovation ecosystem. Most recently, in April 2024, FRONTSH1P was featured at the CCRI Accelerator Session during the World Circular Economy Forum (WCEF) in Brussels, where it contributed to the matchmaking between stakeholders and solutions, affirming its role as a CCRI-linked demonstrator.

Further consolidating its role within the CCRI community, FRONTSH1P was spotlighted in an official CCRI stakeholder interview titled *"Meet the CCRI stakeholders: FRONTSH1P project"*, which presented the project's systemic approach to circularity, its territorial dimension, and the stakeholder engagement strategy. The interview is available at the CCRI website.

In November 2024, FRONTSH1P participated in the 3rd CCRI Coordination and Support Workshop, continuing its contribution to the CCRI learning environment and collaborative practice sharing. This event focused on deepening the methodological exchange between pilot projects and facilitating the co-creation of practical solutions to common challenges encountered during implementation.

In June 2025, FRONTSH1P further strengthened its engagement by attending two major events. The first was the EU Green Week Partner Event titled *"Stakeholder Event: Circular Solutions in Action"*, held on 5 June 2025, where FRONTSH1P presented its hands-on experiences with circular economy deployment and connected with stakeholders across Europe. More information about the event is available. The second was the 4th CCRI Workshop organised by Ecorys, which brought together CCRI actors to assess ongoing implementation, discuss success factors, and review barriers to scaling. FRONTSH1P

participated actively in these discussions, providing insights on stakeholder engagement and replicability.

These sustained participations reflect FRONTSH1P's growing recognition as a reference demonstrator within the CCRI ecosystem and its commitment to fostering interregional collaboration and policy integration around systemic circular solutions.

Annex I

Annex I provides a regional overview of the stakeholders identified through the FRONTSH1P stakeholder engagement process. The tables presented in this annex should be read as a supporting and partial presentation of the stakeholder mapping exercise, rather than as a complete repository of all stakeholder information generated throughout the project.

As initially foreseen, stakeholder engagement was structured through a dedicated Stakeholder Engagement Plan conceived as a living document, to be continuously updated across the project and organised for each region into mapping, analysis and action sections. This document explicitly framed stakeholder mapping as an ongoing exercise and not as a one-off static output.

During implementation, however, the consortium decided to align this work with the stakeholder mapping approach already being developed under WP8 in the framework of the Regional Circularity Booster Roadmaps. In practice, this meant that the work initially envisaged under WP9 was integrated into the already ongoing WP8 process using Toolbox 5, in order to avoid duplication of efforts and ensure coherence between stakeholder mapping, regional roadmap development, and engagement planning.

This adjustment did not imply a change in the overall analytical logic. The methodology remained consistent with the approach described in the deliverable, notably in terms of stakeholder identification, categorisation, and influence–interest analysis, in line with the CCRI-inspired framework. However, the operational collection and management of stakeholder information became embedded in the WP8 roadmap process, which served as the main working basis for regional stakeholder analysis. As a consequence, Annex I does not contain the same level of detail for all regions. In several cases, some entries remain incomplete or marked as *N/A*. This is because not all regional partners could provide the full stakeholder data for inclusion in a public annex, in particular due to GDPR-related considerations concerning the treatment, disclosure, or publication of stakeholder information.

The annex should therefore be understood as a non-exhaustive extract of a broader stakeholder engagement process. More detailed information can be found in the Regions' Roadmaps.

Região do Norte Stakeholders Draft List

Name	Sector	Influence	Contribution: Strengthen	Contribution: Weakness	Engagement Method
AGI	C	partner - implementing party	production/supplier sector,already incorporating recycled prime matter, interested in implementing CE solutions	technical, legal and regulatory, quality and price of recycled materials	workshop questionnaire
Aguas de Monchique	C	partner - implementing party	production sector (water) highly interested in plastic packaging waste and solutions	bottled water packaging circular solutions	workshop questionnaire
Ambitamega Ltd.	C	leader	transformation sector, recycling materials	market access, cross-sectoral offer and demand matching platform	workshop questionnaire
Associacao PortugalFoods	S	partner - implementing party	market knowledge, community influence	knowledge implementation, connecting value chain stakeholders	workshop participation
Associacao SmartWaste Portugal	S	partner - implementing party	market knowledge, community influence	knowledge implementation, connecting value chain stakeholders	workshop participation
Bicafe	C	partner - implementing party	production sector (coffee) highly interested in plastic packaging waste and solutions	coffee capsules packaging circular solutions	workshop participation
CCDR-Norte	G	coordinator	regional authority, stakeholder engagement	auditing, legal and official data monitoring	workshop participation
CECOLAB/ESB-UCP	A	partner - implementing party	knowledge acquisition and transfer, evidence-based info	knowledge implementation, connecting value chain stakeholders	seminar participation and interest
CEINOP SA	C	leader	transformation sector, recycling materials	market access, legal and regulatory	workshop questionnaire

