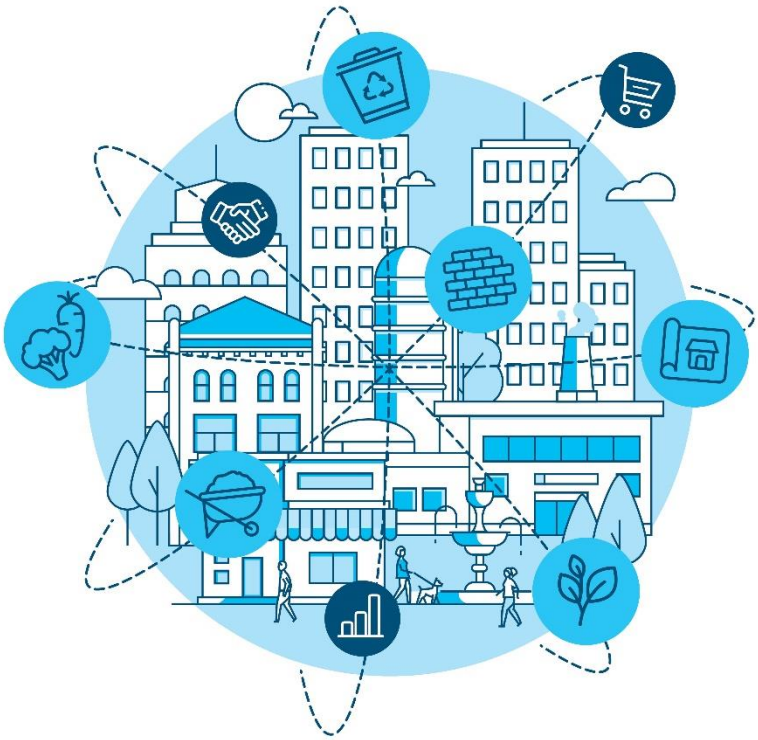
Stakeholder Engagement Plan - CDW

Deliverable 2.1

Seville Municipality



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Abstract	This plan explains how the local stakeholders of Seville will be engaged in the CityLoops project.
Keywords	CDW; Engagement; Stakeholders; Seville
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Contents

1. Executive Summary

This is a stakeholder engagement plan for the City of Seville, supporting the implementation of the CityLoops activities in the construction and demolition waste (CDW) stream. The goal of stakeholder engagement is to develop a process which inspires individuals, groups, businesses, institutions and others to improve their interaction and to cooperate effectively to accomplish goals. The stakeholder plan is our tool to organize stakeholder processes in the implementation of our main and sub-activities of the CityLoops project. The stakeholder plan and the stakeholder analysis we provide in this document will act as an informative platform to carry out stakeholder activities and achieve our goals. This plan represents an initial idea of how stakeholder engagement may work with the tools and demonstration actions in our city, but it is important to highlight that stakeholder engagement processes are reflexive and repetitive, and that the plan will be updated.

2. Introduction

The city of Seville, located in the south of Spain, has 700,000 inhabitants and a surface area of 140.42 km^2. The construction industry is one of the main economic activities that boosts the economic development of the city. Construction and Demolition Waste (CDW) represents up to 45% of the total amount of waste generated in the city, i.e., 270,547 tonnes of CDW and 1,309,501 tonnes of excavated soil annually. Currently, only 16.1% of CDW is recycled, mostly for buildings works and road fillings. Seville's cluster of partners for the CityLoops project is includes the Municipality of Seville, LIPASAM (Municipal Solid Waste Management company), EMASESA (Municipal Wastewater Treatment Management company) and IDENER (Private Research company). Together these partners are committed with the CityLoops' approach to close the loops of waste material in the city, promoting a circular economy approach to the city's development.

Seville's aim within CityLoops is to both increase the recycling rates of CDW in the city and to enable the transition from downcycling to higher quality recycling. Towards this aim, the city will engage in three actions:

- Testing the potential of recycling CDW in 2-3 demonstration sites
- Optimising the collection and handling of CDW and soil from citizens and small companies
- Developing IT-tools that combine these actions with Sustainability Indicators for the city as well as monitoring of wellbeing

Demonstration actions will be implemented in three project phases, i.e., Inception and preparation phase (Month 1 - Month 18), Demonstration phase (Month 18 - Month 44), and Replication phase (Month 36 - Month 48). These phases may partly overlap, and timings will vary from activity to activity in accordance with their complexity, the degree of preparation required, and the state of readiness.

In the inception and preparation phase, five instruments and tools will be developed in order to use them in the next phase (demonstration phase) in three demonstration actions.

2.1. Demonstration action 1 - Pipe replacement: Recycling concrete and soil

2.1.1. Inception and preparation phase (M1 - M18)

Tool 13: An instrument of quality assessment of CDW

This instrument defines and performs a standard and certification system guaranteeing the quality of and behaviour of materials when used in construction. Tests will be carried out during the inception phase on the quality and behaviour of different waste materials from old pipelines -such as plastic, iron and concrete- when used as construction materials, building on the preliminary work done in the ARCO project. The results of these tests will be applied during the demonstration phase and will also continue throughout this phase.

Figure 1 shows the schedule of this instrument in the inception and preparation phase. The development is composed by 4 steps i.e., (1) Evaluation of previous results, (2) Set the methodology to the quality control, (3) Methodology validation regarding the procurement design, and (4) Dissemination.

