

The European Commission's
**INTELLIGENT CITIES
CHALLENGE**

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Molina de Segura: Intelligent City Transformation Overview

ICC Final Deliverable



Executive summary

Molina de Segura is a city with great potential, being the economic center of the area, having a SmartCity platform with freeware technology and having extensive experience in collaborative processes and in the application of European projects. But it has two quite obvious challenges: to improve mobility in its urban area and to increase the use of the Circular Economy in its different industrial areas.

The vision of the city by the City Council and the neighborhood representatives participating in the ICC has been fully agreed upon, wanting to have a city with fully accessible and reliable data in real time, where public transport is used by the majority in addition to having full coverage of soft mobility lanes and the Circular Economy is in common use in the different industrial areas.

For this, 8 Solutions have been created, where 5 are Intelligent Mobility. The most important due to its impact is the creation of the Low Emissions Zone and the creation of soft mobility lanes, both of which are financed with the *NextGenerationEU* mobility funds. Next in importance due to its impact would be the expansion of the tram line from Murcia, with studies confirming its technical and economic viability. And with less impact would be making the traffic data accessible in real time and all the information on the urban bus (it should be remembered that this transport is completely free for the residents of the city). And to promote the Circular Economy, a web platform and an ambitious campaign have been created that will be started jointly, to later carry out a study of its impact that allows incentives for its use to be applied to the different companies in the city.

Honestly, we are very proud of the result, since 7 of the solutions have been started or are about to be started, leaving only the extension of the tram because it is not municipal competence.

And for the coming years, once the solutions have been implemented, our intention is to strengthen the path taken to improve the use of public transport, transparency of all the data obtained from our smart city and reinforcement of Circular Economy policies. All this to achieve compliance with the SDGs present in the 2030 Agenda, since it is the main objective of the city during this decade.

Mayor Foreword

Together with Europe, we build the future of cities, making our places of residence more climate resilient and more accessible to people's needs.

Smart Cities have come to change the urban model, social and works and services to which we were accustomed: more spaces for cyclists and pedestrians to improve their health, less pollution to a better breathing and more vegetation in order to reduce high temperatures.

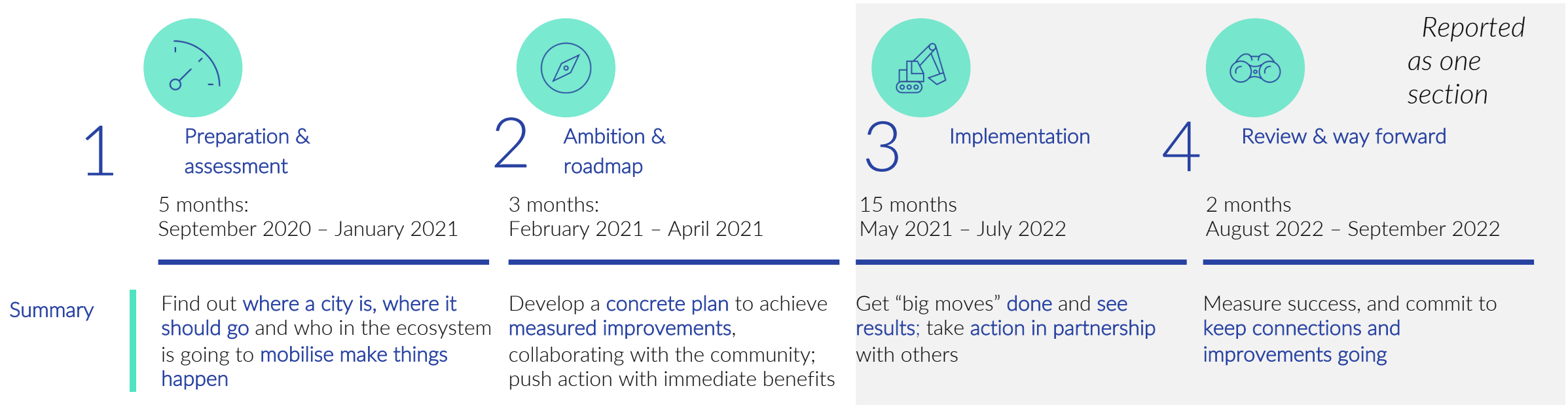
We have a challenge, to move faster than nature is imposing on us. The decisions we make today are helping to improve our relationship with nature and make our coexistence with the planet more sustainable. The phrase "There is no planet B" has already become famous, but this sounds very far away, if there is no planet B it is because there is neither a Spain, a Region of Murcia or a Molina de Segura B.

We are challenged to be at the forefront. In Molina de Segura, the largest economic hub in southeastern Spain, the quality of life has to be matched with the work and wealth generated by companies, with the collaboration of the City Council. Molina will not advance if the citizens who live here do not advance.

Eliseo García Cantó

The city of Molina de Segura pursued an EU-supported transformation over four main stages, and this document details that journey by these sections

Overview to the city's journey and structure of this document



Section
1

September 2020 to January
2021

Molina de Segura: Preparation and assessment

ICC transformation



Introduction

Being located in the agglomeration of the metropolitan area of the Region of Murcia, Molina de Segura has the highest economic income in the region: the per capita income is the highest one per inhabitant and dozens of leading national companies in different fields have offices in the city.


At first, Molina de Segura grew by expanding the irrigated land, and later by the proliferation of many industries dedicated to the canning industry, which produced fruits in syrup, jams, juices and a long list of products. In turn, an auxiliary industry fabric was created, and other very important sectors such as the transport of goods by road. This city has a great industrial tradition since the nineteenth century with commercial and export activity in the agricultural, plastic, ceramic, wood, textile and olive industries. Since the 1920s, the area is also famous about canning industries.


Molina de Segura aims to boost a more livable, safe, digital and sustainable city. We have designed a master plan to become a Smart City; which was evolved towards the current Policy Programme executed under the ERDF programme “EDUSI Molina Avanza Contigo”.


The city has different public services, such as local hospital and police station, and is the largest logistics centre in southern Europe. Moreover, Molina de Segura is integrated into CRIsoI, a Cloud Data Center, and has a Smart City platform based on FIWARE, and a metropolitan IoT network for air quality and noise monitoring.

