

# I-SharE LIFE

Innovative sharing solutions  
for full electric travels  
in small and medium size urban areas



This project has received funding from European Union's  
Life Programme under Grant Agreement  
N° LIFE 17 ENV/IT/000212 I-SharE LIFE

## Environmental results and benefits

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ONLINE FINAL DISSEMINATION EVENT  
23<sup>RD</sup> JUNE 2021

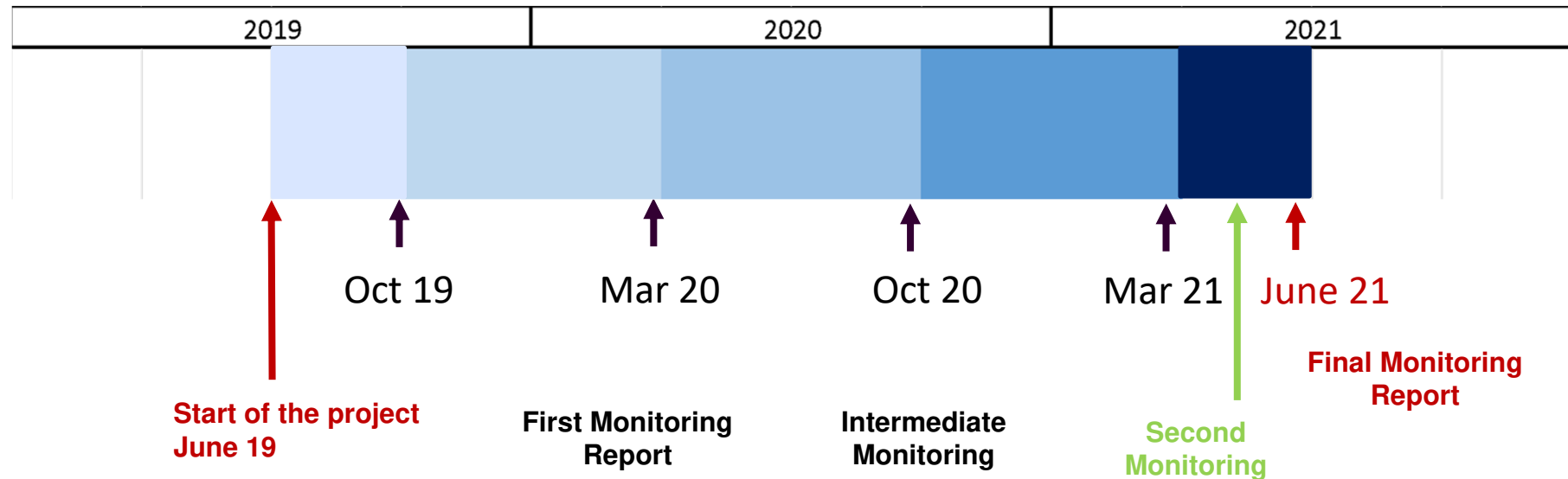


# Agenda about Environmental results and benefits

1. Environmental Results
  - a) Environmental KPI
  - b) analysis of service models
  - c) analysis of case studies
2. Environmental Benefits
2. Considerations

# Monitoring schedule

Data regarding the service, and needed for realizing the Monitoring of the project, have been collected for 18 months (October 2019 – March 2021)



# Environmental results

The environmental results come from the Data analysis based on 3 different levels:

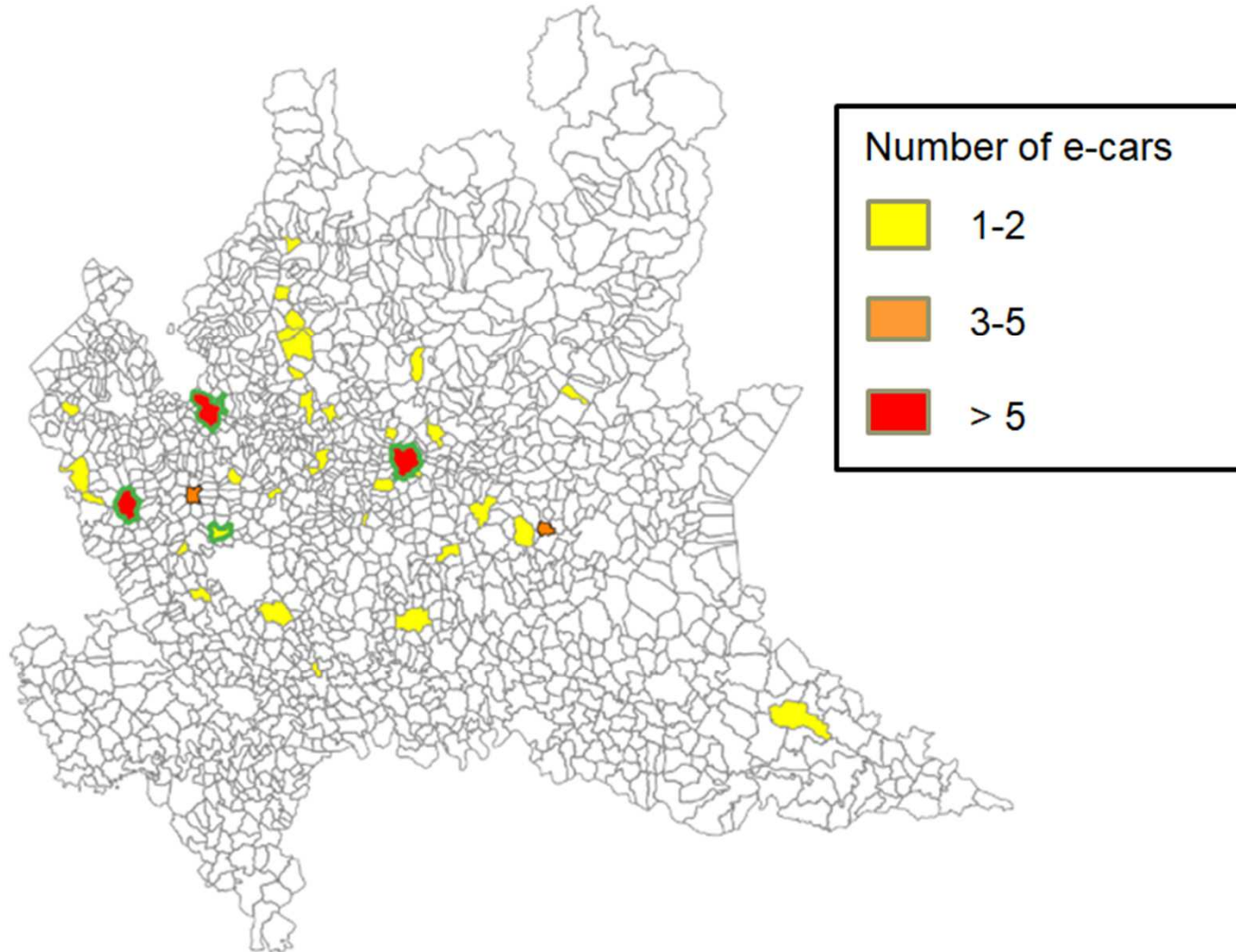
1. Analysis of the **total runs** (LIFE + Replications e-cars) → to calculate **environmental KPI**
2. Analysis **by Service** → to check and benchmark **service models**
3. Analysis **by Municipality** → to check and benchmark **case studies**