Year	2019			2020												2021		
Project month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Calendar month	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
WP2 project management																		
QUALITY ASSESSMENT TOOL																		
1. Evaluation of previous results																		
Technical prescriptions																		
Administrative characteristics of the procurement focused on green clauses																		
Literature review																		
2. Set the methodology to the quality control																		
3. Methodology validation regarding procurement design																		
Number of tenders																		
Number of offers																		
4. Dissemination																		
Public procurement: circular clauses description																		
CDW classification: best practice guidelines																		

Figure 1. Schedule of development of the instrument of quality assessment of CDW

2.1.2. Demonstration phase (M18 - M44)

The quality assessment of CDW instrument will be used in 1-2 construction sites where the old pipelines for drinking water and sewage are being replaced. In Seville, both the drinking water supply network and the sewage network need replacement, and there is also a need for improving the storm water drainage capability. This work involves digging up roads, pavements, and old pipelines, thus resulting in a large amount of CDW and excavated soil.

Seville will test the instrument developed in order to replace more primary raw materials by CDW. These tests will also identify more uses for the CDW. CDW that meets the specifications developed in the previous phase will be used in constructions in the demonstration sites, and CDW will replace primary raw materials as filling under the pavements.

2.1.3. Replication phase (M36 - M48)

Seville will integrate guidelines for the use of recycled materials within these contracts, stressing the re-use and recycling of CDW through public procurement, i.e. by rewarding companies that use a higher amount of recycled materials for construction with a higher rating. Potential replication areas could be Torre Albas street, Torrelodones street, Torresmiranda street, Torrejoncillo street, Torre Cabra street or Torre Almodóvar street, as well as several public buildings.

2.2. Demonstration action 2: Optimal use of clean points

2.2.1. Inception and preparation phase (M1 - M18)

Tool 14: CDW flow optimisation tool

Clean Points are centralised locations for collecting particular waste streams, including CDW from citizens and small companies. Currently in Seville there are 4 Clean Points across the city. The goal of developing the CDW flow optimisation software tool is to show to the user two main types of information: (1) The current status of the existing Clean Points and their corresponding containers, and (2) The information to select the most optimal Clean Point according to: origin district, zip code, expected date for waste disposal and types of waste.

Figure 2 shows the schedule of software tool development during the inception and preparation phase. The development consists of 9 steps:(1) Preliminary study and state of the art, (2) Initial System requirements, (3) Initial Software design document and specifications, (4) Initial User Interface Design, (5) Initial Back-End Implementation, (6) Architecture and Front-End, (7) Final Back-End Implementation, (8) Review of full Tools and Platform, and (9) Final testing and Deployment.

Year	2019			2020												2021		
Project month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Calendar month	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
WP2 project management																		
CDW FLOW OPTIMISATION SOFTWARE TOOL																		
1. Preliminary study & state of the art																		
Description of the specific results to be obtained																		
Literature review																		
Determine main inputs, outputs & state variables																		
Determine methodologies																		
Characterisation of collection routes																		
Feedback from local partners																		
2. Initial System requirements																		
Definition of the main specifications & functionalities																		
Definition of Use Cases according to Agile Methodology																		
Definition of the inputs, methodology & results fo the App for CDW																		
Definition of examples of use & expected results																		
3. Initial Software design document & specifications																		
Definition of how the tool must work and specifications																		
Definition of how to provide input data, internal calculations and expected results (and its format																		
Definition of the main functionalities (what the tool must do)																		
Describe main GUI																		
4. Initial User Interface Design																		
Main window in Inkscape or Powerpoint																		
Input data windows in linkscape or Powerpoint																		
Results window in linkscape or Powerpoint																		
Main Visualisation and Input Data tools in linkscape or Powerpoint																		
5. Initial BackEnd Implementation																		
6. Architecture and FrontEnd																		
7. Final BackEnd Implementation																		
8. Review of full Tools and Platform																		
9. Final testing and Deployment																		

Figure 2. Schedule of development of the CDW flow optimisation tool

2.2.2. Demonstration phase (M18 - M44)

The software tool will be tested by the Seville's cluster in order to optimise the CDW managed by the clean points and develop best practice guidelines. Additionally, an awareness campaign for citizens and SMEs will be carried out to maximise the impact of the implementation for a circular CDW management through the clean points.

Tool 17: Awareness campaigns

A communication campaign will be prepared for citizens focused on the prevention of the abandonment of CDW and its correct management. It will then be carried out during the demonstration phase. The expected results are (1) disseminate and raise awareness, and (2) engagement activities (Campaign and workshops will increase the awareness and commitment of the stakeholders).

Figure 3 shows the schedule of the campaign development during the demonstration phase, composed by 2 steps i.e., (1) Tender, and (2) Implementation.

Year	2021										2022							
Project month	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Calendar month	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
WP2 project management																		
AWARENESS CAMPAIGN																		
Tender																		
Implementation																		

Figure 3. Schedule of development of the Awareness campaigns

2.2.3. Replication phase (M36 - M48)

The software tool will be used to model different scenarios regarding waste generation, the city's growth and economic activity in order to suggest potential new locations and upscaling of Clean Points (CDW collection sites in Seville).

2.3. Demonstration action 3: Assess the city's circularity

2.3.1. Inception and preparation phase (M1 - M18)

Tool 15: Wellbeing monitoring tool

The Wellbeing monitoring software tool will determine the current wellbeing of the city and determine potential improvements and new indicators. Based on the initial sector wide circularity assessment (Task 2.3), the tool will include a "city simulation" to estimate the impact of specific actions and policies on specified indicators. This includes the execution of an analysis of the current population satisfaction using MFA oriented tools, the definition of Urban Sustainability Indicators (USI) and Life Satisfaction Indicators (LSI). The main goal is to show the effect of interventions in different districts on the wellbeing of the citizens.