CENTI	A	partner - implementing party	knowledge acquisition and transfer, evidence-based info	knowledge implementation, connecting value chain stakeholders	workshop participation
Colab4Food	A	partner - implementing party	ring testing, technological collaboration, innovation	knowledge implementation, stakeholder engagement	workshop participation
Decorgel	C	partner - implementing party	innovation food products	product valuation and circularity and supplier	workshop participation
Ecoiberia, reciclados ibericos SA	C	leader	transformation sector, recycling materials,	limited cycle of PET transformation, legal framework for recycled materials, double tributation (acquisiton and disposal), high financial burden, procedures awareness	workshop questionnaire
ESS Ltd (SME)	C	partner - implementing party	highly interested, heterogeneous company, involvement of fishery industry solutions (microplastics)	financing, mixed purges (e.g. PETs)	workshop questionnaire
Groupo Primor	C	partner - implementing party	raw materials production and transformation and supplier	packaging circular solutions	workshop participation
INEGI	A	partner - implementing party	knowledge acquisition and transfer, evidence-based info	knowledge implementation, official data quantification	workshop questionnaire
INL -- International Iberian Nanotechnology Laboratory	A	leader	knowledge acquisition and transfer, evidence-based info	knowledge implementation, connecting value chain stakeholders	workshop participation
Lipor	C	leader	waste management operator, market influence, low risk, high demand	incineration focus, waste storage and management	workshop questionnaire
MC Sonae	C	leader	circularity solutions implemented in a large scale, product commercialisation	circular product valorisation and commercialisation, scale up new solutions	workshop participation

MORE CoLAB Braganca	A	coordinator	knowledge acquisition and transfer, evidence-based info	knowledge implementation, connecting value chain stakeholders	seminar and workshop participation
MoreCOLAB	A	partner - implementing party	ring testing, technological collaboration, innovation	knowledge implementation, stakeholder engagement	workshop participation
Muroplas - Industria de Plastico SA	C	partner - implementing party	production/supplier sector, health sector niche	quality materials integrity, material utilisation cycle	workshop questionnaire
Primor Charcutaria SA	C	partner - implementing party	raw materials production and transformation and supplier	circular solutions for industry	seminar participation and interest
TECMEAT	C	partner - implementing party	raw materials production and transformation and supplier	technical, legal and regulatory, quality and price of recycled materials	
Veolia Portugal	C	partner - implementing party	waste management operator, market influence, low risk, high demand	incineration focus, waste storage and management	workshop participation
VerdePeculiar Ltd	C	leader	transformation sector, recycling materials	market access, legal and regulatory	workshop questionnaire
WEDOTECH	A	partner - implementing party	knowledge acquisition and transfer, evidence-based info	knowledge implementation, official data quantification	workshop participation

Stereá Elláda Stakeholders Draft List

Name	Sector	Influence	Contribution: Strengthen	Contribution: Weakness	Engagement Method
XYLOMET S.A.I.C	C	partner - implementing party	Variety in furniture manufacturing products Operates in the furniture and wood trade sector. Presence in the region with potential exposure to wood-related value chains.	Limited or no prior engagement in environmental or circular economy initiatives. Focused solely on traditional commercial operations; low awareness of sustainability opportunities. No indication of openness to participate in technical dialogue or knowledge sharing.	N/A
Wood processing industry Vassilios Pilatos&Son	C	partner - implementing party	Local actor in wood processing with existing operational infrastructure. Familiarity with supply and transformation of wood materials.	Traditional business model, not oriented towards innovation or circular principles. No prior participation in sustainability or European-level projects. Unresponsive or passive during initial outreach efforts.	No structured engagement – contact attempted without feedback.
EY TREFO AVEE	C	partner - implementing party	Manufacturer of animal feed with established facilities and distribution in Central Greece. Familiarity with raw material sourcing from the agri-food sector.	Low awareness of circular economy frameworks and limited interest in environmental innovation. No history of engagement in EU or public sustainability initiatives. Production focus leaves little room for broader collaboration or adaptation.	No structured dialogue – general information was shared without follow-up.

