

DEMO EC

DEVELOPMENT OF SUSTAINABLE
MOBILITY IN EUROPEAN CITIES

PUBLIC TRANSPORT
INTERMODALITY

Start moving.

ARAGON
ACTION
PLAN

COORDINATED BY FAMCP & CTAZ

PROJECT INFORMATION



DEMO-EC fosters low-carbon transport in cities through integration of mobility management by combining the fields of mobility behaviour change, governance, e-mobility, car reduction, walking, cycling and public transport.

For environmental friendly transport and to reduce CO₂-consumption: alternatives for normal cars have to be introduced. A crucial aspect is to foster the combination of different environmental transport modes like public transport, cycling and also new arise mobility solutions.

TOPIC: Low Carbon Economy

PARTNER ORGANISATION: FAMCP. FEDERATION OF MUNICIPALITIES REGIONS AND PROVINCES OF ARAGON

LIFETIME: 1 Jan 2017 to 31 Dec 2021

OTHER PARTNERS INVOLVED : CTAZ. CONSORCIO DE TRANSPORTES DEL ÁREA DE ZARAGOZA

COUNTRY: Spain

NUTS II Region: ES 24 Aragón

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The Action Plan aims to impact: Investment for Growth and Job Programme

Name of the policy instrument addressed: ERDF Regional Operative Programme (ROP).

Priority axis 4.C (4.3.1), Improve energy efficiency and CO₂ emissions reduction in buildings and infrastructure and in public services.

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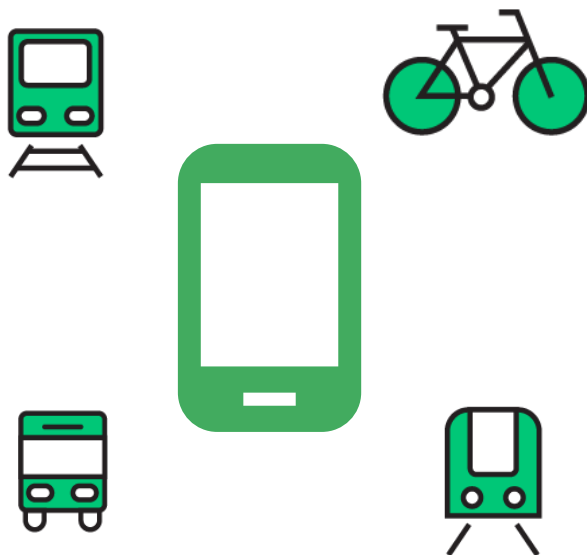
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Part I – General Information

About DEMO-Ec Project

The population of cities increases in Europe, which is a big challenge for the organization of transport in urban areas. For environmental friendly transport and to reduce CO₂-consumption the alternatives for normal cars have to be introduced. A crucial aspect is to foster the combination of different environmental transport modes like public transport, cycling and new arise mobility solutions. One way to combine these modes is a mobility management approach.

.The challenge here is that in city administrations a lack of instruments and unclear responsibilities exist. For successful implementation of mobility management also different actors and user groups must involve like companies and inhabitants as end users.

DEMO-EC fosters low-carbon transport in cities through integration of mobility management by combining the fields of mobility behavior change, governance, e-mobility, car reduction, walking, cycling and public transport.

The main goal of the project DEMO-EC is to integrate mobility management in city development/ planning by analyzing, exchanging and dissemination of good practice to improve the effectiveness of policies in the field of low-carbon in transport.



The expected impact of the project is to positively influence policies to envisage low-carbon alternatives for transport mobility by supporting cleaner transport modes and systems, and by promoting alternative mobility behavior. To reach these aims, the partners of DEMO-EC collect best-practices from local, regional, national and European level in the fields of Behavior change, Governance/participation, E-Mobility, Car reduction (walking, cycling) and Public transport.

The partners, consist of cities and regional development agencies from 5 different countries, exchange their experiences and results of the best practice analysis to improve policy programs by developing regional action plans.

The experience and best practices gained in the project also helps cities to improve their policy instruments and to implement mobility management in their cities and regions.