Tool 16: City simulation platform

A virtual platform will be developed to include the developed software tools (CDW flow optimisation tool, Wellbeing monitoring tool and OMSW flow optimisation tool) and the open

data generated within the action. Data on the current situation of the city, demonstration action progress, simulated results in mid- and long-term future scenarios and related awareness campaign data will be shown on this platform.

Figure 4 shows the schedule of software tools development during the inception and preparation phase. The development is composed by 9 steps: (1) Preliminary study and state of the art, (2) Initial System requirements, (3) Initial Software design document and specifications, (4) Initial User Interface Design, (5) Initial Back-End Implementation, (6) Architecture and Front-End, (7) Final Back-End Implementation, (8) Review of full Tools and Platform, and (9) Final testing and Deployment.

Year	2019			2020												2021		
Project month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Calendar month	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
WP2 project management																		
WELLBEING MONITORING SOFTWARE TOOL																		
1. Preliminary study & state of the art																		
Description of the specific results to be obtained																		
Literature review																		
Determine main inputs, outputs & state variables																		
Determine methodologies																		
Characterisation of collection routes																		
Feedback from local partners																		
2. Initial System requirements																		
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7. Final BackEnd Implementation																		
8. Review of full Tools and Platform																		
9. Final testing and Deployment																		

Figure 4. Schedule of development of the Tools 15 & 16

2.3.2. Demonstration phase (M18 - M44)

The software tool and city platform will be tested and evaluated according to the results obtained from the other demonstrations actions. Seville's cluster will used data provided to the platform and tools in order to develop best practices guidelines on the circularity of the city. The city platform will improve data exchange between the partners of the city and enable dialogue about the potentials of urban development in regard to the handling of CDW and soil beyond formal governmental organisations by project groups, workshops and at conferences.

2.3.3. Replication phase (M36 - M48)

A new methodology will be developed to standardise wellbeing indicators which will allow for replication in other European cities. The platform will enable policy makers to learn and analyse the potentials in changing the resource flows of CDW and OW and promote flexibility and adaptiveness towards a circular city.

3. STAKEHOLDERS AND STAKEHOLDER GROUPS

3.1. CDW Stakeholder mapping. Period: October 2019 - March 2020

In a meeting with part of the Seville cluster team with experience in the construction sector, the different tools and pilot actions to be developed during the CityLoops project (described in the previous section of this document) were reviewed. During that meeting, a value chain approach was used, focused on the material flow of said tools and pilots, in this case, construction and demolition waste.

With this value chain approach, from the extraction of the material, through its manufacture or transformation, use and management of the final waste, the group fit where each of the actions to be carried out in the project would belong in the material cycle. Likewise, critical activities were highlighted based on the CDW value chain where the involvement of stakeholders was potentially necessary.

Once those activities that were considered critical were selected, we proceeded to identify groups of stakeholders based on their activity profile in the value chain. For instance, in the waste management stage, the activity of "Waste treatment" was identified as a critical activity, and therefore, the team proceeded using a brainstorming method to identify organizations that

carry out this activity in the area of Seville. As support, Table 1 of Annex A of the Guidance for Stakeholder Engagement provided by NRI was used.

The same procedure was done with the rest of the stages of the value chain and critical activities in those stages (Extraction - manufacturing, construction, etc.). The results of the session can be seen in the following table.

ACTIVITY IN THE PROJECT WHERE CAN BE INVOLVED	ORGANIZATION	ACTIVITY PROFILE	ACTIVITY	DESCRIPTION TABLE 1 A GUIDANCE FOR STAKEHOLDER ENGAGEMENT
Pilot action, CDW Characterization & Material Flow Mapping	Fermovert SLU	Waste Treatment plant	Recycling company focused on the optimization and CDW treatment, and commercialization of recycled materials.	The company can help the organization address specific impacts, as it is involved in the pilot project.
Material Flow Mapping & Evaluation	GSA Servicios Ambientales	Waste Manager	Company focused on helping the environmental conservation, reducing the impact of waste with a sustainable management of waste recycling.	The company contributes with its activity in the improvement of the environment. The recycling of CDW is one of its focuses.
Material Flow Mapping & Evaluation	LLOPIS Servicios Ambientales	Waste Manager	Group of companies that manages industrial hazardous and non-hazardous waste	The company contributes with its activity in the improvement of the environment. The recycling of CDW is one of its focuses.
Potential for Pilot action, Evaluation & Material Flow Mapping	Martín Casillas	Suppliers	Company specialized in water network building works.	This company is specialized in water network building works and is an important actor in Seville.

Material Flow Mapping & Evaluation	AGRECA RCD	Waste Manager	Construction and demolition waste management companies' association of Andalusia.	This association meets all the waste management companies that handle this waste and is an important actor in Andalusia.
Material Flow Mapping & Evaluation	Cointer Servicios Medioambiente	Waste Manager	Urban waste management company.	CDW management is one of its focuses.
Material Flow Mapping & Evaluation	Consejería Medioambiente	Public Administration	Environmental agency of Andalusia	This body is the one that regulates and promulgates regional laws and policies in the fields of environment, water, waste, sustainable development and territory, in coherence with national and European policies and strategies, so the partnership have legal obligations, and also, legal restrictions in relation to the policies and laws that this body promulgates.
OW Diagnosis and characterization, Material Flow Mapping & Evaluation	Universidad de Sevilla	Universities & Technology Centres	University institution	This organization can help us transfer knowledge, best practices, etc, to achieve a better performance in collection, treatment, etc. It can be positively affected by its involvement in the project, as an

				opportunity to show or advance in new lines of work.
Material Flow Mapping & Evaluation	Joint Research Centre	Universities & Technology Centres	The JRC site in Seville works closely with sister services of the European Commission to provide socio-economic and techno-economic support for the conception, development, implementation and monitoring of EU policies.	This organization can help us transfer knowledge, best practices, etc, to achieve a better performance in collection, treatment, etc. It can be positively affected by its involvement in the project, as an opportunity to show or advance in new lines of work.