# I) Total runs of the project

Total run in Italy and in Croatia by LIFE e-cars + Replication e-cars, from October 2019 to March 2021

774,000 ITA km + 122,000 HR km = 896,000 total km

# I) Total runs of the project



# I) Total runs of the project



## I) Environmental KPI of the project

- The KPIs were calculated starting from the estimate of km that have not been travelled by traditional cars thanks to electric car sharing, considering the pollution factors of the average Italian and Croatian vehicle fleet (traditional calculation).
- The emissions due to the production of electricity are zero because for the I-SharE LIFE Project only energy from clean and renewable sources is used by E-Vai.



## I) Environmental KPI of the project

The total KPI have been calculated on 18 months of using of the service in all 5 demo sites:

### Emissions reduction

- **NOx**      **610 kg/18 months**
- **CO**        **690 kg/18 months**
- **PM10**    **85 kg/18 months**
- **CO<sub>2</sub>**     **230 t/18 months**

# I) Environmental KPI of the project for country

The KPI for country related on the last year (March 2020-March 2021)

**ITA**

<b>Emissions reduction</b>	
<b>NOx</b>	<b>260 kg/year</b>
<b>CO</b>	<b>270 kg/year</b>
<b>PM10</b>	<b>40 kg/year</b>
<b>CO<sub>2</sub></b>	<b>103 t/year</b>

**HR**

<b>Emissions reduction</b>	
<b>NOx</b>	<b>110 kg/year</b>
<b>CO</b>	<b>145 kg/year</b>
<b>PM10</b>	<b>15 kg /year</b>
<b>CO<sub>2</sub></b>	<b>36 t/year</b>

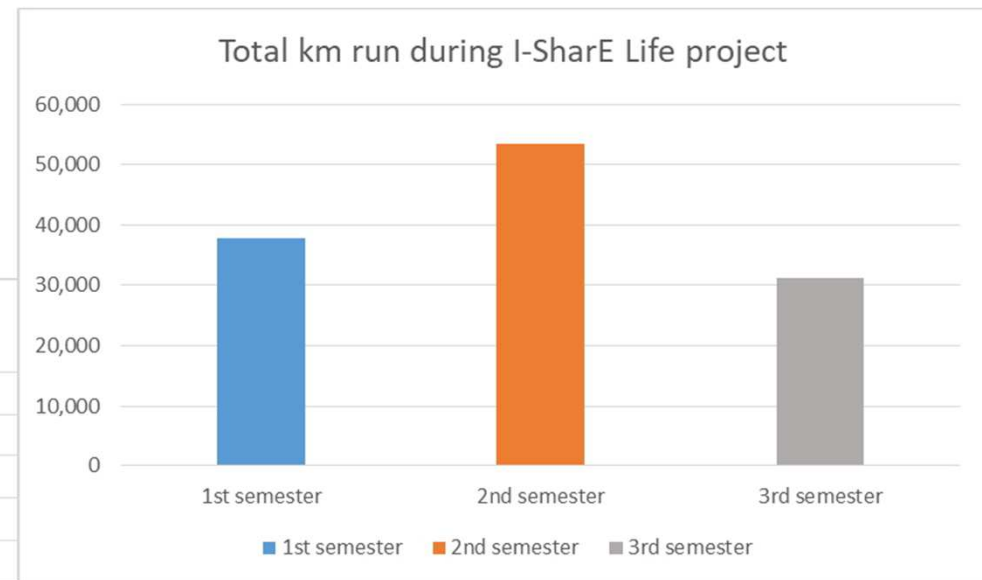
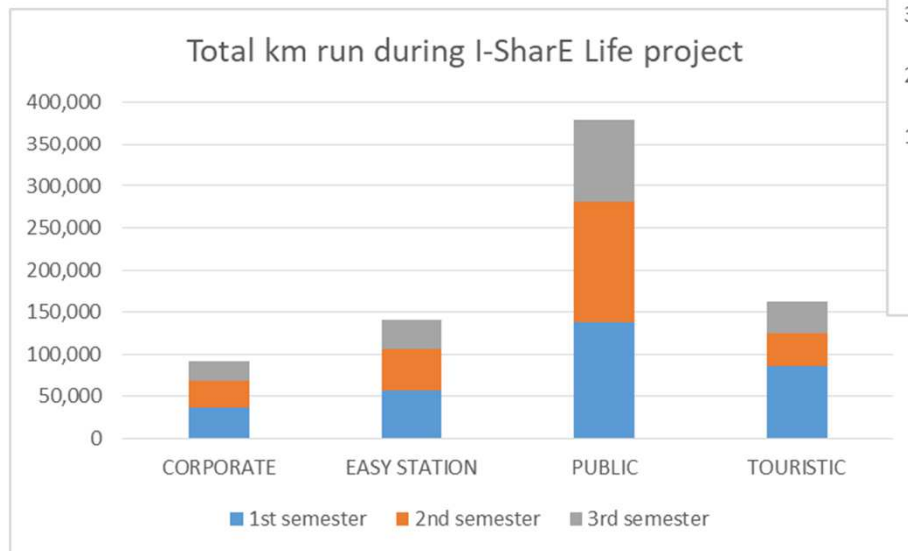
## II) I-SharE LIFE service models

Total km travelled for different service models per semester

(October 2019-March 2021)