City needs: State of the city overview

Significance of insight to what we want to do on the ICC

 Of critical importance to ICC journey and we should be working to change

 Of importance to ICC journey, and we should act to change this along the journey as opportunity presents

 Contextually relevant, but not major point of attention in ICC and unlikely to be impacted on the journey

The state of Molina de Segura today

Molina de Segura is a city that is experiencing a great process of change and modernization in recent years. In large part thanks to the different European projects that are being implemented.

We sincerely believe that we have great potential by having a great industry, a City Council with a satisfactory experience in implementing transformational projects, and a citizenry that welcomes these changes.

In addition, we have the Smart City platform, with the European Fiware standard, and electronic administration, recently implemented, which enables us to have a very good reception capacity for new technological solutions.

All of this should allow us to address in the best possible way the main objectives of the city: improvement of air quality, better management of road traffic in the urban area, and correctly apply a circular economy policy in the industrial field.

For all this, we are very excited and hopeful with the results to be obtained at the ICC.

Key insights from city performance analysis

Higher performance observed

1 Very successful in attracting and consolidating an industrial and logistics economy

2 Successful implementation of a Smart City platform

3 Successful in participating in EU initiatives and attracting EU funding

4 Highly committed with Climate Change mitigation as part of Covenant of Mayors

5 Excellent relationship with other public and private entities to cooperate in designing innovative initiatives to enable sustainable urban ecosystems

Lower performance observed

1 Lack of usage of public transportation

2 Reduced availability of cycling infrastructure

3 Congestion at peak hours with associated poor air quality

4 Very few initiatives in place towards greening of the industry and low implementation of circular economy strategies in the industries

5 Lack of optimization of local natural resources

City Ecosystem

We were pleasantly surprised by the great reception of the workshops by the neighborhood and business representatives. They were very productive workshops in which all attendees actively participated. Of course, due to COVID-19, all the workshops were carried out online. These workshops focused on obtaining clear results and requiring the participation of all attendees. To do this, we used several telematic joint work tools, such as surveys or visual collaboration platforms.

The initial perspectives were overcome, and this way of working will continue to be used by the City Council. And the reflections of the stakeholders were very good, as they appreciated that their opinion was actively taken, because it is not a common way of meeting. Regarding the structure of the ICC, we also received good criticism, since the support of the experts assigned to the city was highly valued.

The following entities have participated in a particularly active way during the ICC:

- Chair of Mobility and Sustainable Transport of the UCAM (San Antonio Catholic University of Murcia)
- Federation of Neighborhood Association "Interbarrios"
- Sercomosa (Molina de Segura public-private urban services company)

ICC strategy: Vision and ambition statements

In 2030, Molina de Segura is a smart, open, transparent city, an economic and healthy hub. Where the Circular Economy is applied in its various industrial areas, and smart mobility reaches the entire city.

1. The **City services** are digitized, transparent, efficient and easily available through a molinadesegura.es portal and the digital signage system. With the transparency and smart city sub-portals being especially important.

1. **Digital signage system** showing real-time data distributed throughout the city.
2. **Municipal web portal** with all the accessibility and adaptability tools.
3. All city data accessible in real time at ciudadinteligente.molinadesegura.es

2. The **Circular Economy** is used by all companies in a common way. Both at the city level, and with the rest of the companies in the region.

1. The portal molinacircular.es is used by a large number of companies.
2. Circular economy **awareness campaigns** are constantly carried out.
3. **Incentives** apply for all circular economy practices in industry.

3. **Smart Mobility** is used throughout the city, making great use of public transport. All data on traffic behavior in the city is open.

1. **Public transport is free** for all the inhabitants of the city and there is a tram connection with Murcia.
2. The **Low Emissions Zone** includes most of the city's population
3. **Soft Mobility** is present in the city, allowing driving without a car to access any area.

City strategy in Smart Mobility: justification

It was always clear in the workshops that improving mobility was essential for this city. In addition to the fact that there always has to be a very important part of pedagogy for citizens, since applying measures without the majority support of citizens is not efficient at all.

The five Smart Mobility solutions have in common the complexity of their financing, since it is necessary to help them in their financing due to its high level or that they are financed by companies or local entities outside the City Council.

Another generalized conclusion of the interventions to the mobility workshops is that the data obtained must be accessible to everyone in real time.

The solutions obtained have synergies between them, since they all come from the municipal PMUS (Sustainable Urban Mobility Plan). Therefore, they also have synergy with solutions already taken, or that are planned to be taken.

The greatest risks we face is that when applying the solutions, the expected results are not obtained, for this reason we will be very attentive to all the KPIs constantly, to see the evolution of the city. In addition to doing a lot of pedagogy with citizens, to let them know how important and beneficial it is to have intelligent mobility in the city.

City strategy in Circular Economy: justification

During the Circular Economy workshops, it became clear that it was essential that the solutions should be transversal to all the industrial activity present in the city, and without restrictions on the size of the company, which is why they have been carried out thinking of being applied from a small company of a few workers, even by one of the multinationals with thousands of workers that are in the city.

The three solutions obtained in Circular Economy interact with each other and have great synergy. In addition to the fact that its application order is essential, since the campaign cannot be started until the web platform is fully operational to be able to advertise it in the campaign, and the incentives cannot be applied until reliable application level data is available of the other two solutions, in order to have an acceptable estimate of the economic impact on the City Council.

The main factors that will define the success of these solutions will be the number of companies that make use of it, and that there are from the different industrial areas that make up the great industrial pole that is Molina de Segura.