Table 1- initial identification of potential stakeholders.

A list of possible organizations was prepared and contacted by phone. In these phone calls, the reason for the call, the description of the CityLoops project and the interest in the organization being part of the project's stakeholder group were briefly explained. Likewise, these calls were used to ask these organizations if they were aware of other companies and / or associations that had the same activity and potentially had an interest in being involved in the project. To prepare these interviews, Table 2 of Annex A of the Guidance for Stakeholder Engagement provided by NRI was taken as inspiration. Following these phone calls, the list of potential stakeholders was reviewed, adding to those organizations that had shown interest in the project, eliminating those that did not show it, and adding the proposals from stakeholders that emerged during the phone interviews. The results of this stage can be seen in the table below.

ORGANIZATION	OUTPUT OF PHONE INTERVIEWS
Fermovert SLU	FERMOVERT has expertise in CDW recycling.
GSA Servicios Ambientales	The company has a solid experience in recycling.
LLOPIS Servicios Ambientales	The company has expertise in waste management.

Martín Casillas	The company has expertise in construction works, including CDW management.
AGRECA RCD	Agreca encompasses a significant network of companies that may be affected by changes and measures in relation to CDW management.
Cointer Servicios Medioambiente	The company has expertise in waste management.
Consejería Medioambiente	This body regulates the rules and policies regarding waste management in Andalusia.
Universidad de Sevilla	Universidad de Sevilla can help us to obtain cutting-edge knowledge in relation to best practices in collection, treatment, as well as helping in the search for new technologies and methods to improve current activity.
Joint Research Centre	This organization can help us to obtain cutting-edge knowledge in relation to best practices in collection, treatment, etc. Also, it collaborates closely with the European Commission, supporting it for the conception, development, etc. of EU Policies.

Table 2. Phone interviews output.

In order to carry out a more in-depth analysis, with the information collected from the phone interviews, in addition to a review through web pages of the activity of each of the organizations and a review of the list of critical activities of the project, a table was prepared, inspired by Table 3 of *Annex A of the Guidance for Stakeholder Engagement*. This table reflects in greater depth (1) what the activity of each of the stakeholders is, and (2) what is the interest of the Seville cluster to involve that stakeholder, (3) in which part of the system or value chain it is involved, and (4) their level of influence over other stakeholders. This table can be seen below.

		DEPTH ANALYSIS TO DEVELOP ACTOR PROFILE		
ORGANIZATION	**ACTIVITY PROFILE**	**• WHAT ARE THE MANDATES, MISSIONS, AND OBJECTIVES OF EACH ACTOR?**	**• IN WHICH PART OF THE SYSTEM IS THE ACTOR PRESENT AND ACTIVE? • WHERE EXACTLY DOES EACH ACTOR**	**• WHICH RELATIONSHIPS EXIST WITH OTHER ACTORS IN THE SYSTEM? • WITH WHICH OTHER ACTORS DOES THE ACTOR COOPERATE?**

			PERFORMS ACTIONS (I.E. IN WHICH LOCATIONS)? • WHAT IS THE SCOPE OF THESE ACTIONS?	• WHAT IS THE COOPERATION BASED ON (I.E. INFORMATION EXCHANGE, USE OF COMMON RESOURCES, INSTITUTIONALLY REGULATED DEPENDENCY)?
Fermovert SLU	Treatment plant	They are involved is CDW recycling management and can share the experience with other recycling companies.	FERMOVERT is in Seville and focused on CDW.	The company is a referent for expertise in CDW recycling.
GSA Servicios Ambientales	Waste Manager	The company acts as attraction pole to similar organizations in this sector.	Focus is waste management. Located in Seville.	The company has a lot of contacts with other companies in Seville.
LLOPIS Servicios Ambientales	Waste Manager	This group's work is nationwide. So, the interest of involving them is to capture its experience in the sector.	This company intends to improve environmental quality, focused on waste management.	The company is a referent in the waste management sector.
Martín Casillas	Suppliers	This is one of the biggest constructor companies in Seville. Also has a R&D department that has shown interest in joining the project.	The company oversees doing a lot of water infrastructure and has experience in projects related with CITYLOOPS.	
AGRECA RCD	Waste Manager	Agreca can act as driver to	Agreca represents the	It is a reference for the CDW

		companies that conform its network. Also, It can help us in the construction of the material flow, particularly in the stage of recycling.	"waste" stage of the material value chain. Scope of its activity is Andalusia.	management sector and has a big network of companies.
Cointer Servicios Medioambiente	Waste Manager	This group works nationwide. So, the interest of involving them is to catch its experience in the sector.	The company is focused in waste management and it is present across Spain.	The company works in numerous cities and towns.
Consejería Medioambiente	Public Administrations	This body regulates rules and policies in our field of work, and our interest for collaborate with them is to capture knowledge and information of how the targets material flows work in Andalusia.	This body has region-wide influence, setting the rules and laws regarding waste, waster, etc.	The influence of this public body is widespread, establishing the policies and rules in waste, waster, environment management.
Universidad de Sevilla	Universities & Technology Centres	Promotion of research, innovation, and the transfer of its results to society. So, the interest is to capture its expertise.	The University is in Seville but has a regional influence.	The organization is a referent in the academic sector.

