

Measure title: **Car-Sharing Scheme**

City: **Donostia–San Sebastián** Project: **ARCHIMEDES** Measure number: **56**

Executive Summary

Within this measure the municipality of Donostia – San Sebastián has put in operation an electric car-sharing system in the city. In its beginning stage, the car-sharing scheme accounts for 6 cars (4 electric and 2 plug-in hybrids) available for subscribers to the service in 3 locations (Elias Salaberría, Bermingham and Hernani streets).

The system, which is operated by Ibilek car sharing (www.ibilek.es/en/), started operating in October 2012.

Users should subscribe to the system in advance (registering for the service costs €50 and the monthly fee is €10). Once they become member, they would receive an Ibilek card, which is used to access to the service. To use any of the cars, it should be booked on the Internet by accessing the member's account, or on the phone, assuming 1 € cost per reservation, days or minutes before the desired time of use it. Once the reservation is made, the Ibilek card is passed over the glass of the car, allowing entering the vehicle, which is then ready to be used.

The use of the vehicles can last as long as desired by the user, with a minimum required time of 30 minutes. The basic fee for the use of the cars is 9 € per hour (although special offers for long uses and company plans are available). The basic fee includes 20 km and 15 km mileage for electric and hybrid cars, respectively. If users go over the number of kilometres set out in the special package, they would be billed for the extra distance as follows: hybrid vehicle: €0.35 per extra km; pure electric vehicle: €0.25 per extra km.

As announced by the limited awareness level before the measure was implemented, after two months since the service started operating, the number of subscribers to the system has been very limited (only three members have registered to the service, accounting for a total of 100 km). The subsequent delays and changes in scope of the measure may have also affected its success, at least during this beginning stage of the service.

Nevertheless, according to the public survey conducted, this situation is likely to change in the near future, once that more intensive promotional campaigns are developed, since among those who knew about the system, 81% assess it as positive (63% of the surveyed people ranking the system as good or very good).

It should be noted that the extensive promotional campaign is currently being developed and their results are expected to be noticed in forthcoming months.

Nevertheless, these preliminary results suggest that more targeted promotional campaigns, directed towards specific collectives especially suitable for this kind of service may be needed.

A Introduction

A1 Objectives and target groups

A1.1 Objectives

The measure objectives are:

(A) High level / longer term:

- To minimise the environmental impacts from traffic

(B) Strategic level:

- Car-sharing and car-pooling can fill the gap in mobility needs and remove the need for car purchase, which tends to lead to over-use.

(C) Measure level:

- To build a significant client base (300 – 500 members) to ensure a secure future for the scheme.

A1.2 Target groups

The car-sharing service is mostly targeted at citizens complying with at least one of the following conditions:

- Drivers who make less than 15.000.km/year with their own car
- Drivers who can use car sharing instead of purchasing a second private car
- Public Administrations, as a substitution of their municipal fleet for staff members
- Companies' employees, as a substitution of the company cars

A2 Description

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Charging the vehicles is free at any of the any of the IBIL public charging points distributed in the city. If cars are returned with over 60 % of the battery, users are rewarded in the following reservation.

At the end of the reservation, cars have to be returned to the same location where it was taken. The reservation does not end until the car is connected to the charging point.



Pic 1. Location of the 3 car-sharing locations

B Measure implementation

B1 Innovative aspects

The innovative aspects of the measure are:

- **New mode of transport exploited** (at regional level) – There is no car sharing at present in San Sebastián. This will be the first implementation of a car sharing scheme outside of Barcelona in Spain.
- **New policy instrument** (at regional level) – ADS will launch the car sharing scheme in co-operation with the Gobierno Vasco, Diputación Foral de Gipuzkoa (regional governments) and of the two other major cities in the region Bilbao and Vitoria.
- **New organisational arrangements** (at regional level) – the scheme will be operated in cooperation with the Basque Energy Agency. Potential cooperation with the two other major cities in the region (Bilbao and Vitoria) will be sought.
- **New technology used** (at national level) – the car-sharing scheme will make use of electric vehicles

B2 Research and Technology Development

Not relevant

B3 Situation before CIVITAS

Before the CIVITAS project started there was no car sharing in Donostia - San Sebastián. The motivation for including the measure in the project is to further promote new forms of access to vehicle use (car-sharing is seen as a complement to car-pooling efforts already made by the municipality, also within CIVITAS). These new forms of access to vehicles can fill the gap in mobility needs and remove the need for car purchase (which tends to lead to over-use).

