

What is the LIFE Program  
LIFE is the EU financial instrument supporting environmental, nature conservation and climate action projects across the EU

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[www.i-sharelife.eu](http://www.i-sharelife.eu)



**CAR SHARING  
MODEL 3  
"PUBLIC"  
BERGAMO**



## THE PROJECT IN BRIEF

### "I-SharE LIFE – Shared and electric transport in small and medium urban areas"

The **aim** of the project is to reduce pollutants and atmospheric loads, in particular PM10 and NO2, and to mitigate the emission of greenhouse gases produced by road transport and urban mobility.

Five models of electric car sharing service have been tested integrated with the public rail transport service to verify its transport effectiveness, environmental and economic sustainability in medium-small city contexts and in specific areas of use.

**50 electric cars** were used at the four demonstration sites in small/medium-sized cities in Lombardy and a further 8 electric cars in Osijek, a city in Croatia.

I-SharE LIFE has the ambition to evolve the electric car-sharing model, developed in large metropolitan cities, to export it to the province and to inland areas with low population density also verifying replicability and transferability in other urban areas with similar characteristics.

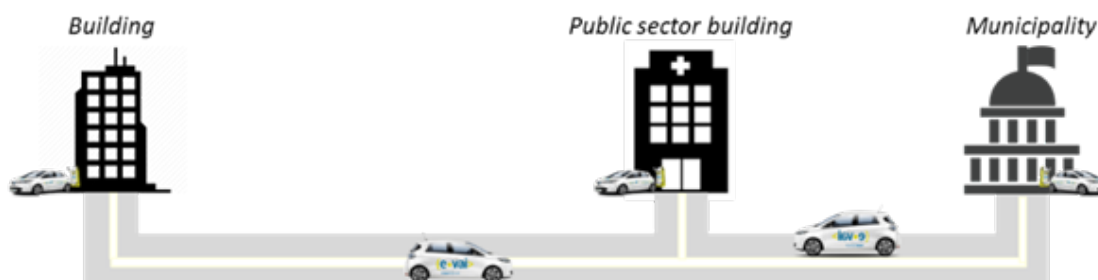
**Duration:** July 1, 2018 to June 30, 2021 [36 months]

### DESCRIPTION OF MODEL 3 - Car Sharing: "Public"

The "Public" model is intended for medium and small urban areas, which are geographically "isolated" and poorly served by the local public transport service, thus being suitable for the needs of municipal administrations and citizens.

- ◆ Municipality: electric vehicles, contracted by the municipal administration, or by local authorities or associations, will be used within a specific time slot to carry out work missions and service operations;
- ◆ Citizens: outside the time slot reserved for the public administration, the electric vehicle will be made available to all citizens of the Municipality who, by registering for the service on the website or via the APP, will be able to use it in sharing through an instantaneous logic ("Just in time") and make rentals A to A (same pick-up and drop-off location) or A to B (different pick-up and drop-off locations).

### DIAGRAM OF THE MODEL



## TARGET AREA

Activation of this mobility service is optimal **for municipalities that do not have the minimum population density required to activate traditional free-floating car sharing services** (at least 500,000 inhabitants) and **which are not well served by regional public transport**. The model turns out to be a flexible and innovative mobility solution as on the one hand the activation of the station based car sharing service is guaranteed (recharging points where the vehicle can be collected and released), on the other it allows the Municipality to repay the cost of the service through a revenue share model (distribution of revenues) that is efficient and proportionate to the quantity and frequency of use of the service by citizens.

CHARACTERISTICS OF THE TARGET AREA	
Minimum urban population	over 3.000 inhabitants
Presence of recharging infrastructures in the area	recommended
LPT services in the area	not very efficient and

## MINIMUM REQUIREMENTS FOR ACTIVATION

The activation of the "Public" model requires the presence of:

INFRASTRUCTURE REQUIRED	MINIMUM QUANTITY	COST
Electric vehicle monthly fee (Municipality)*	1	€600,00/month
Electric vehicle monthly fee (Municipality)**	2	€1200,00/month
Electric vehicle monthly fee (Municipality)***	4	€2400,00/month
Construction cost for excavations and single charging station connection	n.a.	€15.000,00
22 KW charging station (*) and (**)	1	€1.000,00
22 KW charging station (***)	1	€1000,00
Reserved parking (based on the number of vehicles activated by the Municipality)	1	n.a.
Electricity cost (Municipality)	n.a.	Included in the vehicle fee

(\*) If Municipality has a population between 3.000 and 5.000 inhabitants

(\*\*) If the Municipality has a population of between 5.000 and 10.000 inhabitants

