RESOURCE

Regional project development assistance for the uptake of an Aragonese circular economy

D4.4 Benchmarking the Methodology

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Abstract	This deliverable, resulting from Task 4.3, presents the core RESOURCE Circular Methodology, enriched through insights from best practice analysis and benchmarking exercises. It aims to provide a comprehensive and replicable support framework tailored to the needs of circular economy SMEs
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EXECUTIVE SUMMARY

The purpose of the benchmarking exercise within the RESOURCE project is to assess and compare the project's methodologies, tools, and support mechanisms against established best practices from similar European and international innovation initiatives. The aim is to identify strengths, gaps, and areas for improvement in how RESOURCE supports pilot projects, particularly in terms of acceleration services, investment readiness, and cross-border collaboration. This evaluation informs evidence-based recommendations to enhance the project's overall effectiveness, scalability, and alignment with broader EU innovation and sustainability objectives.

The analysis confirmed that RESOURCE provides a solid, well-structured support model, especially in relation to access to funding and capacity building. However, several areas were identified for refinement. These include introducing standardized tools such as business model templates, pitch decks, and policy-readiness checklists to improve consistency across pilots. Other key recommendations involve establishing a structured investor engagement process, tailoring training to pilot maturity levels, and offering simplified environmental assessment methods. Strengthening legal and regulatory guidance and involving local authorities earlier can further align pilot activities with EU frameworks. Assigning a dedicated focal point for each pilot and implementing milestone-based progress tracking are also essential to improve project management, stakeholder trust, and long-term impact.

These findings, detailed in the sections below, underline the value of a more integrated and scalable approach. While RESOURCE aligns well with EU innovation goals, enhancing its technical, legal, and operational dimensions will be crucial to maximize its replicability and added value across diverse regional contexts.

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ABBREVIATIONS

CCRI ....Circular Cities and Regions Initiative

CE...........................Circular Economy

EBN ....European Business and innovation centre Network

EU ....European Union

KPI...........................Key Performance Indicators

LCA...........................Life Cycle Assessment

PDA ....Project Development Assistance

SIG ....Special Interest Group

SMEs........................Small and medium-sized enterprises

SUs...........................Startups

TRL...........................Technology Readiness Level

WP ....Work Package

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1 Introduction

1.1 Context and background

Circularity is an essential aspect of the industry transformation towards resource-efficiency, climate neutrality and long-term competitiveness.

The RESOURCE project is currently studying the private funding opportunities needed in circular projects and facilitating their development. RESOURCE's overarching objective is to develop new Project Development Assistance (PDA) services to fund regional circular economy investment projects. More precisely RESOURCE is:

- building an integrated expertise pool to support technically, economically, and legally the regional circular economy pilots SMEs,
- developing innovative financing schemes and business models,
- launching concrete investments.

The methodology developed for the RESOURCE project ensures the sustainability of those circular economy projects by potentially completing their private funding with other sources of financing (European, national, and regional public funds).

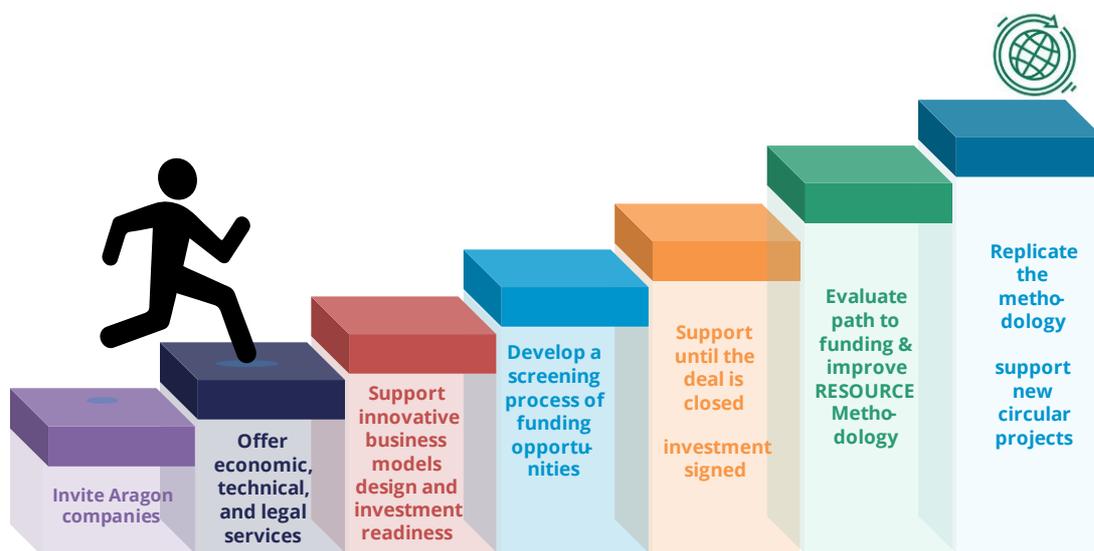The RESOURCE methodology consists of seven steps:

Figure 1 - The RESOURCE methodology in 7 steps

1.2 Expected outcomes

Circular Economy (CE) has been targeted since January 2020 as a strategic priority for the Region of Aragon. The Region has launched a manifestation of interest and identified a portfolio of circular projects in need of funding. Ten of these projects were selected as pilots in the RESOURCE project.