Section 2

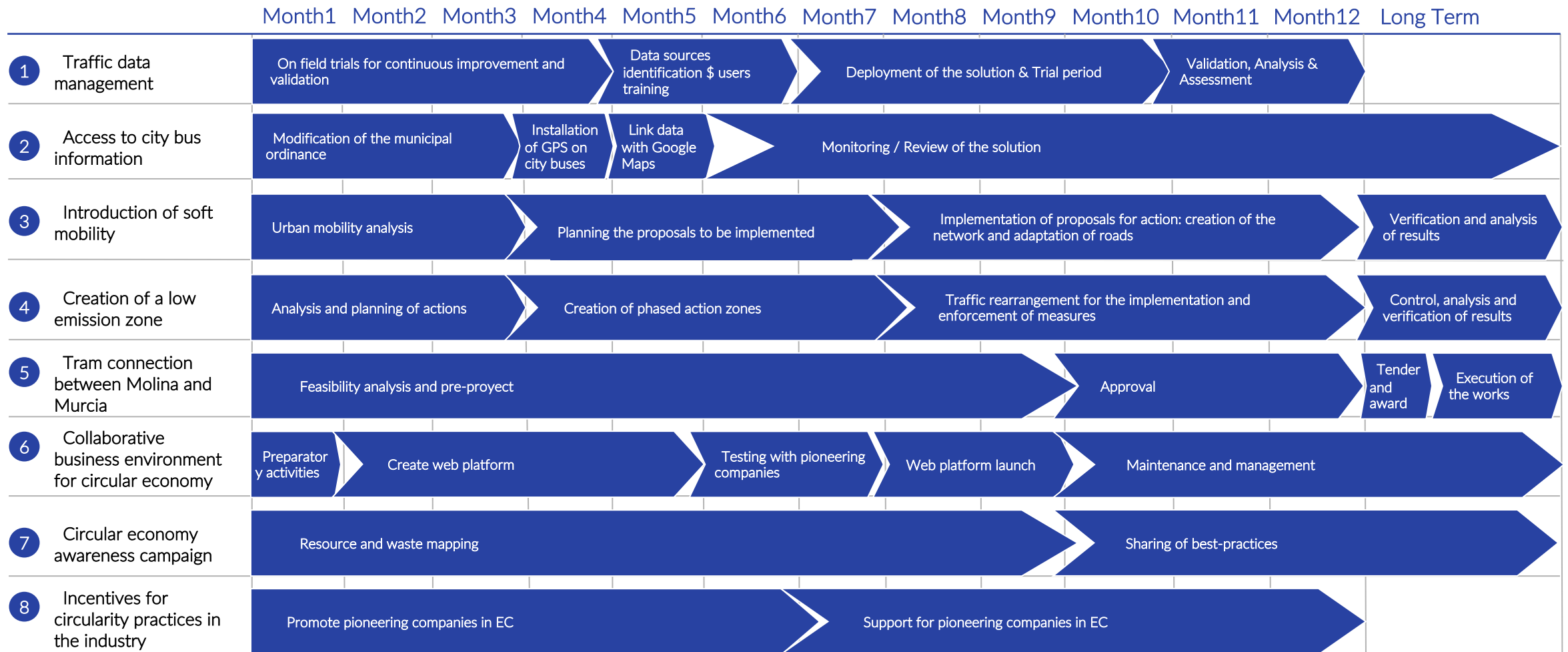
Molina de Segura: Ambition and roadmap

ICC Transformation

February 2021 to April 2021



High level implementation roadmap for each initiative



Rationale to road map












Smart Mobility: Given the high impact of mobility in a city, a large part of the road map has been dedicated to the preliminary analysis of solutions, and to the control, analysis and verification of the results. In other words, the study of solutions has been prioritized, in order to obtain satisfactory results, since in this city there is a bad history of applying mobility solutions without due prior and final analysis.

This road map is also very much defined by the financing of the solutions, since they are either subsidized with the *NextGenerationEU* funds or must be carried out by companies or public entities not directly dependent on the City Council. Therefore, its realization cannot begin until the funds are confirmed.












Circular Economy: This road map was easier to carry out, since the solutions are fully financed by the City Council, and do not require prior analysis and results.

The 3 Circular Economy solutions have their interconnected phases, since until the web platform is published, the awareness campaign cannot be started, and the incentives for the industry cannot begin.












Smart Mobility (1/5) - Traffic data management

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	<p>What: Data collection for intelligent traffic management and review of the mobility model</p> <p>Why: Lack of information on city mobility</p> <p>How: Create AI-based system to detect and prevent environmental degradation</p>	Solution lead: Molina de Segura City Council 	Solution working team: Department of mobility of the City 	Source of funding and estimated cost 	<p>Next Generation EU funds for mobility</p> <p>50,000 € of estimated cost</p>
	Link to vision 	<p>CO2 reduction</p>	Contributors: Information and communication technology department of the City 	Solution maturity outputs 	<p>Have real-time information on traffic behavior in the city</p>
	Link to ambition statement 	<p>Ambition statement 1: change the urban area of the city, applying smart mobility projects</p>	Risks and mitigation 	City performance outcomes and impacts 	<p>Need for a period of time from the implementation to obtain data that allow to draw relevant conclusions</p> <p>Improved knowledge of the state of the city, with reliable and real-time data</p>
Expected impact and timing 	<p>Medium & instantly</p>				










Smart Mobility (2/5) - Access to information about urban buses

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	<p>What: Use information technology in public transport</p> <p>Why: Lack of information on urban public transport</p> <p>How: Apply information technologies for public transport (GPS, web portal, Google Maps)</p>	Solution lead: Concessionaire company of urban public transport 	Solution working team: Department of mobility of the City 	Source of funding and estimated cost 	<p>Concessionaire company of urban public transport</p> <p>10,000 € of estimated cost</p>
	Link to vision 	<p>CO2 reduction</p>	Contributors: Information and communication technology department of the City 	Solution maturity outputs 	<p>Have information on urban buses on the web platform and Google Maps</p>
	Link to ambition statement 	<p>Ambition statement 1: change the urban area of the city, applying smart mobility projects</p>	Risks and mitigation 	City performance outcomes and impacts 	<p>Increased quality of life and air quality</p>
Expected impact and timing 		<p>High & instantly</p>			












Smart Mobility (3/5) - Introduction of soft mobility

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	<p>What: Incorporate bike lanes in two-way streets and make them one-way</p> <p>Why: The city is not friendly for soft mobility</p> <p>How: Creation of the soft mobility network</p>	Solution lead: Molina de Segura City Council 	Solution working team: Department of mobility of the City 	Source of funding and estimated cost  <p>Next Generation EU funds for mobility</p> <p>3 M€ of estimated cost</p>	
	Link to vision  <p>CO2 reduction</p>	Contributors: Information and communication technology department of the City 		Solution maturity outputs  <p>Facilitate soft mobility in the city</p>	
	Link to ambition statement  <p>Ambition statement 1: change the urban area of the city, applying smart mobility projects</p>	Risks and mitigation  <p>Obtain social support and the need to intervene in the wheeled infrastructure</p>		City performance outcomes and impacts  <p>Increased quality of life and air quality</p>	
Expected impact and timing  <p>High & 3 months</p>					