B4 Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Planning and design phase (*September 2008 – March 2012*) – The design of the Car-Sharing scheme in Donostia San Sebastián has turned into a long and difficult process. The initial idea was to work together with the Basque Government in order to follow a joint strategy to implement this service in the three main cities of the Basque Country. However, the process seemed to be too long and it was decided to find another way to go ahead with this measure.

After this first attempt, discussions were held with different private operators and after having analysed various options. HERTZ appeared to be interested in the service as a possible operator. Negotiations were held with and the service was ready to be launched in autumn 2010.

At the same time, the EVE (energy Agency from the Basque Country) had created its new companies IBIL and IBILEK. IBIL is a company dedicated to the installation of on-street charging points for electrical vehicles and at that time had started to install the first points in the Basque Country. IBILEK is a car-sharing company operating with electric and hybrid cars. IBILEK approached the Municipality of Donostia – San Sebastián as part of its strategy to start operating in the three main cities of the Basque Country.

Although the agreement with HERTZ was almost reached, before the final commitment was made, the IBILEK option was studied and a negotiation initiated to install in the city the car-sharing system promoted by EVE's company. Eventually, a technical agreement was reached between the two entities.

Nevertheless, on May the 22th there were local elections in Spain and the newly elected Local Government decided to call for a public tender to develop the car sharing system in the city. The final tender was published in late March 2012 and finally the company Ibilek car sharing (www.ibilek.es/en/) was awarded the contract.

Stage 2: Implementation (*March 2012 - September 2012*) – Once the contract was awarded, an implementation process started, including the installation of the charging points and the design of the management system for the service.

Also an information campaign was launched showing the electric cars destined for car-sharing scheme in several events.



Fig. 2 - Presentation of car-sharing scheme in Donostia – San Sebastian

The system started operating on 3th of October with two out of three location points fully operational (Birmingham and Hernani streets), with the third location starting to operate a while later. 6 cars are available in these locations (4 pure electric cars and 2 plug-in hybrid cars).

As a promotion campaign the first 250 registered users will have a 65% discount in the register and monthly fee and the first hour of usage will be free for them.

The car-sharing scheme launch was preceded by a press conference held by the Municipality and which Basque Energy Agency and IBILEK general directors were present.



Pic. 3 - Car-Sharing scheme launch presentation

Stage 3: Evaluation (*September 2012 - Onwards*) – Due to the limited time span within the CIVITAS project, the Measure Level Evaluation Plan has been adapted to be able to provide some data regarding membership and usage of the system. The full evaluation approach would only be possible to be applied in the medium term, outside the framework of the CIVITAS project.

B5 Inter-relationships with other measures

The measure is related to other measures as follows:

- **Measure DSS16. – High Quality Bus Corridors.** The aim of this measure is to build an optimised and user-friendly environment for public transport modes that will encourage people to use clean, collective transport facilities
- **Measure DSS18. – Advanced Park & Ride Network.** At the P&R locations a new management model will be implemented to favour those users that continue their trip in public transport
- **Measure DSS24. – Extension of the infrastructure for cycling and walking.** The road space dedicated to these modes will be increased. Furthermore an underground bicycle parking facility will be realized and the city will stimulate condominiums to realize bicycle parking inside their buildings.
- **Measure DSS33. – Travel Plans in Donostia-San Sebastián.** Travel Plans will be developed to promote sustainable modes of transport to school and to business areas.

C Planning of Impact evaluation

C1 Measurement methodology

C1.1 Impacts and indicators

C1.1.0 Scope of the impact

This measure is aimed at promoting a more efficient car use by reducing the need to own a car, which is one of the main drivers for its over-use. The measure is in line with the overall objective of reducing the number of cars entering the city and circulating within its neighbourhoods.