It is expected that the strong interest coming from Aragon companies to shift towards circular practices will guarantee a sustainable pipeline of projects to test the RESOURCE methodology. The final objective of the RESOURCE project through the creation of a portfolio of project development assistance services, was to accelerate the development of the CE in Aragon and to reach €20M direct private investment in circular projects over a period of 36 months, until end of June 2025.

RESOURCE was able to reach out to and gather a CE community to develop an innovative regional process and ecosystem and aim to remove the technical, economic, legal, regulatory, and financial barriers the CE projects face.

The RESOURCE solution was co-created with public institutions, intermediary organisations, finance stakeholders and beneficiaries. A specific outreach and communication campaign was conducted from the beginning of the RESOURCE project and throughout its entire duration to engage the largest possible number of stakeholders. A set of knowledge and capacity-building activities including online training webinars, exchange of good practices, etc. were specifically developed. It is expected to further engage with other CE ecosystems in the EU interested in replication of the RESOURCE methodology.

1.3 Purpose of this report

The purpose of Report 4.4 "Benchmarking RESOURCE Methodology" is to systematically analyse and compare the approaches, tools, and support mechanisms used across different ecosystems to foster CE practices among SMEs and startups. By identifying and evaluating best practices, challenges, and gaps, particularly in areas such as capacity building, funding access, regulatory navigation. The report aims to establish a comprehensive methodology that can guide future interventions. It serves as a foundational reference to support capacity-building efforts, facilitate policy alignment, and promote more effective collaboration among stakeholders involved in circular innovation.

This deliverable built upon Deliverable D4.2 "*Best Practice Selection,*" which was developed as part of the RESOURCE project funded by the European Union under the Horizon Europe research and innovation programme (Grant Agreement No. 101060142). As part of Work Package 4 (WP4) – *Replicability on the EU scale: best practices and benchmarking* – this report continues the effort to identify and promote effective support mechanisms for CE projects. While the earlier D4.1 "*Map of Circular Economy projects implemented across EU countries*" identified 25 promising initiatives, D4.2 narrowed this list to five key best practices using a structured methodology. These were analysed in depth, and six core pillars were extracted to serve as benchmarking criteria. Building on that foundation, the current deliverable—Report 4.4 *"Benchmarking RESOURCE Methodology*" collects feedback and recommendations from key stakeholders. Its purpose is to validate the benchmarking framework, evaluate the replicability and scalability of best practices, and ultimately strengthen the support landscape for circular innovation across Europe.

2 Benchmarking Methodology

2.1 Objectives of the benchmarking activity

The objectives of the benchmarking activity are to evaluate the effectiveness and relevance of the RESOURCE project's methodology by comparing it with best-in-class practices from similar initiatives. A draft methodology was presented to experts, feedback collected, integrating recommendations, and refining the methodology for its final form. Specifically, it aimed to:

1. Identify strengths and weaknesses in the current support mechanisms provided to pilot projects.
2. Assess the alignment of RESOURCE's tools and approaches with the needs of SMEs, startups, investors, and innovation ecosystems.
3. Highlight innovative practices that could be adapted or integrated into RESOURCE to improve its impact, scalability, and sustainability.
4. Provide actionable recommendations to enhance the project's future implementation and contribution to EU policy goals such as green transition, CE, and SME competitiveness.

2.2 Methodology used for benchmarking activity

The benchmarking methodology was designed to ensure relevance, credibility, and practical value by engaging experienced members of the EU|BIC network and other qualified experts. The process began with identifying EU|BICs and stakeholders actively involved in CE initiatives, followed by a targeted call for participation within the network and through broader outreach via EU projects and platforms such as LinkedIn.

A clear set of criteria guided the expert selection process, focusing on demonstrated experience in EU-funded projects, particularly in circularity, innovation, or sustainable development, along with affiliation to relevant institutions such as universities, research centres, or industry associations. Previous involvement in benchmarking or similar evaluation exercises was also considered essential.

Working in collaboration with EBN, a diverse pool of candidates was established and reviewed against the defined criteria, with an emphasis on complementary expertise to ensure a multidimensional perspective. Selected experts received formal invitations detailing the objectives, structure, and scope of the benchmarking activity, along with key RESOURCE project materials for preparatory review.

Ultimately, five experts were selected and engaged in dedicated online sessions to evaluate RESOURCE's support approach, focusing on capacity building, investment readiness, and regulatory and technical alignment. Their insights directly contributed to refining the methodology and provided recommendations. Additionally, their participation was extended to the EBN Congress, where they served as reviewers during the RESOURCE pitching and matchmaking sessions, offering real-time feedback. This hands-on involvement added practical depth and strengthened the credibility of the benchmarking process.