Joint Research Centre	Universities & Technology Centres	We want their participation in the project from a perspective of Evaluation of our tools/demo actions.	Although this organization is in Seville, his influence is Europe-wide.	The influence of this organization is European, supporting to EU Commission in the conception, implementation and monitorization of policies and rules

Table 3. Depth analysis to develop actor profile

After this first phase of analysis, which includes tables 1, 2 and 3 above, a second phase was carried out with the purpose of classifying the stakeholders in terms of power and resources (both economic and useful knowledge) for the project. In this second phase the organizations that conform the Seville cluster (City Council of Seville, EMASESA, IDENER and LIPASAM) were included in the analysis. This classification or weighting of stakeholders will be used to prioritize the efforts and resources of the Seville cluster in terms of involving them during the project, as well as the scope of actions for their involvement.

This classification was carried out in 3 steps. The first step consisted of scoring and weighting the stakeholders grouped by "activity profile", taking tables 6 and 7 of *Annex* A of the *Guidance for Stakeholder Engagement* as inspiration. Said tables seek to score and weigh the stakeholders in 3 categories: power, legitimacy, and resources and for each category, qualitatively determining whether the position of each stakeholder is high, medium, or low. In the classification made by the Seville cluster, only the categories of Power and Resources have been considered, since it has been understood that both are the only ones relevant to the project to be developed. Please, see the table below.

Power	Treatment plant	Waste Manager & Waste water manager (Private)	Waste Manager & Waste water manager (Public)	Suppliers	Public Administrations	Universities & Technology Centers	Merchants Associations / Small distribution.	Distribution	Social organizations & Citizens
What is the actor's authority in terms of Setting objectives and norms?	1	1	2	1	3	1	1	1	2
What is the actor's authority in terms of Allocating or denying resources to other actors?	1	1	1	1	3	1	1	1	1
What is the actor's authority in terms of defining others' tasks and responsibilities?	1	1	2	1	3	1	1	1	2
What is the actor's authority in terms of controlling access to knowledge/information?	2	2	2	2	3	3	2	2	1
What is the actor's authority in terms of allocating rewards, recognition and sanctions?	2	1	2	2	3	1	1	1	2
What is the actor's authority in terms of channeling messages to superiors and external bodies?	2	1	3	1	3	1	2	1	2
What is the actor's authority in terms of structuring the participation in decision-making processes?	2	1	3	2	3	1	1	1	1
How does the actor influence other actor's role and scope of action?	1	1	2	1	3	1	1	1	2
How is the actor influenced by other actors about his/her role and scope of action?									
Power deriving from the control of the flow of information and influence over information content. (Poder del control de la información y datos)	2	1	3	3	3	2	1	1	1
Weighted score (Sum of weight·score)	**14**	**10**	**20**	**14**	**27**	**12**	**11**	**10**	**14**

Resources	Treatment plant	Waste Manager & Waste water manager (Private)		Suppliers	Public Administrations	Universities & Technology Centers	Merchants Associations / Small distribution.	Distribution	Social organizations & Citizens
Who has more resources in terms of material (economic, infrastructure, equipment, etc.)?	2	1	3	3	1	1	1	1	1
Who has more resources in terms of knowledge?	3	1	3	3	2	3	2	1	1
Weighted score (Sum of weight·score) RESOURCE	**5**	**2**	**6**	**6**	**3**	**4**	**3**	**2**	**2**
Weighted score (Sum of weight·score) POWER	**14**	**10**	**20**	**14**	**27**	**12**	**11**	**10**	**14**

Table 4. Categorising the stakeholder in terms of power & resources

With the results of this weighting, and with the help of Table 8 of Annex A of the *Guidance for Stakeholder Engagement*, the stakeholders were grouped into profiles of engagement action. Three different profile categories were identified: Definitive stakeholder, Useful, and Discretionary stakeholder. Please, see the table below.

Profile for stakeholder engagement action	Treatment plant	Waste Manager & Waste water manager (Private)	Waste Manager & Waste water manager (Public)	Suppliers	Public Administrations	Universities & Technology Centers	Merchants Associations / Small distribution.	Distribution	Social organizations & Citizens
Category	Definitive stakeholders	Discretionary	Definitive stakeholders	Definitive stakeholders	Key power	Useful	Discretionary	Discretionary	Definitive stakeholders

Table 5. Profile for stakeholder engagement actions.

The results of this grouping will help to select both the most successful methods of involvement, both, as previously mentioned, the level of resources to be assigned by the

Seville cluster for such involvement. As a last step, taking into account this classification, and inspired by tables 9, 10 and 11 of *Annex* A of the *Guidance for Stakeholder Engagement*, a brief analysis was carried out in order to score the different groups of stakeholders (by activity profile) in terms of interest in the project's actions and resistance, either during their implementation, since they may involve an effort or a change in the behaviour or guidelines of said stakeholders in their regular activities or patterns, or during the replication or upscaling of said actions. The results can be seen in the table below.

Interest/Resistance analysis	Treatment plant	Waste Manager & Waste water manager (Private)	Waste Manager & Waste water manager (Public)	Suppliers	Public Administrations	Universities & Technology Centers	Merchants Associations / Small distribution.	Distribution	Social organizations & Citizens
Interest	3	2	3	3	3	2	3	2	2
Resistance	1	1	1	1	1	1	2	1	3
Total	2	1	2	2	2	1	1	1	-1

Table 6. Interest/Resistance analysis.

The classification into categories of the previous step and this last analysis will be the basis for identifying and selecting methods and resources for involvement, as will be observed in the following sections of this plan.