It is also expected that this measure will promote more sustainable mobility patterns among the users of Car-Sharing services, increasing the number of trips made by public transport and non motorized modes.

If widely accepted, this measure is expected to contribute to improve traffic performance, alleviating congestion on Donostia-San Sebastián streets, thus favouring time saving for motorized modes, and improving public transport reliability, which, may contribute to increase the public perception of this mode, and therefore its overall use.

In line with the reduced need for car ownership, the measure is expected to reduce the need for on street parking space, allowing the municipality to recover public space for other uses.

C1.1.1 Selection of indicators

NO.	EVALUATION CATEGORY	EVALUATION SUB-CATEGORY	IMPACT	INDICATOR	DESCRIPTION	DATA /UNITS
ECONOMY						
2a		Costs	Costs	Capital costs	Capital cost per system or unit	Euros, quantitative
2b				Operating costs	Costs per pkm or vkm	Euros, quantitative, derived or measured
2b				Maintenance costs	Maintenance costs	Euros, quantitative, derived or measured
SOCIETY						
13		Acceptance	Awareness	Awareness level	Awareness of the policies/measures	Index (%), qualitative, collected, survey
14			Acceptance	Acceptance level	Attitude survey of current acceptance of the measure	Index (%), qualitative, collected, survey
TRANSPORT						
		Transport System	Vehicle use	Number of kilometres travelled by users of the car-sharing scheme	The monthly number of kilometres travelled in the scheme/ user	Number of veh-km
			Car-sharing users	Number of car-sharing users	Increase of the car sharing users number	Number

C1.1.2 Methods for evaluation of indicators

No.	INDICATOR	TARGET VALUE	Source of data and methods	Frequency of Data Collection
2a	Capital costs		Data collected from financial records regarding the investment in car-sharing vehicles and support infrastructure	When implementation takes place
2b	Operation and maintenance Costs		Annual operation and maintenance costs	Annual
13	Awareness level	To raise awareness among citizens	Data will be collected through a specific before and after survey over a representative sample of citizens. The target audience are citizens of all ages and gender living in Donostia. The survey method will be based on on-street personal interviews .The questionnaire will include questions regarding awareness and acceptance levels. A sample size of 400 interviews is defined (95% confidence level)	One time before the measure was implemented
14	Acceptance level	To raise acceptance among citizens	Data will be collected through a specific before and after survey over a representative sample of citizens. The target audience are citizens of all ages and gender living in Donostia. The survey method will be based on on-street personal interviews .The questionnaire will include questions regarding awareness and acceptance levels. A sample size of 400 interviews is defined (95% confidence level)	One time before the measure was implemented
	Number of car-sharing users	100-240 users	The subcontractor will keep record on the operation variables such as the number of users and the preformed kilometres.	Ongoing
	Number of performed kilometres / user		The subcontractor will keep record on the operation variables such as the number of users and the preformed kilometres.	Ongoing

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C1.1.3 Planning of before and after data collection

EVALUATION TASK	INDICATORS INVOLVED	COMPLETED BY (DATE)	RESPONSIBLE ORGANISATION AND PERSON
Analysis of financial accounts.	2a, 2b	Month 49	ADS, Leire Aguirre
Survey conducted among citizens	13-14	Month 41	ADS, Leire Aguirre
Operation variables		Months 48,49	ADS, Leire Aguirre

C1.2 Establishing a baseline

The main scope of the evaluation process is to assess the economic requirements of the system and its performance in terms of usage. Also the perception of the citizens regarding the scheme has been gauged.