About FAMCP and Aragón Action Plan

Each region participating in DEMO-Ec produces its own Action Plan, providing details on how the lessons learnt from the interregional cooperation will be exploited in order to improve the policy instrument tackled within each region.

This document is the Action Plan elaborated by FAMCP (Federación Aragonesa de Municipios, Comarcas y Provincias) under the supervision of CTAZ (Consortio de Transportes del Área De Zaragoza) and with the contribution of several regional and municipal stakeholders for public transport, mobility and energy.

This Action Plan has been elaborated following the two main principles of the project and the Interreg Europe approach:

- Interregional cooperation: cooperation was supported by a series of interregional study visits for the exchange of experiences and identification of good practices
- Involvement of the main stakeholders promoting the reduction of carbon emissions using public transport as main instrument

This document is structured in four parts. After this introductory section, the second part provides an overview of the territorial context and the policy instrument addressed by the Action Plan. The third part provides an overview of the actions envisaged and the fourth one corresponds to the description of the actions, specifying its background, activities, players involved, timeframe and costs.

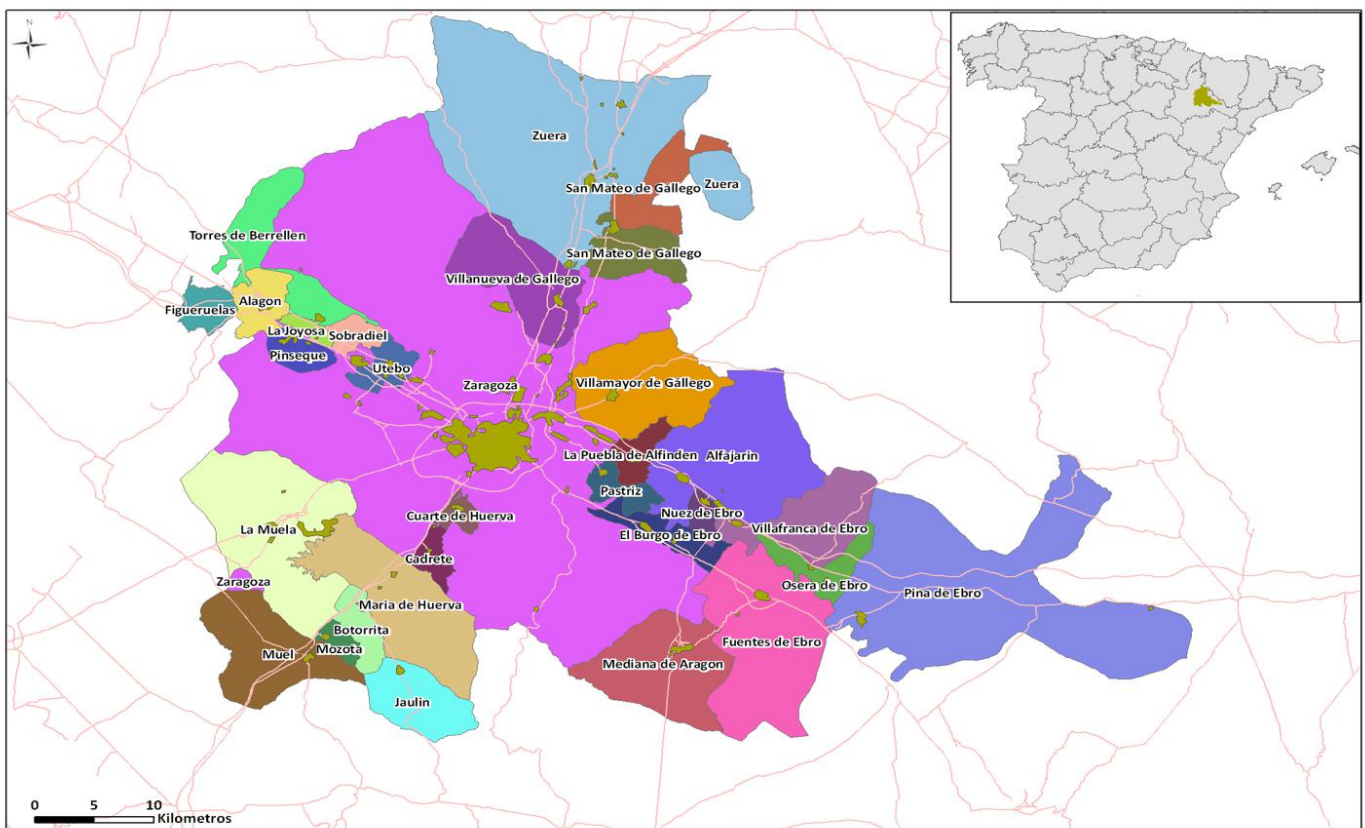


Part II – Policy context

This section includes a brief overview of the territorial context and the policy instrument addressed by this action plan.

The geographical coverage of the Action Plan is Aragon Region (Spain). Aragón is a North-Eastern region of Spain and the 4th in size, representing the 9,43 % of the country surface. Although the traditional economy is primary sector, the base of the economy has moved to service sector, highlighting the position of Zaragoza (the capital) as one of the main logistical and commercial centers in the country, thanks to PLAZA, near Zaragoza Airport and connecting the products transport in the South of Europe.

The coming agricultural platform will implement the economy orientation in the region and especially in the province of Zaragoza.



Map of Zaragoza metropolitan areas and Province (32 municipalities)

The activities of this Action Plan are focus in the province of Zaragoza (Zaragoza + 32 municipalities).

The proposed actions are based in the learning process and they could be implemented by the regional stakeholders, as actors of the regional reduction of carbon emission policy through the promotion of the use of public transport.

The area of Zaragoza has a triple function: it is a group of municipalities concentrating more than 80% of the population of the region; a space in which are located the capital and the great infrastructures and services of Aragon; and it is the functional metropolis of Aragon.