3 RESOURCE Support Methodology

3.1 Overview of the Methodology

The RESOURCE project offers a structured and integrated approach to supporting CE pilot projects and SMEs through a one-stop-shop methodology. This methodology brings together financial, legal, environmental, and technical support to ensure that participating projects are investment-ready, environmentally sustainable, and regionally replicable.

Originally based on the five key pillars identified during the initial mapping exercise, the methodology has since been expanded and refined to provide a more comprehensive framework tailored to the diverse needs of circular startups.

Below is an overview of the core components of this enhanced methodology, highlighting how each contributes to building robust and scalable circular business models.
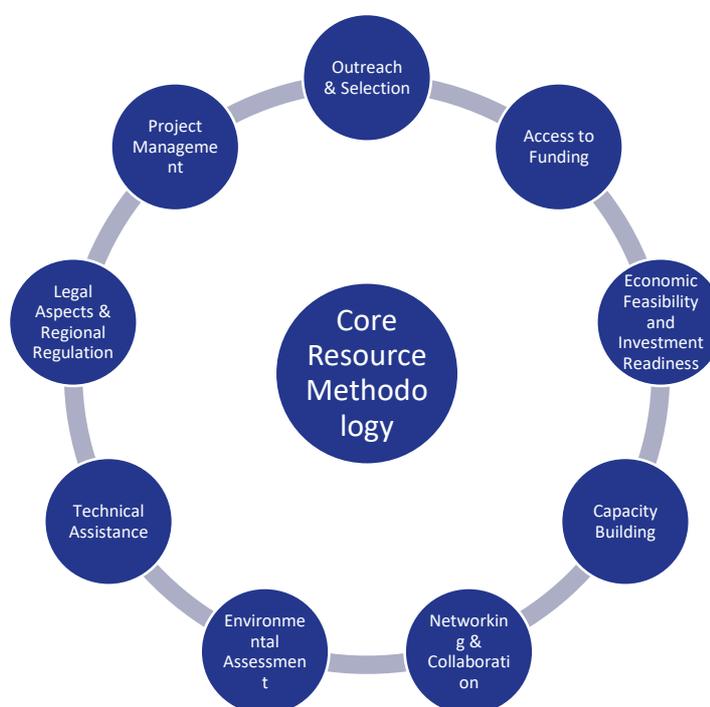

Figure 2 - Core Resource Methodology

For each aspect of the methodology, a short description will follow, followed by the inputs and recommendations from the benchmarking exercise.

3.1 Core RESOURCE Methodology

The RESOURCE project implemented a comprehensive one-stop-shop methodology, integrating financial, legal, environmental, and technical support to accelerate the development of circular business models. Originally built around five core pillars, the methodology was progressively expanded to address the varying needs and maturity levels of participating SMEs and startups. A key recommendation was to formalize and document this approach in a way that is adaptable and replicable across regions. To support this, modular templates, clear roadmaps, and iterative feedback loops should be embedded to ensure consistency, transparency, and measurable impact.

The RESOURCE methodology places strong emphasis on circularity-focused incubation, combining capacity building, tailored technical assistance, investment readiness support, and environmental performance evaluation. However, one-size-fits-all approaches proved limiting. A key recommendation was to introduce modular support tracks aligned with startup maturity and Technology Readiness Level (TRL), ensuring that interventions are both relevant and effective.

Furthermore, the adoption of standardized toolkits—such as business plan templates, pitch decks, and simplified Life Cycle Assessment (LCA) formats, was encouraged. These tools will enhance the comparability and replicability of the methodology while improving the quality of support provided. Organising these practices into a flexible framework will make the RESOURCE methodology more accessible and scalable, ensuring long-term value and broader application beyond the initial pilot cohort.

3.2 Outreach & Selection

A total of 13 pilot projects were initially identified through the Aragon Circular initiative and CEEI Aragon's network of incubated and hosted companies. By the end of the programme, 10 pilot projects remained engaged. A structured and criteria-based selection process was developed to evaluate project suitability. The key assessment criteria included:

- Technological Potential: Level of innovation and feasibility of the proposed solution.
- Market Potential: Capacity to enter and perform in relevant markets.
- Financial Evaluation: Prospects for private equity investment and long-term financial sustainability.
- Team Composition: Strength, experience, and technical/business capabilities of the founding team.
- Impact & Excellence: Anticipated environmental, social, and/or economic impact.
- Circular Economy & Innovation: Alignment with CE principles and introduction of innovative practices.
- Fundraising Strategy: A demonstrated funding need (public and/or private) and potential for investment readiness.
- Project Maturity & Coherence: Feasibility based on internal resources, planning, and strategic alignment.

This structured approach was designed to identify projects with the highest potential for circular innovation and private investment readiness. However, the benchmarking exercise highlighted opportunities for refinement. One key recommendation was to enhance the transparency and consistency of the selection process by introducing a scored evaluation grid, where each criterion is weighted according to its relevance. This would allow for a more objective and comparative assessment of applicants. Suggested additional criteria include:

- Stage of Development: Prioritize projects at similar maturity levels to allow for balanced support.
- Openness to Share Confidential Data: A mandatory condition for effective monitoring, benchmarking, and support.
- Willingness to Engage in Tailored Support: Key for enabling meaningful circular transformation.