DRIVAS (Farm Drivas)	C	partner - implementing party	Regional actor in livestock and feed supply chain. Operates in a sector directly linked to the food/feed resource mission.	No history of involvement in research or environmental innovation projects. Demonstrated minimal engagement and limited availability during initial contact attempts. Focused strictly on core production with no visible inclination toward process improvements or by-product valorisation.	Unsuccessful outreach – no response or feedback received.
Agricultural Cooperative of Lamia (L' ami)	C	partner - implementing party	Established regional actor in dairy production and processing. Longstanding presence and trust in the local agricultural community. Initial openness to explore sustainable solutions, particularly regarding organic residues.	Limited prior involvement in EU-funded or research-driven circular economy initiatives. Limited in-house R&D or innovation personnel.	Introductory meetings held at the Regional offices. Follow-up discussions planned through local stakeholder engagement sessions.
KOLLIMENOS WOOD	C	partner - implementing party	Established presence in the wood processing sector of Central Greece. Handles diverse wood inputs (logs, planks, pallets), with potential for residue valorization. Demonstrated interest in participating in initiatives that promote more efficient resource use.	Limited formal experience with circular economy projects or EU-funded initiatives. Business model remains primarily linear; waste streams currently underutilized.	One-on-one meetings held at Regional offices Planned invitation to technical information session on CSS1

ISOSTEVIA MON.IKE	C	partner - implementing party	Active in the production and packaging of stevia-based natural sweeteners. Export-oriented and quality-certified, familiar with sustainability standards. Operates with a vertically integrated supply chain, which offers flexibility for piloting resource management actions.	Limited prior exposure to circular economy frameworks in formal EU project settings. High operational focus on product quality and exports may constrain capacity for side-project participation.	Introductory communication via the Region Follow-up planned through regional workshops and technical meetings in 2025
Stevia Hellas	C	partner - implementing party	Pioneer company in Greece in the cultivation and processing of stevia. Strong ties with producers and cooperatives across Central Greece. Demonstrated entrepreneurial mindset and experience with international markets.	Tends to operate independently with limited prior involvement in collaborative sustainability initiatives. Internal reluctance to share production data or practices openly due to competitiveness concerns.	Exploratory discussions initiated by the Region. Potential invitation to targeted meetings or technical info sessions.
Taglis S.A.	C	partner - implementing party	Well-established wood processing company located in Boeotia. Possesses industrial-scale capacity, with significant quantities of wood residues potentially available. Technically relevant to the objectives of CSS1.	Currently operates within a conventional business model, without evident commitment to circular principles. No participation in collaborative innovation projects to date. Difficult to engage meaningfully without a tailored approach and solid technical support material.	Not yet implemented – future engagement may include customized meetings and technical briefings.

Campania Stakeholders Draft List

Name	Sector	Influence	Contribution: Strengthen	Contribution: Weakness	Engagement Method
Alto Calore Servizi S.p.A.	C	partner - implementing party	N/A	N/A	N/A
Federazione Provinciale Coltivatori Diretti di Avellino	S	partner - implementing party	N/A	N/A	N/A
C.I.A. Confederazione Italiana Agricoltori di Avellino	S	partner - implementing party	N/A	N/A	N/A
Città dell'Alta Irpinia (Strategia Nazionale Aree Interne) Comune Capofila pro-tempore	G	partner - implementing party	N/A	N/A	N/A
Agritech	A	partner - implementing party	N/A	N/A	N/A
Italian National Research Council | CNR · Institute for Composite and Biomedical Materials IMCB Istituto per i Polimeri, Compositi e Biomateriali (IPCB) CNR	A	partner - implementing party	N/A	N/A	N/A