Territory and mobility conform a close linked binomial that overcomes the administrative borders between municipalities, and this is a challenged question to take in mind when promoting public sustainable mobility. The place where citizens live and work are a strong determinant aspect for the design and investment in infrastructures, public services and mobility policies.

The movement of the population from work to home and for leisure activities has its own influence in the organizational approaches for mobility services and in the configuration of the municipalities itself.

Thus, the activities of the Action Plan are designed to implement and reinforce the Priority axis 4.C (4.3.1) of the ROP:_ Improve energy efficiency and CO2 emissions reduction in buildings, infrastructure and in public services.

Concretely, the action planned with DEMO-EC learning experiences and activities are focused on public Transport and Mobility with the main emphasis in the development of the infrastructure for providing greener public services.

The selection of the activities is based in one of the priorities of ERDF investment that foresees carbon reduction strategies especially in urban areas, promoting sustainable multimodal urban mobility.

This Action Plan considers different actions tackling these main topics:

1. Public transport services infrastructures
2. Use of tech solutions for intermodal public transport.
3. The real exchange of experience and the learning process opened through the identification and transfer of the good practices identified among the DEMO-EC partners.
4. The involvement of the stakeholders, that represent all the actors in the approach to reduce carbon emission through public services



"<https://www.freepik.es/fotos-vectores-gratis/fondo>">Vector de Fondo creado por macrovector - www.freepik.es

STAKEHOLDERS

FUNDACIÓN PARA EL DESARROLLO DE LAS NUEVAS TECNOLOGÍAS DEL HIDRÓGENO EN ARAGÓN

Private, not-for-profit entity, created to promote the use of hydrogen as an energy vector. Promoted by the Government of Aragon. The Foundation works day by day for the development of new hydrogen technologies integrated with renewable energies and the promotion of Aragon's involvement in economic activities relating to the use of hydrogen as an energy vector. The mission of the Foundation is to carry out activities for generating, storing and transporting hydrogen in transport applications.

CTAZ

The Zaragoza Area Transport Consortium is a public entity formed by the Government of Aragon, the Zaragoza Provincial Council and 32 town councils that are part of 5 different counties. It promotes the economic, social and environmental sustainability of the entire public transport and mobility system in the Zaragoza Area.