HR

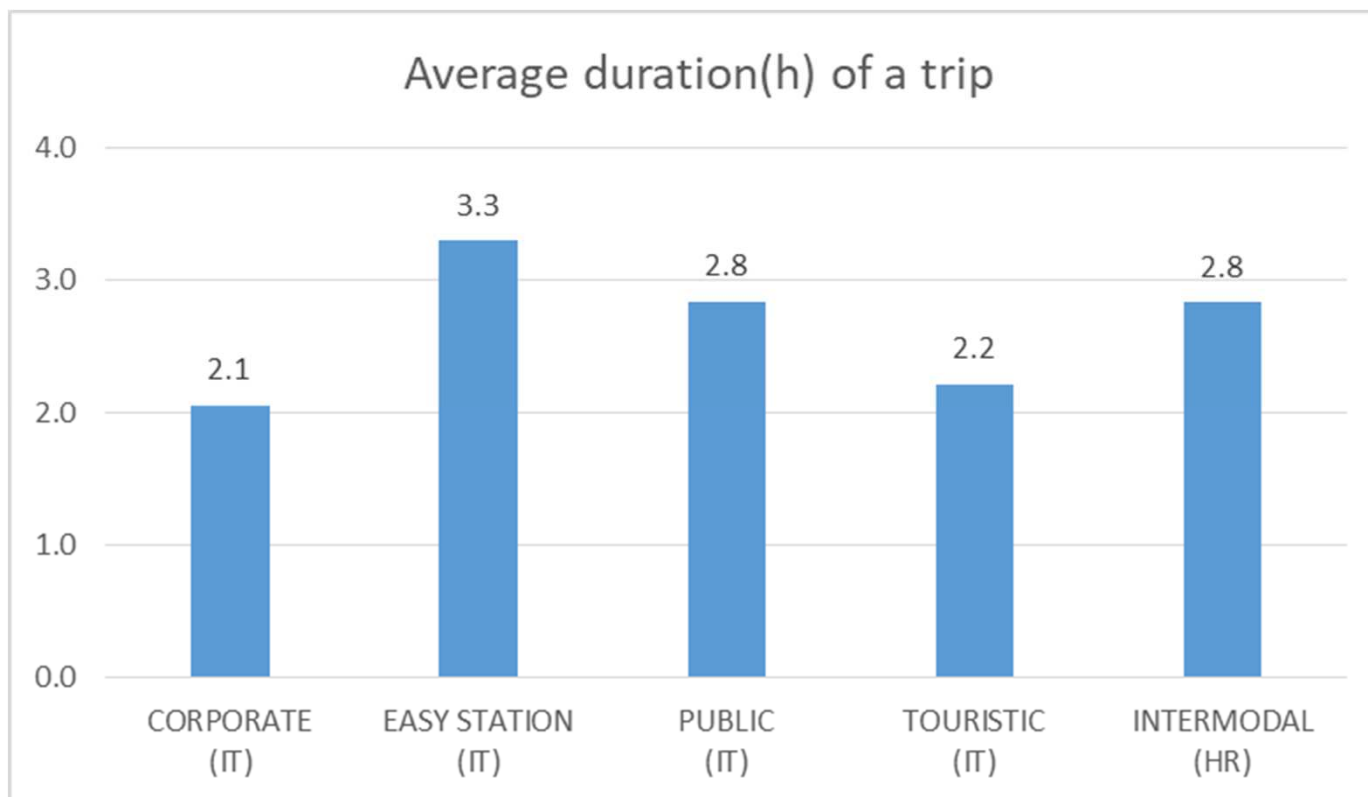
ITA



## II) I-SharE LIFE service models

Average of a trip about duration (h)

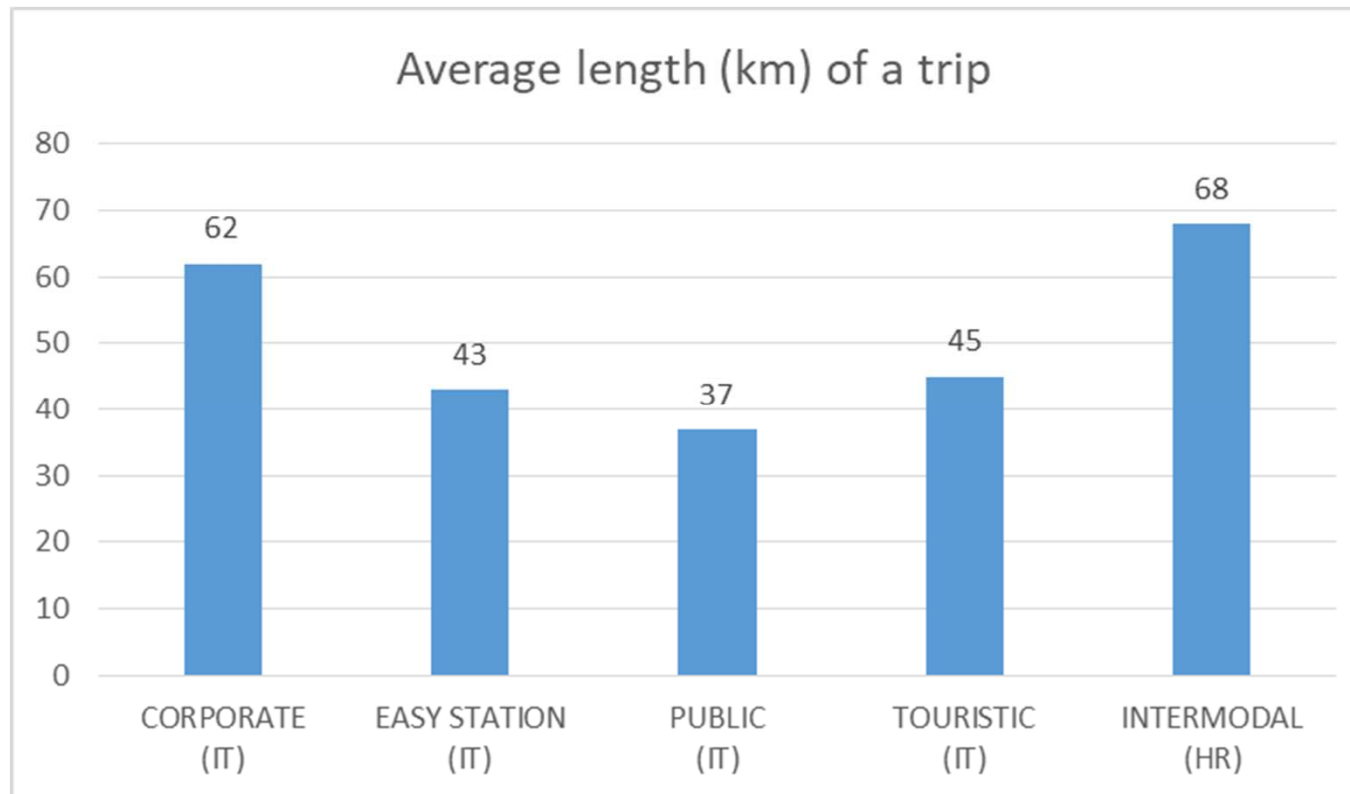
(October 2019-March 2021)