Smart Mobility (4/5) - Creation of a low emission zone

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description  <p>What: Areas in which strategies to reduce road traffic will be implemented</p> <p>Why: Need to reduce CO2 emissions</p> <p>How: Creation of a low emission zone in areas where road traffic reduction strategies would be implemented</p>		Solution lead: Molina de Segura City Council 		Source of funding and estimated cost  <p>Next Generation EU funds for mobility</p> <p>4 M€ of estimated cost</p>	
	Link to vision  <p>CO2 reduction</p>	Solution working team:  <p>Department of mobility of the City</p>	Contributors:  <p>Information and communication technology department of the City</p>	Solution maturity outputs  <p>Create a more comfortable area in the city</p>	
	Link to ambition statement  <p>Ambition statement 1: change the urban area of the city, applying smart mobility projects</p>	Risks and mitigation  <p>Obtain social support and the need to intervene in the wheeled infrastructure</p>		City performance outcomes and impacts  <p>Increased quality of life and air quality</p>	
Expected impact and timing  <p>High & 3 months</p>					

Smart Mobility (5/5) - Tram connection with Murcia












Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts		
<div>Description</div> <div></div>	<div>What: Make the tram arrive to the city of Murcia</div> <div>Why: The current tram network does not reach the city</div> <div>How: New tram line connected to Murcia, the universities and shopping centres</div>	<div>Solution lead:</div> <div></div> <div>Ministry of Development and Infrastructures of the Region of Murcia</div>	<div>Solution working team:</div> <div></div> <div>General Directorate of Mobility and Coastal, of the Ministry of Development and Infrastructures of the Region of Murcia</div>	<div>Source of funding and estimated cost</div> <div></div> <div>Ministry of Development and Infrastructures of the Region of Murcia</div> <div>108.94 M€ of estimated cost</div>		
	<div>Link to vision</div> <div></div>	<div>CO2 reduction</div>	<div>Contributors:</div> <div></div> <div>Molina de Segura City Council</div>	<div>Solution maturity outputs</div> <div></div>	<div>Create an interurban tram line from Murcia</div>	
	<div>Link to ambition statement</div> <div></div>	<div>Ambition statement 1: change the urban area of the city, applying smart mobility projects</div>	<div>Risks and mitigation</div> <div></div> <div>It would require a strong investment by the Region of Murcia</div>	<div>City performance outcomes and impacts</div> <div></div>	<div>Increased quality of life, air quality and number of jobs</div>	
<div>Expected impact and timing</div> <div></div>	<div>High & 3 months</div>					

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Circular Economy (1/3) - Collaborative environment between companies

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	<p>What: Generate a collaborative environment between companies to increase economies of scale</p> <p>Why: Despite being the main industrial sector in the area, there is no circular economy solution</p> <p>How: Creation of a web platform</p>	Solution lead: Molina de Segura City Council 	Solution working team: City Project Manager - Municipal Company Office - Sercomosa 	Source of funding and estimated cost 	Molina de Segura City Council 5,000 € of estimated cost
	Link to vision 	Promotion of a green economy hub Efficient use of resources	Contributors: Industrial sector in the area 	Solution maturity outputs 	Web Platform creation and maintenance
	Link to ambition statement 	Ambition statement 2: Involve a important part of the industrial ecosystem in the circular economy network Ambition statement 3: More efficient Waste and water management	Risks and mitigation 	City performance outcomes and impacts 	Improvement of the industrial sector and the economy of the city
Expected impact and timing 		Medium & 6 months			

Circular Economy (2/3) - Circular economy awareness campaign

Strategy	Stakeholders involved	Inputs, outputs, outcomes and impacts
<div><div>Description</div><div><div></div><div>What: Awareness campaign on circular economy and good practices in recycling focused on the industrial sector</div><div>Why: The industrial sector are not properly informed about the advantages of the circular economy</div><div>How: Creation of a awareness campaign</div></div></div> <div><div>Link to vision</div><div><div></div><div>Promotion of a green economy hub</div><div>Efficient use of resources</div></div></div> <div><div>Link to ambition statement</div><div><div></div><div>Ambition statement 2: Involve a important part of the industrial ecosystem in the circular economy network</div><div>Ambition statement 3: More efficient Waste and water management</div></div></div> <div><div>Expected impact and timing</div><div><div></div><div>Medium & 6 months</div></div></div>	<div><div>Solution lead:</div><div><div></div><div>Molina de Segura City Council</div></div></div> <div><div>Solution working team:</div><div><div></div><div>City Project Manager - Municipal Company Office - Sercomosa</div></div></div> <div><div>Contributors:</div><div><div></div><div>Industrial sector in the area</div></div></div> <div><div>Risks and mitigation</div><div><div></div><div>Failing to reach most of the industrial sector</div></div></div>	<div><div>Source of funding and estimated cost</div><div><div></div><div>Molina de Segura City Council</div><div>4,000 € of estimated cost</div></div></div> <div><div>Solution maturity outputs</div><div><div></div><div>Raise awareness in a wide industrial sector</div></div></div> <div><div>City performance outcomes and impacts</div><div><div></div><div>Improvement of the industrial sector and the economy of the city</div></div></div>

Circular Economy (3/3) - Incentives for circularity processes in industrial sector

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	What: Economic and non-economic incentives for companies to achieve zero waste Why: The current municipal legislation does not contemplate the circular economy How: Drafting and approval of a municipal ordinance of circular economy	Solution lead: Molina de Segura City Council 		Source of funding and estimated cost 	Molina de Segura City Council Undefined estimated cost
		Solution working team: City Project Manager - Municipal Company Office 		Solution maturity outputs 	Apply Incentives for circularity processes
	Link to vision 	Promotion of a green economy hub Efficient use of resources	Contributors: Industrial sector in the area 		
Link to ambition statement 	Ambition statement 2: Involve a important part of the industrial ecosystem in the circular economy network Ambition statement 3: More efficient Waste and water management	Risks and mitigation 	Have a low participation by the industrial sector	City performance outcomes and impacts 	Improvement of the industrial sector and the economy of the city
Expected impact and timing 	Medium & 6 months				

Key Performance indicators - overview (Smart Mobility)