The data collection method for the evaluation of the measure is as follows:

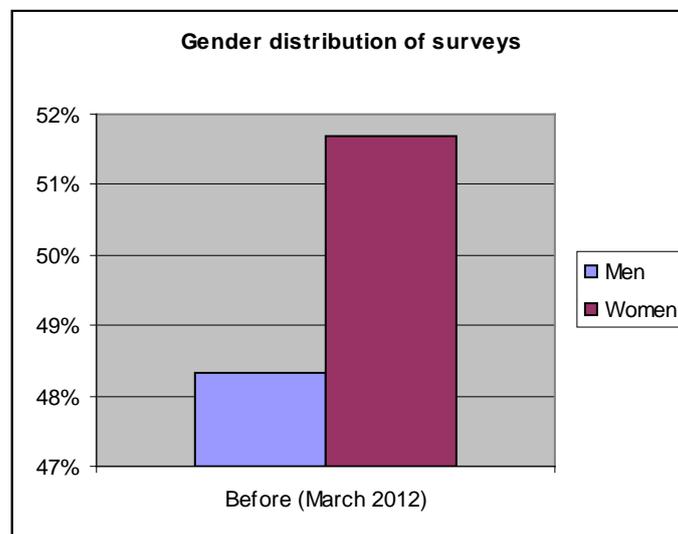
Cost indicators results have been gathered from the car-sharing operator (EVE-IBILEK).

Society indicators results have been gathered through on-street surveys in neighbourhoods affected by the measure. In that sense, the criteria to establish the quantity of surveys needed to have a representative universe with a 95% confidence, has been as follows:

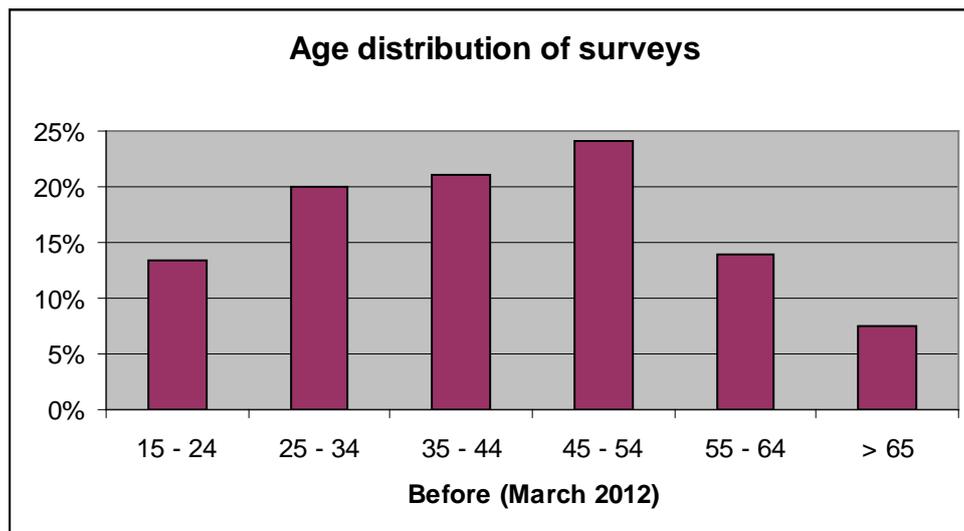
DISTRICTS TO SURVEY	ANTIGUO	CENTRO	GROS	AMARA	TOTAL
Population	17.411	14.200	20.396	26.004	78.010
% Population	22,32%	18,20%	26,15%	33,33%	100%
Nº Survey	85	70	100	128	383