It has been entrusted with the approval, evaluation and five-yearly review of the Sustainable Mobility Plan for the Zaragoza area, as the main planning tool for mobility strategies in the Zaragoza area

ENERGY CLUSTER

Non profit organisation composed by the main energy companies in Aragón and the regional government, the University of Zaragoza and national energy providers.

It promotes the development of initiatives of renewable energies, energy efficiency, electric mobility, intelligent networks (Smart Grid)

OPME

The Office for the Promotion of Electric Mobility (OPME) is the link and coordination office for emerging actions and initiatives relating to electric mobility. This office develops its activities under the Directive 4.2 of the DMM_Z (Zaragoza Metropolitan Mobility Guidelines) advocates the specific promotion of the electric vehicle through the "Launching of a Plan to promote the electric vehicle aimed at preferential demand niches in the Zaragoza area



Part III –Overview of the Actions Envisaged

This section includes a brief overview of the actions included in the Action Plan. These actions were drafted according to a set of broad guiding principles:

Stakeholder

Inputs, Interregional learning process (lessons learnt from the different interregional exchange activities carried out in DEMO Ec implementation), Policy instrument improvement and Feasibility.



ACTION 1:

Safe public bike parking for intermodal citizens mobility

Promotion of specific measures for intermodal citizens mobility

This section includes a brief overview of the actions included in the Action Plan.

These actions were drafted according to a set of broad guiding principles:

- Stakeholder Inputs, Interregional learning process (lessons learnt from the different interregional exchange activities carried out in DEMO Ec implementation)
- Policy instrument improvement and Feasibility.

BACKGROUND

One of the first challenges concerning the reduction of carbon emissions is the mobility in urban areas. And this one of the main topics to take part in DEMO Ec: identify initiatives in bigger metropolitan areas which could support ideas to promote competitive transport alternatives under two premises: affordable and effective.

Citizens are more and more aware of the impact that mobility in urban areas has in the environment. The challenge to face with this action is to promote the intermodality of public urban mobility and the action of create and consolidate a public network of safe public parking for bikes was configured through the study visits of the project.



The first **study visit** to **Leipzig** in the kick off meeting (23/03/2017) gave us the opportunity to learn about thematic focus of mobility patterns of the city. The analysis presented by experts of the Department for Traffic Planning and Road Construction, was deeply valuable about traffic flows, traffic distribution, traffic modelling, planning of streets system for public transport, location, e-mobility, and specially about Bicycle Planning.

The city of **Leipzig** provides **more than 5000 parking racks** placed for bikes. Since 2008, when **Zaragoza** launched its own bike lanes grid, and although the number of **bike users as main transport in the metropolitan area** of Zaragoza has increased as well as the number of users of the bike due to users buying their own bikes, there isn't safe public services for parking private bikes. This was the first approach to the action.

During the **second study visit to Leipzig** (14/03/19) FAMCP and its stakeholders were very interested in learning more about the GP Car reduction topic, and we received from the experts talk an enlightening presentation about the **Sustainable Scenario of the Traffic Strategy** of Leipzig.

Moreover, the real exchange of experience was more realistic during the part of the study visit based in a walking through the inner city and the visit to a **public parking bikes at the University** of Leipzig (Augustusplatz), and the train station where we could visit the installation of parking boxes.

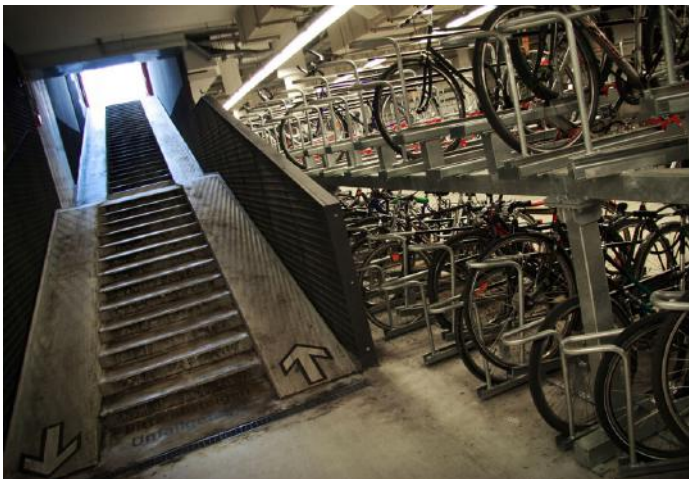
Leipzig – City of traffic: Car reduced city centre
Bicycle parking:



Leipzig's "**Project Bike Stands**" (Leipziger Bügel) has, in the past few years, provided more and more bicycle parking spaces. Only in the city centre, more than 1000 such bike stands have been put in place. With the renovations of the Leipzig University on the Augustusplatz, two bicycle parking garages with 600 to 1000 spaces were built.