Initiative	Activities – Actions	Solution Maturity - outputs	City performance – outcomes and impacts
Traffic data management	Create AI-based system to detect and prevent environmental degradation - On field trials for continuous improvement and validation, Data sources identification & users training, Deployment of the solution & Trial period and Validation and Analysis & Assessment	Have real-time information on traffic behavior in the city	<ul style="list-style-type: none"> - Volume of data collected - Number of vehicles identified - Number of cameras used - Public information visualisation by citizens: number of visits to the web portal
Access to information about urban buses	Apply information technologies for public transport: GPS, web portal, Google Maps - Modification of the municipal ordinance, Installation of GPS on city buses, Linking data with Google Maps and Monitoring / Review of the solution	Have information on urban buses on the web platform and Google Maps	<ul style="list-style-type: none"> - Number of passengers (evolution) - Indicators of service improvement - Number of urban bus lines included in Google Maps and number of citizens accessing information on Google Maps - % of buses with GPS - Information available to users
Introduction of soft mobility	Creation of the soft mobility network - Urban mobility analysis, Planning the proposals to be implemented, Implementation of proposals for action (creation of the network and adaptation of roads) and Verification & analysis of results	Facilitate soft mobility in the city	<ul style="list-style-type: none"> - Increase in the number of journeys - Increase in school trips - Kilometres of infrastructure implemented - Number of bicycles and scooters available for rent

Key Performance indicators - overview (Smart Mobility)

Initiative	Activities – Actions	Solution Maturity - outputs	City performance – outcomes and impacts
Creation of a low emission zone	Creation of a low emission zone in areas where road traffic reduction strategies would be implemented - Analysis and planning of actions, Creation of phased action zones, Traffic rearrangement for the implementation of measures and Control, analysis & verification of measurements and obtaining results	Create a more comfortable area in the city	<ul style="list-style-type: none"> - Reduction of GHG emissions. - Reduction of noise caused by individual motorised traffic. - Reduction of private motorised traffic in the historic centre of the municipality. - Increased use of sustainable modes of transport (intermodality) - Increase in urban space made available for people
Tram connection with Murcia	New tram line connected to Murcia, the universities and shopping centres - Feasibility analysis & pre-project, Approval, Tender & award and Execution of the works	Create an interurban tram line from Murcia	<ul style="list-style-type: none"> - Number of passengers using the tramway - Reduction of CO2 emissions - Increase in the number of public transport places available - Improved accessibility in the cities concerned

Key Performance indicators - overview (Circular Economy)

Initiative	Activities – Actions	Solution Maturity - outputs	City performance – outcomes and impacts
Collaborative environment between companies	Creation of a web platform - Design functionality and requirements and call for tender for web development	Web Platform creation and maintenance	<ul style="list-style-type: none"> - Number of registered users - Number of single users / month - Number of products or services exchanged / partnership agreements
Circular economy awareness campaign	Creation of a awareness campaign - Resource and waste mapping and sharing of best-practices	Raise awareness in a wide industrial sector	<ul style="list-style-type: none"> - Number of companies surveyed in person - Number of surveys answered non-face-to-face - Number of workshops / events organized - Number of attendees / participants in the workshops - Number of success stories from Molina de Segura - Number of best practices collected
Incentives for circularity processes in industrial sector	Drafting and approval of a municipal ordinance of circular economy - Promote and support for pioneering companies in circular economy	Apply incentives for circularity processes	<ul style="list-style-type: none"> - Number of companies with green seals - Reduction of the carbon footprint of green seal companies - Number of new companies established in Molina with green seals

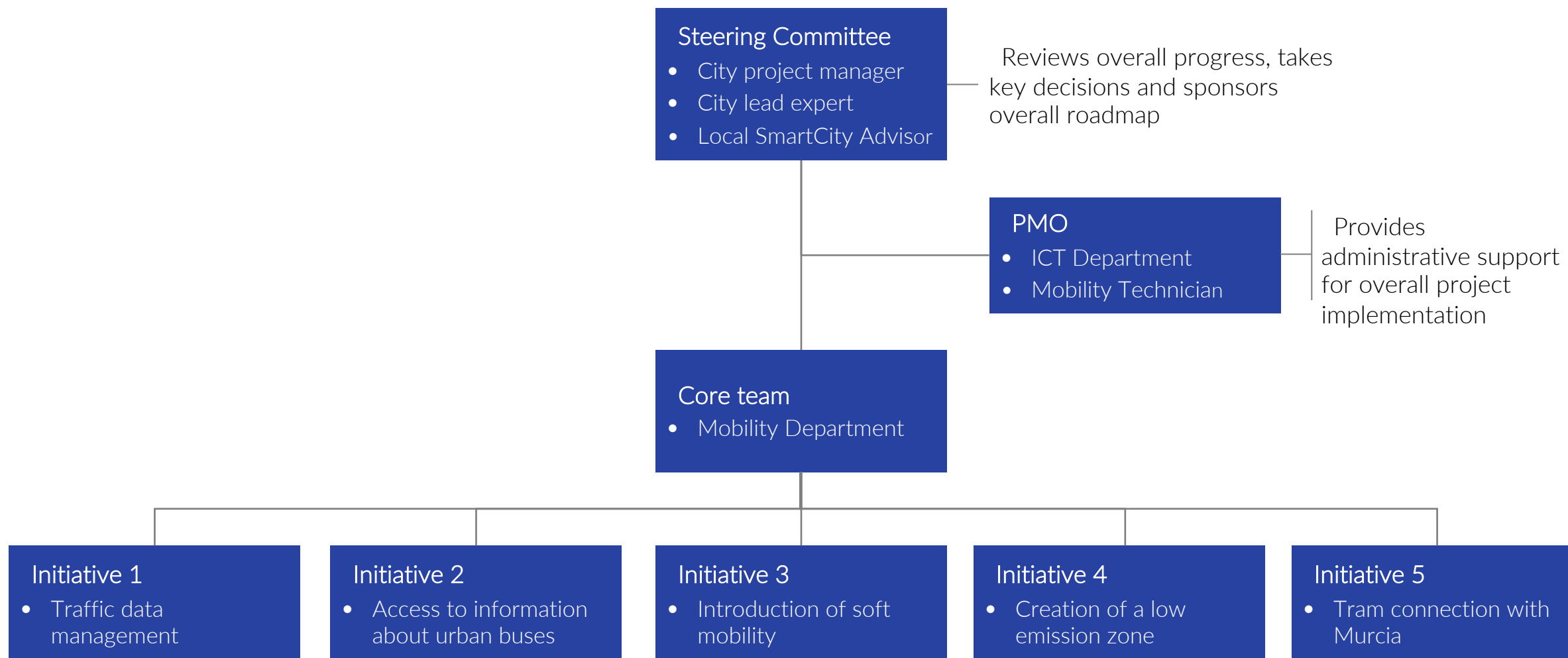
Rationale to KPI approach

The decision process of the KPIs was focused on obtaining them as clear and irrefutable as possible, that is, that any citizen, without technical knowledge of the subject, can get a clear idea of the impact of the solution when viewing them. This is because all the KPIs are going to be published on the municipal web portal, since transparency is a main point in our municipal management.