Table 1: Population and number of surveys in the four selected districts

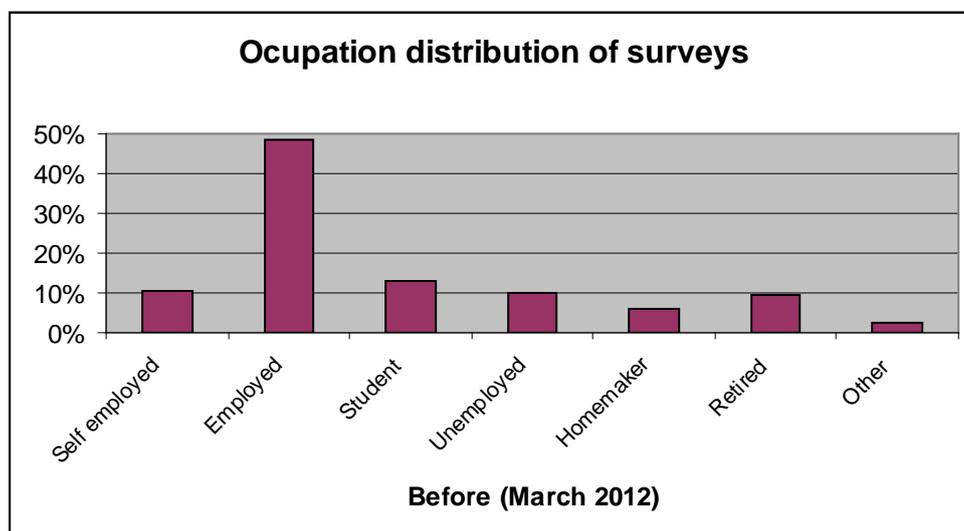
Till now, the only survey campaign conducted in order to cover “Before” scenario was made in March 2012. A representative sample of citizens of all ages and gender living in or visiting the neighbourhoods affected by the new car-sharing scheme were randomly selected for on-street personal interviews. The questionnaire included questions regarding awareness levels (see questionnaire annexed to this report).



Graph 1. Gender distribution of surveys



Graph 2. Age distribution of surveys



Graph 3. Occupation distribution of surveys

C2 Measure results

C2.1 Economy

Table C2.1.1: Costs

Indicator	Before (date)	BaU (date)	After (2012)	Difference: After – Before	Difference: After – BaU
2a. Capital costs	N/A	N/A	237.000 €	N/A	N/A
2b. Operating costs	N/A	N/A	43.200 €	N/A	N/A
2b. Maintenance costs	N/A	N/A	990 €	N/A	N/A

Capital costs include the following items:

- a) Charging points: 3.000 € per unit (6 units)
- b) Infrastructural changes: 7.500 € per unit (6 units)
- c) Vehicles: 29.000 € per car (6 cars)

The operation costs of the system include:

- a) Management system and web platform: 10.200 €
- b) Personnel costs for the management of the service: 27.000 €
- c) Electricity used by the vehicles^(*): 6.000 €

(*) The actual performance of the system does not allow providing actual yearly costs in terms of energy consumption, since the service has only been operative for a few weeks. Yearly costs have been estimated based on the hypothesis of 5.000 km covered by each vehicle during the year:

Yearly mileage: 5.000 km per vehicle
 Average speed: 40 km/h (urban driving profile)
 Energy consumption: 47 kw per hour
 Energy consumption: 47/40=1,175 kwh/km
 Electricity price: 0,17€/kwh
 Euros/km: 0,17*1,175=0,2€
 Yearly costs: 5000*0,2= 1000 €

As for the maintenance costs, these include the internal reparation works and the cost of official vehicle inspection (ITV).

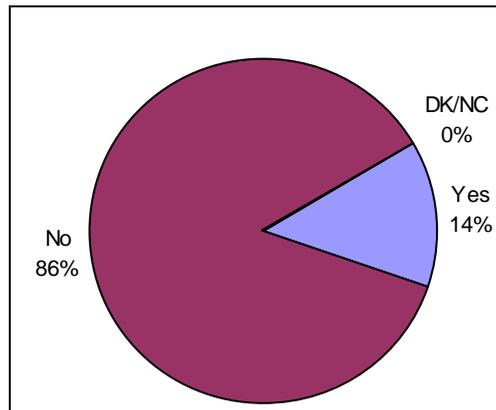
C2.2 Society

Table C2.2.1: Acceptance

Indicator	Before (March 2012)	BaU (date)	After (date)	Difference: After –Before	Difference: After – BaU
13. Awareness level	13.70%	N/A	N/A	N/A	N/A
14. Acceptance level	80.70%	N/A	N/A	N/A	N/A

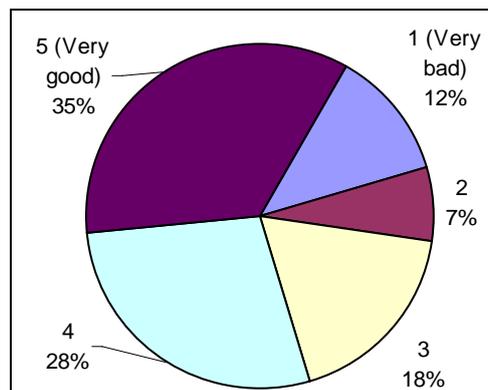
Citizens were asked whether if they know or not about the new car-sharing to be implemented in the city. According to the survey, before the measure was implemented, there was little knowledge of the planned system, although media has published information articles during its first steps of implementation (when the tender was launched and the contract was awarded)¹.