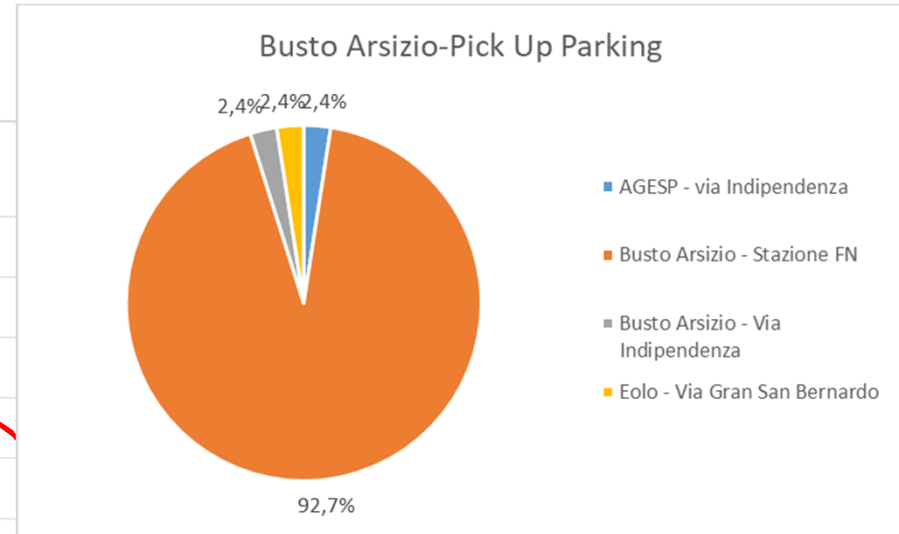
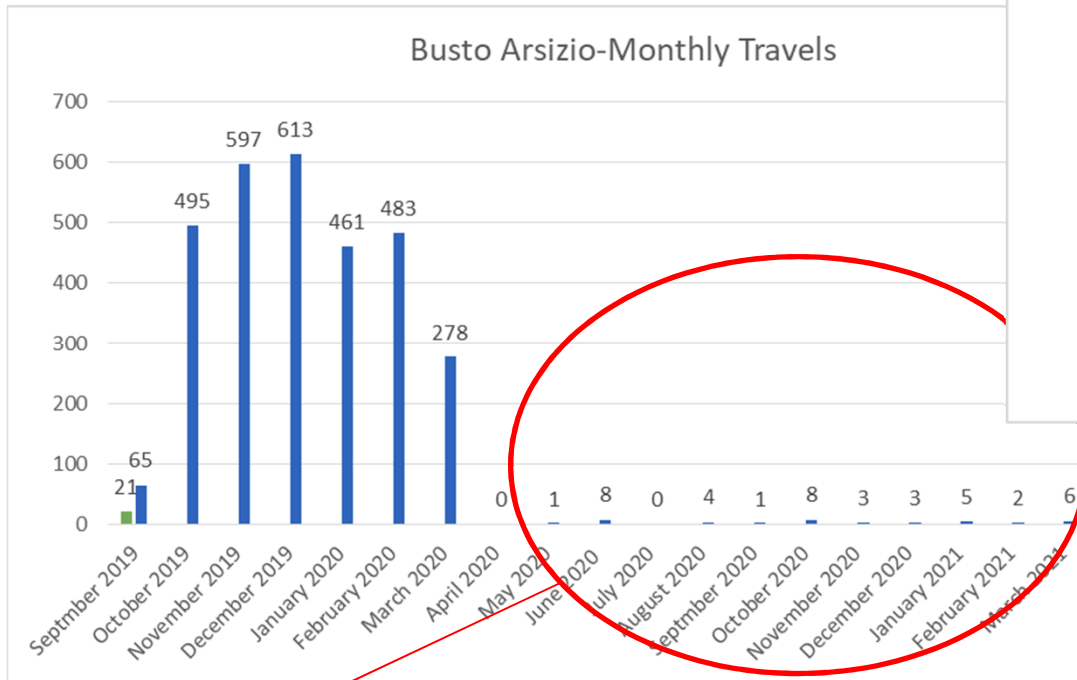
## II) I-SharE LIFE service models

Average of a trip about length (km)

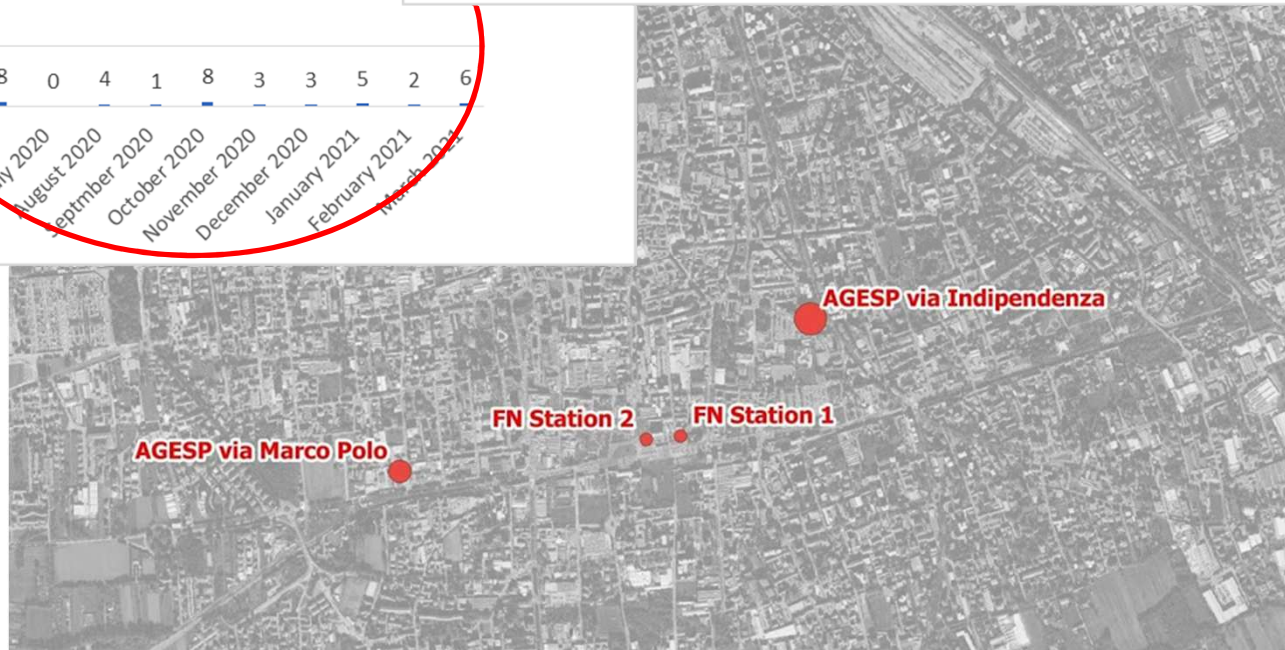
(October 2019-March 2021)