At the Knauthain train station, four "bicycle boxes" have been installed for bicycle parking.

Throughout the project, during the learning process, whether in the study visits, as in the SWOT analyzes carried out, we learned and were convinced ourselves that a city center without cars not only works well for **Leipzig/Genova**, but for other cities as **Zaragoza** and its area. Leipzig and Zaragoza, have similarities of orography, surface size and population. It's well known that people enjoy their time in the city center. And that was the main objective of the concept: improving the attractiveness of the interior space of the city to invite pedestrians and residents to stay, reducing the volume of the car.



Leipzig – City of traffic: Car reduced city centre



Bicycle Parking:

- bicycle parking concept for city centre
- use of parking rack („Leipziger Anlehnbügel“)
- approx. 5.000 parking racks placed in Leipzig

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Leipzig Experience: identification of good practices to be transferred)

Surely, as the most important thing before developing and implementing the car concept, we need to set our specific objective and make sure we have the support of political actors. (CTAZ, Zaragoza City Council, Aragón Gob). In that sense, the new SUMP of Zaragoza was developed during this 2019.

To support this concept, the activity takes the reference of the **Good Practice 4.1 Car Less City City Centre Concept for Leipzig**, described in DEMO Ec Handbook. One of the goals of the practice are the rules and requirements for cyclist, which includes safe and secure public parking spaces for bicycles.

Coming back to **Zaragoza** metropolitan area, the problem of the NO existence of safe public bicycle parking was detected. A city with 132 km of bike lanes with **any public infrastructure to park bikes**. The stations available are those of the public system of BiZi but this service includes the renting of the bike through the citizen card. There is no alternative for parking private bikes.

One of the concerns of people who use the bike every day is where to park it during their daily activities or at night.

This concern extends even to people who do not use the bike for fear of being robbed or because they have already been stolen in the past as there isn't as safe space to store it. This fact combined with the cycling mentality of arriving as close as possible to the destination by bicycle, makes the quality, quantity and comfort of the place where you leave the bicycle an important key to think about when ordering and managing the parking cyclist.

THE ACTION: SAFE PUBLIC PARKING FOR BICYCLES IN ZARAGOZA AND ITS METROPOLITAN AREA.

The goal of the action is contributing to the integration of the bicycle as a complementary way to the metropolitan public transport system.

This action is in line with the Policy Instrument tackled: Improvement of Public services infrastructure to promote actions to reduce CO2 emissions.

The policy of safe bike parking will be planned as a combination of secure parking with the following characteristics:

- Limited duration in intermodal stations and attraction poles
- Medium capacity parking in more remote places such as public transport tram, study centers or sports centers
- Long-term parking in premises in residential areas.
- Temporary parking for events.

This will complement the intermodality of public transport in metropolitan areas. The action foresees 2 main activity areas:

- Public safe parking bikes with high number of park places in the inner cities, to satisfy the demand that all the citizens using their own bike as mobility instrument for arriving at work and for leisure activities at night
- Residential areas, where this kind of parking areas can improve the access to other public transport. These parks would be like a connecting point. Also with the aim of giving bike safe parking to citizens who have no space at home, no elevator, etc. and thus, promoting the use of their bikes.

Players involve	 
Timeframe	2019-2021
Cost	250.000 €
Funding	CTAZ/CEF-TRANSPORT-2016-MAP-Aragón Governement. The action will be implemented with regional and local funds, not having identified extra funds by the moment.



ACTION 2:

Healthy metropolitan itineraries around AP-68. Health, connectivity and mobility planning

BACKGROUND

Peri-urban areas account for most of the greenhouse gas emissions from the use of cars when travelling to work.