- Motivation and Goal Alignment: Alignment with the RESOURCE programme's overarching objectives.
- Readiness to Work with Authorities: Especially relevant for projects involving regulatory compliance or waste streams.
- Understanding of Financial and Environmental Impact: A dual commitment to both sustainability and business viability.
- Clarity of Funding Objectives: Defined financing needs and openness to public or private investment options.

Another recommendation was to ensure greater homogeneity among selected projects, particularly in terms of their development stage and resource needs. Where diversity in project maturity is unavoidable, the support programme should adopt a tailored approach, adjusting support services (e.g. legal, business model, or technical assistance) to meet individual project requirements effectively. The regional nature of the selection process (e.g. limited to Aragon) also led to variability in project readiness. Future programmes would benefit from a more standardized, pan-regional selection process using a pre-selection self-assessment tool covering TRL, investment readiness, and sustainability maturity. This would enable:

- More diverse and better-aligned project selection.
- A tiered evaluation model that accounts for both technological and business maturity.
- Early screening of data sharing willingness and alignment with public-private objectives.

Together, these measures would improve transparency, comparability, and effectiveness in pilot selection across future RESOURCE-like initiatives.

3.3 Access to Funding

Project partners have provided extensive support in trying to secure funding through co-creation sessions, best practice exchanges, and conferences. The key areas of funding assistance include:

- Public Funding: Assistance was provided in identifying and applying for national and EU grant opportunities, often in collaboration with external experts and consultancy firms.
- Private Investment: Startups received support in preparing for venture capital and private equity engagement, including participation in pitching events and targeted investor matchmaking.
- Bank Loans: While loan financing was discussed, a formal structure for supporting bank applications was not implemented, though it was proposed by advisory experts.
- Innovative Financing: Concepts such as crowdfunding and tokenization were suggested by experts but have not yet been tested within the pilot portfolio.

Structured investor engagement emerged as a critical area for improvement. While general support activities were delivered, such as participation in Investment Expert Committee meetings, a more systematic approach is needed. These meetings revealed three recurring themes: the importance of understanding investor profiles, the composition and strength of founding teams, and the market approach of the startups.

Experts highlighted that venture capital funds primarily seek financial returns, meaning pilot projects must present clear and credible business models. Founding teams need to demonstrate robust sales

and go-to-market strategies. At the same time, pilot teams stressed the importance of working with specialized investors who understand circular models and emphasized the need to balance financial return expectations with environmental and social impact.

Recommendations

1. **Early investor engagement**: Investors should be involved from the early stages of programme design. At the same time, awareness-raising on CE value and metrics is essential. While investors may be open to impact-driven investments, profitability remains a priority. Circular projects should therefore frame their business case to highlight both environmental and financial value.

2. **Structured investor engagement process**: a suggestion was that with experienced partners now involved, RESOURCE should formalize a structured investor engagement framework, including:
   - A curated repository of investor profiles
   - Preparatory sessions for both startups and investors
   - Light due diligence support (technical and financial), using trusted experts

3. **Addressing public funding gaps**: Many startups lack the internal resources to prepare competitive proposals or manage reporting obligations. Recommended solutions include:
   - Proposal-writing support (e.g. via expert vouchers)
   - Training in project management and reporting
   - Use of templates and successful case studies
   - Matchmaking with experienced consultants

   In addition, in some regions, especially those with language or administrative barriers, awareness of available funding is limited. Visibility should be improved through centralized platforms, multilingual resources, and local intermediary support (e.g. business support organisations).

4. **Reducing administrative burden**: The complexity of public funding application and reporting processes can deter early-stage applicants. For smaller grants, procedures should be simplified, and applicants should receive structured coaching throughout the funding cycle.

5. **Improving investment and impact readiness**: SMEs and Startups often lack the ability to express environmental or social impact in investor-relevant terms. Suggested actions include for example: training in "impact pitching" to quantify benefits such as emissions reductions or job creation, development of standard frameworks for impact measurement, etc.

These steps would build investor confidence, improve startup preparedness, and increase alignment between investment needs and opportunities. Additionally, blended finance models should be explored to support capital-intensive projects and to facilitate coordinated access to both public and private funding streams.

3.4 Economic Feasibility and Investment Readiness

Ensuring the financial viability and investment readiness of CE projects is crucial for their successful implementation and scaling. RESOURCE has focused on equipping pilot projects with the necessary financial insights, risk mitigation strategies, and investor engagement tools. The key areas of support include:

- Cost-Benefit Analysis: Evaluating the financial feasibility of CE projects.
- Market Potential Assessment: Identifying commercialization opportunities and market positioning.
- Risk Management Strategies: Addressing financial and operational risks to enhance project stability.
- Investor Pitch Deck Development: Crafting compelling investment presentations to attract funding.

