New electric mobility services

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Who is E-Vai and its services

E-Vai is an 100% Italian company active since 2011 in sharing mobility sector. It offers sustainable and shared mobility solutions to citizens, public administrations, commuters and private companies.

The distinctive features of E-Vai are:

Sustainable / Electric

E-Vai uses only low environmental impact vehicles in its business models (95% of the electric fleet + 5% of the hybrid fleet).

Intermodal

E-Vai is a company of the Northern Italy Railway Group and owns numerous stables, columns and parking lots in many stations in Lombardy.

Regional action perimeter

E-Vai has always operated within the Lombardy Region offering shared and sustainable mobility solutions to B2C and B2B customers.

Sharing mobility constraints and limits

To date, sharing mobility has several limitations in terms of economic, environmental, location and diffusion in different territories:

ECONOMICAL LIMITS	*ENVIROMENTAL LIMITS*	*LOCALIZATION LIMITS*	*SPREADING LIMITS*
• *The cost of vehicles represents the main economic and financial risk;* • *Mobility sharing services are not affordable for the entire population;*	• *Car-sharing companies do not use electric or hybrid vehicles and for this reason their inclusion on the road does not lead to a real environmental benefit.*	• *Sharing mobility services are present only in major cities, which have at least 500k inhabitants, but not in small municipalities or towns;*	• *The use of sharing mobility services assumes that the customer has access to the technology, but in Italy there are still problems of access to the network;*

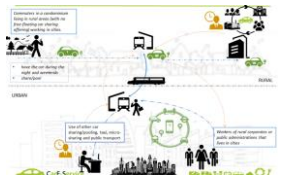
How to overcome the limits of sharing mobility

Within the CarE-Service project, the goal of E-Vai is to overcome the 4 limits of sharing mobility, offering on the market:

1. *ECONOMICAL LIMITS* → Create an agreement with car makers for the supply of vehicles produced by the Circular economy process at a lower price

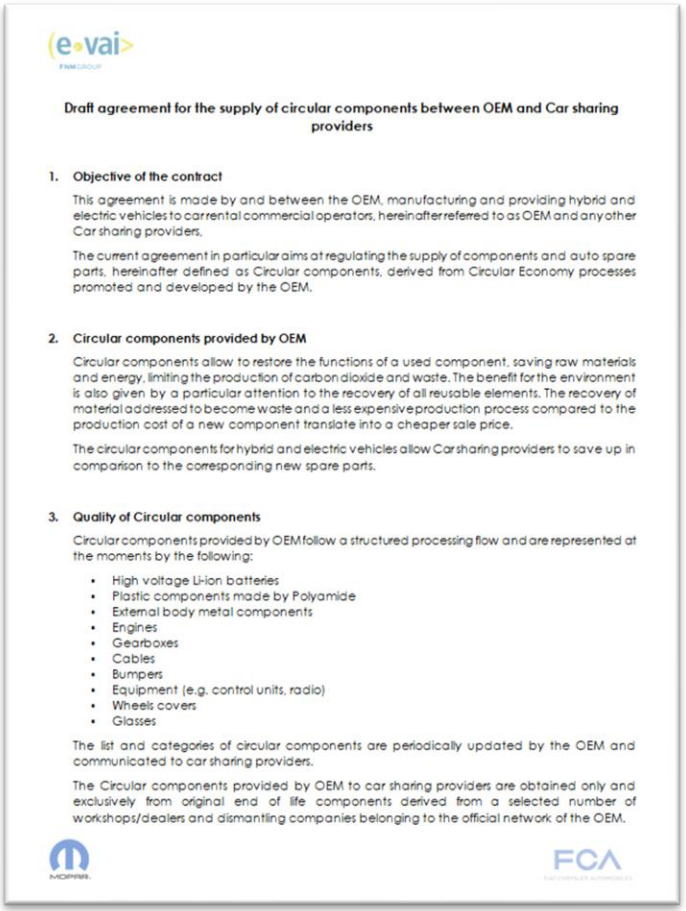
2. *ENVIROMENTAL LIMITS* → Insert in the fleet of E-Vai electric vehicles produced by the process of Circular economy

3. *LOCALIZATION-SPREADING LIMITS* → Create a business model of shared mobility, integrated with the railway network, to be implemented in small Municipalities



1 - Agreement with car makers

Currently E-vai has defined a draft partnership contract, designing the economic conditions and service levels for the supply and maintenance of vehicles or their components, produced following the circular economy approach and methodologies;



Draft agreement for the supply of circular components between OEM and Car sharing providers

1. **Objective of the contract**

This agreement is made by and between the OEM, manufacturing and providing hybrid and electric vehicles to car rental commercial operators, hereinafter referred to as OEM and any other Car sharing providers.

