

D1.2 Stakeholders' engagement strategy

Thematic priority	HORIZON-CL6-2021-CIRCBIO-01-02
Type of action	Coordination and Support Action (CSA)
Start date and End date	01.07.2022 - 31.07.2025
Work package	WP 1
Task	Task 1
Due date	30/12/2022
Submission date	28/12/2022
Deliverable lead	Eloy Fernández Pérez-Aradros (GoA)
Authors	Eloy Fernández Pérez-Aradros (GoA) Miguel Luis Lapeña Cregenzán (GoA) Marianne Baumberger (G.A.C)
Reviewers	Geraldine Quetin (GAC)
Version	1.0
Suggested citation	Eloy Fernández Pérez-Aradros, Government of Aragon (2022) "RESOURCE project - Stakeholders' engagement strategy. Deliverable 1.2", Horizon Europe grant no. 101060142

Abstract	This document collects the analysis of the interviews carried out with the stakeholders in circular economy in Aragon and establishes the strategy for their engagement defining their participation in RESOURCE and the measures to be applied at each phase, with the aim that their collaboration is truly effective and sustained over time. It also identifies the responsibilities of the partners for the maintenance of the commitment of stakeholders
Keywords	Stakeholder engagement, stakeholders' engagement, stakeholder analysis, circular economy
Document type	<ul style="list-style-type: none"> ✓ R – Report O – Other
Dissemination level	<ul style="list-style-type: none"> ✓ PU – Public <p>SEN – Sensitive, limited under the conditions of the Grant Agreement</p>

Document Revision History

Version	Date	Description of change	List of contributor(s)
V0.1	07/12/2022	1st version of the template for comments	Eloy Fernández
V0.2	15/12/2022	2 nd version of ToC and content	Marianne Baumberger, Eloy Fernández
V0.3	21/12/2022	Ready for internal review	Eloy Fernández, Marianne Baumberger
V0.4	23/12/2022	Internal review + minor updates	Eloy Fernández, Miguel Luis Lapeña Cregenzán, Marianne Baumberger, Geraldine Quetin, Marc Pattinson
V1.0	27/12/2022	Final review	Geraldine Quetin

Disclaimer

The information, documentation and figures available in this deliverable are written by the RESOURCE project's consortium under EC grant agreement 101060142 and do not necessarily reflect the views of the European Commission.

The European Commission is not liable for any use that may be made of the information contained herein.

Copyright notice

©RESOURCE

EXECUTIVE SUMMARY

One of the key factors influencing the engagement strategy of the different stakeholders in the development of the circular economy is determined by the national / regional / local context in which they operate. The approval of the "Aragón Circular" Strategy by the Government of Aragon, as well as the actions carried out in its development, reflects a strong interest of the Economic Ecosystem of Aragon in the change to circular economy and offers a number of projects suitable for the application of the RESOURCE methodology.

The overall objective of RESOURCE is to develop an innovative methodology to support the financing of circular economy projects. The RESOURCE project aims to support some pilot projects from the development of their technical solution, through the development of their business plan, also with legal support, to ensure that they can obtain private financing when the project needs it.

Aligning and engaging stakeholders is an important step towards this goal.

This is why we started with a systemic mapping of all of them, grouped into four categories, which was described in D1.1 "Stakeholder mapping". **But more is needed.**

Key players in the circular economy ecosystem need to be attracted and involved in the project; a contingency plan needs to be defined in case their interest in participation may wane; and finally, the maintenance of stakeholder engagement needs to be assessed weighed in order to take any measures that may be necessary to ensure that engagement is sustained. This is the purpose of the RESOURCE's stakeholders' engagement strategy, described in this deliverable D1.2.

The sections 1 and 2 of the document introduce both the purpose of the RESOURCE's stakeholders' engagement strategy into the Resource project, and the principles, objectives and stages upon which the RESOURCE stakeholders' engagement is built.

The section 3 of the document presents the main findings of the extensive work regarding stakeholder analysis made by the Resource project, thanks to a series of fifty interviews conducted with a representative group of each of the four stakeholder categories (institutional agents, intermediate organisations and facilitators, economic agents and final beneficiaries), and thanks to the Aragon Conference on Circular Economy. Stakeholders, grouped into the four categories, are defined here as those stakeholders who can directly or indirectly affect, be affected by, or influence the adoption, development and success of a circular economy. They all have different interests, motivations, objectives and influence in making decisions aimed at implementing the circular economy, such as reducing costs, improving efficiency, reducing environmental impacts, improving competitiveness, promoting investment in technological development and innovation, improving governance, etc. For each of them, the analysis has been developed considering four essential axes, highlighting overlapping aspects and, where appropriate, the individualities of some of the stakeholders: 1) **the main roles** that these stakeholders assume in relation to the circular economy; 2) **the main bottlenecks** they identify in applying circular economy to their activity; 3) **the main motivations** they have for the change from the linear to circular economy model; and 4) to what extent they expect **support and solutions within RESOURCE** and if they are **willing to collaborate** in future actions.

Obviously, the arguments for gaining and maintaining stakeholder's commitment have to take these aspects into account. **The sections 4, 5 and 6 of this document designs the strategy to attract the main actors of the circular economy ecosystem in Aragon and involve them in the project.** RESOURCE will therefore apply a transdisciplinary approach to working with stakeholders to enable learning experiences and the generation of synergies between them.

The **section 4 "Stakeholders' engagement plan"**, defines in detail their participation throughout the life of RESOURCE, differentiating the general commitment from the more specific commitment of the so-called pilot projects, to which RESOURCE members will provide technical, legal and financial feasibility support, in addition to the life cycle analysis of their project.

The **section 5 "Stakeholders' engagement implementation"** details the management of the stakeholders, divided into five phases (inform, consult, involve, collaborate and empower) according to the intensity of their participation in the project and proposing the necessary measures to ensure that their contribution is truly effective in all of them. This section closes with the forecast of the measures that can be applied to maintain the stakeholders' interest once the project has ended. The identification of the RESOURCE partners who are responsible for the different moments in which stakeholders will be involved is also described.

The document ends up with **section 6 "Stakeholders engagement evaluation"**, completing the strategy, providing measures to assess their participation in the whole RESOURCE project and to offer improvements.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
LIST OF FIGURES	6
LIST OF TABLES	6
ABBREVIATIONS	7
1 INTRODUCTION AND OVERALL STRATEGY.....	8
1.1 Context and background.....	8
1.2 Stakeholders engagement´s purpose.....	9
2 RESOURCE'S STAKEHOLDERS ENGAGEMENT STRATEGY	10
2.1 Introduction	10
2.2 Principles of the stakeholders' engagement strategy	12
2.3 Objectives of the stakeholders' engagement strategy	13
2.4 The 5 stages of the RESOURCE's stakeholders engagement.....	14
3 RESOURCE'S STAKEHOLDERS ENGAGEMENT ANALYSIS.....	15
3.1 Stakeholders identification	15
3.2 Stakeholders analysis.....	16
3.2.1 Stakeholder interviews method.....	16
3.2.2 Main findings from the stakeholder interviews	17
3.2.3 Additional information for mapping circular economy in Aragon.....	26
3.2.4 Conclusion.....	27
4 RESOURCE'S STAKEHOLDERS ENGAGEMENT PLAN	32
4.1 Stakeholders engagement (general)	32
4.2 Stakeholders engagement (pilot projects)	33
5 RESOURCE'S STAKEHOLDERS ENGAGEMENT IMPLEMENTATION.....	36
5.1 Stakeholders management.....	36
5.1.1 Inform.....	37
5.1.2 Consult	38
5.1.3 Involve.....	38
5.1.4 Collaborate.....	39
5.1.5 Empower	40
5.2 Stakeholders maintenance	41
5.3 Roles and responsibilities of consortium members.....	41
6 STAKEHOLDERS' ENGAGEMENT EVALUATION	42
ANNEX I: LIST OF INTERVIEWS	43
ANNEX II: LIST OF INITIAL PILOT PROJECTS	46
ANNEX III: PERSONAL DATA PROTECTION.....	48
ANNEX IV: QUESTIONS FOR STAKEHOLDERS ENGAGEMENT EVALUATION	49

LIST OF FIGURES

Figure 1 - The RESOURCE methodology in 7 steps.....	8
Figure 2-Principles of the Stakeholder Engagement Strategy.....	12
Figure 3 - Objectives of the Stakeholders' engagement Strategy.....	14
Figure 4 - Phases of the stakeholders' engagement plan in RESOURCE.....	14
Figure 5 - Mapping of Stakeholders.....	15
Figure 6 -Stakeholder interviews distribution.....	17
Figure 7 - Geraldine, RESOURCE coordinator, from GAC, participates in a workshop..	26
Figure 8 - Matrix of circular economy mapping	28
Figure 9 - Stakeholders engagement assessment matrix: interest and influence.....	29
Figure 10 - Stakeholder participation in RESOURCE	32
Figure 11 - Objectives of public participation and influence in decision making	37

LIST OF TABLES

Table 1: Roles and responsibilities in stakeholders engagement.	42
--	----

ABBREVIATIONS

CE	Circular Economy
CCRI	Circular Cities and Regions Initiative
CEEIARAGON	Centro de Europeo de Empresas Innovadoras de Aragón (European Center of Innovative Companies of Aragon)
IP	Internet Protocol
EU	European Union
KPI/KPIs	Key Performance indicators
LCA	Life Assessment Cycle
NDA	Non-Disclosure Agreement
PDA	Project Development Assistance
PERTE	Proyecto Estratégico para la Recuperación y Transformación Económica (Strategic Project for Economic Recovery and Transformation)
TCP	Transmission Control Protocol
SMEs	Small and Medium enterprises
WP	Work Package
....	

1 Introduction and overall strategy

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 will study the private funding opportunities needed in circular projects and facilitate their development.

RESOURCE overarching objective is to develop new Project Development Assistance (PDA) services to fund regional circular economy investment projects. More precisely RESOURCE will:

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

The project is designed to ensure a high degree of replicability of the PDA and related services. Results will be disseminated to maximize the project's impact in Aragon and beyond.

Circular economy is a 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. Nine of these projects will serve as pilots in the RESOURCE project.

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

The RESOURCE methodology consists of seven steps:

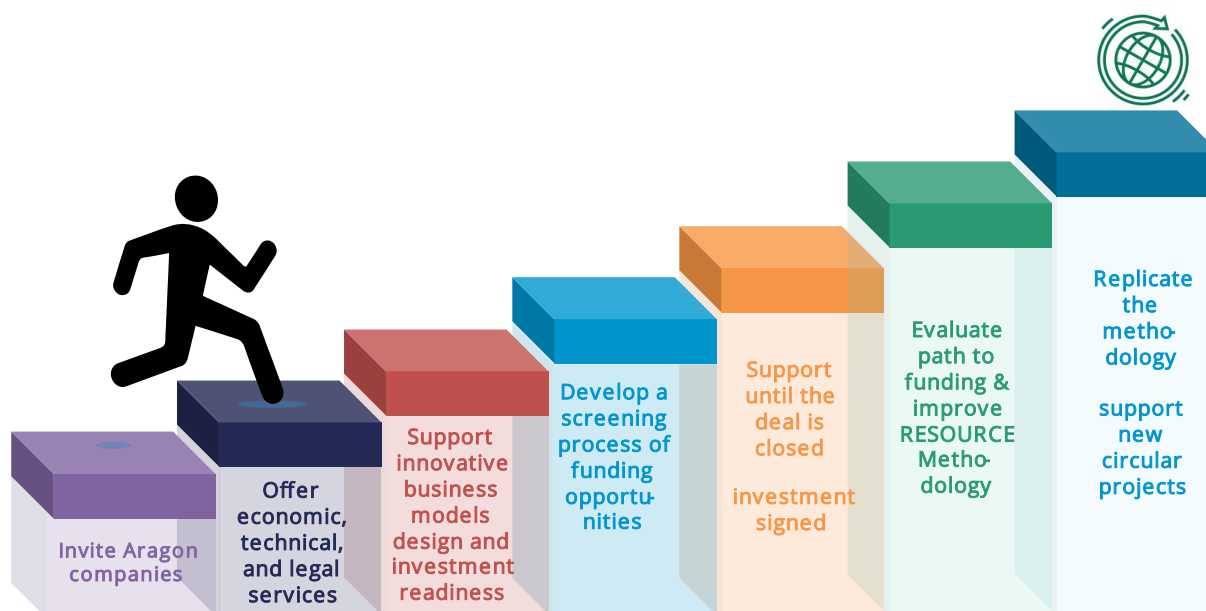


Figure 1 - The RESOURCE methodology in 7 steps

The final and overall objective of the RESOURCE project is the creation of a portfolio of project development assistance services to accelerate the development of circular economy in Aragon and to reach €20M investment in 9 circular projects over a period of 36 months, until end of June 2025.