To assess economic feasibility, RESOURCE partners carried out SWOT analyses with participating pilots. These assessments aimed to identify key strengths, weaknesses, opportunities, and threats in each business model, with the goal of guiding strategic decisions and investment readiness. The analyses also evaluated alignment with regional, national, and EU funding criteria and were conducted in phases throughout the project, with the most recent round taking place in early 2025. Seven pilot projects completed these evaluations.

Recommendations

The following recommendations were provided by the experts:

1. **Frame CE as a business opportunity**: Insights from benchmarking stressed the importance of presenting CE projects as profitable ventures. While environmental benefits are important, highlighting economic advantages, such as cost savings, new revenue streams, and competitive differentiation, proved more effective in engaging both entrepreneurs and investors. Framing circular models as commercially viable businesses increases adoption and investment appeal.

2. **Strengthen financial documentation and tools**: Not all pilot projects developed complete financial models or valuation strategies, which limited their investment readiness. Contributing factors included staff turnover, lack of standardized tools, and limited guidance. To address this, RESOURCE should:
   - Provide editable templates, including pitch decks, ROI calculators, and valuation models
   - Deliver onboarding workshops on how to complete and use these tools effectively
   - Assign a dedicated focal point to each startup to guide documentation and monitor progress

3. **Mandate business planning and external review**: To improve consistency and investor trust, all pilots should be required to submit business plans and financial projections early in the programme. These documents should undergo review by external financial advisors to ensure quality, realism, and alignment with investor expectations. This standardization would not only increase comparability but also improve credibility in investor discussions.

By embedding structured financial planning and aligning business strategy with circular impact, the RESOURCE methodology can better support the dual goals of sustainability and economic viability.

3.5 Capacity Building

To support the development and scalability of the pilot projects, RESOURCE implemented a structured capacity-building programme. The initiative aimed to enhance participants' business skills, strengthen their investment readiness, and foster meaningful connections across the CE ecosystem. Key components of the capacity-building activities included:

- Training Workshops – Practical sessions on investment readiness, pitching, and business model development.
- Expert Committees – Sector-specific advisory panels offering targeted mentorship and guidance.
- Networking Events – Opportunities to connect with potential partners, investors, and key stakeholders.
- Business Plan Support – Tailored assistance in developing robust, fundable, and sustainable business strategies.

Recommendations

1. Define clear objectives and KPIs from the start with pilot projects: Each pilot project should be required to establish specific objectives and Key Performance Indicators (KPIs) at programme entry. To guide this process, the consortium can offer a suggested KPI framework aligned with CE metrics, business development, and investment readiness. These KPIs should be used to monitor progress throughout the programme and measure outcomes at its conclusion.

2. Strengthen engagement and minimize dropouts: Participant retention is a common challenge in non-equity-based programmes. While financial incentives tied to KPIs may not be feasible in public projects, alternative engagement strategies should be considered. These may include milestone-based support models, recognition and visibility opportunities, or privileged access to investors and networks.

3. Tailor support based on maturity and TRL: A one-size-fits-all curriculum is not suitable for a diverse group of startups. Modular training tracks should be introduced based on the maturity level and TRL of each pilot. Resources such as business model canvas templates, tailored roadmaps, and targeted workshops can be adapted accordingly. For example, one organisation successfully applied the GrowthWheel tool to develop a long-term strategic plan, supported by internal coaching.

4. Standardise tools and information flow: Consistency in support delivery and reporting can be achieved by using standardised toolkits across all pilots. These should include business model templates, pitch decks, investment readiness checklists, evaluation frameworks, LCA guidance, and regulatory compliance matrices. Hands-on guidance should be provided to accommodate varying levels of business experience (e.g., SMEs, researchers, early-stage startups). A dedicated focal point within each pilot is essential to coordinate input, manage documentation, and ensure transparency. Reporting should be structured around three mandatory milestones: onboarding, midterm evaluation, and pre-exit review.

5. Expand Circular Economy-Specific training: To further align capacity building with CE goals, specific training modules should be introduced. These could include sustainable procurement practices, ESG compliance, or applied "learning by doing" models.

Additional recommendations include:

- Introducing **competency tracking frameworks** (e.g., team readiness, IP literacy, negotiation skills).
- Embedding **curated peer learning and mentoring sessions based on case studies and real-world examples**.

- Adopting milestone-based progress models to **monitor development and encourage consistent engagement**.

By tailoring support and standardising processes, RESOURCE can strengthen pilot outcomes, accelerate business maturity, and foster long-term impact.

3.6 Networking & Collaboration

Fostering strong networks and collaboration mechanisms is essential for accelerating innovation, enabling knowledge exchange, and expanding the market potential of CE projects. In the RESOURCE project, networking activities included ecosystem events, expert exchanges, and limited peer learning interactions. However, public visibility, cross-sector collaboration, and structured engagement with corporates were underdeveloped.

A key area of opportunity is to build stronger connections with large corporations through challenge-based calls focused on specific CE goals. These industry-led challenges could be co-financed through incentives for SMEs and tax incentives for corporates, aligning startup solutions with the compliance and innovation needs of larger companies. Such initiatives would also improve the practical application and scaling potential of circular business models.