The **Zaragoza Metropolitan Mobility Guidelines** propose, from its axis 3, the promotion of non-motorised mobility, the connection of Zaragoza with its metropolitan area through its extensive network of rural roads. For this reason, with the support of the Ciclorred de la Ribera Alta del Ebro and drawing on the experiences of Poland in creating a network of roads that can vary and be used for each specific route.

The action arises from the results of the analysis of necessities of the project funded by Connecting Europe Facility in 2016. These results are still among the weaknesses/difficulties identified in the **SWOT matrix** elaborated by FAMCP in DEMO Ec Project.



The identification of the good practice on cycling around suburb areas in Warsaw, **GP 2.4** "Poland: Cycling around the Warsaw's suburban garden tri-city" of **DEMO Ec handbook**, focused on the process for a coordinated planification of alternative routes for non-motorized transport. Warsaw's experience identify the critical point in the communication of this strategies in a city, to count on the involvement of the citizens.

The communication campaign implemented in Poland will be transferred for the design and implementation of the 3rd phase of the action. The paths and itineraries used in the action should currently be in use, so no new infrastructure would be needed. But the municipalities of the area will take part in the signposting and in promoting the information of the itineraries among citizens in order to promote their use. Although a complete set of ICT Tools is foreseen, it is also important the contribution of the municipalities in the maintenance, improvement and updating the cloud information.



The social awareness and direct involvement of the inhabitants of the 32 municipalities is the main challenge to face. In this sense, the campaign implemented in Poland give the main key points to plan a policy making process for the planning and implementation of the action. Citizens, stakeholders and cities will work together in the low carbon transport strategy.

The action has into account the concept of preferential user: the length of the itineraries is wide and signposting covers a large area. For this reason, the bicycle appears as the most suitable transport mean for this network of itineraries. However, it can be used by people on foot both in small stretches and over longer distances. In this case, dirt tracks are more comfortable than asphalt roads because of the lack of a delimited pedestrian area.

The inclusion of several sections for the pedestrian and non-motorized vehicles (specially bikes) choice will result in the attractiveness of the itineraries.

It should be noted that the distances between points of interest are on the limits where the bicycle is as fast as the car. As we are concentrated in a periurban area, the maximum length of the distance is reduced to 4 to 5 kilometers. Although Aragón is a very flat territory, days with average winds of more than 20 km/h are a third of the total. This is a dissuasive question when you want to use the bicycle as a mean of transport because reduces the average travel speed. Therefore, the pedal-assisted bicycle is a solution to this adverse climate and its promotion can be key to a modal shift from car to bicycle or bicycle + public transport.

As it has just been presented, **intermodality is one of the bases of this project**. The distances and the orography between the main points make viable the use of the bicycle but if we increase the combination of the bike with train and buses the possibilities for accessing to workplaces is reduced in time and of course in emissions.

THE ACTION: Healthy metropolitan itineraries around AP-68.

The action is planned in 3 Phases:

1st phase:

Data collection and participation. A preliminary study through a participatory process and the realization of a draft plan with the information received.

2nd phase:

Selection of roads: Identification of the roads, their uses and their situation. A participatory process for pre-design of ICT Tools and the signaling proposal.



3rd phase:

Visibility of the Network. After determining the paths to be signposted and the possible improvements that can be made to the network, a small exploitation plan with ICT tools is proposed. As important as physical signage is the communication of the existence of the network, its dissemination and communication with people who use it. Among communication activities, on the spot activities and ICT campaigns will be used. In addition, all the postings will be marked with QR Codes that can be scanned with the smartphones form amore information or in case any assistance could be needed. , it is proposed to include QR codes that link to the web and the point where the signal is found. When carrying out the project, it is recommended that the website be operational before the physical signposting.



Players involve	
Timeframe	2 years
Cost	58.500 €
Funding	The action will be implemented with regional and local funds, not having identified extra funds by the moment.