1.2 Stakeholders' engagement's purpose

To develop the RESOURCE methodology, aligning and engaging stakeholders is a fundamental step that constitutes task 1.1 (stakeholder engagement) which is developed in months 1 to 6 of the project.

This report is intended as an operational tool to engage the relevant stakeholders at the relevant time, that will support the deployment of the RESOURCE project.

Therefore, the first step consists in carrying out a systemic mapping of all stakeholders described in D1.1, mainly from the Aragon region, whose involvement is necessary for the implementation of the project. The aim is to identify all the actors that can be involved and to provide a wide range of options to ensure, in the second part of the task, a minimum of 50 interviews carried out. Those interviews helped analysing and understanding how all these actors can support the RESOURCE project, what they can bring and what they need to better support circular projects raise funding.

Subsequently, it is necessary to engage these actors effectively to design and carry out the project activities. This is the objective of the stakeholder's engagement strategy included in the third point of this document, that is conceived as a guidebook. It liaises with all project activities to involve people relevant to the future steps.

2 RESOURCE stakeholders' engagement strategy

2.1 Introduction

One of the key factors influencing the engagement strategy of the different stakeholders in the development of the circular economy (CE) is determined by the national / regional / local context in which they operate.

The approval of the "Aragón Circular" Strategy (fully aligned with the "Action Plan for the Circular Economy" developed by the European Commission¹ and with the Spanish Circular Economy Strategy, "Spain Circular 2030"²) as well as the actions carried out in its development, allow to have a database of projects and companies willing to collaborate for a better access to private funding. It also includes other agents interested in the development of the circular economy. In short, it reflects a strong interest of the Economic Ecosystem of Aragon in the change to circular economy and offers a number of projects suitable for the application of the RESOURCE methodology.

In the development of action plans such as those mentioned above, concerted public-private efforts are beginning to develop to support entrepreneurs who wish to apply the principles of the circular economy to their production processes, facilitate access to both public and private capital, make governments work for entrepreneurs, accelerate innovation processes and, at the same time, make the economy increasingly de-carbonised.

The overall objective of RESOURCE is to develop an innovative methodology to support the financing of circular economy projects from the private sector. The project aims to support some pilot projects from the development of their technical solution, through the development of their business plan, to legal support, to ensure that they can obtain private financing when the project needs it.

Aligning and engaging stakeholders is an important step towards this goal. This is why we started with a systemic mapping of all of them, grouped into four categories, which was described in D1.1. But more is needed.

Key players in the circular economy ecosystem need to be attracted and involved in the project; a contingency plan needs to be defined in case their interest in participation may wane; and finally, the maintenance of stakeholder engagement needs to be assessed and measured in order to take any measures that may be necessary to ensure that engagement is sustained. This is the purpose of the RESOURCE's stakeholders' engagement strategy, described in this deliverable D1.2.

The RESOURCE stakeholders' engagement strategy is based on an extensive work of stakeholder analysis, to understand their interests and role in the circular economy in general, and during the RESOURCE project in particular:

¹ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

² https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/economia-circular/200714eeec_resumenejecutivo_en_tcm30-510578.pdf

- a series of fifty interviews conducted with a representative group of each of the four stakeholder categories;
- the exchanges and conclusions of the Conference on Circular Economy organised by the Department of Economy, Planning and Employment of the Government of Aragon (RESOURCE partner) on 23rd November 2022.

Stakeholders, grouped into the four categories, are defined here as those who can directly or indirectly affect, be affected by, or influence the adoption, development and success of a circular economy project. They all have different interests, motivations, objectives and influence in making decisions aimed at implementing circular economy, such as reducing costs or environmental impacts, improving efficiency, improving competitiveness, promoting investment in technological development and innovation, improving governance, etc.

Obviously, the arguments for gaining and maintaining stakeholder's commitment have to take these aspects into account. RESOURCE will therefore apply a transdisciplinary approach, working with stakeholders, to enable learning experiences and the generation of synergies between them.

Although the project aims to achieve its objectives in the most participatory way possible, it is also limited in time and funds. Therefore, it is possible that not all stakeholders who would like to participate in the project will be included or that those who do participate will not do so to the extent they would like. However, the consortium will take the utmost care to consider the needs and wishes of all stakeholders.

The following sections of this document will describe :

- the **principles, objectives and stages** upon which the RESOURCE stakeholders' engagement is built;
- the **main findings of the stakeholder analysis**: the main roles, bottlenecks and motivations regarding CE, and the best way to collaborate with each category of stakeholders;
- the **stakeholders' engagement plan**: the strategy to be applied to ensure their commitment and participation throughout the project and even after its completion, differentiating the general commitment that everyone assumes from the more intense commitment of the so-called pilot projects;
- the **stakeholders' engagement implementation**: the activities and measures to be conducted, and associated responsibilities, to ensure effective contribution of the stakeholders, and the maintenance of their interest and their involvement.
- the stakeholders' engagement **evaluation**: the measures to evaluate the participation of the stakeholders in the whole RESOURCE project and to propose improvements.

2.2 Principles of the stakeholders' engagement strategy

Stakeholders' engagement is generally based on a set of principles that define the core values underpinning interactions with stakeholders. The common principles are based on international best practice as set out in "*Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets*", published by the International Finance Corporation in 2007³, and include the following:



Figure 2-Principles of the Stakeholder Engagement Strategy

- **Engagement.** The plan must require real and meaningful commitment from all parties to meet the objectives. It is demonstrated by recognising the need to understand, engage and identify the community and acting early in the process.
- **Active participation and inclusion.** The plan should promote the widest possible and active participation of all parties.
- **Collaboration.** The plan should focus on achieving common goals through collaboration among the parties.
- **Ongoing communication.** The plan should encourage ongoing communication between the parties to ensure that objectives are being met.
- **Integrity.** This principle is achieved when the engagement is conducted in a manner that fosters mutual respect and trust between the parties.
- **Respect.** It is created when the values and interests of the stakeholders and the needs of the territory where the action takes place are recognised.
- **Transparency.** The plan must be transparent about the role of each party and the goals envisaged for the agreement, as well as how they will be achieved.

³ This document is accessible in https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_stakeholderengagement_wci__1319577185063

- **Trust.** It is achieved through open and meaningful dialogue that respects and upholds the beliefs, values and opinions of the community.
- **Accountability.** The plan should clearly specify who is accountable for the various parts of the agreement.

RESOURCE adheres to these principles, considering the diversity of stakeholders and their needs, as well as the regional considerations of the Aragon territory, and it will apply them in all the actions of the project in which the interested parties are involved.

2.3 Objectives of the stakeholders' engagement strategy

The overall objective of this plan is to outline the stakeholders' engagement activities that help achieve RESOURCE's objectives.

In this way, the plan sets out a strategy and provides general guidelines on who should be involved in each process and why. This allows for greater transparency in the selection of stakeholders, maintaining inclusiveness, but also enhancing engagement without overburdening them.

The key objectives of this plan are to:

1. **Gather relevant information from stakeholders and interest groups** related to the project and identify those who can be relevant to achieving the project's objectives, including those that can maximise scientific impact.
2. **Outline a participatory process** to involve all relevant stakeholders to plan, guide and evaluate the shift from the linear to the circular economy.
3. **Define roles and responsibilities** for the implementation of the plan.
4. **Align with the project's reporting and monitoring measures** to ensure the effectiveness of the stakeholders' engagement process and its periodic reviews based on the results.
5. **Promote, develop and encourage the circular economy :**
 - Promote the development and implementation of innovative and environmentally friendly technologies to improve process efficiency and environmental performance.
 - Develop an accessible economy by creating incentives and financial mechanisms to support circular economy schemes and achieve better capital mobilisation.
 - Encourage business models and strategies that favour the circulation of circular goods and services.
6. **Encourage environmental education** to promote awareness and a broad understanding of the benefits of the circular economy.
7. **Disseminate project information** and ensure regular, accessible, transparent and appropriate consultation and co-decision in accordance with the dissemination and communication strategy included in D 5.1.

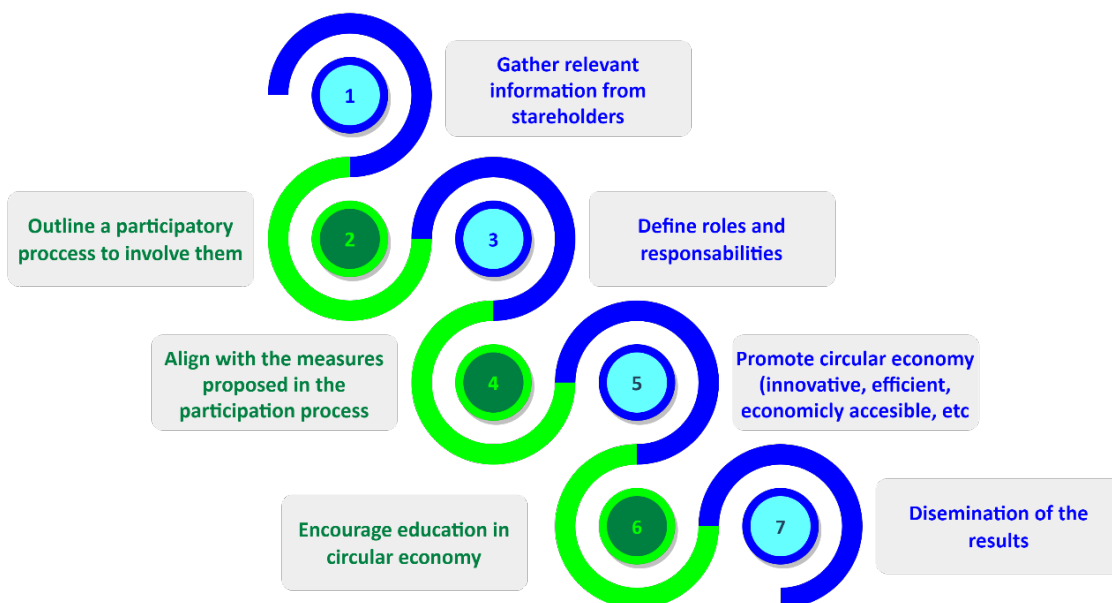


Figure 3 - Objectives of the Stakeholders’ engagement Strategy

2.4 The 5 stages of the RESOURCE’s stakeholders’ engagement



Figure 4 - Phases of the stakeholders’ engagement plan in RESOURCE

In line with the purpose and scope of the RESOURCE project, five phases of stakeholders’ engagement are considered as depicted in Figure 4 - Phases of the stakeholders’ engagement plan in RESOURCE. Phases 1 and 2 can be considered as initial engagement, while phases 3 and 4 correspond to ongoing engagement and engagement beyond the end of the project, respectively. Phase 5 is an evaluation phase that is carried out on an ongoing basis. Each phase of the RESOURCE’s stakeholders’ engagement is explained in more detail in the following sections.

3 RESOURCE stakeholders' engagement analysis

This first fundamental phase consists of identifying and categorising all stakeholders. Understanding stakeholders is essential to achieve the RESOURCE project objectives. To do, RESOURCE project conducts two essential steps: stakeholder identification and stakeholder analysis.

3.1 Stakeholders' identification

Stakeholder identification is primarily a process of listing, collecting and storing basic information about the entities or organisations interested in the project.

The RESOURCE's stakeholders were identified, classified into four categories and listed in D 1.1, which is a public document. Main results are summarised in the graph below.

