



# How technologies contribute to innovation in CarSharing and Mobility Services

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# About VULOG



- 📍 French SME specialized in CarSharing technologies (founded in 2006)
- 📍 Clients in Europe & North America
- 📍 We supply our solution to a wide range of entities. Example of clients:



*C.S. Pure Players*



*Rental Companies*



*Public Transportation*

PSA PEUGEOT CITROËN



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*Car Manufacturers*



*Fleet Managers*

# VULOG provides end-to-end solution to carsharing operators



**Front End**  
For End Users



**Back End**  
To operate the fleet



VULOG Real-time Mobility Platform



**In-Car Technology**



**Round Trip Services (A->A)**



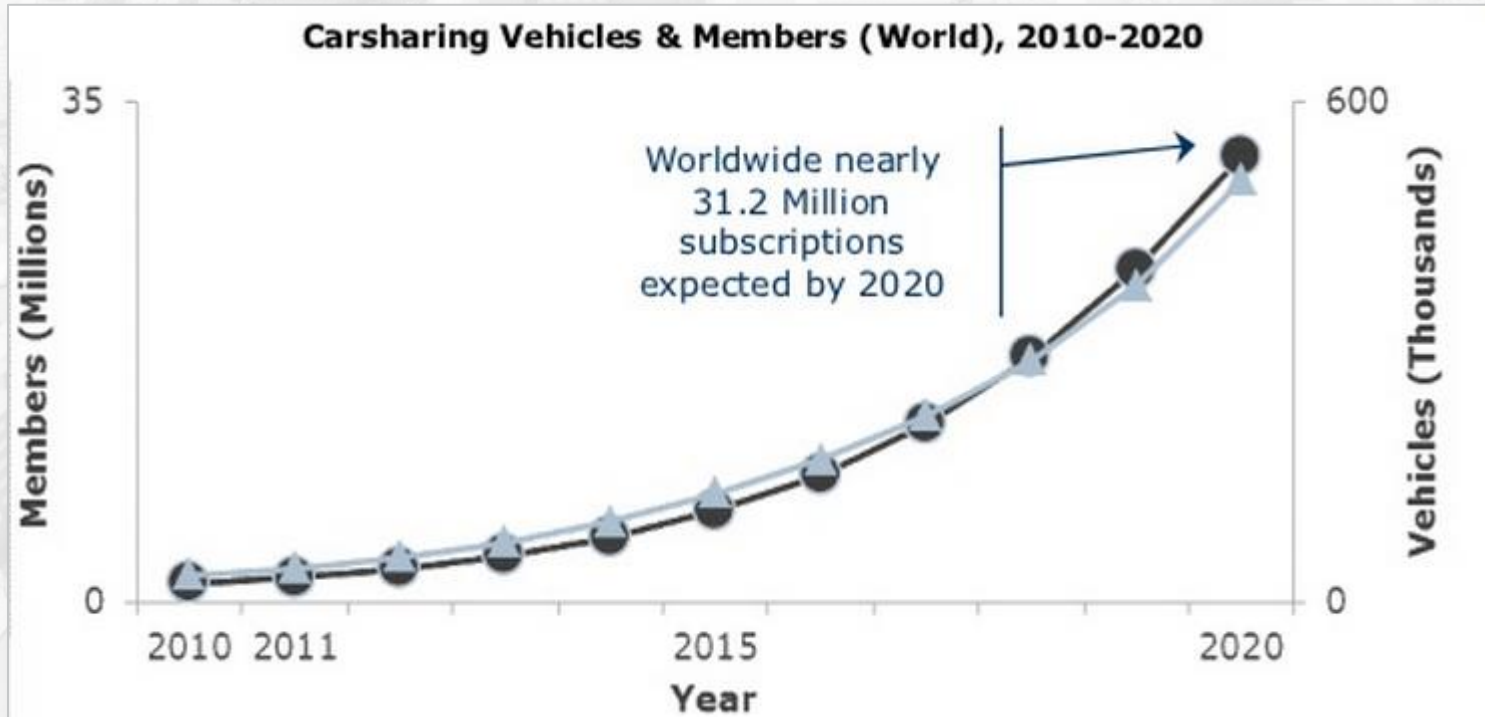
**One Way (A->B)**



**Free Floating (no station)**

**.... And other innovative services**

# CarSharing members in 2020 in the world: nearly 32.2 Million



Source : Frost & Sullivan

# What role CarSharing technologies should play in this high demanding market ?



# CarSharing technologies: 5 top priorities



**1 – User Experience**



**2 – Multimodal transport**



**3 – Smart Cities Integration**



**4 – New innovative services**



**5 – Operation costs reduction & industrialization**



# 1 – User Experience

*“A car sharing vehicle must be as easy to use as the person's own vehicle*

*Or even easier ?”*

**Intuitive**

**Flexible**

**Seamless**

**Reliable**



# 1 – User Experience

**VULOG Example**

⇒ Improve user experience through innovative on-board devices: our On-Board Touch Screen – 1/2