4. STAKEHOLDER ENGAGEMENT METHODS AND STAKEHOLDER ENGAGEMENT PLAN

A stakeholder engagement strategy should establish the objectives of stakeholder engagement through the plan preparation process and indicate how the involvement of stakeholders is achieved at each stage of the plan preparation/dissemination process. In this way, it will be able to better understand what the stakeholders want, when they want it, how engaged they are and how the project plans and actions will affect their goals. In this section, it will be described, the engagement methods and the stakeholders engagement plan, in order to reach the goals of the project.

Moreover, to see an overview of the activities, please, check this link for the SEP gantt chart)

4.1. STAKEHOLDER INVOLVEMENT IN INCEPTION/ PREPARATION PHASE. Period: October 2019 - March 2021

4.1.1. General objectives of stakeholder's engagement during this period:

a) Identification and selection of relevant stakeholders related to the activities in focus in order to set up a long-term Working Group (WG) for OW/CDW

b) Presentation of the Project to the WG: this includes the description of the scope of the project, the details of the demonstration actions, the project's expected impact, the role expected from the stakeholders, and also discuss what stakeholders could expect from the Project.

c) To work cooperatively on the definition of the demonstration cases, evaluation indicators and on the concept of Circular City.

d) Collaborate on the identification of relevant data for the characterisation of material flows, for circularity assessment and evaluation purposes.

4.1.2. Methods, activities, structures:

PURPOSE	IDENTIFICATION AND SELECTION OF STAKEHOLDERS
Responsible	Demonstration Manager - Santiago Rodriguez-Perez (IDENER)
Date	M3 (December 2019)
Description	As a first step for the identification of stakeholders and stakeholder groups, a brainstorming session was held by some members of Seville Cluster, with expertise in the CDW sector, with an approach inspired by the value chain of the material flow to work, in this case, CDW, taking into account the extraction, manufacturing, use, waste management, etc.), where special interest was placed in those activities within said value chain in which CityLoops will be working. Likewise, within said activities, which are described below, those that required and / or needed the involvement of interested parties were identified.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).

What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	In this stage, the reason to involve the stakeholders mentioned is because it is foreseen that these actors could have valuable knowledge, information, opinion and data to develop the instruments/ process/ tasks of the project.
When in the process?	At the beginning of the whole project.

PURPOSE	IDENTIFICATION AND SELECTION OF STAKEHOLDERS
Responsible	Demonstration Manager – Santiago Rodríguez (IDENER) + all Seville partners (LIPASAM, EMASESA, IDENER and SCC)
Date	M3 (December 2019)
Description	The Project coordination group in Seville (LIPASAM, EMASESA, IDENER and SCC) elaborated a list of potential stakeholders and discussed in a working meeting the pertinence, relevance, power, and influence of a selected number of local actors, keeping in mind the scope of activities where their involvement would be desirable and important. This was done through a brainstorming session and a previous review of the Project description and timeline. During this working meeting a detailed description of tasks and subtasks of demonstration case and other related activities were discussed.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	These actors could have valuable knowledge, information, opinion and data to develop the instruments/ process/ tasks of the project.
When in the process?	At the beginning of the whole project.

PURPOSE	ESTABLISHMENT OF A PERMANENT WORKING GROUP (WG) AND OFICIAL PRESENTATION OF THE PROJECT TO THE WG
Responsible	SCC – César Gallardo + all Seville partners (LIPASAM, EMASESA, IDENER)
Date	M5 (February 2020)
Description	The presentation of the Project to the stakeholder WG was done through different methods and using several media. The first step consisted on the dissemination of Project general information, which was done through a personalized e-mailing that included an information pack (view presentation and ideas doc). This initial contact was followed by individual phone calls for one-to-one informal interviews in order to share a general project overview and get and initial feedback from stakeholders. During these phone interviews several additional stakeholders were identified through snowball sampling. After these individual discussions with each stakeholder, a WG meeting was organised. The first aim was to have stakeholder feedback after some time of reflection and analysis of the Project documentation that had been circulated. The second aim of this first WG meeting was to present and explain the stakeholders' workshop that would take place later. The objective, contents, and expectations linked to the workshops were shared and discussed within the WG and this allowed stakeholders to better prepare the sessions. This first WG meeting was highly relevant for them to understand their role and expected involvement, and also for the coordination group to better identify their potential contribution to Project actions.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	These actors could have valuable knowledge, information, opinion and data to develop the instruments/ process/ tasks of the project. It is important that these actors have information about the objectives, scope and activities that during the project will take place. Creating a long term working group will allow us to set a net of contacts for consulting, asking feedback and reporting of useful data for the project and tasks/instruments, etc. mentioned above. Asking their opinion for the definitive of the demonstration cases, evaluation indicators and on the concept of Circular City.

When in the process?	At the beginning of the whole project.

PURPOSE	JOINT DEFINITION OF THE DEMONSTRATION CASES, EVALUATION INDICATORS AND ON THE CONCEPT OF CIRCULAR CITY.
Responsible	SCC – César Gallardo + all Seville partners (LIPASAM, EMASESA, IDENER)
Date	M5 (February 2020)
Description	*First round of preparation workshops* in February 2020. This was a one-day workshop focused on CDW. The specific objectives of the workshop were: 1. Officially present the Project and some transnational Project partners to the stakeholders WG 2. Review demonstration actions and related tasks within WP 4, 5 and 6. 3. Stir WG feedback and bring up issues/ ideas linked to the work ahead. 4. Analyse whether all interests and actors are represented in the group 5. Officially set up a Stakeholder WG for CDW The material used for the workshop included PPT presentations, flipcharts, big posters, paper questionnaires, and individual notebooks. The methods used during the workshop combined several elements: *formal presentation, small group discussions, general assembly discussions, active and participative exercises, and informal networking during breaks*. Supporting material used during the workshop can be found here: **Presentation 1** **Presentation 2** **Presentation 3** **Presentation 4** **Presentation 5** **Presentation 6** **Presentation 7**
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	• These actors could have valuable knowledge, information, opinion and data to develop the instruments/ process/ tasks of the project. In fact,

	the majority of them have significant knowledge about the materials handled in the project, how is the flow of these materials in the city (and province) of Seville, legislation and studies related with them, etc. • In order to put them in context about the results expected by their participation (role of observers, data reporters, advisers, etc.) • Asking their opinion for the definitive of the demonstration cases, evaluation indicators and on the concept of Circular City.
When (in the process?	At the beginning of the whole project.