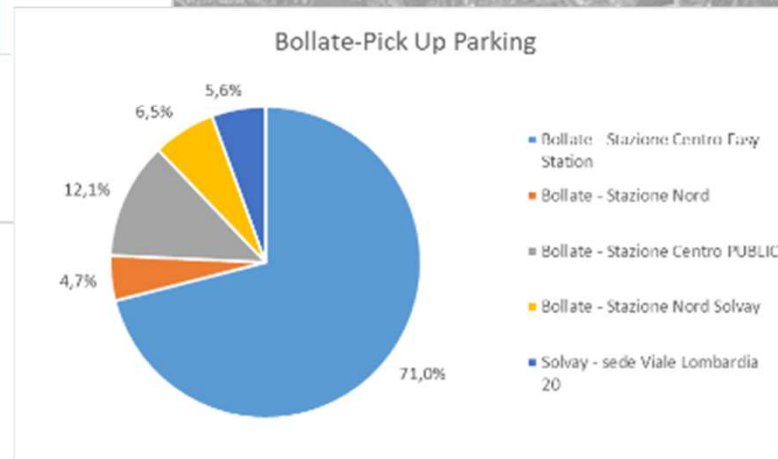
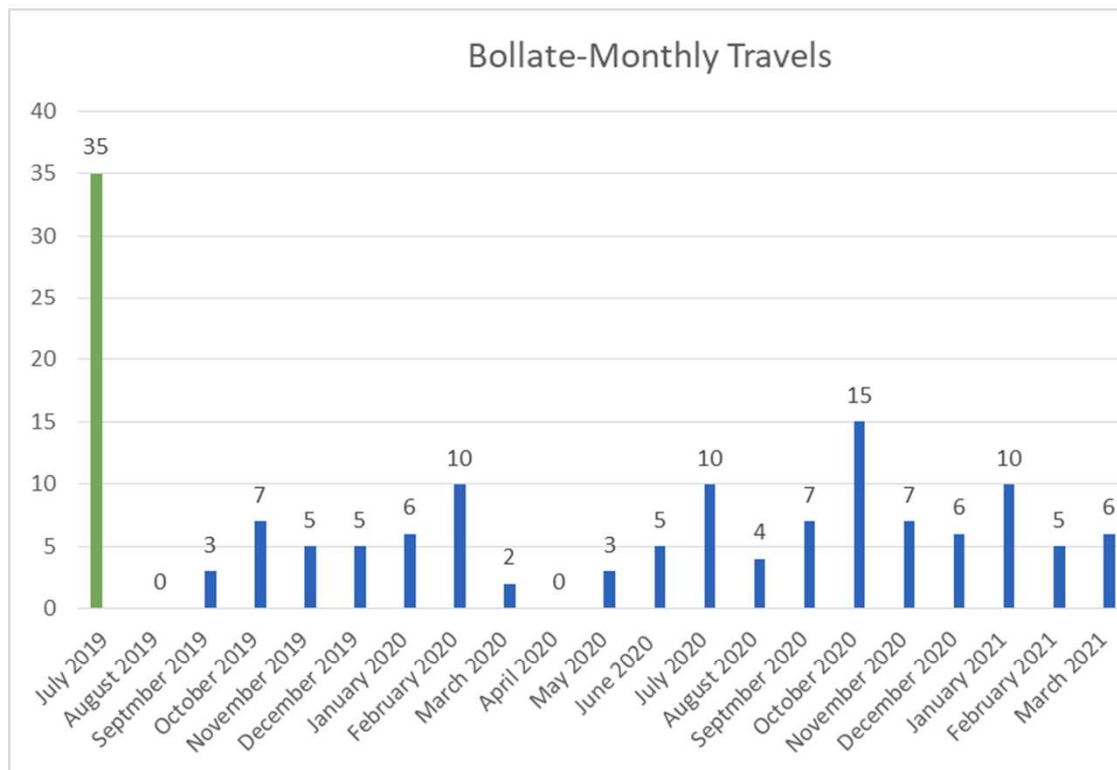
# III) Analysis of single case studies – Busto Arsizio