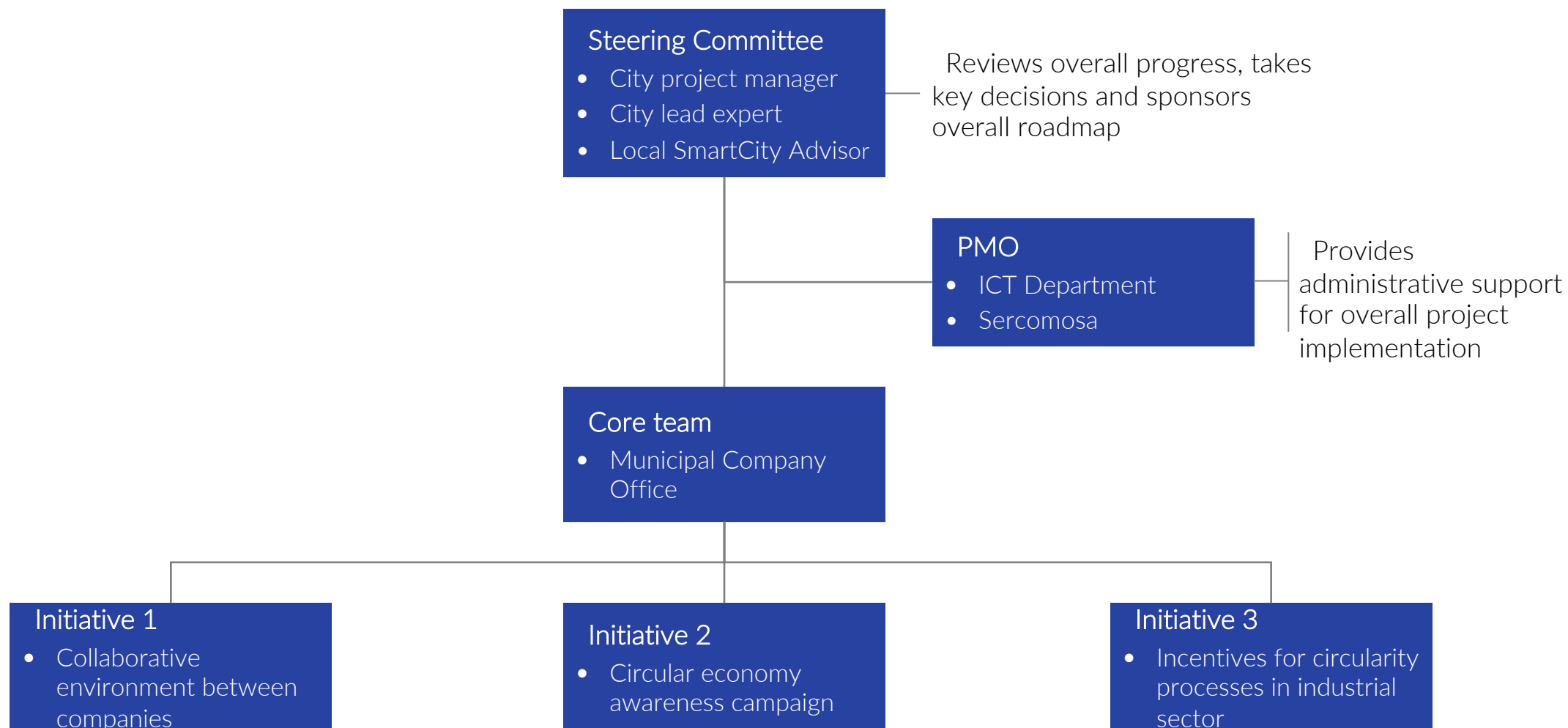
The KPIs were one of the main topics to be discussed in the different workshops that were held with the neighborhood and business representatives. Since our intention is to continue holding periodic meetings with them, to analyze the results of the solutions carried out, and for this the best way will be to study the evolution of the KPIs.

For this reason, we have a high number of KPIs, but it is something to which we are willing, since we consider that it is the best way to see the evolution of the city after the application of the different solutions obtained in the ICC.