ACTION 3:

Smart Mobility: Settin-up a network of charging e-Points

BACKGROUND

The metropolitan Guidelines for Mobility in Zaragoza are the supra-municipal instrument to plan future mobility issues in an area covering around 32 municipalities. These guidelines have as main principles inter-modality, integration and inter-urban mobility.

More concretely, the guideline 4.2 has the specific aim of **boosting the electric vehicle** through the design and implementation of a formative and informative campaign.

This action has a lot of similarities with **the experience of Leipzig** in becoming one of the "smartest" German cities in sustainable mobility. In fact, part of the public fleet of buses has been changed to electric vehicles. This action gives response to one of the recommendations of the experience and good practice of the handbook (3.1 City of intelligent mobility), which strongly recommends **public city administration should "set a good example"**, having its fleet electrified.

The **study visits and the partners meetings** gave Zaragoza City Council and CTAZ the opportunity to exchange success activities and enlighten points of view to **promote the changes in mobility patterns**.

The main contributions and advices come from the part of the dissemination activities. **Leipzig shows the importance of the awareness of the citizens:** they should consider themselves as key point in the project. Only the involvement in this kind of challenging projects can lead the initiative in a successful one.

This exchange of initiatives with Leipzig highlighted another key point for the success of the action: the participation of the business and private users. The main steps in this issue

has been taken as the Chamber of Commerce and CTAZ are aware that the promotion of this change of behaviors needs the cooperative work among public administrations, industrial sector, services providers and civil society. Thus, a specific office for the management and coordination of the public, private and citizens initiatives has been created: OPME (Office of Promotion of e-Mobility).

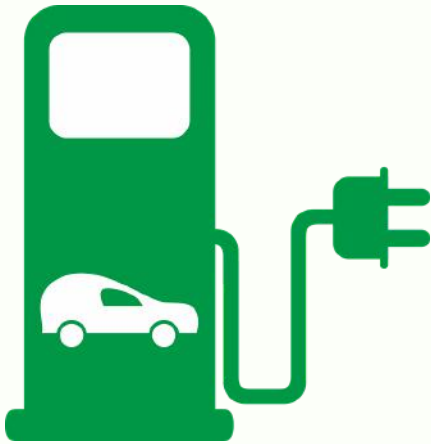
OPME is working as a liaison office for all the initiatives and the coordination of the stakeholders involved in them and to be developed in the metropolitan area. Although the activities are proposed for the metropolitan area, the lessons learnt in DEMO Ec have made possible the involvement of the regional government in the promotion activities, interesting in the creation of a public network of charging points in other rural areas. **In Leipzig, there are currently 67 free public charging stations** with 160 charging spots. **The current network in Aragon** is only proposed in Zaragoza province and they are established in hotels, parking and shopping areas (all **private** activities) FAMCP organized last September a specific meeting to explain and **promote the installations of e-mobility areas all over the region**, considering the special situation of our region, with low population density and long distances to cover (ROP indicator).

The workshop was very successful, and the participants represented the public and private stakeholders, not only associations but also specific companies linked to the e-vehicles.

THE ACTION: Setting-up a public network of e-mobility charging points

OPME is developing a full communication strategy for promoting the advantages of changing from fuel cars to e-mobility with the aim to fulfill the objectives of the European White Paper of transports .

The public transports fleet is still being changed under strict criteria of environmental friendly and the reductions of emissions to catch the total number in 2030. According to the exchange of experience, new activities have been to promote the opening of charging points:



- Providing information about funds and grants for companies to promote business projects to develop e-mobility
- Information about incentives for the purchase of alternative vehicles to reduce pollution levels and improve air quality. There is also a proposal of the cars that can make the citizens awarded by these incentives. Long-term parking in premises in residential areas.
- Promotion of the sharing transport initiative

The awareness campaign will make possible an **increase of the demand of charging points**, so, a map indicating the points in different cities and towns around Zaragoza and other main cities will be available.