Corporate problem for monitoring, several travels are not recorded

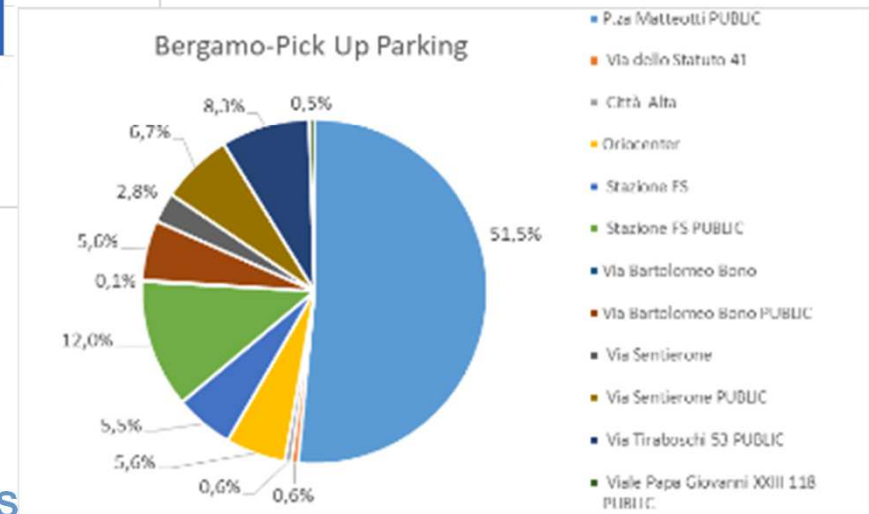
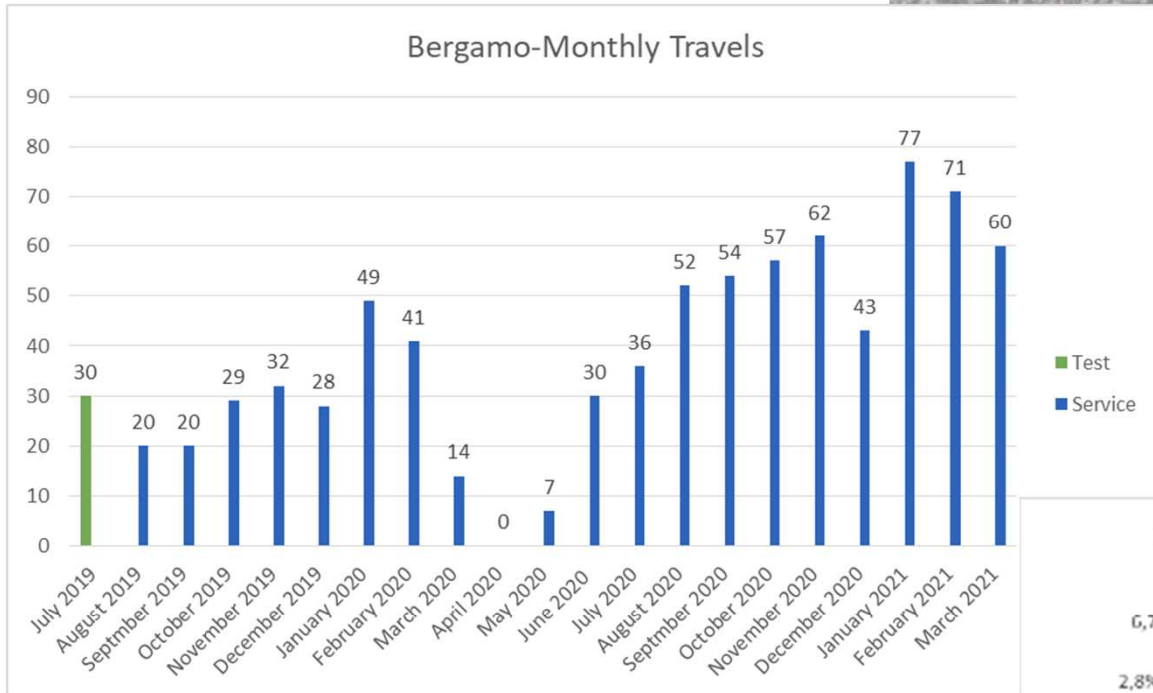
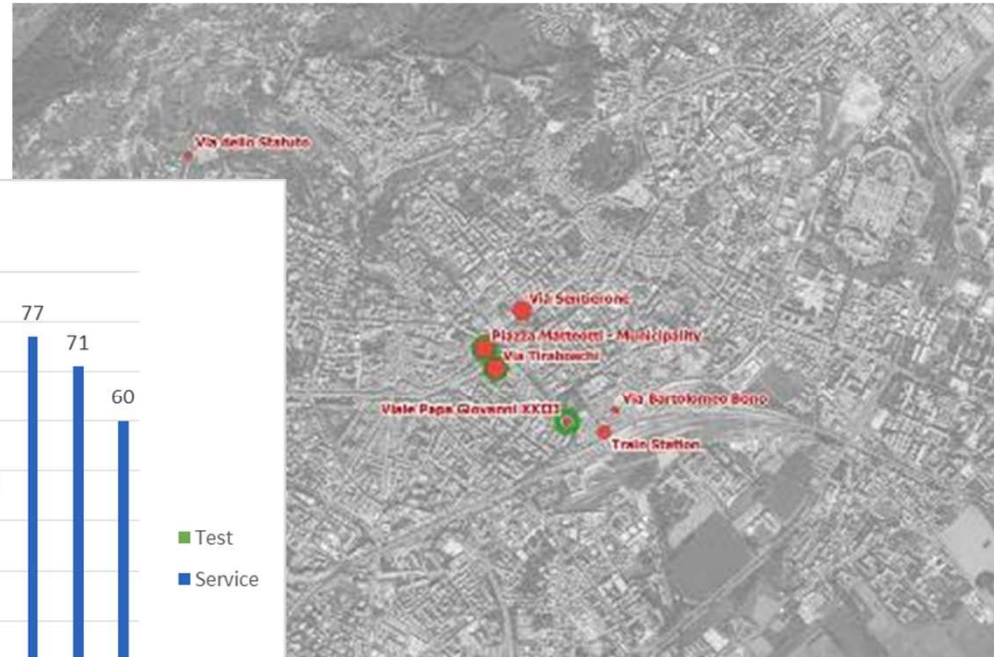


# III) Analysis of single case studies – Bollate



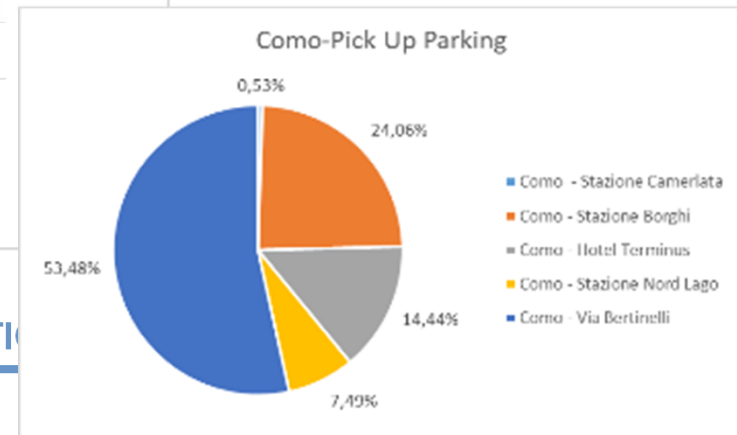
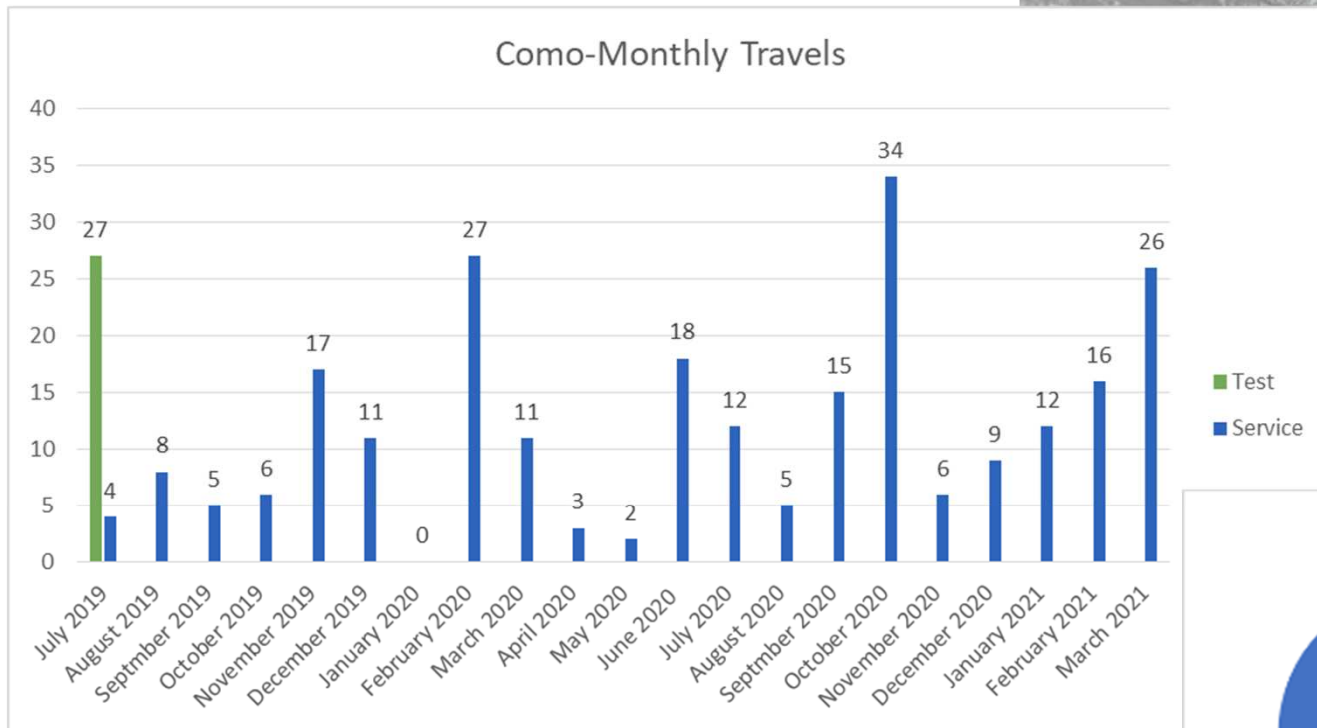
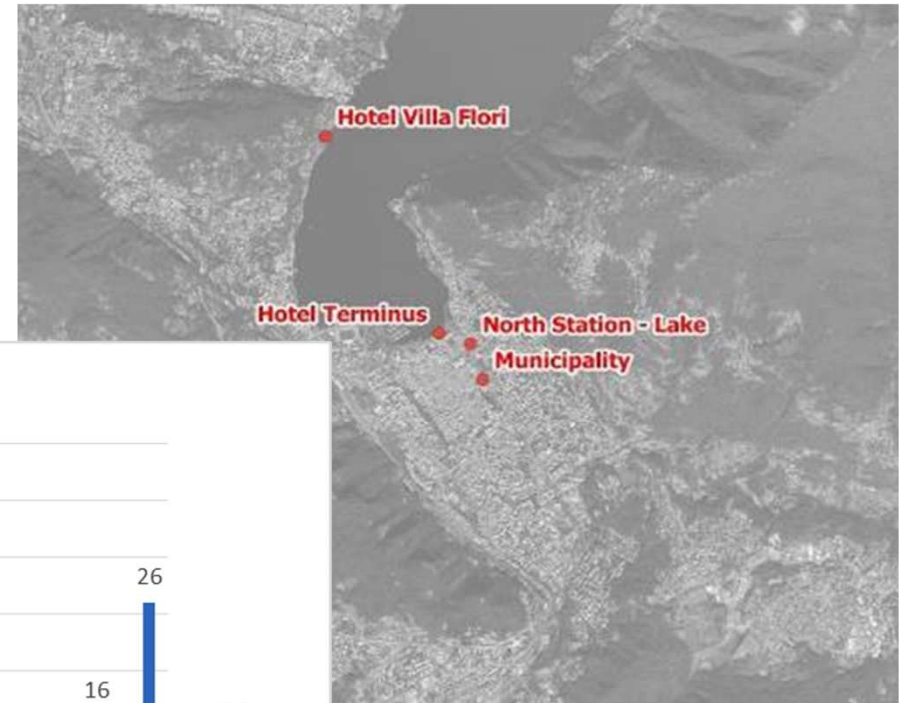