¹ When assessing this survey, it should be noted that mistaking car-pooling and car-sharing is quite common in Spain, due to the usual use of the same term to refer to both of them.



Graph 4. Awareness level (Before scenario)

Citizens were also asked how they assessed the car-sharing scheme as a mobility improvement tool for the city. In this case, there was also a huge percentage of unaware people, but among those who knew about the system, the results were quite positive, with 81% of the surveyed population assessing it as positive (63% of the surveyed people ranking the system as good or very good).



Graph 5. Acceptance level (Before scenario)

C2.3 Transport

Although the system is yet in a very early stage of development, following are the first available figures regarding usage of the system.

Table C2.3.2: Transport System

Indicator	Before (date)	BaU (date)	After (Oct-Nov 2012)	Difference: After – Before	Difference: After – BaU
Number of kilometres travelled by users of the car-sharing scheme	N/A	N/A	100 km	N/A	N/A
Number of car-sharing users	N/A	N/A	3	N/A	N/A

Along the two month period considered, only three members have registered to the service, accounting for a total of 100 km.

It should be noted that the extensive promotional campaign is currently being developed and their results are expected to be noticed in forthcoming months.

Nevertheless, these preliminary results suggest that more targeted promotional campaigns, directed towards specific collectives especially suitable for this kind of service may be needed.

C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Build a significant client base (300 – 500 members)	0
2		
3		
4		
NA = Not Assessed O = Not Achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded		

C4 Upscaling of results

Up-scaling this measure to the whole city would depend on the level of success and the public acceptance of the measure.

Nevertheless it is possible to extend the measure to neighbour municipalities of the Guipuzkoa region.

C5 Appraisal of evaluation approach

What is presented here is a basic evaluation, conditioned by the very limited time of operation. It is considered valuable, given the circumstances. But in the future, evaluation of mobility behaviour of car-sharing users, as compared with regular drivers (even themselves before becoming members of the scheme) should be undertaken.

C6 Summary of evaluation results

As announced by the limited awareness level before the measure was implemented, after two months since the service started operating, the number of subscribers to the system has been very limited (only three members have registered to the service, accounting for a total of 100 km). The subsequent delays and changes in scope of the measure may have also affected its success, at least during this beginning stage of the service.

Nevertheless, according to the public survey conducted, this situation is likely to change in the near future, once that more intensive promotional campaigns are developed, since among those who knew about the system, 81% assess it as positive (63% of the surveyed people ranking the system as good or very good).

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C7 Future activities relating to the measure

Although, no additional locations were offered as part of the tender process, the Municipality of Donostia - San Sebastián would consider extending the system to the business areas of the city in the near future. Some current business area, such as Miramon, has its own electric car spots, which uses the same technology as the car-sharing system, easing the potential connection with the business areas.

D Process Evaluation Findings

D0 Focused measure

X	0	No focussed measure
	1	Most important reason
	2	Second most important reason
	3	Third most important reason

D1 Deviations from the original plan

The deviations from the original plan comprised:

- **Multiple changes in the project:** The design of the Car-Sharing scheme in Donostia San Sebastián has turned into a long and difficult process. The initial idea was to work together with the Basque Government in order to follow a joint strategy to implement this service in the three main cities of the Basque Country. However, the process seemed to be too long and it was decided to find another way to go ahead with this measure.

After this first attempt, discussions were held with different private operators and after having analysed various options. HERTZ appeared to be interested in the service as a possible operator. Negotiations were held with and the service was ready to be launched in autumn 2010.