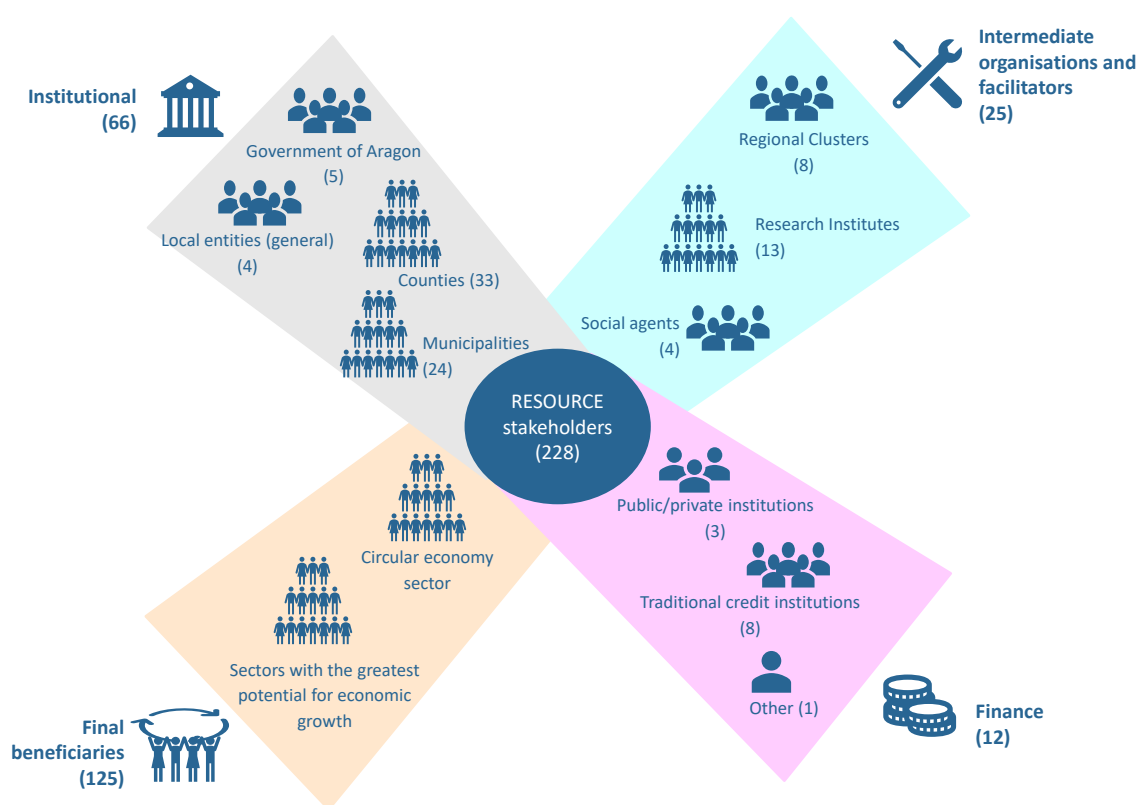


Figure 5 - Mapping of Stakeholders

As a preliminary point, it is appropriate to make a conceptual clarification to distinguish between investors in circular economy and financial agents. This is because the concept of investors also includes companies that provide their own funds for the development of circular economy projects (which is also a form of private investment), regardless of whether they also decide to access other types of financing, whether public or external private. It is therefore necessary to distinguish the concept of investor (whether with own or external funds) from the one that develops the project and that, although it may provide its own funds,

will be considered, for the purposes of the categorisation of stakeholders, as a final beneficiary.

The identification and collection of stakeholders is an ongoing process that takes place throughout the life of the RESOURCE project.

3.2 Stakeholders' analysis

Stakeholders' analysis can take multiple forms and has the primary objective of gaining a better and more detailed understanding of their needs and interests.

To do so, RESOURCE project conducted fifty interviews and was also fuelled by the outcomes of the Circular Economy Conference in Zaragoza on 23 and 24 November 2022 organised by the Department of Economy, Planning and Employment of the Government of Aragon. By cross-analysing the information their roles in the circular economy were determined, bottlenecks for the development of their activity in relation to the circular economy were identified, as well as the main reasons that lead them to apply circularity processes and, finally, how RESOURCE can help them and to what extent they are willing to collaborate.

3.2.1 Stakeholder interviews method

The interviews, carried out by all the participants in WP1, followed the flexible model included in the annex of D1.1 and were preferably conducted by videoconference, as the option chosen by the interviewees, or by phone, in order to avoid travelling, sometimes long distances. In cases where the proximity was closer (e.g. with clusters and some final beneficiaries), the interviews were conducted in person.

All interviewees were given the guideline of the interview in advance so that they could get prepared. In the final beneficiary group, many of the interviewees asked to review and complete the notes taken by the interviewer in order to avoid inaccuracies or mistakes. In such cases the interviews end up much more developed.

The main difficulty in conducting the interviews has been the timing of the interviews. The last months of the year are complicated by the closing of the 2022 financial year, the completion of inventories and the presentation of justifications. This has delayed both the contact with stakeholders and the interviews.

In the end, the committed figure of 51 interviews has been met, distributed as follows:

1. In the institutional stakeholder category, 5 interviews were conducted, including representatives mainly from the regional administration and entities representing local entities.
2. In the category of intermediate organisations and facilitators, 15 interviews were carried out, 5 of which were made with regional clusters, 7 with research centres and 3 with representatives of socio-economic agents.
3. In the category of financial stakeholders, one public/private financial institution was interviewed (another one ruled out its participation directly as it had no special involvement in the circular economy) and 10 more private investors. 11 interviews

were carried out. It was not possible to interview traditional credit institutions linked to the territory, as they did not answer our request.

4. Finally, in the category of potential final beneficiaries, 20 interviews were made.

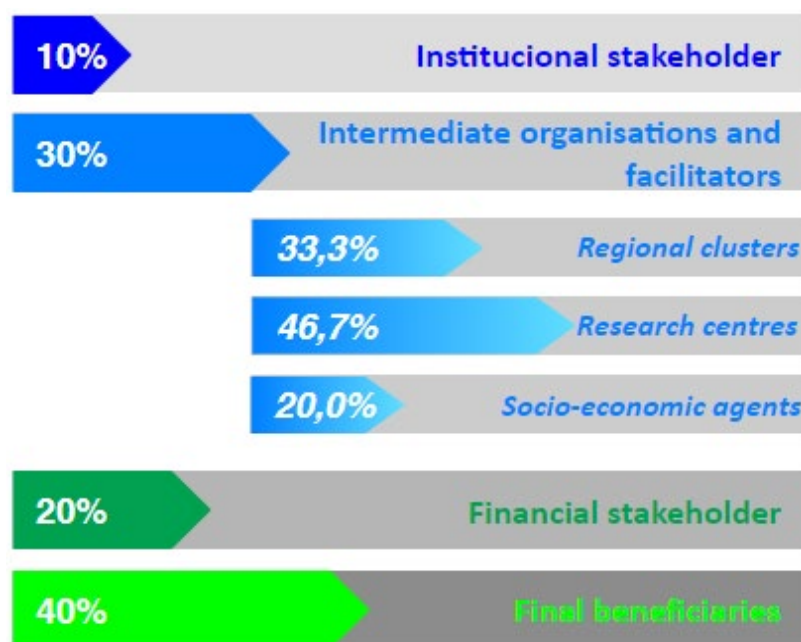


Figure 6 -Stakeholder interviews distribution

Annex I includes a list of all the entities that were initially contacted for the development of the interviews and those that were carried out.

Since both the documentation of the interviews and their translation into English constitute a very voluminous documentation, it has been decided not to include them as an annex to the deliverable, but it can be provided upon request.

3.2.2 Main findings from the stakeholder interviews

3.2.2.1 Institutional stakeholders

Institutional actors (public administrations and either parapublic institutions) can play a **role in facilitating the circular economy**, stimulating and promoting the concept among the economic fabric (companies, industry, commerce...), fostering a climate of trust, collaboration, cooperation and transparency that promotes the right conditions for the promotion of the circular economy.

The interviews carried out were along these lines. However, it can be seen in all of them that they are too specific in their respective competences, trying not to interfere in those that correspond to other institutional entities. And although there are avenues of cooperation between them, they are still far from reaching a desirable level of coordination between all of them. Although the circular economy is not new, it is true that it is being promoted, from an institutional point of view, much more in recent years. And in this process, it is moving away from the traditional view that the circular economy focused on recycling and waste management. Today, this perspective has been overcome because, as practically all the

interviewees agree, **the main role of the institutional actors consists of disseminating among the business fabric (agricultural, industrial or services) the need to change to this new economic paradigm**, to innovate in clean technologies and the adoption of efficient solutions for the use of resources. **Perhaps as a differentiating element, but no less important, is the role of the administration in educating society on responsible consumption.**

The **main bottlenecks** highlighted by the interviewees are **the lack of awareness and knowledge of the business fabric**. There is no business or social culture of circular economy, and it is necessary to work in this direction by promoting responsible consumption as a means of driving circular production. **The insufficient degree of maturity of the technology** to convert waste and by-products into new raw materials at a competitive cost is also highlighted. Reference is made to the **lack of adequate manpower for certain jobs required** by the circular economy (e.g. experts in the repair of certain goods). From the point of view of the local administration, the problem is the **great dispersion of local entities in Aragon and their small size** (of the 731 municipalities in Aragon, only 28 have more than 5,000 inhabitants), which even makes it difficult to establish a business fabric, and even more so circular projects.

Going back to the interviews, the main bottleneck pointed out by all interviewees is **the lack of resources**. There is a strong emphasis on the lack of funds and the need for their diversification in order to address all public policies, which reduces the amount that can be allocated for this purpose, and the need for collaboration with the private sector to enable companies to access non-public sources of funding. **Administrations take on the role of funding the early stages of circular economy research processes, but private investment should be more involved in the later stages.**

The **main motives** that the sectors of the administration interviews provide for developing the circular economy are centred on two clear objectives. On the one hand, **to promote a more sustainable economic activity in Aragon** by supporting companies in the process of change. On the other hand, **to look for new business opportunities that generate employment and wealth in Aragon** and allow the economic development of depopulated areas where circular activities can be implemented. In short, the administrations seek economic development and the improvement of conditions in their respective territorial areas, whether regional or local.

With regards to the **support that RESOURCE can provide**, it is particularly important that it can **serve as a guide for good practices in circular economy** and through this benchmarking **improve the development of the Aragon business fabric**. Special emphasis is placed on the technical, economic viability and legal support it provides to help companies to access private financing or, simply, to develop circular economy projects. Reference is also made to RESOURCE as a means of disseminating and publicising the advantages of the circular economy.

As regards their **participation in future actions of the project**, in general terms, the regional administrative bodies, except for one, decline to participate because another body is already involved in the project as a partner. It will be necessary to insist on the need to participate in future workshops. This is not the case with the representation of the local administration, which is willing to collaborate.

3.2.2.2 Intermediary organizations and facilitators

Intermediary organizations and facilitators are understood as those who provide the essential services for the transition to the circular economy to take place and accelerate. This concept can include multiple activities and services, such as data management technologies, a reverse logistics network, etc. There will be as many types of enablers as there are actors capable of addressing the needs of companies that want to progress on the path to circularity. In D1.1 was justified its division in three categories: regional clusters, research institutes and the representatives of socioeconomic sectors. Their different nature offers nuances when considering the four axes on which this analysis is focused.

The principal role of clusters in circular economy consists of acting in a coordinated manner with stakeholders, clients or administrators with the purpose of requesting resources, aid or facilitators and share experiences, resources and knowledge. In this way, they achieve three very specific benefits for the companies that make them up: they increase their capacity for innovation, increase their productivity and reduce costs. The main common fields of action in which the clusters interviewed have revealed their main role in relation to the circular economy focus, as their main objective, on promoting the recovery of the different waste generated by the associated companies. To this end, they carry out actions such as promoting transversality with other more agile sectors, encouraging the use of technology in the development of their members' projects and facilitating access to sources of funding for the development of increasingly sustainable and environmentally friendly projects. Of course, they also have their specific roles linked to the companies that are part of them and that are important for the circular economy, such as optimising reverse logistics (ALIA) or water quality (ZINNAE).

All the research centres interviewed consider the circular economy as one of their most immediate missions. Basically, all the centres consider that their reason to be is research and transfer knowledge to companies, increasingly incorporating environmental sustainability and circularity criteria into their respective fields of research in the design of industrial processes and products at all levels (materials used, resource consumption, energy efficiency, design of circular business models, etc.). Simply, they actively collaborate to ensure that the companies to which they provide research services are aligned with existing European policies to facilitate the green, digital and inclusive transition.