CREA-Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria Olivicoltura, frutticoltura ed agrumicoltura - OFA Via Torrino 2 -81100 Caserta	A	partner - implementing party	N/A	N/A	N/A
Task Force di Ateneo (TFdA) in BioEconomia Circolare (BEC) dell'università degli studi di Napoli Federico II	A	partner - implementing party	N/A	N/A	N/A
Dipartimento Chimica e Biologia A. Zambelli Università degli Studi di Salerno	A	partner - implementing party	N/A	N/A	N/A
Phy4srls SpinOff del 12	C	partner - implementing party	N/A	N/A	N/A
Nature Based Future Center	A	partner - implementing party	N/A	N/A	N/A
Ecoresolution	C	partner - implementing party	N/A	N/A	N/A
Centro Diagnostico Baronia	A	partner - implementing party	N/A	N/A	N/A

Biodistretto d'Irpinia	S	partner - implementing party	N/A	N/A	N/A
Consorzio di Bonifica dell'Ufita	G	partner - implementing party	N/A	N/A	N/A
Dipartimento di Agraria dell'Università degli Studi di Napoli Federico II. Polo Enologico Abellinum	A	partner - implementing party	N/A	N/A	N/A
Dip Chimica e Biologia Università degli Studi di Salerno	A	partner - implementing party	N/A	N/A	N/A
Phy4srls SpinOff	C	partner - implementing party	N/A	N/A	N/A
CDB srl	C	partner - implementing party	N/A	N/A	N/A
Agronomo G***** D********	C	partner - implementing party	N/A	N/A	N/A
Agronomo F***** R*********	C	partner - implementing party	N/A	N/A	N/A
Agronomo M*** M*********	C	partner - implementing party	N/A	N/A	N/A
Agronomo M**** L********	C	partner - implementing party	N/A	N/A	N/A
Agronomo C**** P******	C	partner - implementing party	N/A	N/A	N/A
Agronomo A***** D* S*******	C	partner - implementing party	N/A	N/A	N/A

Agronomo G****** S********	C	partner - implementing party	N/A	N/A	N/A
Agronomo C**** M*****	C	partner - implementing party	N/A	N/A	N/A
Agronomo M*** L****	C	partner - implementing party	N/A	N/A	N/A
Agronomo F***** C*************	C	partner - implementing party	N/A	N/A	N/A
Agronomo N**** W*****	C	partner - implementing party	N/A	N/A	N/A
Polaris srl	C	partner - implementing party	N/A	N/A	N/A
Agronomo O*** D******	C	partner - implementing party	N/A	N/A	N/A
Agronomo D*** M*****	C	partner - implementing party	N/A	N/A	N/A
Agronomo D** L*** G*******	C	partner - implementing party	N/A	N/A	N/A
Agronomo G********* C******	C	partner - implementing party	N/A	N/A	N/A
Agronomo E*** T******	C	partner - implementing party	N/A	N/A	N/A
Agronomo D**** D*********	C	partner - implementing party	N/A	N/A	N/A
Agronomo G**** C*********	C	partner - implementing party	N/A	N/A	N/A
Agronomo R*** D***	C	partner - implementing party	N/A	N/A	N/A

Agronomo P******** M***********	C	partner - implementing party	N/A	N/A	N/A
Azienda Agricola L* R**** F********	C	partner - implementing party	N/A	N/A	N/A
Oleificio San Comaio	C	partner - implementing party	N/A	N/A	N/A
Azienda Agricola R***** D***	C	partner - implementing party	N/A	N/A	N/A
Oleificio Locoil	C	partner - implementing party	N/A	N/A	N/A
Oleificio M******** A****** e Figli	C	partner - implementing party	N/A	N/A	N/A
AIPO Soc Coop a r.l.	C	partner - implementing party	N/A	N/A	N/A
Oleificio T*** Srl	C	partner - implementing party	N/A	N/A	N/A
Olieficio Fam Sas	C	partner - implementing party	N/A	N/A	N/A
Frantoio C******	C	partner - implementing party	N/A	N/A	N/A