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D2 Barriers and drivers

D2.1 Barriers

The main barriers encountered for the development of measure 56 are:

Preparation phase

- **Political:** Changing decisions delayed the normal development of the project, including the local elections, which resulted in the launch of a tender to award a contractor.

- **Technological:** The local electricity infrastructure needed for recharging points conditioned the location of charging points which should be ideally located at places where a good service for the citizens is also offered
- **Institutional:** The discussion about the duration of the contract as well as about the appropriate way for the project to be awarded (whether it was legally possible to do it as a direct agreement or it required a public tender) delayed the project development
- **Technological:** The technology of electric cars is not yet very well known among the general public and it can be an obstacle to register in the system.

Implementation phase

- **Cultural:** Citizens are still unaware of the benefits, both from a personal perspective and in society terms, associated to this new mobility option. Owning a car is almost the only choice citizens realize now and it will take time to change this habit.

Operation phase

The system has been operative for less than two months now. No major barriers have occurred yet.

D2.2 Drivers

As for the drivers, the main ones affecting the measure are:

Preparation phase

- **Political:** For the government elected this service is part of an overall strategy to change mobility behaviour in the city. The measure development has accounted with strong political support, which has been a key factor for success, given the difficult process encountered in its definition.
- **Positional:** The measure is framed in an overall strategy to reduce car use, being the strategy to reduce surface parking provision in the city centre should one of its main assets, which can foster the use of the car-sharing service among involved neighbourhoods.
- **Cultural:** The decision to use electric and plug-in cars has provided the “environmental touch” to attract environmental conscious citizens.

Implementation phase

- **Positional:** The measure development coincided in time with the launching by EVE of the two companies, IBIL and IBILEK, which facilitated the final definition of the scheme and its realisation.
- **Financial:** The availability of CIVITAS funding has been a significant opportunity to develop these measures.

Operation phase

The system has been operative for less than two months now. No major drivers have occurred yet.

D2.3 Activities

In order to handle the above referred barriers and/or to make use of the drivers, the following activities were taken during the implementation of the measure:

Preparation phase

- **Organizational:** Ongoing dialogue with relevant stakeholders and interested parties has made it possible to arrive to an optimal solution combining car-sharing with electromobility.

Implementation phase

- **Involvement/Communication:** Communication efforts have been developed in order to acknowledge citizens about the new concept implemented in the city. An incentive scheme has also been launched at the beginning stage of the service.

Operation phase

The system has been operative for less than two months now. No major activities have occurred yet.

D3 Description of organisations and risks

D.3.1 Measure partners

Following there is a brief description of all project partners and its level of involvement with the measure:

- **DSS Municipality Mobility Department** – Responsible for the planning and implementation of the measure. Leading role.

D.3.2 Stakeholders

The main stakeholders involved in the measure are:

- **IBILEK** – Car-sharing operator. Main role.
- **IBIL** – Charging points supplier. Principal role.

D4 Recommendations

The main recommendations derived from the implementation of the measure are:

D.4.1 Recommendations: measure replication

- **Location of vehicles and charging points-** It is important to place the available vehicles and the charging points at easily accessible locations, regularly visited by the population, providing high visibility to the system.

- **Incentives** – In order to boost the system, it is recommended to include an incentive stage during the first months of operation.
- **Innovative technology** – The scheme could be used to showcase innovative technology solutions, such as electric vehicles, which can help attract a potential partner for the development and exploitation of the service.
- **Long term financial plan** – Since the introduction of such kind of innovative services may take some time to consolidate, it is important that the planning phase includes a sound long term financial scheme which guarantees the long term viability of the system.
- **Upscaling potential** – The planning stage should also include a clear definition of the upscaling potential of the scheme, necessary to draft the long term viability plan of the system.

D.4.2 Recommendations: process

- **Involvement:** General promotional activities seem to not be sufficient to attract new users in the beginning stages of the project. More targeted communication campaigns are required, based on a research on customers' profiles in order to identify suitable target groups.
- **Cooperation with similar schemes** – In order to increase the attractiveness of the system, the potential for cooperation with similar schemes at the regional and national level should be explored by means of on-going dialogue with potentially interested parties.