The role of the organisations representing the socio-economic sectors interviewed is to coordinate, represent, promote and defend the general and common interests of all business people in Aragon. And within them, to contribute to achieving a sustainable economy by conveying to the associated companies the importance of implementing the circular economy in their business development with the use of the best available techniques, reducing energy and material consumption, etc. They mainly carry out this function by training activities and providing support and advice to member companies.

As for the bottlenecks identified by this type of stakeholder, there are several types. Generally speaking, they all agree it is necessary to improve the culture of the circular economy, so that companies adapt their processes and opt for more environmentally friendly management methods. They also consider that there is too much regulation and that it is too rigid, which prevents or hinders the application of the principles of circularity, and that bureaucratic

procedures are excessive and cause many delays. Finally, and also of a general nature, they highlight **the scarce public and private funding available**, given that it is directed towards other priorities. From the research centres, the **lack of a human resources policy** suited to the needs of R&D&I (CSIC) or the fact that **the prices of original raw materials are usually lower than those of recycled or recovered raw materials** (ISA) are particularly highlighted. Finally, the representatives of the socio-economic sectors underline **the high degree of ageing of the current productive system, which limits the adoption of innovations**.

As for the **main drivers for transition** to the circular economy by these intermediate organisations and facilitators, the clusters have focused their answers on the needs of the sector each of them represents, for instance in the field of water, it is important to link it to the production of **renewable energies, biogas or green hydrogen in order to make the investments profitable**. For the research centres, the main driver of change to approach the circular economy lies into **the knowledge and development of new materials and processes that meet the sustainability, circularity and climate neutrality needs** of current and future society. It is also seen as an **opportunity to generate business**. For their part, the representatives of the socio-economic sectors see as a **main driver the Government of Aragon**, as the coordinating administration, with national and European financial support, and the business organisations as prescribers and interlocutors with the productive fabric. The final objective pursued by the entities interviewed is to achieve a more prosperous and competitive Autonomous Community in a sustainable economic environment.

Special mention should be made of **access to investment as a driver of transition towards the circular economy**. All the interviewees consider that public funding (at regional, national and, fundamentally, European levels) is essential, although it should be less rigid and include greater possibilities of access. **They remark Investment funds, green financing, soft loans,** commitment of the 7 European banks of more than 7000ME for green projects, etc.

They also consider that **financial intermediaries in Aragon, both bank and non-bank, are perfectly able to meet the needs of companies to finance investments in the circular economy. A joint and coordinated action of both systems can provide solutions to many projects.**

As in any economic activity, they point out that **the main bottleneck** in this field is the **economic return that any investment requires** to recover the financial resources (own or external) applied to finance the investment. In an economic environment of rising interest rates, such as the one expected for the coming years, the number of projects is reduced due to the need to obtain higher returns in order to cover the higher financing costs.

The **support that RESOURCE can bring** to the members of this stakeholder category manifests itself, in the opinion of all interviewed parties, mainly in two ways. Firstly, by **expanding the possibilities of financing business initiatives in the field of the circular economy**, which can lead to traditional sources of funding innovating and adapting to the needs of the circular economy; and secondly, by **sharing innovative financing schemes that are operational** and ready to finance circular economy investments at local and regional scale, **guides and reports** developed throughout the project, **success stories, activities, resources, innovations, processes or procedures focused on the circular economy**, which can facilitate the emergence of synergies in the Aragon business fabric. In relation to this last aspect, the research centres highlight the closer approach to the research needs of companies.

Regarding their **collaboration in future RESOURCE actions**, the entities interviewed have shown their willingness to contribute to future actions with their knowledge and experience and to disseminate the results among their associates.

3.2.2.3 Financial stakeholders

While it is true that investment under sustainable investment criteria has become a cornerstone of the philosophy of many investors, the term circular economy does not yet have the same depth.

The **role of investors** in the circular economy consists of **accompanying the enterprises that develop this type of projects both in their creation and their expansion**, increasingly prioritising the application of circular economy principles in the projects they support rather than attending to the projects solely in terms of return on investment. This decision is not altruistic either but is supported by the fact that politically it supports the economic paradigm shift and invests in education, in terms of circularity, not only for companies but also for consumers. In short, it takes into account the mobilisation of public funds (for example, the announcement of the allocation of nearly one billion euros for the period 2020-2030, announced in the European Green Deal) in favour of the decarbonisation of the economy.

In any case, and in the face of this scenario, the role assumed by the main financial agents interviewed ranges from the following positions:

- **Those investors who view this type of circular economy project favourably but continue to prioritise the maxim of investment risk capital, i.e. making a profit.** However, it is important to highlight that there are networks that, although they do not prioritise circular economy projects, they do value the fact that the projects in which they intend to invest are not harmful to the environment.
- **There are other investors**, IBERDROLA, REDEIA, ELEWIT, etc., which, due to their activity, **increasingly base their production model on solutions that not only do not harm the environment, but even favour it**, as is the case of renewable energies, biofuels, etc.
- And as someone of the final beneficiaries (VALL COMPANYS) has stated, **many of the financial institutions operating in the market require the adoption of a sustainable financing agreement**, based on the determination of a series of key performance indicators (KPIs), of certain objectives and, obviously, of their fulfilment.

The **main bottlenecks identified by interviewed investors**, with the main risks or obstacles considered to invest in CE projects, are:

- They are **projects with a long maturity**, generally over three years, with intensive activity in external capital, and **which require high investment in the early stages with medium to long term results.**
- There is a **significant regulatory and legal risk**: most of these projects need to obtain licences prior to development, which considerably increases the time required to capitalise investments, and they are subject to regulatory changes that may require readaptation of production processes.
- **Technological risks arising from the emergence of new technologies** that may turn obsolete those in which the initial investment has been made are also considered.

- There are **certain projects that may not be scalable**, i.e. that may not be implemented within the company's production system or that may not be marketable. **Sometimes the results of circular economy projects are not business-oriented.**
- It is important to assess **whether the project achieves economic self-sustainability**. It is good that the premise of the project is the circular economy, but it must be self-sustainable and generate profit.
- **Novel proposals are valued**. If they are similar to other projects at a global level or to something that already exists, the project is not interesting for investment purposes.
- **Projects must have commercial outlets**; otherwise, their chances of commercialisation decrease considerably. In Spain, there is a **lack of early adopters** and in order to implement products abroad it is counterproductive to be a local company and not have references in the international market.
- The team is focused on the product, not on the project. They have to be credible that the business is viable as such, as well as sustainable from a circular economy point of view. Many circular economy projects reach their maximum when the market is not ready for their new products, and they do not have the critical mass to invest in such projects.
- In the end, as in any type of investment and from the point of view of a Venture Capital fund, **the most important risk is the risk of losing the invested capital.**

With these bottlenecks, and without prejudice to the outcome of the co-creation workshops that will be held, the requirements that circular economy projects must meet in order to access private funding are already being pointed out.

From the investors' point of view, the main drivers of change or **motivations for investing in the circular economy** are that they consider it to be a **critical element in ensuring the medium- to long-term sustainability of the planet**; they also consider it to be a strategic vector for **future investment projects**, which are **increasingly in demand by investors**, as more and more public support and **more consumers or users are demanding this type of products and/or services**. Moreover, this trend is expected to increase in the coming years.

More specifically, several investors - Iberdrola, REDEIA, ELEWIT, etc. - consider that this type of project is in line with their business, and that their main **motivation is to generate a positive impact** on the territories where they operate, even if it does not form part of their core business. For this type of investor, investing in circular economy projects that they can then exploit within their own business structure is an added value.

In general, for all the investors interviewed, these types of projects have a clear impact on society and the sustainability of the planet. As far as companies are concerned, through their **corporate social responsibility systems**, they should at least try to ensure that their activity does not harm the environment.

Today's society demands that all business projects are aware of the negative effects of their productive activities and that things can and must be changed in order to reach the global goal of zero emissions.

Finally, for all the investors interviewed, the **RESOURCE project can help them with the pre-selection and analysis of circular economy projects in which to invest**, for subsequent presentation to the pool of investors. In fact, it can **generate an important source of**

information on the ecosystem of circular economy projects in the region, through the dissemination of experiences, events, etc.

In addition, they have highlighted that the dissemination of RESOURCE in Aragon can also help them to **incorporate new investors to their global project**. Likewise, it is also positively valued as a means of disseminating their own network of investors and the tools they have.

Finally, some investors have highlighted that **some of the projects presented may generate synergies and become potential users of the technologies developed** by their investee companies.

However, their commitment **to participate in future RESOURCE activities has been less intense**. With the exception of a few interviewees who directly declined the possibility of participating, they generally agreed that they would be willing to participate if conditions allowed it. Special mention should be made of the non-participation in the interview process of the main traditional credit institutions linked to the territory of Aragon. It will therefore be necessary to intensify efforts with them to ensure their participation in the workshops to be held in 2023.

3.2.2.4 Final beneficiaries

The most natural "final beneficiaries" of the RESOURCE project are the companies. Indeed, they play the **main role for change from the classic economy system to the circular model**, which proposes an uninterrupted cycle based on reducing waste, recycling and reusing, reducing carbon emissions, extending the life cycle of products by making them more durable and, in short, contributing to more sustainable consumption and minimizing the effects of climate change.

All enterprises are producers, consumers and marketers of goods and services. Each within their respective field of activity and value chain. In this respect, companies from the agri-food and livestock sector, the industry and construction sector and the service sector were interviewed. In general terms, **all of them have assumed the role of recovering in some way the waste generated in their production processes**, so that, once reconverted into raw materials, it can be reintroduced back into the system. In those cases where this process is not possible, energy recovery systems are applied (if this is profitable).

To this end, **the focus is on eco-design** with the aim of improving processes and revaluing waste and maximising the use of sustainable materials, analysing in each case the different alternatives that make it possible to reduce the negative impact of its products and finding more sustainable raw materials and energy sources.

The interviewees also highlight **the importance of achieving a high degree of energy efficiency in their production processes, reducing the consumption of fossil fuels and using clean and renewable energy**. In fact, the production of **hydrogen and biogas** as alternative and clean energy sources is one of the main lines of development of the circular economy.

And although they do not express it exactly in this way, they also take on an **educational role** aimed at consumers.

The **bottlenecks** that the companies interviewed highlighted for the development of the circular economy are very **similar for all of them, regardless of the sector of activity in which they operate**.

Obviously, the main one is **the lack of funding for the development of this type of project**. However, with regard to private financing, the size of the companies is relevant. The larger companies say that they have their financing problems under control, and it is **the medium-sized and smaller companies that have the greatest difficulties in accessing private financing**. Financial institutions require the adoption of sustainable financing agreements through the determination of KPIs that many companies cannot set or are unable to meet. As will be discussed below, this means that one of the main ways in which RESOURCE can help companies is through the advice and support that can be provided to access these sources of finance.

Certainly, underlying the problems of access to finance are other barriers highlighted in the interviews. It is pointed out, for example, that **the circular economy is still in its infancy and that R&D processes are more important than the scaling and commercialisation of circular products**. They also add as a difficulty in accessing funding the additional costs involved in implementing circular economy processes in companies, which **makes them less competitive**. It is also difficult for the products resulting from circular projects to access the market, as these **products sometimes do not meet the requirements of the sector or are not cost-competitive with linear economy products**.

What all the companies interviewed agree on is **the scarcity of public funding**. They point out that few funds are allocated and that many of the companies that develop circularity projects do not have sufficient funds. They point out that the percentages of funding are too low, either because the aid intensity is low or because the subsidy ceilings are set for the beneficiary companies. They also indicate that the calls for proposals are too rigid in terms of not supporting investment lines that do not involve R&D processes, the high minimum amount required for projects to be eligible, etc.

There is also agreement that an important bottleneck is **the existence of legal and bureaucratic barriers**. These have already been referred to in the analysis of other groups, so there is no need to add to them.