Friesland Stakeholders Draft List

Name	Sector	Influence	Contribution: Strengthen	Contribution: Weakness	Engagement Method
Content Gordijnatelier Dokkum BV	C	N/A	N/A	N/A	N/A
De Vries Sails Makkum B.V.	C	N/A	N/A	N/A	N/A
Sun Screen Zonwering B.V.	C	N/A	N/A	N/A	N/A
Zeilmakerij De Vries Maritiem B.V.	C	N/A	N/A	N/A	N/A
Fibremax B.V.	C	N/A	N/A	N/A	N/A
Smartrigging B.V.	C	N/A	N/A	N/A	N/A
Opnieuw Vloeren	C	N/A	N/A	N/A	N/A
Animat Nederland B.V.	C	N/A	N/A	N/A	N/A
IKO B.V.	C	N/A	N/A	N/A	N/A
FBS Retread B.V.	C	N/A	N/A	N/A	N/A
Ferucom B.V.	C	N/A	N/A	N/A	N/A
Fiber-Line International B.V.	C	N/A	N/A	N/A	N/A
Kok Polyesterbouw B.V.	C	N/A	N/A	N/A	N/A
Paul Dijkstra Composites B.V.	C	N/A	N/A	N/A	N/A

Wolvega Panelen B.V.	C	N/A	N/A	N/A	N/A
FWD Composite Structures B.V.	C	N/A	N/A	N/A	N/A
ASV Composites Holding B.V.	C	N/A	N/A	N/A	N/A
Sloepmakerij B.V.	C	N/A	N/A	N/A	N/A
Jachtwerf Heeg B.V.	C	N/A	N/A	N/A	N/A
Wajer Yachts B.V.	C	N/A	N/A	N/A	N/A
K.K.F.H B.V.	C	N/A	N/A	N/A	N/A
Reniko Nederland B.V.	C	N/A	N/A	N/A	N/A
VDB Kunststof Kozijnen B.V.	C	N/A	N/A	N/A	N/A
De Lange International B.V.	C	N/A	N/A	N/A	N/A
PP Global Holdings B.V.	C	N/A	N/A	N/A	N/A
Heiwo Coating B.V.	C	N/A	N/A	N/A	N/A
Rotocoat Wolvega B.V.	C	N/A	N/A	N/A	N/A
Trivium Packaging Netherlands B.V.	C	N/A	N/A	N/A	N/A
Almo Products B.V.	C	N/A	N/A	N/A	N/A
Prosé Geotechniek B.V.	C	N/A	N/A	N/A	N/A
NPI B.V.	C	N/A	N/A	N/A	N/A

Primo Netherlands B.V.	C	N/A	N/A	N/A	N/A
Visser Afvaverwerking Transport en Recycling B.V.	C	N/A	N/A	N/A	N/A
Fryrec B.V.	C	N/A	N/A	N/A	N/A
Rembrands Plastic Specials B.V.	C	N/A	N/A	N/A	N/A
Kunstsof Design	C	N/A	N/A	N/A	N/A
Mematec Kunststoffen B.V.	C	N/A	N/A	N/A	N/A
KKD B.V.	C	N/A	N/A	N/A	N/A
Grain Plastics B.V.	C	N/A	N/A	N/A	N/A
Infoframe B.V.	C	N/A	N/A	N/A	N/A

Annex II

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LOOP Circular

MANIFESTO

on Policy Recommendations

#Preamble#

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The world, as we know it nowadays, is facing one of its greatest crises in history due to climate change and all the negative consequences this phenomenon entails. The excessive use to resources, caused by a linear production model who maximizes waste in exchange of disposable products, is one of the main issues that menaces the sustainability of our planet. Because of that, we firmly believe that a change is possible, that a collective effort can make a big change for the benefit of the ecosystem and the humanity, and that with dedication, careful planning and commitment resources can be used more effectively, reducing waste and ensuring the recycling and second life of them in the long run.

For the reasons explained beforehand, the LOOP cluster was born as a joint, bottom-up initiative of four different sister projects: **Agro2Circular, CIRCULAR FOAM, EcoeFISHent, and FRONTSH1P**. All of the projects are funded under the same Horizon 2020 GD3.2 call, to demonstrate systemic solutions for the territorial deployment of the circular economy in European regions and their further replication. The current cluster is built around a set of guiding principles. These include creating a systemic circular economy, offering sustainable solutions, improving efficiency, encouraging technological innovation, reducing waste, optimizing resources, promoting environmental sustainability, driving systemic change, supporting recycling, turning waste into resources, fostering collaboration across different sectors and stakeholders, and encouraging the reuse of materials.