# III) Analysis of single case studies – Bergamo

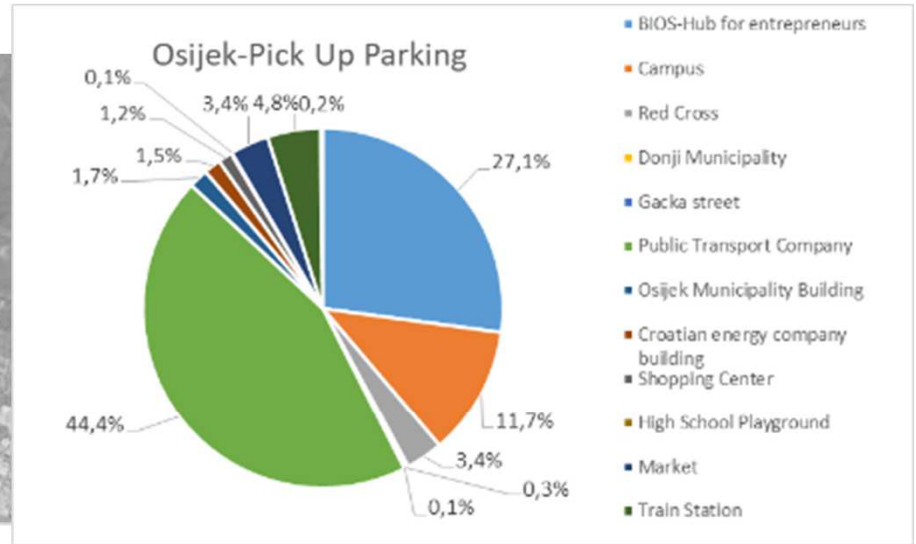
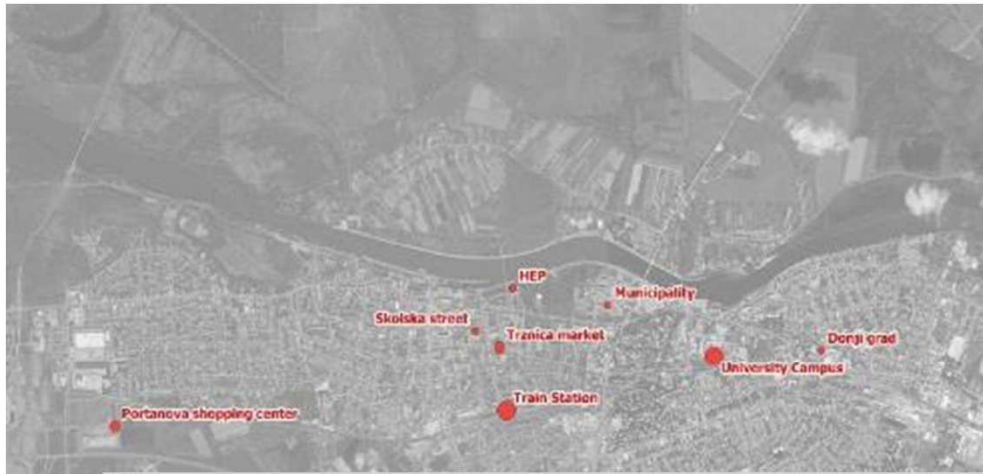