The **main drivers for transition** towards the circular economy model highlighted by the companies interviewed, as in the previous case, are in line with general elements, without prejudice to the fact that in the interviews (and in some cases, when asked to review and complete the interview form, in great detail) they link them to the value chain in which they operate. Apart from these specialisations, the main reasons that drive companies to develop circular economy activities can be summarised as follows:

- They all want to **be an active agent in the change** to the circular economy and in reducing the environmental impact of their activity. They are committed to greater energy efficiency (using renewable energies), reducing water consumption, minimising the carbon footprint and minimising the landscape impact of their respective activities. The answer given by the Vehicle Research Institute deserves a special mention, which states as a motivation for its involvement in the circular economy that cars should be as easily repairable as they were years ago, highlighting the step backwards that has

been taken in recent years by putting products on the market that are increasingly difficult to repair.

- Many of the companies interviewed are committed to their intention **to close the full circle in their value chain by minimising waste generation**, with the aim of raising their efficiency to zero waste. In this respect, there are references to waste revalorisation processes, some of which are especially highlighted as being of very high value in the event of their possible reincorporation into the market as raw materials.
- To this end, processes of continuous review of processes and products are applied, applying eco-design processes and using the latest and most advanced technologies. Special mention is made of the Vehicle Research Institute, which shows that the development of this sector has meant that vehicles are now less repairable than before.
- Obviously, **growth is the main and legitimate objective of any company**. Applying the circular economy to their activity would allow them to grow in a sustainable way, increasing their competitiveness and reducing costs. And all this in an environmentally friendly way.

The interviewees are generally aware that society, especially the younger sectors, demand sustainable products. Thus, through the development of the circular economy and its promotion, they aim to **achieve a brand image** as a company that meets this demand.

The interests of the entities interviewed in relation to the support they can receive from the RESOURCE project are mainly focused on **access to preferential financing for the implementation of industry scale-up projects**.

They also consider as a particularly relevant aspect **the possibility of accessing personalised advice** from the project partners to carry out the **life cycle analysis** of their project, to receive technical advice on more sustainable materials, new manufacturing processes and, finally, especially in the case of small and medium-sized enterprises, to receive advice on the economic viability of their projects and legal advice. However, this does not seem to be a necessity for large companies that already have their own financial and legal departments.

Some companies highlighted the possibility that the contact and relationship with other actors involved in the project **could generate synergies to launch new circular economy projects**.

In addition, most of the companies interviewed want to receive information on the development of the project, which can be done by facilitating access to the RESOURCE website.

The question of the possibility of **collaboration in future actions of the RESOURCE project has received positive responses**, generally conditioned by the availability of the moment, although some (YUDIGAR) offer their total availability and others (VALL COMPANYS) **offer mentoring services to companies that could be potential suppliers** and wish to carry out circular economy projects. There are also companies that have expressly declined to participate.

3.2.3 Additional information for mapping circular economy in Aragon

As additional information to the mapping resulting from the interviews carried out, it is appropriate to refer to the outcome of the Conference, organised by the Department of Economy, Planning and Employment of the Government of Aragon (partner of the RESOURCE project) in collaboration with the Club of Rome International and held in Zaragoza on 23 November 2022, simultaneously with the RESOURCE consortium meeting, which also took place in Zaragoza on 23 and 24 November 2022.

The second part of the conference, entitled "Challenges and commitments to the circular economy: from Aragon to the world", included **three workshops in which approximately 70 companies from Aragón** (that are listed too in annex I) participated and gave their views on the state of the circular economy in Aragon.

The three workshops, **on food and agro-livestock, construction and industry, and technology and services**, were run according to the "World coffee" system and worked on four axes:

- Axis 1: Overcoming obstacles to the development of the circular economy.
- Axis 2: Active barriers for the development of the circular economy in Aragon business environment.
- Axis 3: Future towards which we want to advance.
- Axis 4: Demands from companies of Aragon to the public administration.



Figure 7 - Geraldine, RESOURCE coordinator, from GAC, participates in a workshop

In the conclusions document of these workshops, which is available on the website aragoncircular.es, the following are highlighted:

- **Axis 1 - Obstacles overcome:**
 1. **Eco-design is the key** to the circular economy and must be promoted. It is an indispensable driver of development for the circular economy.
 2. **Pay-per-use (renting)**. Transformation or shift from the supply of a good to the provision of a service related to that good (servitisation).
 3. **Creation of a circular economy culture** at social, business and administrative levels.

- **Axis 2 - Active barriers:**
 1. **The cost** of circular goods and services has a **competitiveness problem** and is a difficult barrier to overcome for access to a sustainable market.
 2. **Legislation acts more as a barrier than a driver for change.**
 3. **Lobbyists and large franchises** impede the move towards more circular models.
 4. **Lack of vision and business culture in the value chain** towards a collaborative model that facilitates circularity.
 5. To continue overcoming obstacles, there is a **lack of dissemination between business-administration-society.**
 6. **Change the way of thinking** towards a sustainable consumption model based on the right to repair and reuse. Overcome the throwaway culture.
 7. Economic obstacles. Difficulty in **accessing financing.**
 8. **Lack of aid, tax benefits,** etc. More public aid.
 9. **Administrative processing times** are too long. There is a need for less bureaucracy and more administrative simplification.
- **Axis 3 - The future we want**
 1. To have **legislation that is more oriented towards circularity** than towards waste management itself.
 2. **Legislation should be more flexible,** simplified and adapted to the sector.
 3. **Committee of experts** (circular economy office) where information, financing, good practices, help, reasons to measure circularity can be requested.
 4. A future where there is **greater industrial symbiosis** (waste from one, raw material from another).
 5. **More lines of funding** for the development of circular economy projects.
 6. **Disseminate information on the benefits** of the circular economy. Show its benefits.
 7. **Rethink, redesign, re-educate, regenerate.**
- **Axis 4: Demands from business**
 1. The **administration must be exemplary** in tenders, public procurement, etc.
 2. **Legislation updated** in accordance with current regulations and that circularity criteria are established and prioritised.
 3. **A single European standard** for circular products (eco-label) and that products from outside the European Union comply with these requirements.
 4. **Free and accessible data.**
 5. **Accompaniment, advice and training.**
 6. Awareness that **most businesses are small and have difficulties,** or are simply unaware, **of means of financing and support.**

3.2.4 Conclusion

Below is a matrix that summarise in a graphical description of the assessment of the stakeholder interviews described in the previous pages. In this matrix it is possible to identify, for each of the four categories described above, the main roles they play in the circular economy, what are the main bottlenecks they encounter in their development, what are the main reasons that drive them to undertake this type of project or to rethink their production system and, finally, what they expect to obtain from the RESOURCE project.

	Institutional Stakeholders	Intermediary organisation and facilitators	Financial Stakeholders	Final Beneficiaries
Roles	<ul style="list-style-type: none"> Promote CE Disseminate the need to change No interference in other's competences Cooperation Education 	<ul style="list-style-type: none"> Coordination with stakeholders Share experience Share knowledge Recovery of waste Research Knowledge transfer Aling with European policies Sustainable economy Train activities Provide support 	<ul style="list-style-type: none"> Economic support to enterprises Reach benefit Image of the investor New bussines model Sustainable financial agreements 	<ul style="list-style-type: none"> Make the change to CE Reducing waste Recycling More durability Minimize effects of climate change Energetic efficiency Improve their processes Education to consumers
Bottlenecks	<ul style="list-style-type: none"> Lack of culture of CE Immature technology Lack of skilled labour Dispersion of municipalities Regulation Lack of funding 	<ul style="list-style-type: none"> Improve culture of CE Regulation and bureaucracy Lack of funding Degree of ageing in the companies 	<ul style="list-style-type: none"> Long maturity of projects Regulation risk Technological risk (obsolescence) Not scalable projects Non-self-sustaniability projects Not being novelty Lack of comercial outlets Focus on product (not in procces) Lost of inversion 	<ul style="list-style-type: none"> Lack of funding Sustainable financial agreements hard for SMEs CE is in an initial moment (R&D) High financial costs Access to market Non competitive prices of CE products Too rigid requirements for public funding Regulation
Main drivers	<ul style="list-style-type: none"> Sustainable economic activity New bussines opportunity 	<ul style="list-style-type: none"> Develope new materials Develope new processes Generate bussines Implemet best technologies Sustainable development Access to funds Private/public colaboration 	<ul style="list-style-type: none"> Strategic vector Sustainability in mid-long term Positive impact in territory Social responsibility Not harm environment 	<ul style="list-style-type: none"> Active agents in change Close the circle of their processes Zero emissions Ecodesign Growth of the company Image of the company
Help expected	<ul style="list-style-type: none"> Guide for good practices Improve the development of economy Dissemination 	<ul style="list-style-type: none"> New possibilities of funding Share good practices Creation of synergies 	<ul style="list-style-type: none"> Selection of projects to invest Information of CE ecosystem Dissemination Attract new investors New synergies 	<ul style="list-style-type: none"> Acces to funds Technical advice LCA support Advice in economic viability of the project Legal advice Synergies

Figure 8 - Matrix of circular economy mapping

From this data it is possible to understand the situation of the stakeholders, their main concerns and needs. All this information is particularly relevant for the development of the working groups that will participate in the co-creation workshops that are developed in task 2 of this WP1 and that will allow a rapprochement between the companies that aspire to obtain funding and the investors, with the support and mediation of the rest of the actors. However, in order not to overburden these critical actors, it is necessary to be cautious when choosing the actions to be proposed and to design measures that will allow the engagement strategy included in the following part of this document to be successful.

The above matrix can be complemented with another one expressing the degree of interest shown in the interviews by the different stakeholders in the RESOURCE project (which would be the two lower boxes in the image below) and the need for the project to obtain and maintain their involvement throughout the whole process (which would be the complete matrix).



Figure 9 – Stakeholders' engagement assessment matrix: interest and influence

In general, all stakeholders have shown an interest in the project and sometimes even an intention to participate very actively in almost all phases. However, and also in practically all categories, there was some reluctance to take the collaboration much further.

These include stakeholders on the left (low interest), including those who did not even respond to the first contact for the purpose of the interview. These include representatives of local authorities, some representatives of socio-economic sectors (in particular those of workers) and some investors, generally of a banking nature.

The reason for this minimal interest may be due to the fact that the RESOURCE project is in its infancy and there is no detailed knowledge either of its objective or of the help that can be offered to them or the advantages they can obtain; it is also intuited, from the interviews carried out with other members of their respective groups, that the last months of the year are complicated because the organisation's own priorities have to be attended to. These groups should be targeted with actions to increase their interest (move them to the right and upwards). Particularly striking in the case of stakeholders classified as institutional stakeholders, since their ability to bring the project closer to the local business fabric and to act as intermediaries and even facilitators of some measures (especially legal and administrative) can be fundamental. Among the measures that can be adopted to overcome this lack of knowledge is to disseminate the project more widely to the local administration and, in general for all groups, to hold explanatory sessions practically face-to-face or with very small groups in the form of workshops. Likewise, the possibility of producing information pills in the form of a report to be broadcast on local television, as well as podcasts for dissemination in different media, is also being considered. In short, the necessary measures should be adopted to guarantee their participation in the working groups and co-creation workshops to be held in 2023 and 2024. In any case, the minimum commitment that can be guaranteed from WP1 is to continue providing them with all kinds of information related to RESOURCE.

The group that has shown interest (bottom right) includes all those who have participated in the interviews. Among those who have shown the greatest interest in participating in future calls for proposals are obviously interested companies (potential final beneficiaries) and investors. However, the willingness to collaborate shown by the representatives of the socio-economic sector of the Aragon business fabric also deserves special mention. Some of them have even proposed to organise dissemination days for their associates on the means of financing the circular economy, giving a preferential place to RESOURCE. In general, the attitude of those who have participated in the interviews is proactive and they do not expect any particular difficulties for their participation in the different phases of the project. Nor will measures aimed at maintaining their interest in the project and reducing their fatigue be neglected. The measures to be adopted for the previous group can also be applied to this one and even be carried out jointly where possible.

The top two frames of the image cannot be evaluated at this time because they will be developed in the future. The stakeholders' engagement part (top left) is the part that will be deployed with the workshops and working groups to be conducted in task 1.2 and evaluated in D 1.3 (M24). The part aimed at involving stakeholders (top right) refers to their participation in the expert committees referred to below and will be assessed in WP3 and task 1.3 of WP1. Therefore, these tables express RESOURCE's intention to involve stakeholders. It is possible that some of them may not yet be aware of the importance of the project but will be called upon to play an active role at later stages.

Efforts will be made to involve as many stakeholders as possible to bring value to the RESOURCE project and to maintain this involvement throughout its duration.