In view of those principles, the presented four projects aim to achieve the following goals: to integrate circular economy principles into different industries and regions, ensuring that **waste is reduced**, **resources are reused**, and systems are designed to be **regenerative,** contributing to environmental sustainability by **reducing pollution, minimizing waste**, and addressing **resource depletion**, as well as creating **new economic models** based on sustainable practices, encouraging **innovation, job creation**, and new business **opportunities**. Also, each project seeks to develop solutions that can be replicated and scaled across regions and industries, creating widespread **impact** and accelerating the transition to a circular economy.

For the realisation of all the previous objectives, the LOOP cluster has identified several **common solutions and policy recommendations** that could have a huge impact in advancing towards a more circular society: **Tax reductions and incentives**, **green public procurement**,

categorization and **labelling** of products, better **harmonisation** and **enforcing** of regulations, improved **definitions** and **criteria**, and lastly, **awareness** campaigns and **social engagement**.

Therefore, in light of the necessity to act in the explained matters, we declare ourselves to take part in this challenging yet thrilling and essential journey of adopting a circular economy model in our societies, by supporting sustainable initiatives, adopting circular practices, and sharing the knowledge that drives change. We also encourage entrepreneurs, self-government units and government administration, institutions of the non-governmental sector, and scientific

institutions to implement circular principles set out in the 10 rules of the LOOP Circular Manifesto.

The Manifesto Promoters:

LOOP Circular Manifesto
#Principles#

We, entrepreneurs, self-government units and government administration, institutions of the non-governmental sector, and scientific institutions, in the spirit of cooperation and responsibility for the future of Our Planet, announce this *LOOP Circular Manifesto*.

Faced with the challenges of the contemporary world, we are committed to working together for sustainable development and environmental protection and promoting a circular economy in the spirit of resource efficiency and climate neutrality. We believe that only by uniting our forces can we achieve common goals to ensure a better future for us and future generations.

Our Commitments:

1. Organizing and promoting educational programs to prepare and involve our community in the circular transformation.
2. Increasing efficiency in the use of water, bio-waste and wasteland.
3. Taking care of high-quality recyclable materials.
4. Increasing energy efficiency.
5. Closed-loop management - closing unclosed resource cycles.
6. Promoting and using short supply chains in economic and social activities.
7. Promoting innovative sustainable production and service practices.
8. Practicing sustainable public procurement.
9. Creating and using platforms and venues for exchanging products and services.
10. Strengthening cross-sector cooperation to promote and create circular clusters.

We believe our collective actions will create a better world, starting with ourselves. We call on everyone to join our initiative and work together for the future.

Signatories of the Manifesto:

The FRONTSH1P Project, in light of the abovementioned principles and objectives, strongly encourages its stakeholders to the following:

- **Community Engagement and Education**
    - Involve Residents in Waste Management: Engage residents in waste management through transparent communication, consultations, and joint actions to foster a sense of ownership.
    - Organize Circular Economy Festivals: Host annual festivals focused on circular economy practices to showcase innovative solutions, promote knowledge exchange, and engage the community in sustainability.
    - Create Circular Economy Education Programs: Develop and integrate educational programs on circular economy principles in schools and universities, preparing the next generation with sustainable knowledge.
- **Incentives and Reward Systems**
    - Develop Incentive Systems: Implement a balanced system of rewards and sanctions to encourage participation in waste segregation and recycling, making incentives visible and appealing.
    - Create Local Currency for Waste Exchange: Introduce a local currency system where residents can exchange waste like paper and plastic for tokens, encouraging waste collection and segregation.
    - Implement Rainwater Harvesting Incentives: Provide tax breaks or subsidies for households and businesses that install rainwater harvesting systems, reducing the load on wastewater infrastructure.
    - Offer Tax Incentives for Circular Practices: Provide tax incentives for businesses adopting circular practices, such as using recycled materials, minimizing waste, or offering product take-back options.
- **Infrastructure and Local Services**
    - Establish Repair Service Points: Set up repair service points where residents can repair broken items affordably, encouraging reuse and reducing waste.
    - Launch Community Composting Programs: Create community composting sites for organic waste, fostering local composting and reducing landfill waste.
- **Workforce and Skills Development**
    - Promote New Circular Professions: Update educational programs to include new circular professions, providing training and reskilling opportunities to meet evolving labour market demands in sustainability.
- **Business and Industry Support**
    - Promote Secondary Raw Materials Use: Encourage industries to incorporate secondary raw materials into production processes and inter-industry collaborations to reduce environmental impact. Establish open-access databases that provide detailed information on secondary raw materials available for use in various production cycles.