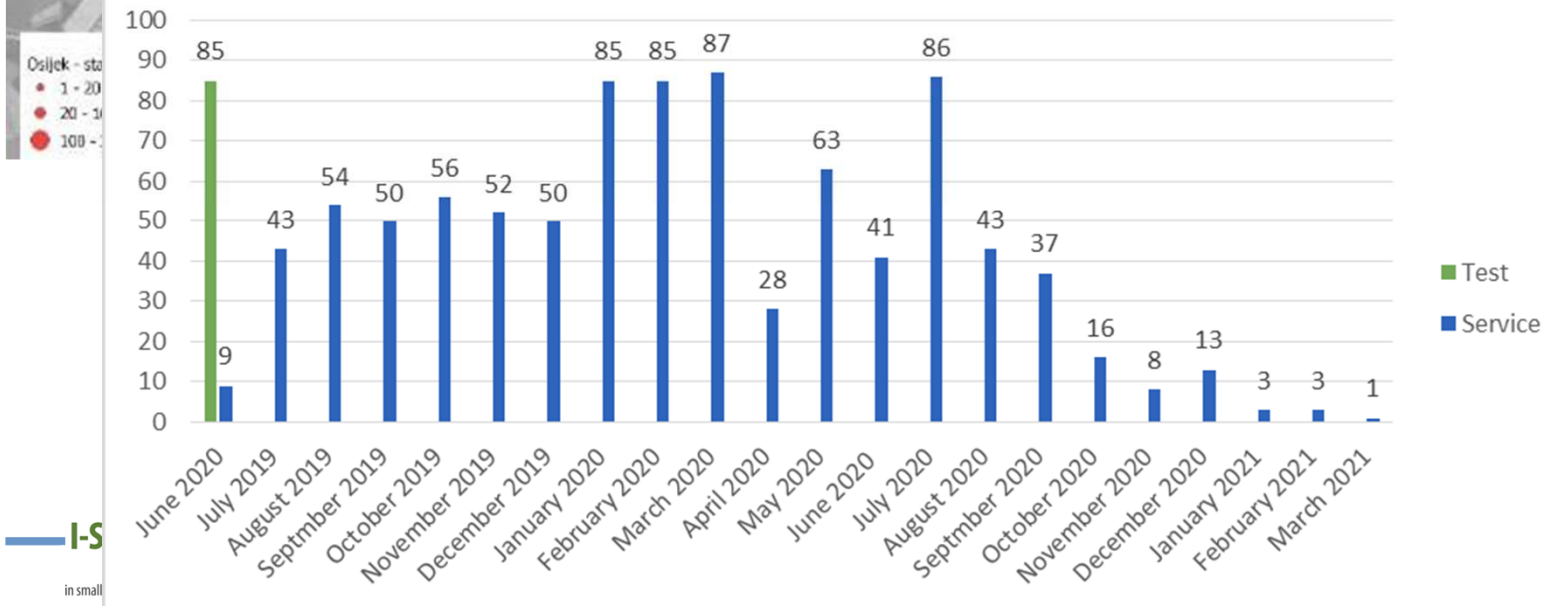
# III) Analysis of single case studies – Como



# III) Analysis of single case studies – Osijek



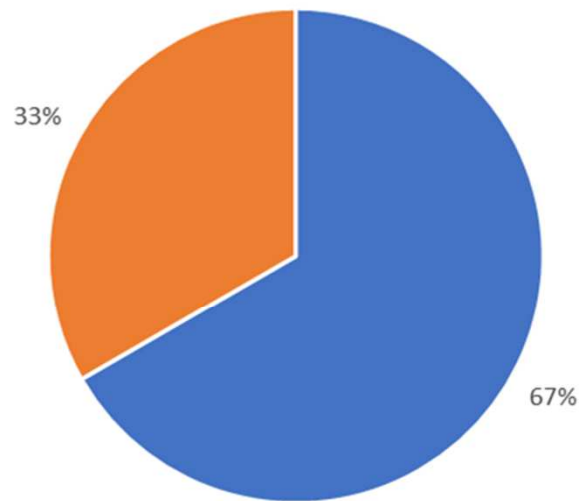
Osijek-Monthly Travels



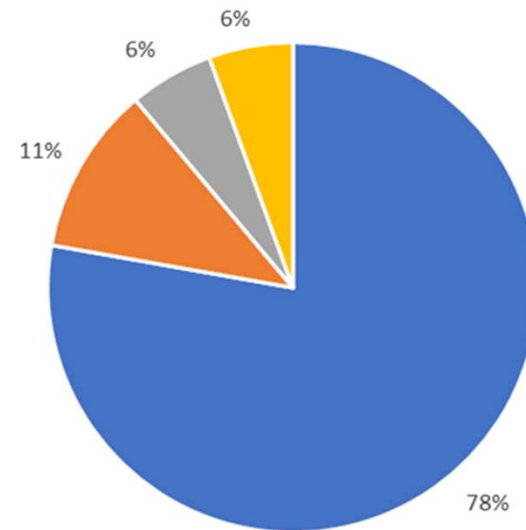
# III) Covid -19 pandemic use of the LIFE project cars in Italy

During the first wave of the Covid 19 pandemic (April – May 2020), E-Vai provided 18 of the Life project cars free of charge to municipalities and associations such as the Red Cross and Civil Protection, to carry out social and health assistance services.

% of cars used between Municipalities and Associations



% of cars used among different Associations



# Environmental benefits

Environmental Benefits due to e-car sharing service are:

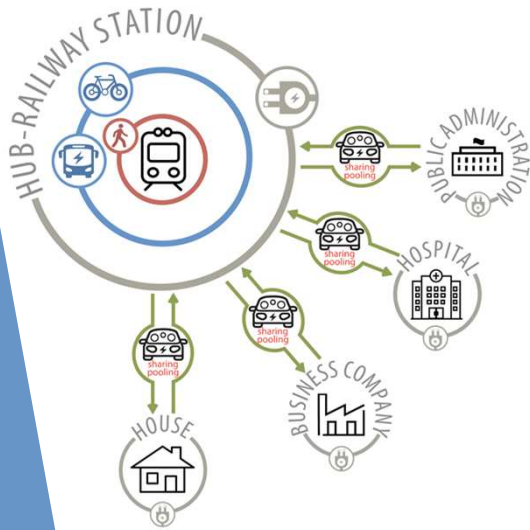
- The **behavioural change** of drivers towards more sustainable means
- The incentives for local public transport
- The electric vehicle fleet is more often **renewed** and more **modern**
- The increasing of **active mobility** especially for people who live and work in the city
- The **reduction** of the abuse of urban space due to the parking of private cars

# Energy consumption

- The electric cars used during the I-SharE LIFE project consumed aprox **135,000 kWh/18 months** (All from renewable resources)
- The estimation of the consumption of ICE (internal combustion engine) cars, if there was not the I-SharE LIFE project is **810,000 kWh/18 months** (Mix of Gasoline, Diesel fuel, LPG, NG)

# Considerations

- The **Public service model** is the more successful model in term of replicability, while in terms of total Km travelled the Intermodal and Easy station are the best ones.
- The methodology of the **User Centered Design** allowed and will allow to **test new rates and new innovative service model** that will contribute to improve environmental conditions and to push the users' behaviour to more sustainable habitudes.
- Thanks to the testing phase and to the involvement of Beta Users in the project it was possible to improve and co-design not only the characteristics of the service but also the touch points of the service such as the **App and the website** that are essential to record the data and to achieve the Monitoring activities and goals.



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