4 RESOURCE stakeholders' engagement plan

The stakeholders' engagement aims to contribute to the overall RESOURCE project: to create a sustainable regional mechanism for the identification, selection, maturation and financing of CE projects with potential for replication at the European level.

Nevertheless, some companies are specifically involved in the project as direct beneficiaries of the RESOURCE action and methodology: the pilot projects. They constitute case studies for which different technical, economic feasibility and legal solutions will be provided. Measures are specifically designed for them in WP2 and WP3 and differ from the general ones foreseen in this commitment plan under WP1. This does not preclude the inclusion here of some provisions aimed at providing new pilot projects in case any of the previously selected ones should fail.

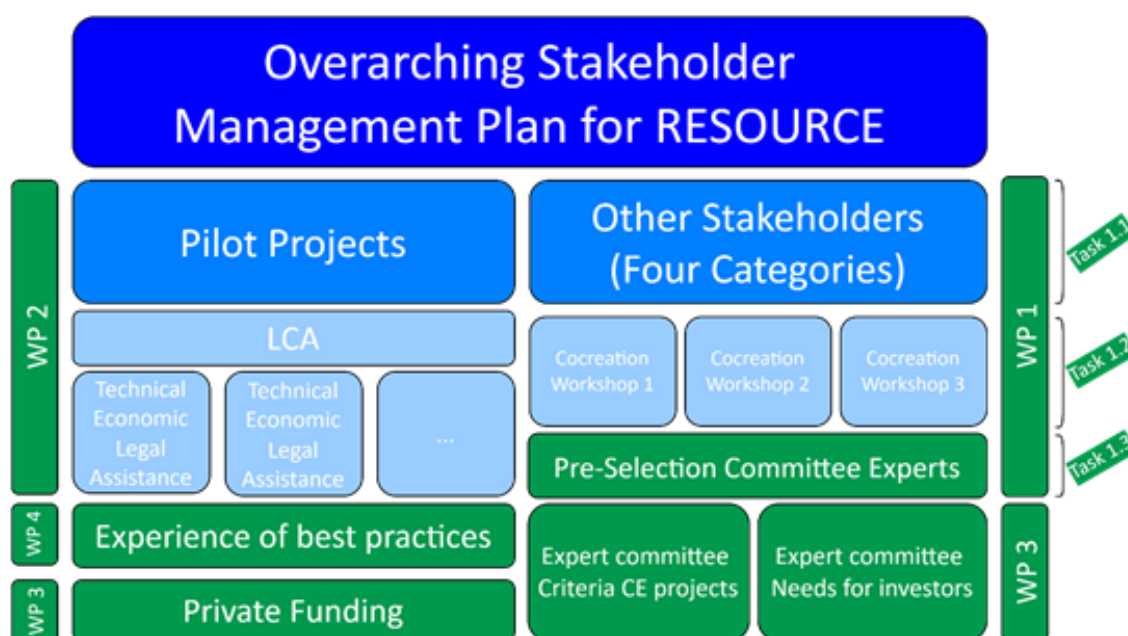


Figure 10 - Stakeholder participation in RESOURCE

4.1 Stakeholders' engagement (general)

The commitment of the stakeholders identified in D 1.1 (without prejudice to the further involvement of the pilot projects) is essential for RESOURCE because their collaboration is essential for the achievement of the objectives of WP1 and WP3. Their collaboration, graphically represented in Figure 10 - Stakeholder participation in RESOURCE and detailed in the WP described in the grant agreement, can be summarised as follows:

- **Participation in the co-creation of the RESOURCE solution (WP1) through the development of 12 workshops** (one per stakeholder category for each of the three proposed workshops) and a final plenary session to reach a point of consensus among all involved.
- **The creation of three Expert Committees**, with an already very small number of participants (between 5 and 10 in each of them) chosen from among the participants

in the working groups, two of them to prepare the roadmap for access to investment (WP3) and the third to pre-select the projects that are likely to access funding both during the RESOURCE project and after its completion (WP1). Its composition and development are described in detail in the grant agreement.

Participation activities are varied, and specific decisions will have to be taken on a case-by-case basis. Without prejudice to the measures proposed in sections 5.1.3 ("involve") for the development of the workshops and 5.1.4 ("collaborate") for the expert committees, the following are some indications that may be useful and will be considered when implementing stakeholders' engagement.

- Not all identified stakeholders will need to be involved in all the actions described. Therefore, consideration needs to be given to whom to involve in each process. The decision should be made on a case-by-case basis to obtain the greatest possible benefits from participation.
- Some of the above actions can be combined in a single event. For instance, working groups participating in each of the three workshops could be held simultaneously, encouraging contact between stakeholders, for example in coffee breaks or breakout rooms to encourage discussion between them.
- There is often internal and external pressure to expand or reduce the list of participants. The number of people involved should not be arbitrary but should be based on a coherent understanding of the purpose and context of the process.
- It is important to consider what participants want to get out of the process and what might prevent them from participating. If everyone's motivations are made clear from the outset, there will be less confusion, and everyone is more likely to be satisfied with the outcomes. This is especially important in an engagement where there is a risk of fatigue.

4.2 Stakeholders' engagement (pilot projects)

As mentioned, and specifically within the category of "final beneficiaries", a group made up of those who will have a greater degree of involvement in the RESOURCE project is singled out. They are the so-called "pilot projects" that will be supported to obtain financing for an amount of 20 million euros.

The main interest of the companies that present these pilot projects is obviously to obtain financing for the development of their circular economy purpose. But to achieve that goal, the RESOURCE project provides specific support. These support measures, which are outside the scope of WP1 and are developed within the scope of WP2 (as can be seen in figure 2), can be summarized as follows:

- **LCA (Life Cycle Assessment)** is a quantitative method, used to measure and analyse the environmental burden of products or services across the companies' life cycle and highlights possible areas of improvement. The assessment requires a data collection exercise, so, to ensure the trust of the companies that provide the data, an NDA will be signed by all RESOURCE partners.

- **Technical Assessment** that will consist in a practical document guiding stakeholders interested in implementing the circular economy investment projects in a step-by-step approach with the objective to support the roadmap to reach private funding.
- **Legal and regulatory assessment** focuses on the policy and regulatory framework at local, regional, national and EU-level. It will set the framework for analysing legal, regulatory and standardization/technical normative issues on national and European level that need to be considered during the circular economy investment projects definition.
- **Economic feasibility.** It will be developed a cost-benefit analysis of the examined circular economic project, which assesses the possibility to implement it. This term means the assessment and analysis of a project's potential to support the decision-making process by objectively and rationally identifying its strengths, weaknesses, opportunities and risks associated with it, the resources that will be needed to implement the project, and an assessment of its chances of success.

Undoubtedly, all these support measures are an important incentive to attract companies interested in participating in the RESOURCE project. However, it is also necessary to bear in mind certain elements that discourage access to sources of financing.

- The first, and most general, is due to **the current context of international crisis** caused by the high cost of raw materials and energy and the instability generated by the conflict in Ukraine. While recognising that this is a reason to look at internal availabilities and the generation of new raw materials from waste or by-products, it is also a reason for companies to apply a principle of prudence in the development of new projects, avoiding the current instability.
- This current crisis situation follows, almost uninterruptedly, the one generated by the COVID-19 pandemic, which has changed the scenario for the business sector, causing uncertainty and an unwillingness to take long-term risks. To alleviate this situation, the EU made available a significant amount of funds ("Next Generation" Funds⁴), of which Spain has been allocated more than 70,000 million euros in the form of non-refundable transfers (subsidies), which must be committed (awarded) before December 2023. In the specific case of the circular economy, Spain has launched a PERTE (Proyecto Estratégico para la Recuperación y Transformación Económica - Strategic Project for Economic Recovery and Transformation) worth 492 million euros, of which a total of 192 million euros have recently been allocated⁵. To these must be added the lines of support that are systematically launched in the Autonomous Community of Aragon for projects related to the circular economy. **This aid can thus become an incentive that allows the development of circular economy projects through the collaboration of public funding, which only covers a non-majority part of the investment, and private funding, in any of its modalities.**
- It can also be **due to the ownership structure of the company developing the pilot project.** If it is a family business, there may be doubts about which sources of private finance to approach if this involves some loss of control of the business; this may lead

⁴ Council Regulation (EU) 2020/2094 of 14 December 2020, establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R2094&from=ES>).

⁵ Orden TED/1211/2022, de 1 de diciembre, por la que se establecen las bases reguladoras y se efectúa la convocatoria para la concesión de ayudas al impulso de la economía circular (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-20700).

to a preference for other sources of finance such as reinvestment of profits or approaching traditional financial institutions for loans. In other cases, ownership of the company may already be held by large investor groups who do not wish to access other sources of external private finance, but who would be willing to increase equity investment in new projects.

- It is also possible that the **timing of project development does not coincide with the financing needs of the companies**, either because these are more urgent or because in the early stages of the project the investment is covered.
- We must not forget the possibility that the desired agreements between investors and companies developing circularity projects may not be reached.
- Finally, it is also necessary to consider the simple evolution of the life of the companies, which may even disappear during the development period of the RESOURCE project, especially due to the international instability referred to above.

All these circumstances affect the pilot projects that were presented in the session held in Zaragoza on 23rd November last, and which are included in Annex II, so that these projects may be insufficient to achieve the final objective. So, this list must be considered as a living document, which must be periodically updated, in which projects can enter and leave in response to the needs of the interested companies and the RESOURCE project itself.

Consequently, the consortium members must be alert and in constant contact and search for companies that may be interested in actively participating in RESOURCE as potential pilot projects. These companies will be able to benefit either directly from the support provided by the partners in the scope of WP2 and described above if they join at an early stage, or from the action protocols developed within RESOURCE and the experience gained during its development if they join at a later stage or in the final funding rounds.

5 RESOURCE stakeholders' engagement implementation

5.1 Stakeholders' management

Stakeholder management is closely linked to stakeholders' engagement and pursues the main objective of reducing the risk of stakeholder fatigue and maximising the benefits of stakeholders' engagement for project outcomes. While stakeholders' engagement is more concerned with the type of stakeholders to be involved and therefore stakeholder categorisation is useful, stakeholder management is more about understanding stakeholders' interests and their perceived need to be involved.

The following considerations should be considered when planning stakeholders' engagement:

- **Time and resources are needed** to develop and build trusting relationships with stakeholders that need to develop and grow; they also need to be sustained over time so that they do not fade away.
- **Participation should be open.** Other stakeholders may be identified in the development of the project who may also want to collaborate and should be allowed to do so.
- **Stakeholders may have unrealistic expectations about the benefits of their involvement in the project.** Therefore, project promoters need to be clear from the outset about what can and cannot be done, establishing a clear understanding of their roles and responsibilities, and conveying this to participants. Above all, participation should provide the opportunity to develop relationships between stakeholders to learn and grow together.
- **Ensure stakeholder participation by avoiding potential conflicts of interest** among participants. This can be avoided by employing liaison staff who are sensitive to local power dynamics and by putting in place mechanism to support and encourage effective stakeholder participation.
- **Stakeholders can easily tire of consultation processes,** especially when their views and concerns are not taken into account, or the development cycles of the participatory process do not correspond to their schedules. This could be avoided by ensuring that consortium members do not make promises to stakeholders but use the planned workshops as an opportunity to manage expectations, challenge misconceptions, disseminate accurate information about the project and collect stakeholder opinions as feedback to the consortium.
- **Stakeholder participation should be developed with an adequate number of stakeholders,** sufficiently large to be considered representative, but also adequately contained so that participation and the achievement of the set objectives can be effective. The selection of an appropriate group in terms of size and the groups represented within it, often leads to participatory processes that can aim not only at exchanging information or opinions but also at developing deliberative processes that allow for joint decision-making and co-design and co-creation processes.

The more stakeholders are involved, the more likely they are to influence decision-making. In this respect, at RESOURCE we want stakeholder participation at the different levels described in the next page to be as high as possible, but it should be reflected at virtually all levels as described in Figure 11 - Objectives of public participation and influence in decision making.

Of the five levels described in this figure, the RESOURCE partners have already developed the first two phases which, of course, are still active in case new stakeholders are identified and their degree of interest is known. The rest will be activated during the implementation of the project.