Recommendations

Peer learning was not fully leveraged across the pilot network. While some interaction occurred, it lacked structure and consistency. Introducing curated peer learning formats—such as thematic workshops, reverse pitching sessions, and failure-sharing ("fail forward") events—can greatly improve knowledge transfer and cross-pilot mentoring. Structured peer learning also fosters trust and collaboration among participants.

Public visibility of pilots and their achievements remained low. Hosting flagship events, such as a RESOURCE Demo Day before the EBN Congress or participation in high-profile startup events (e.g., Web Summit, Hello Tomorrow), would boost external recognition and attract partners, investors, and stakeholders. These events should be designed to showcase success stories and promote circular innovation.

Incentivising participation through tangible rewards—such as event tickets, recognition awards, or special networking access—can significantly improve engagement. For instance, a prior incentive-based activity offering Web Summit tickets led to a 50% increase in participation in mapping exercises.

Best practices observed in regions like Prato (Italy) and Northern France show that ecosystems with decentralized yet coordinated leadership models—engaging incubators, public authorities, SMEs, and citizens—achieve better results. These multi-stakeholder ecosystems facilitate policy alignment, local investment, and community trust. RESOURCE should replicate such models by facilitating regional CE roundtables that bring together policy actors, business support organizations, startups, academia, and civil society. These triple-helix structures (policy–SME–BSO) are essential for scaling CE innovations and embedding systemic change at the regional level.

Summary Recommendations

- Launch **corporate challenge-based calls** linked to circular priorities, with co-financing or incentives for both SMEs and large companies.
- Organise **curated peer learning formats** (e.g., themed workshops, reverse pitches, mentoring).
- **Boost visibility** through public-facing events **like Demo Days** and presence at **major EU innovation summits**.

- Use incentives (e.g., recognition, access to flagship events) to **motivate participation and maintain engagement**.
- **Build local triple-helix ecosystems and replicate models** like Prato through regional CE roundtables.

By embedding collaboration into both the local and European ecosystems and prioritising structured visibility and peer exchange, RESOURCE can amplify its impact and support a stronger, more connected circular innovation community.

3.7 Environmental Assessment

The environmental assessment aimed to evaluate the sustainability and regulatory compliance of the pilot projects through three key areas:

- Life Cycle Assessment (LCA): Conducted in accordance with ISO 14040-14043 standards to measure environmental impact.
- Circularity Potential Evaluation: Assessing the environmental benefits and long-term sustainability of each project.
- Regulatory Compliance Support: Ensuring alignment with CE policies and regulations.

LCA Implementation and Challenges

The evaluation of pilot projects using the LCA framework was conducted in the early months of the project. Out of the thirteen selected pilots, only six underwent a full LCA assessment. However, the process encountered several challenges:

- Data availability issues: In the first selection phase, five pilots were initially chosen, but only three agreed to share their data. Despite signing confidentiality agreements (NDAs), two companies refused to disclose their data due to concerns over protecting proprietary technology and internal policy restrictions.
- Second phase pilots: Due to their late entry into the RESOURCE project, only three additional pilots from the second phase participated in the full LCA assessment.

Despite these challenges, the assessment provided valuable insights into the environmental impact of the pilot projects while highlighting key issues related to data sensitivity and project timelines.

Key Objectives and Outcomes

Beyond individual project assessments, this task aimed to provide a broader understanding of the CE (CE) landscape in the Aragon region by:

- **Enhancing Circular Economy KPIs**: Refining the existing Key Performance Indicators (KPIs) used by the Aragon government to monitor circularity and identifying areas for improvement.
- **Defining pilot selection criteria**: Establishing clear guidelines for selecting and integrating pilots into the RESOURCE project and similar initiatives.
- **Conducting environmental assessments**: Using LCA methods to examine the current environmental impact of pilot products based on their contribution structures and identify potential areas for improvement in circularity and sustainability.
- Results from the **LCA Assessments** included: Six full LCA assessments completed, 26 new CE KPIs proposed for integration into the 8 KPIs currently used by the Aragon government. **Identification of key contributors across 16 environmental impact categories** for the assessed pilots.

- **Providing strategic recommendations**: Policy and project-level recommendations addressed to both Aragon authorities and RESOURCE pilots to facilitate a smoother transition towards a CE.
- **Standardized Assessment Framework**: Applying LCA methodology standards, including goal and scope definition, inventory analysis, impact assessment, and interpretation.
- **TRL Evaluations and Value Chain Analysis**: Evaluating the Technology Readiness Level (TRL) of all 13 pilots, providing detailed analyses of their value chains, and offering tailored recommendations.
- **Business Model Development**: Advising all pilots on refining their Value Propositions and Business

Recommendations

Expanding impact assessment tools: Benchmarking efforts highlighted the need to go beyond traditional Life Cycle Assessment (LCA), which, while useful, often focuses solely on environmental impacts and may be too technical or resource-intensive for SMEs. **To capture a more holistic view of a project's impact, it is recommended to incorporate complementary tools** such as Life Cycle Costing (LCC) to evaluate financial implications, and Life Cycle Sustainability Assessment (LCSA) or Life Cycle Social Impact Assessment (LCSI) to explore social dimensions. These broader frameworks provide a more balanced perspective on sustainability. **Programmes should offer SMEs simplified tools and coaching** via business support centres **to build capacity in using these assessments** not just for compliance, but also **to strengthen their value proposition and appeal** to both public and private funders.