Governance structure for roadmap implementation in Smart Mobility



Governance structure for roadmap implementation in Circular Economy



Section
3+4

May 2021 to September
2022

Molina de Segura: Impact

ICC Transformation



Impact executive summary

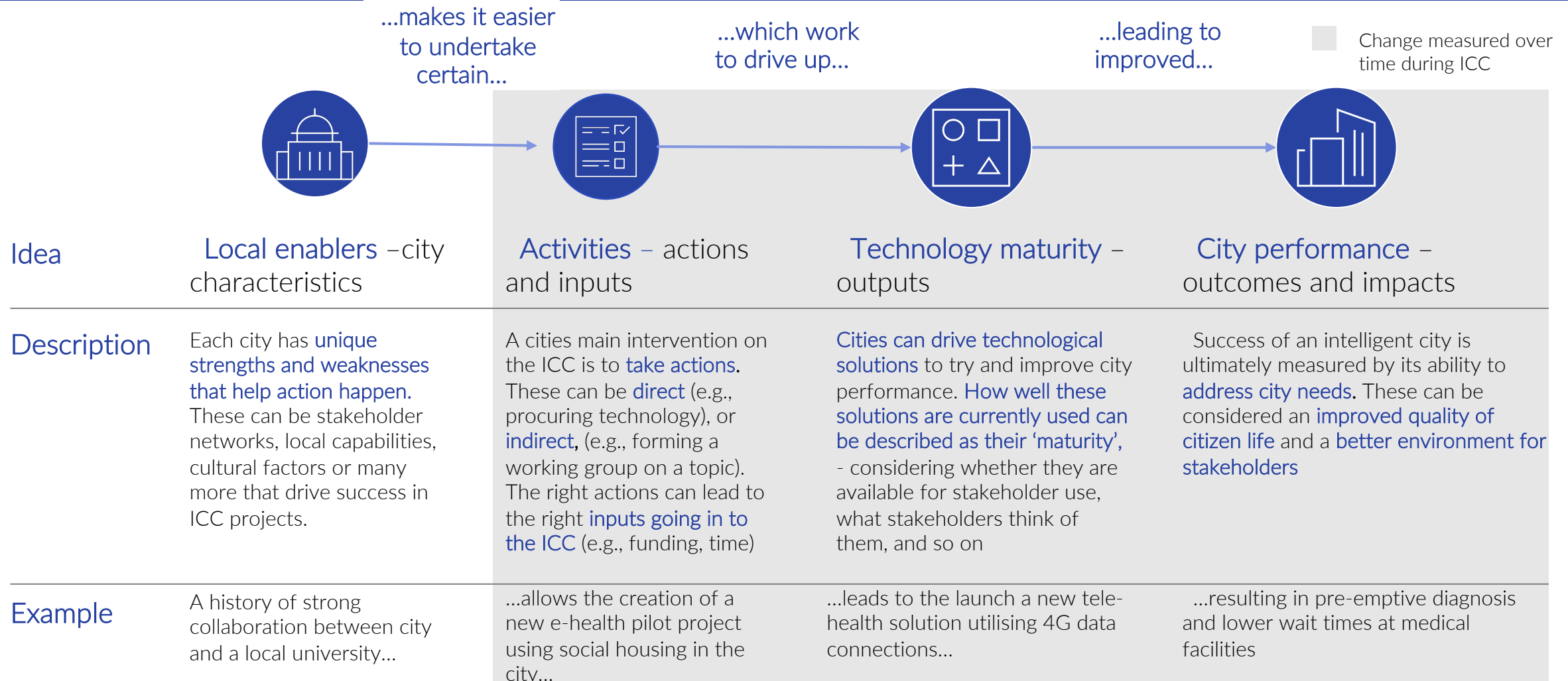
The main successes during the ICC have been obtaining Solutions in which all the participants in the workshops participated and contributed their point of view and that of having learned a new working methodology by this City Council, since we have learned that this methodology of doing active workshops with stakeholders and neighborhood representatives bears great fruit.

Without a doubt, the main obstacles have been those caused by the COVID-19 pandemic, such as not having been able to carry out face-to-face work workshops or changes in municipal budgets.

Regarding the initial KPIs, we are satisfied with the prospects for compliance that we have, although we will be constantly monitoring them.

In the next 3 years we want to continue applying solutions in smart mobility and circular economy, and always openly showing the data obtained in real time, within the objectives of the 2030 Agenda. To do this we are going to expand the technical staff in the Departments of Projects Europeans and Information Technologies.

There are four types of measurable concepts that come together to drive success in the ICC



Assessment of city performance - progress against KPIs

City performance	Where we started	Midway through the challenge	Final results
1 Improved knowledge of the state of the city, with reliable and real-time data	No Smart City municipal web portal	A Smart City web portal that was not fully functional because it did not have the mobility data	Smart City web portal with real-time data on Air Quality, Noise, Mobility and Use of Renewable Energy in municipal buildings
2 Increased quality of life and air quality	No soft mobility lanes or Low Emissions Zone	Without soft mobility lanes but with a Low Emissions Zone	With soft mobility lanes and Low Emissions Zone
3 Increased of number of jobs	No increment	Slight increase	Moderate increase
4 Improvement of the industrial sector and the economy of the city	No increment	Considerable improvement	Big improvement

Assessment of city performance - discussion

Discussion

City performance	
1 Improved knowledge of the state of the city, with reliable and real-time data	Being a web platform with different sources of information, a great effort has had to be made to be able to unify the information. In addition, the use of FIWARE technology has been prioritized. We are very satisfied with the result but we continue working to improve it and increase the information
2 Increased quality of life and air quality	No noticeable increase has yet been noticed in the city, because the Low Emissions Zone is not in operation. As soon as it does, the multiple available data will be analyzed in order to quantify this more than foreseeable improvement. In addition to that an advertising campaign will be made with these improvement data
3 Increased of number of jobs	There has been an increase in the number of jobs in the city, but it is not due to the ICC, since the solution that should have facilitated it, the tram connection with the city of Murcia, has not been implemented due to the refusal of the Ministry of Development and Infrastructures of the Region of Murcia
4 Improvement of the industrial sector and the economy of the city	The city's economy is growing, but it still cannot be associated with Circular Economy solutions, since it will take a few months for this to happen. But analyzing the results of similar solutions in other cities, we have full confidence that there will be an improvement in economic growth

Assessment of solution maturity - progress against KPIs

	Where we started	Midway through the challenge	Final results
Smart Mobility			
1 Have real-time information on traffic behavior in the city	No data	Study data but not in real time	Real-time data accessible on the city's Smart City web portal
2 Have information on urban buses on the web platform and Google Maps	No data	Static data accessible from the municipal web portal	Contract prepared to tender the company that uploads the data to the municipal Smart City portal and Google Maps
3 Facilitate soft mobility in the city	No soft mobility lanes	Realization of soft mobility lanes project	Waiting for the second call of the <i>NextGenerationEU</i> mobility funds
4 Create a more comfortable area in the city	No Low Emissions Zone in the city	Creation of the Low Emissions Zone project	Realization of the Low Emissions Zone with the <i>NextGenerationEU</i> mobility funds
5 Create an interurban tram line from Murcia	No tram line in the city	Refusal by the government of the Region of Murcia for the extension of the tram	Political and neighborhood pressure to get a change in the decision
Circular Economy			
1 Web Platform creation and maintenance	No Circular Economy web platform	Creation of the Circular Economy web platform	Loading of the first data and testing of the web platform for its presentation in October
2 Raise awareness in a wide industrial sector	Generic campaigns carried out by Sercomosa	Contract award for the specific campaign in the Industrial Areas	Waiting for the launch of the Circular Economy web platform in October to start the campaign
3 Apply incentives for circularity processes	No municipal incentives	Analysis of the possible incentives in the workshops and with the ICC experts assigned	Waiting for the results of the Circular Economy web platform to include the incentives in 2023