PURPOSE	FOLLOW UP ON THE DESIGN OF DEMONSTRATION CASES, PRESENT EVALUATION PLAN AND AGREE ON COOPERATION METHODS FOR INFORMATION COLLECTION AND SHARING
Responsible	SCC – César Gallardo +Demonstration Managers – Santiago Rodríguez (IDENER).
Date	M 13 (October 2020)
Description	*Second round of preparation workshops*. This will be a half-day workshop focused on CDW/OW. The specific objectives of the workshops are: 1. To present developments of demonstration cases instruments and collect their feedback in order to integrate them for the start of the Demonstration phase (CDW standard and certification tool; flow optimisation tool and Awareness-Raising Campaign) 2. To get their input regarding the Evaluation Plan and the baseline data (a draft would be pre-circulated) 3. To agree on cooperation methods in relation to the collection of data for material flow assessment and evaluation. 4. Discussion on User Observatory Group on Circular Economy Material and methods used for the workshop will be similar to the ones used in the 1st workshop.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city

	procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	Their knowledge is key for the design of instruments and demonstration actions They are an important source of information for the characterization of material flows and evaluation tasks, and we need to identify who will be a reporter and agree on how/when this data reporting will be done.
When in the process?	This activity is thought for the period just before the demonstration phase, in order to plan jointly the demonstration actions and the tasks related to WP 4 and WP 6.

PURPOSE	ESTABLISHMENT OF A LONG-TERM USER OBSERVATORY GROUP
Responsible	Pedro Cruces Gonzalez- LIPASAM/ Graciano Carpes - EMASESA
Date	M 15 (December 2020)
Description	During the 1st Workshop stakeholders expressed their interest to set up a permanent cooperation structure in order to have a common platform for discussion, knowledge sharing and common work for the different actors involved in each of the materials flows. The *User Observatory Group on Circular Economy* (UOGCE) will have different groups which will be defined jointly according to the different areas of material flows and circular economy interests.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	ALL
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	The objective is to involve as many stakeholders possible in order to have a good representation of the sectors and flows in the Observatory.
When in the process?	We will try to set up and consolidate the Observatory Group on Circular Economy during the project lifetime. This is not a commitment related to CityLoops but a proposal that emerged during the initial engagement workshops.

4.2. STAKEHOLDER INVOLVEMENT IN DEMONSTRATION PHASE. Period: March 2021- May 2023

4.2.1. General objectives of stakeholder's engagement during this period:

a) Share and review developments of instruments related to demonstration case
b) Collect feedback from stakeholders and validate tools with their support
c) Report to the WG the results of the demonstration
d) Evaluate impact and build conclusions together

4.2.2. Methods, activities, structures:

PURPOSE	KEEP STAKEHOLDERS INFORMED ON A PERMANENT BASIS ABOUT THE PROGRESS OF THE PROJECT
Responsible	SCC – César Gallardo.
Date	On a regular basis (at least one communication every 6 months)
Description	Online permanent communication: During this phase a permanent communication with the WG will be established. Updated information on the Project progress will be send by partners through e-mail, including Project publications, meetings, results, news, etc.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	The idea is to keep them up-to-date and permanently informed on CityLoops progress.

When in the process?	On a continuous basis.

PURPOSE	GENERAL OBJECTIVES OF THIS PHASE APPLY. FOR EACH MEETING, SPECIFIC OBJECTIVES WILL BE DEFINED LATER ON.
Responsible	SCC – César Gallardo.
Date	M 20, M26, M32, M38, M42 (May and November 2021, May and November 2022 & March 2023)
Description	CDW Working Group Meetings: half-day working meetings supported by PPT presentations, flipcharts, big posters, paper questionnaires, and individual notebooks. The methods to be used: formal presentation, small group discussions, general assembly discussions, active and participative exercises, and informal networking during breaks. Specific Focus Group exercises will be organised for Midterm evaluation and Final Evaluation (WP 6)
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions, instruments 13, 14, 15, 16 and 17 (Quality assessment of CDW, CDW flow optimisation tool, Wellbeing monitoring tool, City simulation platform and awareness campaigns), characterization of material flows (WP4), evaluation of circularity and demonstration actions (WP6).
What stakeholder will be involved?	Treatment plant, Waste and Water managers (private and public), Suppliers, Public Administration, Universities, Merchants Associations, Distribution, social organizations and citizens, waste management companies, city procurers, city environmental advisors, and builder companies forming a Local Stakeholder Partnership.
Why will they be involved?	Data collection Results sharing Monitoring of demonstration actions Concrete objectives of these regular meetings will be defined later on.
When in the process?	The idea is to organise regular meetings throughout the project lifetime in order to have a permanent monitoring of the project, and also an opportunity to get data, advise, feedback from stakeholders. Concrete dates will be defined later on.