Ensuring data sharing and confidentiality: Transparency and openness to share data are fundamental to meaningful benchmarking. It is recommended that confidentiality and data-sharing expectations be clearly stated from the selection phase. Startups and projects must be willing to disclose key business and development data to support accurate evaluation. While Non-Disclosure Agreements (NDAs) can be used to protect sensitive information, refusal to share essential data should be a disqualifying factor, as it limits the ability to assess progress and generate valuable insights.

In addition to the initial suggestions, several additional recommendations were proposed to enhance the implementation and effectiveness of LCA practices. One recommendation is the **introduction of a "light" version of LCA specifically tailored to the needs and capacities of early-stage startups**. This streamlined approach aims to make LCA more accessible and less burdensome for emerging companies, thereby encouraging wider adoption. Another key suggestion is **to engage trusted intermediaries who can anonymize sensitive data**, ensuring that proprietary information is protected while still allowing for comprehensive analysis. Furthermore, it is advised to consult with experts to **define the minimal acceptable inputs required for the light LCA**, ensuring that the simplified process remains robust and reliable. In conclusion, lowering the threshold for participation in LCA through these measures is expected to significantly improve both the quantity and quality of data collected, ultimately leading to more sustainable and informed business practices.

3.8 Technical Assistance

Technical assistance plays a vital role in enabling CE projects to innovate, scale, and align with market and regulatory expectations. Within RESOURCE, technical support focused on evaluating the technological maturity of pilot projects, strengthening their value chains, and providing access to research and development infrastructure. These efforts aimed to maximize innovation potential while increasing the feasibility and investment-readiness of the pilots.

Key activities included:

- **Technology Readiness Level (TRL) Assessment**: Evaluating the maturity of each pilot's technological solution using a structured template completed by all participants.
- **One-on-one Technical Reviews**: Individual sessions with pilot teams to identify key technological challenges and opportunities.
- **Value Chain Optimization**: Assessing operational inefficiencies and recommending improvements to enhance sustainability and performance.
- **Prototype and R&D Support**: Facilitating connections with research institutions, labs, and test facilities to support prototyping and technical validation.

This structured methodology helped pilots reflect on their technical progress, receive actionable feedback, and prepare for next-stage development. However, benchmarking identified several areas for improvement, particularly in supporting early circular transition planning and the development of infrastructure—both physical (e.g., repair or recycling centres) and digital (e.g., resource-sharing platforms).

Recommendations

1. **Start with feasible circular steps**: Support pilots in adopting incremental circular strategies, such as internal reuse loops or modular design, before transitioning to fully circular models. This phased approach promotes early wins, reduces risk, and builds confidence.
2. **Expand technical coaching offerings**: Tailor support to **include guidance on value chain integration, circular procurement, and compliance with technical regulations**. Address knowledge gaps in areas such as B2B-specific sales processes and public procurement.
3. **Develop circular transition roadmaps**: Introduce tools that help startups **plan their shift toward circularity**, including milestone tracking and infrastructure needs assessments.
4. **Build a vetted expert pool**: Establish a roster of on-demand technical experts **across relevant domains** (e.g., materials science, industrial design, circular logistics) to provide targeted feedback to both startups and investors.
5. **Support infrastructure planning**: Encourage pilots to identify and develop the necessary circular infrastructure (physical or digital) needed **for scaling their solutions**.

These recommendations aim to elevate the technical robustness of pilot projects, ensuring they can meet both sustainability goals and market expectations. A more holistic and customized technical support framework—combined with phased circular transition strategies—will increase the long-term impact and replicability of CE solutions fostered under RESOURCE.

3.9 Legal Aspects and Regional Regulations

Legal and regulatory frameworks are critical enablers—or barriers—for CE implementation. Benchmarking insights underscored several recurring challenges faced by pilot projects, particularly at the regional level. These include **unstable resource supply** (in terms of both quantity and quality), **unclear or rigid regulations**—especially regarding waste classification—and **difficulties in accessing finance due to fragmented legal landscapes**. These challenges are compounded by **inconsistent regulatory frameworks across EU countries**, limiting the ability of CE startups and SMEs to scale across borders.

A key recommendation is to strengthen engagement with regional and national authorities to enable regulatory innovation, especially in reclassifying waste as secondary raw materials and streamlining administrative processes. Public sector awareness remains limited; training local and regional authorities in CE principles and regulatory flexibility can help address bottlenecks and accelerate project deployment.