Assessment of solution maturity - discussion

Discussion

Smart Mobility

1	Have real-time information on traffic behavior in the city	Data is being provided, but it will be even more when real-time traffic analysis is done for smart traffic lights. This contract will be tendered in the coming days. We also have doubts about how to display the data, so we will meet with neighborhood representatives and the mobility consulting company for their study.
2	Have information on urban buses on the web platform and Google Maps	Not all targets in this area have been covered yet. We believe that it will be next year, when the new public transport concession contract is applied and the agreement with the intercity transport company is made
3	Facilitate soft mobility in the city	Waiting for the second call from the <i>NextGenerationEU</i> mobility funds to be launched in the coming days. We are certain that its application will be a historic change in the mobility of the urban area of the city
4	Create a more comfortable area in the city	The different projects for its realization are currently being executed. When the works are more advanced, the important and necessary awareness campaign will begin
5	Create an interurban tram line from Murcia	For reasons beyond the control of the City Council and the vast majority of citizens, this necessary improvement in interurban transport in Molina de Segura will not be possible

Circular Economy

1	Web Platform creation and maintenance	We are very satisfied with the result, since it is the first municipal Circular Economy web platform in the Region of Murcia: <i>molinacircular.es</i> (we are looking forward to October to see it fully operational)
2	Raise awareness in a wide industrial sector	We are finishing preparing the details of this ambitious campaign, in which all possible elements will be used: distribution of company-to-company brochures, posters in the garbage containers in the industrial areas, social networks and advertisements on radio and television
3	Apply incentives for circularity processes	Several incentives are being studied, waiting to see the result of the other two Circular Economy solutions, since these measures cannot be applied without a reliable estimate of their impact on the municipal budget. The measure that we currently like the most is the reduction of IBI for companies that install solar panels on their industrial roof

5 key lessons

Lesson	Reflections
1 Collaboration	We have discovered how important the collaboration of the main affected parties is, especially to define objectives and set KPIs
2 Workshops	We have been fascinated by the good results given by collaborative workshops in which all parties must actively participate
3 Financing	Given the high amount of mobility solutions, their source of financing has been the main factor to guarantee their development in the desired way
4 Experts	Working continuously with experts from different subjects and an expert leader has greatly enriched the experience, allowing for more efficient solutions
5 Timeline	It has not been possible to meet the deadlines for the implementation and development phase of the solutions due to the effects of COVID-19 and the Russian invasion of Ukraine

Reflections on city collaborations

It has been very enriching to collaborate with so many European cities during the ICC. Especially with cities with similar socioeconomic characteristics. By holding meetings with them we have realized that the vast majority of problems or obstacles to becoming a smart city are common to all European countries, such as obtaining both private and public funding sources at a national or European level.

It has been a shame that COVID-19 has not allowed for face-to-face meetings, which would surely have enriched the experience even more. Although with the city of Cartagena, due to its proximity, we have held two face-to-face meetings, one in each city, in which very technical issues on the implementation of Smart Mobility solutions were discussed. And we have another two visits pending when all the solutions are implemented, to be able to study their results in detail.

For Circular Economy solutions, we rely on platforms already implemented or planned in different cities. And we must say that this support has been of great help, allowing us to obtain a web platform that covers all the initial needs.

Commitments

Commitments to on-going resources	Commitments to on-going collaboration	Commitments to on-going KPIs
<ol style="list-style-type: none">1. Use resources as efficiently as possible and periodically evaluate changes that would improve them2. Be totally transparent in their use and making constant education to the citizens of the benefits that they are for the city3. Continuously assess their impact to confirm that they are beneficial to the environment	<ol style="list-style-type: none">1. Hold regular meetings with the participants in the workshops to study the evolution of the implemented solutions2. Continue working with the stakeholders in the ICC, for the realization of the 2030 Agenda of the city3. Maintain the direct link with the city of Cartagena to deal with any technical issue of the smart city	<ol style="list-style-type: none">1. Keep the KPIs accessible from the smart city web portal as open data in real time2. Continuous review and study of the KPIs to analyze the evolution of the solutions implemented in the city3. Hold regular meetings with the participants in the workshops to study changes or new KPIs

3 years plan - ambitions

Building on the ICC, what would will the city aim to achieve in 3 years time?

To have smart mobility fully integrated into the city with a great use of soft mobility lanes, extensive use of public transport and a Low Emissions Zone being the cultural and leisure center of the city.

In addition to having a fully integrated Circular Economy in all industrial areas and executing an awareness plan for the population on recycling on an ongoing basis.

What steps will you take over the next 3 years to achieve these goals?

The technical staff of the Departments of European Projects and Information Technologies will be expanded. In addition, an interdepartmental working group will be formed to study, carry out and monitor the objectives of the 2030 Agenda.

Political and neighborhood pressure will continue towards the Ministry of Development and Infrastructures of the Region of Murcia to ensure that the tram arrives from Murcia.

The new contract for the provision of public transport is going to be tendered, where the use of information technologies is going to be very demanding. An agreement is going to be made with the company that carries out intercity transport to be able to use the municipal mobility card. And the municipal ordinances will be updated to provide fiscal incentives for companies that actively practice the circular economy.

3 years plan - targets

KPI	Category	What commitments will the city make to this end?
1 Users of the municipal mobility card	Smart Mobility	A new concession contract for urban public transport that will improve and expand the service. In addition to making an agreement with the intercity transport concessionaire to allow the use of the municipal mobility card
2 Use of soft mobility lanes	Smart Mobility	Implementation of soft mobility lanes throughout the urban area, which allow access to all schools, institutes, hospitals, leisure centers and municipal services; without taking more than 10 minutes
3 Users of the Low Emission Zone	Smart Mobility	Implementation of the Low Emissions Zone in the most commercial area of the urban area. In addition to carrying out an ambitious campaign to raise awareness and study the impact by analyzing the data from the air quality meters
4 SDG of the 2030 Agenda	Smart City	Creation of an interdepartmental working group in the City Council for the study and implementation of the necessary solutions to meet the Sustainable Development Goals of the 2030 Agenda
5 Users in the Smart City portal	Smart City	Smart City municipal web portal (<i>ciudadinteligente.molinadesegura.es</i>), where real-time data on Air Quality, Mobility and Circular Economy are accessible. Inclusion of this data in the digital signage system distributed in the urban area, districts and urbanizations
6 Users in the Circular Economy portal	Circular Economy	Maintenance and review of the municipal circular economy web portal (<i>molinacircular.es</i>). Carrying out awareness campaigns in all business areas. And application of tax incentives to companies that carry out a circular economy