The current agreement in particular aims at regulating the supply of components and auto spare parts, hereinafter defined as Circular components, derived from Circular Economy processes promoted and developed by the OEM.

2. **Circular components provided by OEM**

Circular components allow to restore the functions of a used component, saving raw materials and energy, limiting the production of carbon dioxide and waste. The benefit for the environment is also given by a particular attention to the recovery of all reusable elements. The recovery of material addressed to become waste and a less expensive production process compared to the production cost of a new component translate into a cheaper sale price.

The circular components for hybrid and electric vehicles allow Car sharing providers to save up in comparison to the corresponding new spare parts.

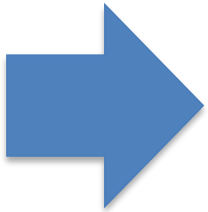
3. **Quality of Circular components**

Circular components provided by OEM follow a structured processing flow and are represented at the moments by the following:

- High voltage Li-ion batteries
- Plastic components made by Polyamide
- External body metal components
- Engines
- Gearboxes
- Cables
- Bumpers
- Equipment (e.g. control units, radio)
- Wheels covers
- Glasses

The list and categories of circular components are periodically updated by the OEM and communicated to car sharing providers.

The Circular components provided by OEM to car sharing providers are obtained only and exclusively from original end of life components derived from a selected number of workshops/dealers and dismantling companies belonging to the official network of the OEM.



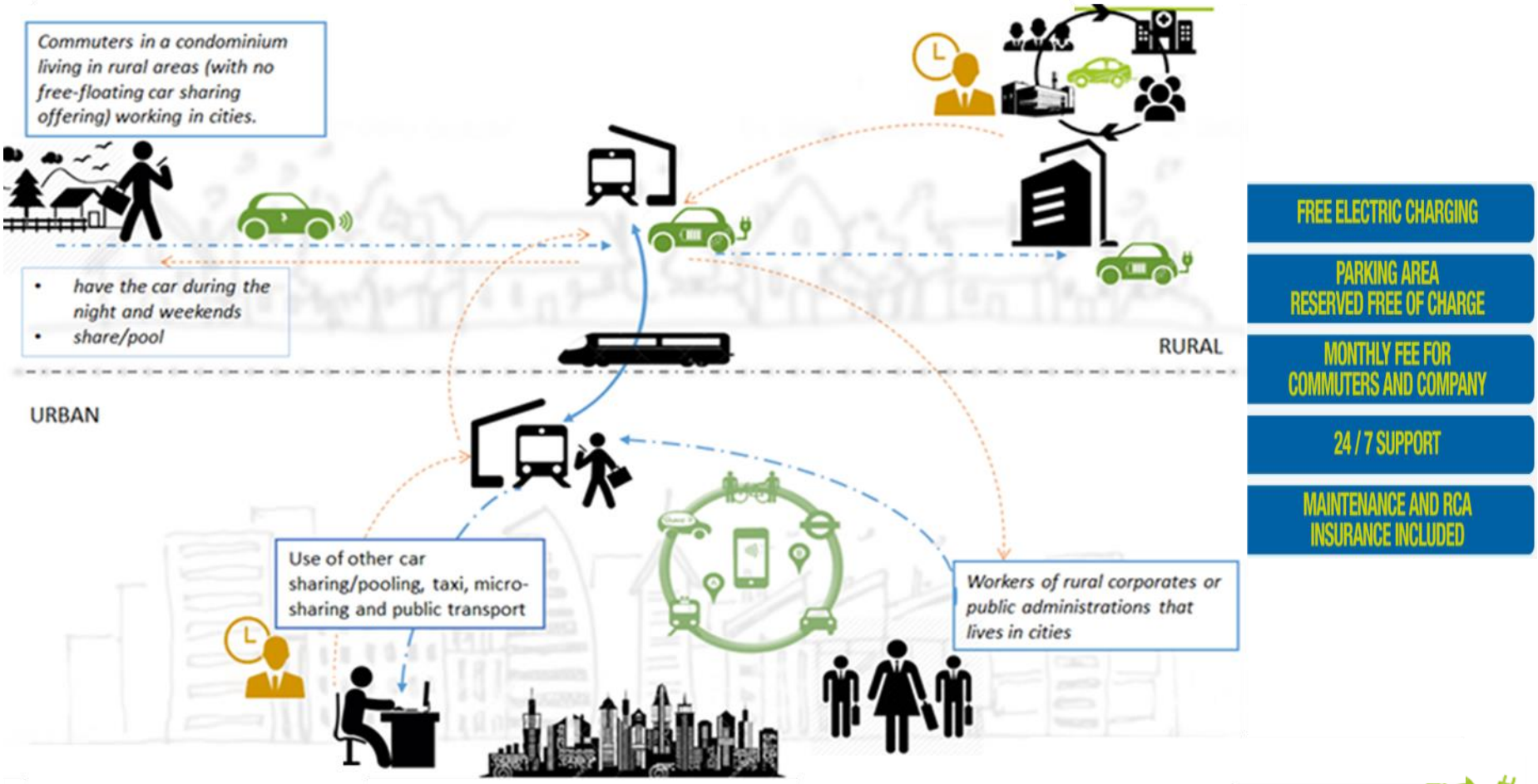
2 - Insert in the fleet of E-Vai electric vehicles produced by the process of Circular economy