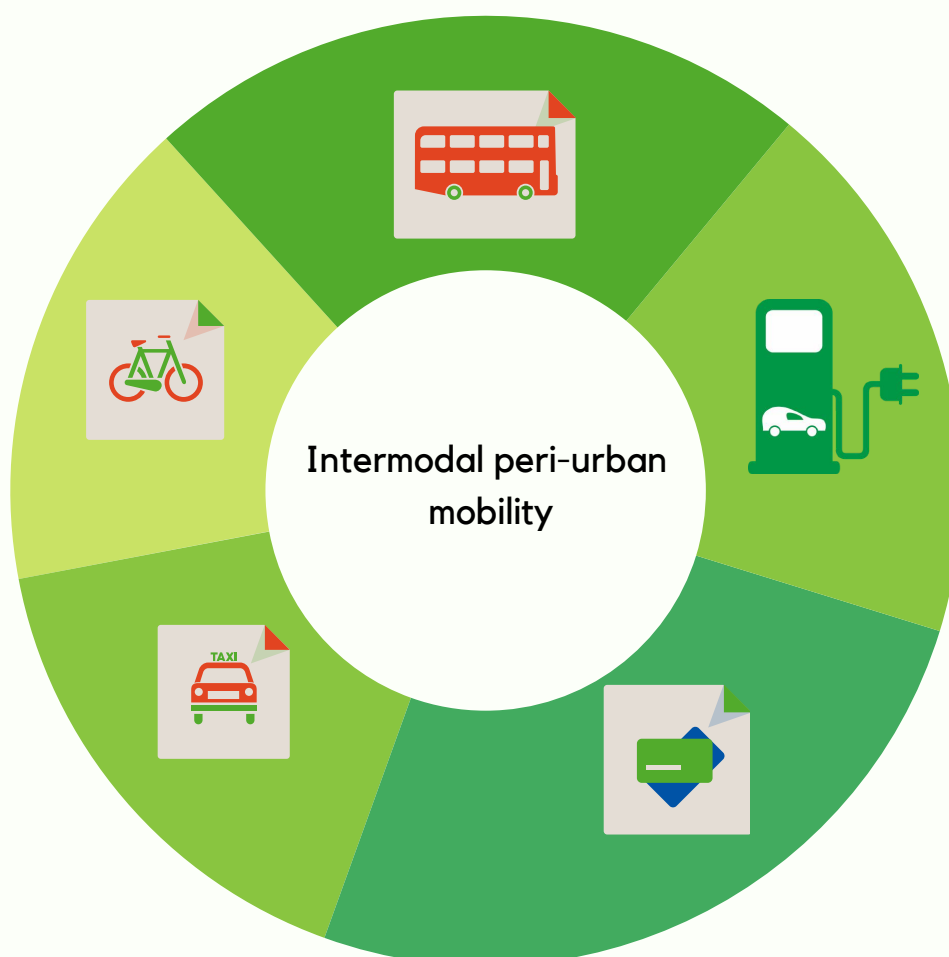
The activities to be developed in this action that have found the **inspiration in the exchange of experiences** are described below:

- Mapping the necessities of charging points in 32 municipalities.
- Design and implementation of active recruitment actions of companies interested in the installation of recharging points, especially in industrial estates and business areas
- Development of training and informative actions for citizens to promote a better knowledge of e-Mobility in the peri-urban area of Zaragoza
- Drawing up a census of electric vehicles



Leipzig Experience: charging point

Players involve	  
Timeframe	2 years (2019-2020)
Cost	70.000 - 75.000 €
Funding	The action will be implemented with regional and local funds, not having identified extra funds by the moment.



Part IV – Approval of the Action Plan

This Action Plan will be monitored by:

FAMCP

Date: 11/02/2020

A handwritten signature in black ink is written over the FAMCP logo. The logo consists of three blue stars to the left of the word 'famcp' in a stylized blue font. Below 'famcp' is the text 'FEDERACIÓN ARAGONESA DE MUNICIPIOS EQUARCA PRODUCIAS' in a smaller blue font.

Signature

CTAZ

Date: 11/02/2020

The logo for the Consorcio de Transportes del Área de Zaragoza (CTAZ). It features the letters 'CTAZ' in a green, stylized font. To the right of the letters is a green circular graphic with a white swoosh. Below the logo, the text 'CONSORCIO DE TRANSPORTES DEL ÁREA DE ZARAGOZA' is written in a green, sans-serif font.

Signature