PURPOSE	THIS SPECIFIC STAKEHOLDER ENGAGEMENT ACTION IS TARGETED SPECIFICALLY AT CITIZENS

Responsible	LIPASAM
Date	M22- M35 (July 2021- August 2022)
Description	Awareness-raising campaign on CDW abandonment prevention The methods used in this campaign are not defined yet, they will be defined during the preparation of tender documents. Specific Focus Group exercises will be organised for Midterm evaluation and Final Evaluation (WP 6)
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Instrument 17- Awareness raising campaigns and demonstration actions.
What stakeholder will be involved?	Merchants Associations, Distribution, social organizations and citizens.
Why will they be involved?	The design of the campaign is essential and we would like to count on their views and ideas in order to have the most effective campaign possible. They are part of the target of this action.
When in the process?	During the campaign design and campaign execution, in order to use them as amplifiers.

PURPOSE	**AMPLIFICATION OF AWARENESS-CAMPAIGN THROUGH STAKEHOLDERS' NETWORKS AND COMMUNICATION CHANNELS**
Responsible	LIPASAM
Date	M22- M35 (July 2021- August 2022)
Description	The stakeholder WG will be an important actor supporting the dissemination campaign: participating in the design during the preparation of campaign methods; and enhancing dissemination through their networks and contacts, as they have access to different audiences. Depending on the type of campaign designed, the dissemination to be done by stakeholders will be adapted accordingly (dissemination of digital material by email, dissemination through corporative websites, digital social networks, etc.)
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Instrument 17- Awareness raising campaigns and demonstration actions.
What stakeholder will be involved?	Merchants Associations, Distribution, social organizations and citizens.

Why will they be involved?	They have their own communication channels and networks, so they are an important support for the dissemination of the awareness raising campaign. Use them as amplifiers of the campaign.
When in the process?	During the 2-months duration of the campaign (this is an estimation, the definitive duration has not yet been defined).

4.3. STAKEHOLDER INVOLVEMENT IN REPLICATION PHASE. Period: September 2022 - September 2023

4.3.1. General objectives of stakeholder's engagement during this period:

a) Analyse scalability of pilot cases in Seville
b) Exchange of experience for replication in other cities
c) Identify new business models

4.3.2. Methods, activities, structures:

PURPOSE	DISCUSS AND DEFINE REPLICATION STRATEGY WITHIN THE STAKEHOLDERS' WG
Responsible	SCC
Date	M38 (November 2022)
Description	During the stakeholder meeting organised in November 2022, the WG will analyse the possible strategies for replication of demonstration cases in the city of Seville. The method used during the meeting will be a brainstorming discussion
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	Demonstration actions.

What stakeholder will be involved?	Waste and Water managers (public), Public Administration.
Why will they be involved?	They have knowledge and vision about the feasibility of possible replication actions.
When in the process?	After implementation and evaluation of demonstration actions

PURPOSE	EXCHANGE EXPERIENCE FOR REPLICATION IN OTHER CITIES
Responsible	SCC
Date	To be set
Description	In the framework of the 3rd Global Forum of Local Governments, Seville will organise a special workshop with cities from all around the world in order to present CITYLOOPS results and replication opportunities. Presentations in other similar events/Networks where Seville is represented are also foreseen.
STAKEHOLDER INVOLVEMENT	
In what instrument/ process?	CityLoops in general.
What stakeholder will be involved?	Waste and Water managers (private and public), Public Administration.
Why will they be involved?	To promote replication of tools and exchange knowledge with other actors.
When in the process?	After implementation and evaluation of demonstration actions.

4.4. Risks and mitigation measures linked to stakeholder engagement

	RISKS	MITIGATION MEASURES
1	Low level of interest/ participation in proposed activities	Personalized follow up will be done with stakeholders. Additionally, support and inspiration will be sought in participatory processes in other CityLoops cities.

2	Low availability in the participants' agendas, mainly related to the working group.	Semi-annual communications about the project will be made at least 2 months before the working group meetings, to agree on an agenda with all stakeholders.
3	Conflict of interests within the WG	Transparency and participation will be enhanced since the beginning within the collaborative working process.
4	Little or no alignment of the feedback and comments of the stakeholders with the demonstration actions of the project.	Semi-annual communications will be used to reinforce project ideas and demonstration actions to be carried out, to train and focus stakeholders.
5	Difficulties in integrating stakeholders' feedback into development and implementation of pilot cases	Stakeholder feedback will be analysed in depth, if they are aligned with the project's demonstrative and thematic actions. Likewise, those that are not selected will be considered, and the reason will be well justified, in order not to discourage interest.
6	Limited Resources (human and material) to keep the User Observatory Group working on the long-term	Before setting up this group formally, Seville partners will analyse the implications and will take a responsible decision based on resources available.
7	Limitation of face-to-face meetings, capacity, or type of communication actions due to the situation of COVID19.	The pertinent national regulations regarding the covid19 will always be followed. If necessary, alternatives will be sought such as: meetings by subgroups, virtual meetings, communication actions that do not include contact or physical presence, (mail, posters, etc).

CITYLOOPS

CityLoops is an EU-funded project focusing on construction and demolition waste (CDW), including soil, and organic waste (OW), where seven European cities are piloting solutions to be more circular.

Høje-Taastrup and Roskilde (Denmark), Mikkeli (Finland), Apeldoorn (the Netherlands), Bodø (Norway), Porto (Portugal) and Seville (Spain) are the seven cities implementing a series of demonstration actions on CDW and OW, and developing and testing over 30 new tools and processes.

Alongside these, a sector-wide circularity assessment and an urban circularity assessment are to be carried out in each of the cities. The former, to optimise the demonstration activities, whereas the latter to enable cities to effectively integrate circularity into planning and decision making. Another two key aspect of CityLoops are stakeholder engagement and circular procurement.

CityLoops runs from October 2019 until September 2023.

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