		INCREASING IMPACT ON THE DECISION				
		INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL		To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC		We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

© IAP2 International Federation 2018. All rights reserved. 20181112_v1

Figure 11 - Objectives of public participation and influence in decision making

5.1.1 Inform

The first one, on "*inform*", is continuously developed from the very moment the RESOURCE project is launched in July 2022. Especially by the Government of Aragon and CEEIARAGON, as partners more involved in the territory where the project is developed, the information to stakeholders and the corresponding feedback has been constant through its dissemination in conferences, media, social networks, etc.; without forgetting the individual meetings with companies interested in developing circular economy projects in Aragon, which have been informed in detail of this project and which are even part of the initial list of pilot projects. Of course, the partners also carry out dissemination and information functions, although their distance from the territory of Aragon considerably reduces their influence. In any case, the activity of the partners in this first milestone of the participation process must be constant and develop throughout the life of the project. A good example of the necessity to keep this level of participation active is importance of the list of pilot projects stay alive, as mentioned above, or the possibility of inviting companies developing circular economy projects to the demo days that are foreseen in WP3 in the last year of the project.

5.1.2 Consult

At the "**consult**" level, the interviews foreseen in WP1 and reported in the first part of this document have already been carried out. Although this part could perhaps be considered as completed, it will undoubtedly still be essential to consult the stakeholders who participate or want to participate more actively in RESOURCE on the development of the different phases of the process. This can provide a mechanism for continuous evaluation and improvement through the submission of alternatives or suggestions by stakeholders. Obviously, at this level of participation, the number of partners consulted must necessarily be lower than at the previous level, otherwise it may not be effective.

At both levels, the commitment by RESOURCE to keep all project stakeholders informed of milestones reached and progress made is maintained. Of course through the dissemination and information channels foreseen in D 5.1, but also through the information dissemination policy to the companies that are part of the database of the Directorate General of Planning and Economic Development of the Government of Aragon, which acts as a partner in RESOURCE, as well as of CEEIARAGON.

5.1.3 Involve

The third phase of the participation process ("**involve**") is to be developed as part of task 1.2 of WP1, through the holding of the co-creation workshops described above, to be held throughout 2023 and early 2024. In this case, the number of interested entities, which will also be grouped in the different working groups according to their specific belonging to the four defined categories, has to be appropriately chosen by the partners responsible for their development in order to achieve an effective result.

For the development of this stakeholder involvement phase, the RESOURCE partners in charge of its coordination and implementation will have to take into account the following parameters:

- **Careful selection of participants, seeking a balance of power interests.** The aim is to ensure that none of the working groups to be created is dominated by any one group. Thus, the group corresponding to institutional entities should be made up of a balance of representatives of regional and local administration and, if possible, with the presence of other bodies of territorial power; in the working group of intermediary entities, clusters and research centres should be balanced and should have the presence of representatives of civil society; in the group of financial actors, the variety should be as wide as possible in order to offer a variety of alternatives to potential final beneficiaries; and finally, in the group of beneficiaries, SMEs should not predominate over large companies, or vice versa, and care should be taken to ensure that projects that operate in different value chains are present.
- **Participation in the working groups must necessarily be attractive and easy,** through the use of group dynamisation models or different means of communication, in order to maintain the attention and activate the participation of the stakeholders and, above all, to avoid their exhaustion or loss of interest.
- It is necessary to **build trust among participants** so that their contributions are as appropriate as possible. Mutual trust should be built by giving participants the

freedom to express what they feel is most appropriate to the nature of the working group in which they participate.

- Directly related to the need to gain the trust of the participants is **the obligation of the organisers of the working groups to provide them with all the appropriate information** so that they can participate with knowledge of what they are working on beyond their own activity or organisational project.
- **Participants should be given real decision-making power** so that their commitment extends beyond the first sessions of the working groups, into the long term, so that they feel that they have a stake in the decisions that are finally taken in the group.
- Since all participants in the working groups are Spanish, **the language used in the workshops and working groups should be in Spanish**. The task of translating the final documents into English for submission to the European Commission will be carried out by the RESOURCE project partners responsible for their organisation.
- The participants in the different workshops **must be advised of the personal data protection measures** that they will provide in order to carry out the corresponding calls. For this purpose, an outline of the information to be provided to participants for this purpose is given in Annex III of this document, without prejudice to its final outline at the time it is to be used.
- **A documentary and graphic record should be kept of the meetings held**, especially of the sketches, proposals and designs made by the participants. Video recording of working sessions may be considered with the agreement of all participants. In any case, the use of the pictures taken, or the videos recorded will remain for internal use of the RESOURCE project partners and will be used exclusively for the drafting of the documents related to the project and cannot be used outside this area.

5.1.4 Collaborate

The fourth level of participation ("**collaborate**") is that which will be achieved in the expert committees that are planned to be set up in WP1 and WP3. In both cases the number of participants is reduced, one might even say considerably, since the number of participants is set at between five and ten people, with the sole and exclusive purpose of facilitating decision-making.

Starting with the WP3 working groups, these are of a temporary nature and seem to be aimed at determining the aspects that investors consider essential to support projects, on the one hand, and, on the other, at specifying the project proposals and the conditions that potential final beneficiaries consider appropriate for accessing private financing.

Finally, the Committee of Experts of WP1 (which could be called pre-selection committee to avoid confusion with the other committees) has a greater vocation of permanence because it is foreseen that it can continue to meet after the end of the RESOURCE project under the coordination and/or mediation of the Government of Aragon. For this purpose, it seems appropriate that its participation in the establishment of the statutes by which it is to be governed (and which constitute D1.3), be agreed by the members of the committee or, ultimately, under the mediation of the Government of Aragon, as the person in charge of its periodic convening.

In the two types of committees described above, the conditions of participation must be similar, albeit with nuances, to those set out in the previous level of participation:

- **Careful selection of participants**, seeking in this case the participation of those who show a greater interest in collaborating.
- The development of the committee sessions should also be **attractive, easy and participatory**, fostering trust among participants and avoiding loss of interest or burnout.
- In the case of the final Committee of Experts (of WP1), **given its vocation of permanence, it would be advisable to consider the periodic renewal of its members** in order to avoid situations of fatigue, although this should be included in its statutes. Some form of official institutionalisation of this Committee could also be proposed, and it could even be proposed that its participants receive a salary, even a symbolic one. However, this is a political decision that is beyond the reach of the RESOURCE project members, including the Government of Aragon through the administrative body acting as a partner, which can only commit itself to submit the proposal to the competent body.
- The members of these committees **must have all the necessary and appropriate information for the development of their functions**, which is especially relevant in the case of the Committee of Experts that can be called pre-selection (WP1), in which projects susceptible of accessing private funding will be assessed.
- Since all the participants in the expert committees are Spanish, **the language used in their meetings must be in Spanish**. The task of translating the final documents into English for their submission to the European Commission, when necessary, will be carried out by the RESOURCE project partners responsible for their organisation.
- **The participants in the different workshops must be warned of the measures for the protection of personal data** in the same sense as expressed in the previous section.
- **A documentary register of the meetings held shall be kept** by drawing up the corresponding minutes of the session. In this case, the video recording of the sessions is ruled out, especially in the case of the pre-selection Committee of Experts, due to the material used for the development of the sessions, which includes company projects that may be affected by business or industrial secrecy. Precisely for this reason, the content of the minutes must be concise and omit any data or references that could violate these secrets. Likewise, the members of this Committee of Experts must take an oath of secrecy with regard to the matters of which they are aware in the course of their work.

Apart from these Committees, the participation of pilot projects, with which the relationship is, of course, much more intense than with the rest of the stakeholders, is also included in the level of participation known as "collaborate". Given the technical nature of this relationship, the participation that these companies may carry out is covered by WP2 and WP3.

5.1.5 Empower

Finally, the last category of the participation process in Figure 11 ("**empower**") is outside the core focus of the RESOURCE project, which, due to its nature, will not target such stakeholders but we will ensure that the relevant public authorities are made aware of this opportunity. It is recalled that the ultimate goal of this project is to enable investors and companies developing circular projects to reach financing agreements, including by applying novel

models. However, the decision on whether or not to sign the financing contract is between the parties. The RESOURCE partners will work very hard to make this agreement a reality and to sign financing agreements for an amount of 20 million, but the final signature is out of our hands.

5.2 Stakeholders' engagement maintenance

At the end of a project, interactions and collaborative actions usually cease. Engaged stakeholders often tend to disengage, as it is not clear to them how future engagement with the project team will be possible. RESOURCE is not immune to this reality and will seek to provide maintenance strategies to provide stakeholders with the knowledge base produced. Above all, RESOURCE intends to develop stakeholders' capacities to implement solutions by encouraging access to funding for circular economy projects. Among the actions to be taken for the maintenance of stakeholders can be mentioned:

- One of the main aims of RESOURCE is to create a new governance model to detect, support and finance circular economy projects. This model must be disseminated and implemented in Aragon not only during the duration of RESOURCE, but it must also have a vocation of continuity.
- Consistent with the above, the Pre-selection Expert Committee should also have a permanent vocation (ideally it should be maintained permanently) to assist in the selection of projects, in the implementation of the new governance model and in the call for periodic rounds of funding for circular economy projects.
- All the protocols, the models developed, and all the knowledge acquired and developed in RESOURCE are adopted for their application and dissemination by stakeholders and their replicability in other areas, especially at European level. In this respect, the Government of Aragon will seek to maintain the initiative by promoting in the region activities linked to the new model and disseminating it at all territorial levels; the RESOURCE website will remain operational and will be maintained providing information on specific innovations (products and services) and links to relevant sites. Obviously, it can be incorporated into the CCRI network, etc.

Some of the consortium members will explore the opportunity to participate in new projects to further advance the RESOURCE solution or to apply its model in other sectors.

5.3 Roles and responsibilities of consortium members

The RESOURCE consortium is made up of a diverse group of members who have different roles within the project and therefore also different responsibilities in stakeholders' engagement. The following table outlines those roles and responsibilities with respect to this engagement plan.

Roles and responsibilities in stakeholders' engagement.

Type of consortium member	Role towards stakeholders' engagement	Responsibility in stakeholders' engagement
WP1 team	Identify stakeholders	Inform stakeholders of the development of RESOURCE project
WP1 leader	Identify and determine key stakeholders to be interviewed	Distribution of the interviews between WP1 team
WP1 team	Interviewer of key stakeholders	Make the interviews and analyse the results
WP1 team	Identify possible pilot projects	Presentation to the partners
All members	Identify and analyse new possible stakeholders	Communicate to correspondent WP leader
WP2 team	Life Cycle Assessment Technical support Economic feasibility support Legal assistance	Give support to pilot projects according to their needs
WP1 team	Select stakeholders who will participate in working groups for co-creation workshops	Organise and coordinate workshops Analysis of the results of the workshops
WP3 team	Select stakeholders for Experts Committee for investors	Coordinate meetings
WP3 team	Select stakeholders for Experts Committee for final beneficiaries	Coordinate meetings
WP1 team	Select stakeholders for Experts Committee to preselect CE investment-ready projects	Coordinate its constitution. Organise the sessions during RESOURCE project
GoA	Maintenance of Experts Committee to preselect CE investment-ready projects	Coordinate meetings
Coordinators	Monitor all the process	Ensure issues are solved

6 Stakeholders' engagement evaluation

Any strategy requires an assessment of the effects of stakeholder participation and stakeholder perceptions of their involvement. These assessments can help guide the participation process and give a timely indication of the level of satisfaction and understanding of the project.

A first evaluation of what has been done so far is included in section 3.2.4 on the mapping matrices of the circular economy in Aragon. For the remaining steps, RESOURCE suggests using a series of guiding questions (incorporated in Annex IV for guidance) during the participation of stakeholders in the working groups of the different co-creation workshops.

In addition, towards the end of the project, a final evaluation will be carried out, which will assess the following key criteria:

- Whether the engagement process has fulfilled its own objectives (i.e. the desired outcomes) and the originally agreed purpose.
- Whether the process met the explicit and implicit demands of the participants.
- Whether the process met the standards of "good practice" in participatory work
- Whether the process indicates effective engagement after the end of the project. The results of this evaluation will be presented at the last general assembly meeting.