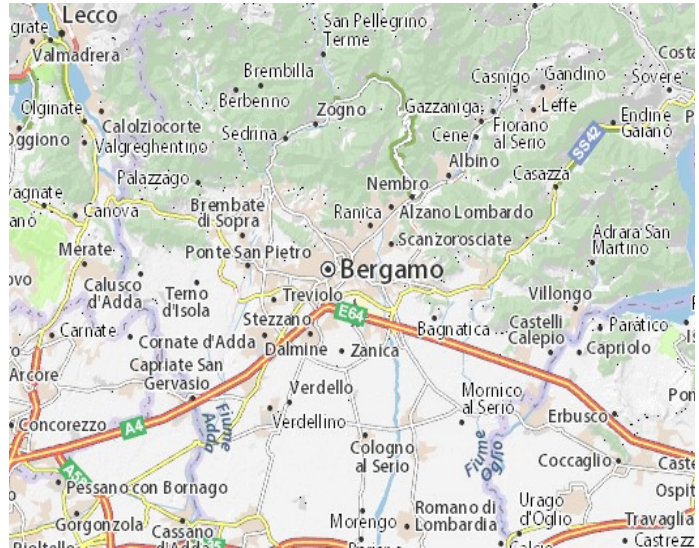
(\*\*\*) If Municipality has a population between 10.000 and 50.000 inhabitants



## DEMO MADE – BERGAMO (Lombardy, Italy)

The model has already been tested and built in the cities of Bergamo.

**Bergamo** is an industrial city with a high population density with a high demand for mobility activated by incentive policies for electric mobility contained in the PUMS (Urban Sustainable Mobility Plan).



**Bergamo** is one of the main demonstration sites of the project, with an innovative mobility model shared between the Municipality and occasional users. The Municipality is equipped with 4 E-Vai electric vehicles. During working hours the employees of the Municipality use the car for work missions, during the remaining time, evenings and weekends, the citizens use the car for private travel. Other Bergamo institutions and municipalities have implemented the same model to create a network with 10 electric vehicles in circulation:

- Municipality of Dalmine (University Campus of Bergamo);
- Municipality of Orio al Serio (Bergamo International Airport);
- Confartigianato Bergamo (Local Association is part of the network and experiments with the I SharE LIFE “Corporate” Model).

### BACKGROUND E CONTEXT

**City / Country:** Bergamo, Italy

**Area [kmq]:** 40,16 kmq

**Population [inhabitants]:** 121.000 inhabitants

**Population density:** 3.016 inhab./kmq

**Small municipality N. inhabitants < 100.000**

**Average municipality**

100.000 < N. inhabitants < 500.000

**Large municipality N. inhabitants > 500.000**

**Bergamo is a average municipality**



## SIGNIFICANT ELEMENTS – TESTING PHASE AND CO-DESIGN

- **Duration:** from July to November 2019
- **Beta User Involved:** 8
- **Stakeholders:** 3
- **Project Partner:** 10
- **N° of Electric cars:** 5
- **Total Kilometers Travelled:** 9.000

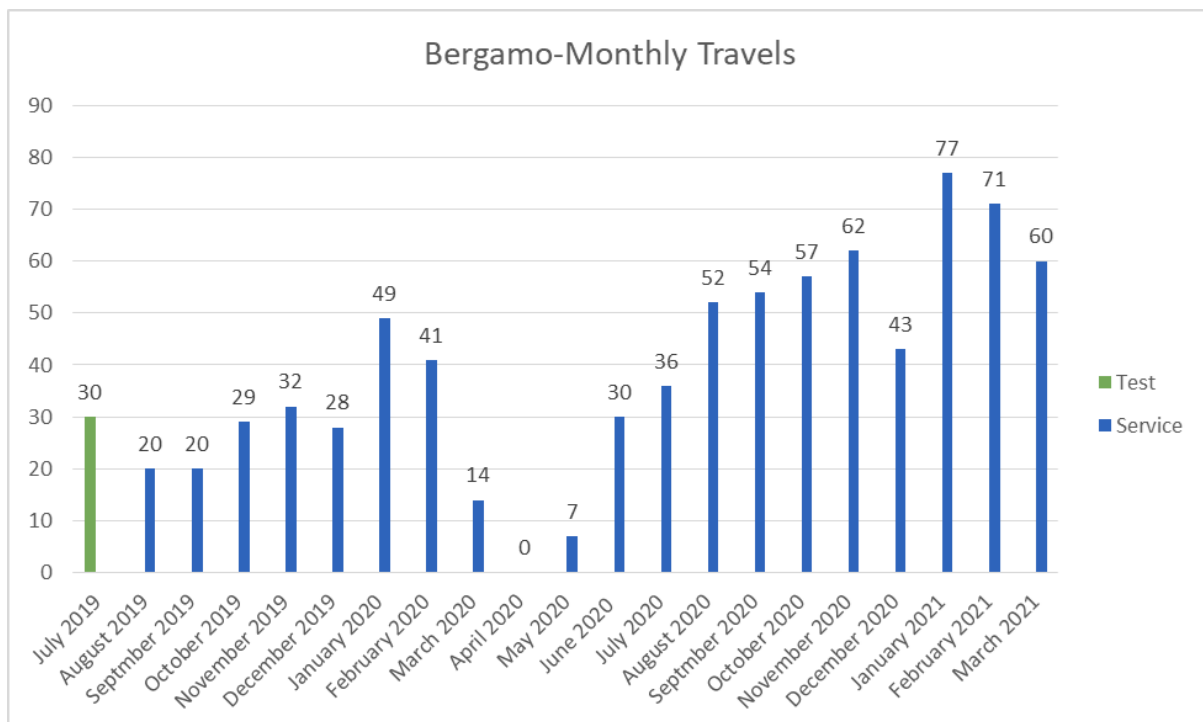


The **co-design workshop** was a moment of comparison and creation, in which had been implemented the car sharing service characteristics.