Vehicles, made of recycled materials, can last longer than a normal vehicle thanks to the modular management of the maintenance activities of the different components. These components can be regenerated and improved in quality, allowing in some cases an increase in their useful life.

More than 80% of the material used in a car is fully recyclable.
Although it is essential that the materials, extracted from the vehicles in disuse, meet the minimum standards of quality and safety to be able to be used again.

3 – Create a new sharing mobility model

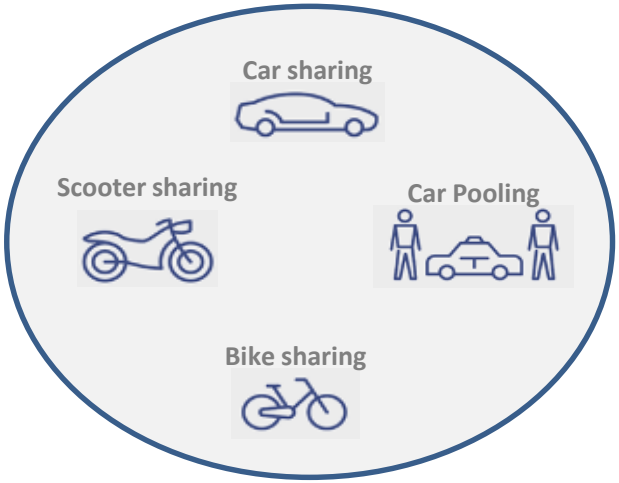
E-vai has defined and developed a new **business model which tries to respond with an eco-sustainable product integrated with the Lombardy Region's railway network to the daily mobility needs of B2C customers (commuters) and B2B customers (companies based near railway stations):**