ANNEX I: List of interviews

Required for interview	Interviewed
Institutional stakeholders	
Department of Agriculture, Livestock and Environment	Department of Agriculture, Livestock and Environment
Department of Industry, Competitiveness and Business Development	Department of Industry, Competitiveness and Business Development
Department of Citizenship and Social Rights	Department of Citizenship and Social Rights
Department of Economy, Planning and Employment (GD of Economy)	Department of Economy, Planning and Employment (GD of Economy)
Aragon Institute of Promotion	
Federation of Municipalities, Counties and Provinces (FAMCP)	Federation of Municipalities, Counties and Provinces (FAMCP)
Provincial Council of Huesca	
Provincial Council of Teruel	
Provincial Council of Zaragoza	
County of Somontano Barbastro	
City council of Binefar	
Intermediary organizations and facilitators	
AERA Cluster Aeroespacial de Aragón	AERA Cluster Aeroespacial de Aragón
ARAHEALTH, Cluster de la Salud de Aragón	ARAHEALTH, Cluster de la Salud de Aragón
CAAR Cluster de Automoción de Aragón	
CLENAR Cluster de la Energía de Aragón	CLENAR Cluster de la Energía de Aragón
ALIA Clúster de innovación logística en Aragón	ALIA Clúster de innovación logística en Aragón
Clúster aragonés de alimentación	
I+PORC Cluster del Porcino	
CMAA Cluster maquinaria agrícola	
TECNARA, Cluster Aragonés de Tecnologías de la Información, Electrónica y Telecomunicaciones	
ZINNAE Cluster aragonés para el uso eficiente del Agua	ZINNAE Cluster aragonés para el uso eficiente del Agua
CIRCE FOUNDATION	CIRCE FOUNDATION
ITAINNOVA	ITAINNOVA
CITA	CITA
CSIC	CSIC
I3A	I3A
INMA	INMA
IUCA. University Institute for Research in Environmental Sciences of Aragon.	IUCA. University Institute for Research in Environmental Sciences of Aragon.
CEPYME	CEPYME
CEOE ARAGON	CEOE ARAGON
CEOE Teruel	CEOE Teruel
UGT	

Required for interview	Interviewed
CCOO	
Financial stakeholders	
AVALIA	
SODIAR	SODIAR
IBERCAJA	
CAJA RURAL DE ARAGÓN	
CAJA RURAL DE TERUEL	
KEIRETSU	
IBERDROLA	IBERDROLA
ELEWIT	ELEWIT
REDEIA	REDEIA
WANNASEED	WANNASEED
CONEXO	CONEXO
BULLNET	BULLNET
FARADAY	FARADAY
OBERSIS	OBERSIS
SWANLAAB	SWANLAAB
Final beneficiaries	
Instituto Investigación sobre vehículos	Instituto Investigación sobre vehículos
MOSES PRODUCTOS S.L.	MOSES PRODUCTOS S.L.
Saint Gobain Placo Ibérica S.A.	
AM3D Metálica S.L.	AM3D Metálica S.L.
YUDIGAR	YUDIGAR
ALGONTEC SLU	ALGONTEC SLU
TECHONOPACKAGING S.L.	TECHONOPACKAGING S.L.
GREENVAL TECHNOLOGIES S.L.	
CELULOSA FABRIL S.L.	CELULOSA FABRIL S.L.
INETUM ESPAÑA S.A.	
RIBAWOOD S.A.	
VALL COMPANYS S.A.U.	VALL COMPANYS S.A.U.
SAICA FLEXIBLE S.A.	
PIKOLIN S.L.	
GESTCOMPOST S.L.	
WEEE INTERNATIONAL RECYCLING S.L.	
GRUPOS ELECTRÓGENOS EUROPA S.A.	
CASALÉ GESTIÓN DE RESIDUOS	
ENDESA	
INVERSIONES METROPOLITANAS ZARAGOZA S.L.	
COANFI	
JORGE S.L.	JORGE S.L.
VEOS S.L.	VEOS S.L.
CEMEX ESPAÑA OPERACIONES S.L.U.	CEMEX ESPAÑA OPERACIONES S.L.U. *
CEMEX S.A.	CEMEX S.A.
CONTAZARA	
BECTON DICKYNSON	BECTON DICKYNSON

Required for interview	Interviewed
TAISI	
THERMOLYMPIC S.L.	
METALÚRGICA TORRENT	
FINANCIERA MADERERA S.A.	FINANCIERA MADERERA S.A.
CONSORCIO AEROPUERTO DE TERUEL	CONSORCIO AEROPUERTO DE TERUEL
BIOSELVAL S.L.	
INEDIT INNOVACIÓN S.L.	INEDIT INNOVACIÓN S.L.
URVINA S.L.	
DR. SCHAR ESPAÑA S.L.	DR. SCHAR ESPAÑA S.L.
EBROACERO S.A.	
EBOCA	EBOCA
FERTINAGRO BIOTECH	FERTINAGRO BIOTECH

* Two interviews made by different divisions of the enterprise.

ANNEX II: List of initial pilot Projects

Pilot projects presented on 23rd November session

COMPANY	VALUE CHAIN	PROJECT
THERMOWASTE SL	Waste management	The project envisages the creation of a production and testing centre for reactors to be marketed internationally. These reactors make it possible to transform solid urban waste into clean and manipulable materials, applying a patented process known as "LIMPULATION". The centre also incorporates an operational plant based on this innovative proposal, which makes it possible to recover all the materials contained in household waste for their subsequent recovery and introduction into society in the form of raw materials, achieving a Real Circular Economy. The proposed solution has the capacity to recover all the BIOMASS contained in the waste, thus avoiding its deposit in landfills and the consequent generation of methane gas.
MONDO TUFTING SA	Plastic	In recent years, the number of uninstalled artificial turf pitches and courts has been increasing and, with it, the concern of society regarding the waste generated by this activity. The fields that we currently find at the end of their useful life incorporate a layer of adhesive in their composition, usually latex or polyurethane, which prevents them from being recycled. The artificial turf manufactured by Mondo Tufting contains, on average, 65% polyethylene yarn, which currently ends up in landfill. With the experience acquired in the internal recycling of yarn rejects, we are developing our project: to return the removed fields to our facilities and, once in the plant, to treat them in such a way that the polyethylene can be fed back into the process, reducing the amount of virgin raw material used.
CENTRO EUROPEO DE RECICLAJE FOTOVOLTAICO SL	Waste management	The project develops a thermochemical technology that allows the recovery of aluminium, glass and cells from photovoltaic panels that have reached the end of their useful life for subsequent reuse or remanufacture. The methodology is based on non-destructive actions, unlike other methods currently implemented, in which the photovoltaic panels are crushed, separating glass and silicon, and then a purification and re-melting process is applied.
BIOSELVAL (GRUPO ARCOIRIS)	Agrifood	With the start-up of the slurry and other co-substrates treatment plant in Valderrobles, the aim is to valorise the compounds derived from the digestion of agri-food waste, evaluating the characteristics it should have in order to determine the best way to apply it in the field and to evaluate its fertilising capacity for the main extensive crops in the area. The objective is double: on the one hand, to compost the waste that cannot be directly recovered and optimise the resulting product so that it can be used as a fertiliser and; on the other hand, by applying a centrifuge system that reduces the water in the compost and filtered by a reverse osmosis system, to reduce water consumption and reuse it for irrigation of crops in the area.
CONFECCIONES OROEL	Textile	The project is based on the research and prototyping of a new range of sustainable products through the eco-design of recyclable technical protective clothing and the use of textile waste. This waste is an important fraction of the pre-consumer textile from cuttings in the manufacture of garments and post-consumer waste from personal protective equipment that is no longer in use. The originality of the

COMPANY	VALUE CHAIN	PROJECT
		project and the technological challenge lies in the type of materials to which eco-design and recovery are applied.
VALOGREENE MUEL S.L.	Chemical	Material recovery (chemical recycling) of part of the waste fractions managed by ADIEGO HERMANOS S.A. at its waste treatment facilities in Zaragoza. The aim is to eliminate the sending of 40,000 tonnes of waste to landfill per year, thus contributing to the promotion of the circular economy.
FERTINAGRO BIOTECH S L	Fertilisers/ Agroindustry	The addition of zinc and manganese in fertilisers is essential because both elements are essential micronutrients for both plants and animals. However, the origin of these micronutrients is always extractive, through mining operations that consume finite resources, with great energy expenditure and a high environmental cost. For this reason, the reuse of zinc and manganese from black mass, from the recycling of alkaline batteries, is proposed through the application of appropriate chemical procedures using lignosulphonates, ingredients of the waste from the paper industry known as black liquor. In short, it is a solution to a problem of pollution and waste generation, by transforming it into raw materials capable of providing the aforementioned micronutrients to crops as fertilisers
YUDIGAR SL / ARROPADOS	Retail/textile	The REVITA project is an initiative that was created with the aim of tackling the two major challenges facing the textile sector: ecological transition and digital transformation, based on an open innovation model and involving all the agents in the value chain, i.e. design, production process, distribution, point of sale and end consumer. It consists of converting textile waste into a raw material applicable for new products made from fabrics, decorative elements and furniture. The project's first step is the collection of used clothing in containers; afterwards, Arropa2 takes all this textile to its plant, where it weighs and separates it and then transforms the waste into new resources which, after the appropriate industrialisation processes, become raw material for designing clothing or integrating it into decorative elements or furniture material.
FELTWOOD ECOMATERIALES SL	Biowaste management	Feltwood develops technologies that enable the production of industrial materials from plant waste (agricultural and food industry) that can replace plastic in a multitude of applications. They are currently in a pre-industrial stage and are growing in customer interest. Their business model is mainly based on licensing the different technologies we are developing. The project they want to carry out with RESOURCE is the internationalisation of the company. During 2023 they hope to set up a pilot plant that will allow to validate all the processes at industrial level and by 2024-25, with this validation already done, they hope to launch an international campaign to promote and sell their technologies worldwide.
BUGCLE	Agroindustry	BUGCLE is an innovative company in the operation and transformation of the Tenebrio molitor insect, to make the sector a reality as a raw material that positively impacts our society and our ecosystems thanks to the revaluation of vegetable waste and innovation in automation and industrialization of the insect sector.

ANNEX III: Personal data protection

The WP1 coordinator shall collect, store, analyse and archive the protectable personal data of the parties concerned in accordance with the rules contained in the Regulation (EU) 2016/679 of the European Parliament and of the Council, of 27 April 2016, on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=ES>).

Consequently, the responsible for the processing of the personal data collected will be the Directorate General of Planning and Economic Development of the Government of Aragon, as partner of the RESOURCE project and leader of WP1.

So, the stakeholders who participate actively in different workshops ante experts' committees will be informed about the next aspects:

- The purpose of the processing of the personal data collected is the communication of the call for co-creation workshops and other activities related to the RESOURCE project in which you have decided to participate voluntarily, as well as the sending of information resulting from these workshops or activities, as well as any other information that may be of interest to you. The legitimacy for the processing of data is protected by the fact that the RESOURCE project is an activity of public interest.
- The data will not be communicated to any person outside the RESOURCE consortium (group of partners) unless legally obliged to do so.
- Interested can exercise their rights of access, rectification, deletion, portability of data, and those of limitation and opposition to treatment, as well as not to be subject to automated individual decisions, through the electronic headquarters of the Administration of the Autonomous Community of Aragon in the next link: https://aplicaciones.aragon.es/notif_lopd_pub/details.action?fileId=846.

ANNEX IV: Questions for stakeholders' engagement evaluation

These issues are subject to reconsideration, extension or modification by all members of the consortium.

1. Please select the stakeholder category that best represents you from the list.

- a. Institutional stakeholders.
- b. Intermediary stakeholders.
- c. Financial stakeholders.
- d. Final beneficiary.

2. Please rate the following statements on a scale from 1 (strongly disagree) to 5 (strongly agree):

- a. The objectives of the action were clear.
- b. The time/space allocated was sufficient for me to express my views.
- c. The action addressed my concerns.
- d. The action] met my expectations.
- e. I now understand the action better.

3. Please select your level of knowledge about the RESOURCE project after this action:

- a. Low
- b. Medium
- c. High

4. Please select your level of engagement in the RESOURCE project through this action:

- a. Informed
- b. Consulted
- c. Involved
- d. Collaborative
- e. Empowered

5. Other comments/questions/concerns