- o Implement Green Public Procurement Policies: Encourage local governments to prioritize circular products and services through green procurement policies, driving demand for sustainable practices.
- o Develop Circular Economy Certification Programs: Establish certification programs for businesses meeting circular economy standards, helping consumers support sustainable products and services.

- **Technology and Transparency**
  - o Enhance Transparency and Traceability: Leverage blockchain and other technologies to track materials throughout their lifecycle, ensuring transparency and accountability in circular supply chains.

Annex 2

#AGRO2CIRCULAR Specific Recommendations#

The AGRO2CIRCULAR Project, in light of the abovementioned principles and objectives, strongly encourages its stakeholders to the following:

- <u>Public food procurement</u>: Inclusion of specific tender criteria favouring caterers that include upcycled food products in their offer.
- <u>Labelling of upcycled wholesale products</u>:
    - Create a European label for upcycled products harmonised with existing regulations such as the Ecolabel, but adapted to upcycled materials and products.
    - Develop awareness campaigns to mitigate consumer resistance, especially in food products, explaining the benefits and food safety guarantees of upcycling.
- <u>Promote B2B platforms</u> to facilitate the exchange of by-products between companies, promoting collaboration in secondary raw material markets.
- <u>End-of-waste management and by-product recognition</u>:
    - Simplify the regulation for the recognition of by-product and end-of-waste status, reducing the current administrative deadlines.
    - Encourage the technical training of public administrations to improve their response capacity and knowledge in the certification of upcycled materials.
- <u>Reduced VAT</u>:
    - Apply a reduced VAT rate for food, cosmetic, or nutraceutical products <u>certified</u> as upcycled.
    - Extend reduced VAT to inputs and equipment used in industrial processes necessary for the production of upcycled goods.
- <u>Engage end-consumers</u> in the circular economy through their active participation in upcycling schemes, providing secondary raw materials through local retail networks in exchange for discount vouchers and other economic and social incentives.

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Commission

Annex 3

#EcoeFISHent Specific Recommendations#

The EcoeFISHent Project, in light of the abovementioned principles and objectives, strongly encourages its stakeholders to the following:

- Animal by-products (ABPs)

  o Adoption of a Commission notice to support operators and competent authorities to comply with *Animal by-products Regulation* and their implementing measures;

  o Possibility to reverse Category 3 materials, deriving from food (especially ABP by choice), from ABP to food (after a proper risk assessment which determine the compliance with food legislation);

  o Harmonisation of Member States (MS) competent authorities' decisions, where required, at regional and local level;

  o Valorisation of ABPs deriving from research activities (i.e. identify a destination different than disposal), where possible;

  o Detailed guidance and derogations for the test and application of alternative methods and 'Method 7' in research activities, especially funded by the EU (e.g. Horizon projects).

- Food waste

  o Definition of 'end-of-waste' criteria for food waste by JRC and adoption at EU level with a Commission Implementing Regulation, to exploit food waste streams and improve circular economy;

  o Identification of harmonised food waste categories, to be coupled with Eurostat statistics;

  o Amendment of 'List of Waste' (LoW) to include proper food waste categorisation for each stage of the food supply chain;

  o Improvement of 'food waste' definition to define what is considered as such, and what is not, for each stage of the food supply chain according to its use and destination;

  o Improvement of food waste statistics with a geographical reference using the NUTS 2 (or higher – i.e. NUTS 3, LAU) classification.

Annex 4
#CIRCULAR FOAM Specific Recommendations#

The CIRCULAR FOAM Project, in light of the abovementioned principles and objectives, strongly encourages its stakeholders to the following:
[work in progress]