To support startup compliance, the **inclusion of regulatory coaching is recommended**. Many SMEs lack the capacity to independently interpret or apply complex sector-specific regulations in areas like construction, bio-waste, or ICT. Tailored policy briefs and simplified guides should be developed to support compliance with sectoral standards and EU-wide strategies (e.g., CEAP, EU Green Deal, Taxonomy).

One of the most actionable tools proposed is the **Policy and Regulatory Readiness Checklist**. This would allow pilots to self-assess their alignment with key regulatory frameworks, identifying gaps early. **It may include indicators such as LCA score availability, CE/FDA approvals, REACH compliance,** and EU taxonomy alignment. This tool **can generate a "policy relevance score",** enabling prioritization of support and guiding investor communication.

Ecosystem collaboration was highlighted as a strong enabler. Regions like Northern France and Prato (Italy) demonstrated that coordinated multi-stakeholder approaches, including public authorities, incubators, SMEs, and even journalists or citizens, create the right environment for CE innovation. These "triple helix" models resulted in concrete outcomes such as SME expansion and new investment. RESOURCE is advised to replicate these models by facilitating structured local and regional roundtables and integrating non-traditional actors for increased legitimacy and visibility.

To **encourage active ecosystem mapping and local engagement**, RESOURCE should consider providing incentives (e.g., event participation, visibility, co-creation opportunities) and work through trusted intermediaries to increase participation.

Recommendations

1. **Develop a policy & regulatory readiness checklist** to guide pilots in aligning with major EU and national policy frameworks.
2. Include **regional legal advisors or regulatory "navigators"** within the support ecosystem.
3. Provide sector-specific policy briefs to **help pilots navigate their unique regulatory landscapes** (e.g., textiles, construction, bio-waste).
4. **Foster local ecosystem coordination**, replicating successful formats such as monthly CE roundtables or coalition-based stakeholder governance.
5. **Embed policy compliance in business planning**, ensuring that regulatory alignment is treated as a core component of investment and impact readiness.
6. Adopt a flexible, milestone-based model to **adapt support as projects evolve**, balancing standardization with project-specific needs.

Through these measures, RESOURCE can better equip CE initiatives to overcome regulatory hurdles, access public funding, and scale across regions with consistent policy alignment.

3.10 Project Management & Impact

To ensure the long-term impact of the RESOURCE project, a central focus was placed on developing a structured and replicable methodology that could be applied in other regions and contexts. By drawing from best practices, policy insights, and strategic knowledge-sharing activities, RESOURCE aimed to create a scalable framework to accelerate CE adoption.

Key actions included benchmarking the pilot projects against leading EU CE initiatives to identify success factors and areas for improvement. The project also produced policy recommendations based on real-world implementation and piloting experience, aimed at supporting broader policy integration. Cross-regional knowledge exchanges, thematic workshops, and dissemination reports were used to promote peer learning and foster transferability.

A cornerstone of replicability was the establishment of an Investors Committee and Advisory Board, which helped design investment-readiness criteria and financing strategies tailored to circular startups. These groups were instrumental in providing external perspectives and connecting RESOURCE pilots with financial ecosystems.

Additionally, a strong pool of experts was mobilised to support scalability. While the core expert pool was drawn from RESOURCE partners, it was expanded to include investors, advisors, funding agencies, and mentors identified through the project's matchmaking activities. This collaborative network contributed to mentoring, evaluation, and ecosystem development.

Recommendations

While the benchmarking identified many strong practices, several gaps were also observed. First, many best practices were broad and not uniquely tailored to CE goals. **Future methodologies should emphasize CE-specific needs**—such as lifecycle assessment tools, material reuse strategies, and alignment with environmental regulation—to better support replication within the circular domain.

Organizational challenges also affected the project. Staff turnover, unclear responsibilities, and inconsistent communication led to delays in support delivery. To strengthen project management and ensure continuity across pilots and partners, the following recommendations are proposed:

1. **Assign a dedicated focal point per pilot project** to act as a single contact for coordination and accountability.
2. **Use shared digital tools**, including dashboards, templates, and collaborative folders, to track deliverables and engagement in real time.
3. **Standardize partner roles and responsibilities**, and document timelines and deliverables in accessible shared platforms to mitigate risks associated with team changes.

By embedding robust coordination mechanisms and emphasizing CE-specific replication tools, RESOURCE can ensure that its methodology remains relevant, adaptable, and scalable across diverse ecosystems.

4 Conclusion

In conclusion, the RESOURCE methodology presents a robust and comprehensive support framework that is critical for circular SMEs aiming to transition toward sustainable, financially viable, and investment-ready business models. By offering tailored support in business development, investment readiness, environmental assessment, and policy alignment, RESOURCE not only strengthens individual enterprises but also strengthens the broader CE ecosystem, aligning seamlessly with both regional and EU objectives.

The RESOURCE project has demonstrated the importance of a holistic and structured approach to supporting CE startups. Future iterations of this methodology promise to be even more efficient, impactful, and scalable, paving the way for a resilient and sustainable CE. Through continued refinement and expansion, RESOURCE can make significant contributions to the EU's innovation ecosystem, driving forward the agenda of sustainability and economic resilience.