The purpose of the workshop was to identify the positive and negative aspects that emerged from the experience of the service. In Bergamo the focus was on the **touch points**, in particular the **App** and the platform were reviewed to improve the service usage.

## SIGNIFICANT ELEMENTS – COMMISSIONING THE SERVICE

- **Duration:** from october 2019 to march 2021
- **Total Kilometers Travelled:** 89.457
- **N° of Electric cars:** 7



## ENVIRONMENTAL RESULTS ACHIEVED

It is estimated in terms of atmospheric emissions that the project has contributed to the savings of approximately:

BERGAMO			
NOx (kg)	CO (kg)	PM10 (kg)	CO2e (t)
52	53	7	20



The calculation of the estimated environmental benefit was made considering the number of trips and km that would have taken place with traditional vehicles (ICE), had the I-Share LIFE service not been implemented.

The emission coefficients of the ICE vehicles refer to the average Italian vehicle fleet.

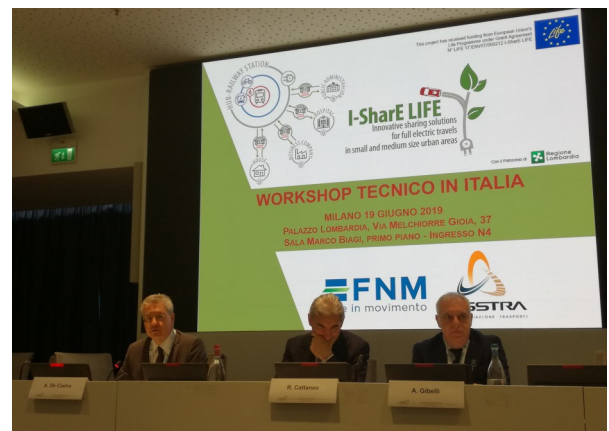
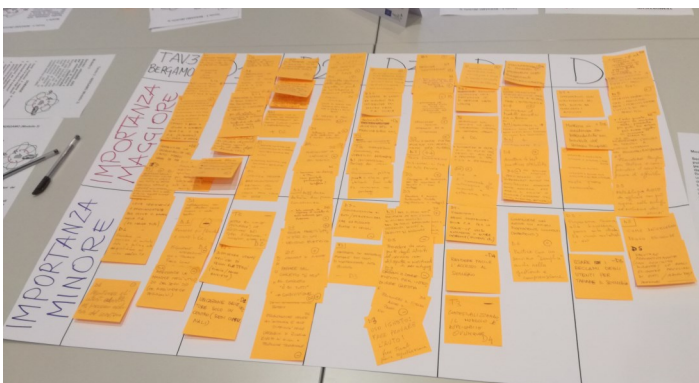
The emissions due to the production of electricity used by the I-Share LIFE cars are considered null, as all the energy purchased for the project comes from clean and renewable sources (e.g. solar, wind).



## LESSON LEARNED

### The point of view of the Stakeholders

- compare with other car-sharing models in the area or in other countries to identify the ideas, possible problems or opportunities
- use agile methodologies to improve development and evolution of the service
- integrations with LPT, but not only for the railway sector. Buses could also be incorporated
- highlight the environmental sustainability of the proposed solution
- create co-marketing actions with businesses (restaurants, bars, ecc..) and generate discounts
- proper management of logistics with respect to return points and subsequent withdrawal from different users
- create discounted rates for users under 26 (students), even compared to evening use of the car
- lack of public administration resources compared to the implementation of the project, co-financing or finalized funds would be needed
- involving more people in the creation and improvement of the service (Municipality, associations, companies,..)



## FINAL CONSIDERATIONS

The “Public” business model makes it possible to offer a mobility solution with low environmental impact and shared to different types of target customers, B2B and B2C. Specifically, the B2B target is represented by the municipality, which will have, at its exclusive disposal in a specific time slot (e.g. 8: 00-18: 00), electric vehicles in sharing mode that can be used to carry out operational missions or other task of the day. The B2C target, represented by the citizens of the locality, will be able to use the vehicles through the APP in the remaining pre-established time slot (eg 18: 00-8: 00) in sharing and just-in-time mode. Finally, the Public model allows you to activate a traditional station-based car sharing service in any location, even medium and small,



## PROJECT COORDINATOR

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## PARTNER

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## SUPPORTERS

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