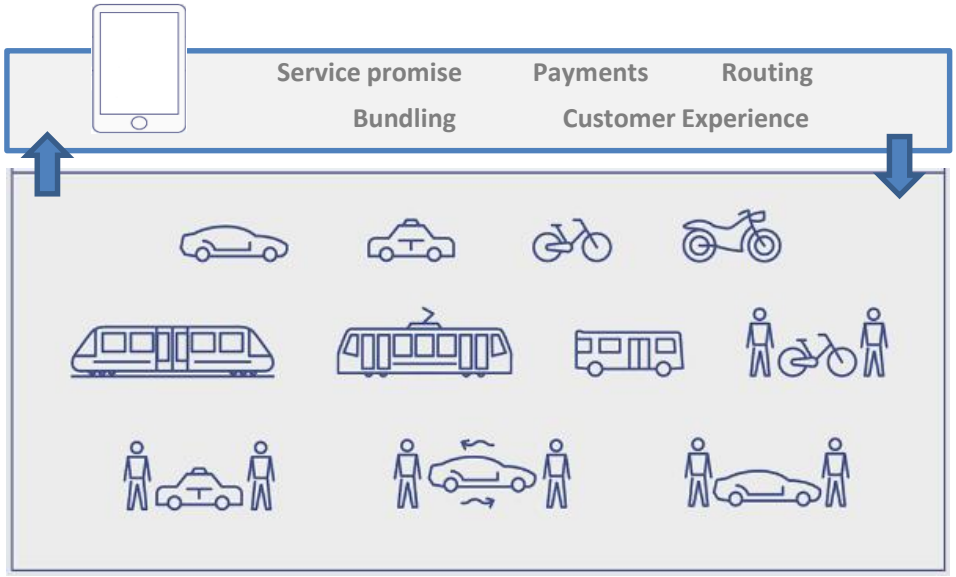
Evolution of sharing mobility concept

In the coming years will change the concept of sharing mobility that will also influence and evolve the IT platforms used, moving from a management based on the aggregation of vehicles to the aggregation of mobility services in a single solution:

1) Multi vehicles aggregation

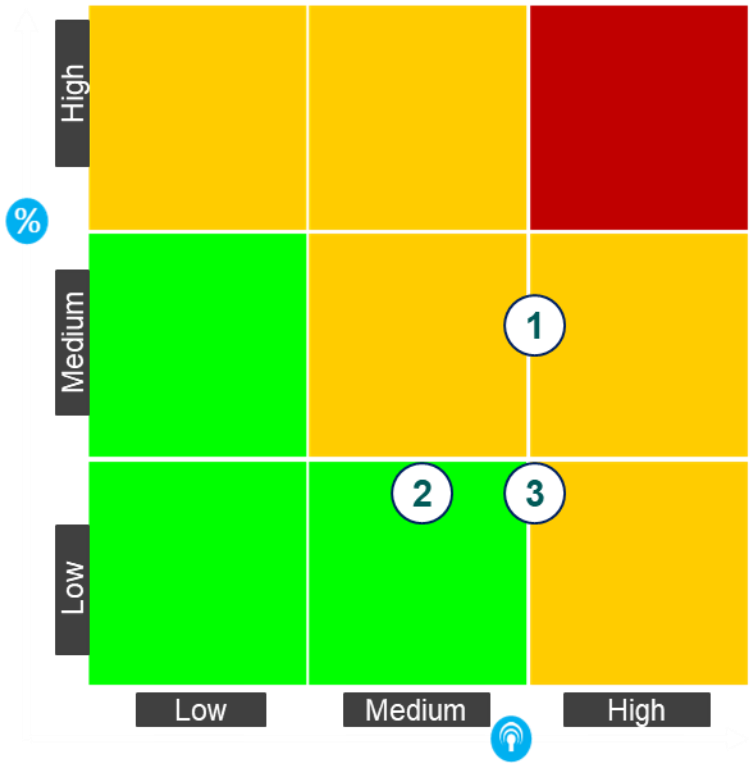


2) MaaS – Multi service aggregation



Matrix of risks

Guaranteeing the success of the assumptions defined in this presentation involves the execution of a series of activities for the constant monitoring of the main operational risks that may have a greater impact on the sustainability of the expected results.



1 **Procurement Area -** Vehicles made of recycled parts will not be cheaper than normal vehicles**.**
(Probability: Medium/Impact: High)

2 **Maintenance area -** Recycled components do not meet safety and quality standards.
(Probability: Low / Impact: Medium)

3 **Financial and marketing area -** Playing the role of first mover can lead to high losses if the innovation proposed on the market does not meet the needs of end customers**.**
(Probability: Low / Impact: High)

THANK YOU FOR YOUR KIND ATTENTION