# 1 – User Experience

**VULOG Example**

⇒ Improve user experience through innovative on-board devices: our On-Board Touch Screen – 2/2



**CHECK ALCOOL**



**CHECK CONDITIONS**

**NAVIGATION  
(and POI)**



**BOOKING MANAGEMENT**



## 2 – Multimodal transport

### *Move from current “silo” approach to “multimodal” approach*

➤ *Mixing Round Trip, One Way and Free Floating*



➤ *Technological compatibility within competing services in a City*

➤ *Integration with Public Transportation*

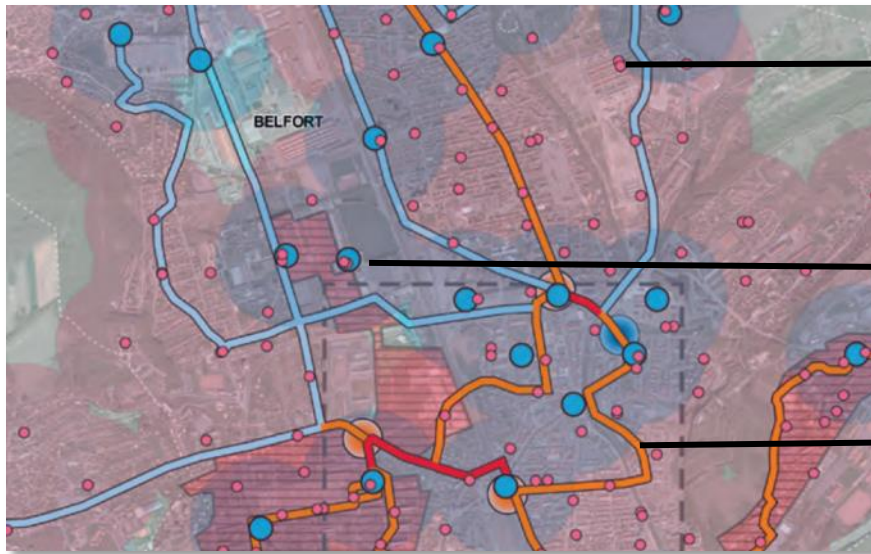




## 2 – Multimodal transport

Example with VULOG contribution

⇒ Triple Play offer from the city of Belfort: a unique CarSharing Service fully integrated into the public transport network (bus, bike and car)



CarSharing Stations



BikeSharing Stations



Bus Lines




A single RFID Card & Invoice

*Extract of the transportation network of Belfort*



# *CarSharing Services must be fully integrated into Smart Cities / Smart Energy*

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- *Electric cars*
  - *Charging stations & charging optimization*
  - *Eco-District*
  - *Eco-driving*



## 3 – Smart Cities Integration

Example with VULOG contribution

⇒ **SUNMOOV Initiative: Innovative EV CarSharing Service integrated into a new Eco-District in Lyon**



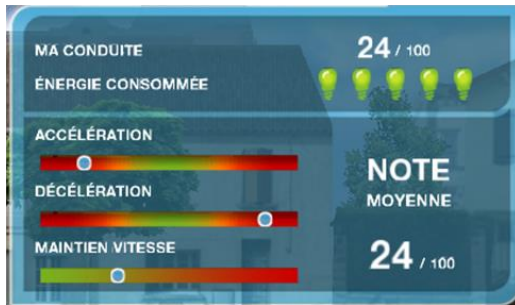
- Vehicles charged by **solar panels**
- **Charging Optimization:** guidance of the users to the appropriate charging spot
  - ✓ Normal charging station
  - ✓ Or Quick Charging station



## 3 – Smart Cities Integration

Example with VULOG contribution

⇒ **Eco-Driving: real-time feedback about the way you drive**



*Screenshot from our On-Board Touch Screen*

- Eco-driving Algorithm developed with a French Research Institute
- Real-time Feedback thanks to the VULOG On-Board Touch Screen



## 4 – New innovative services



***CarSharing Technologies have a key role to play in creating new types of services and new business models***



## 4 – New innovative services

Example with VULOG contribution

⇒ **Autobleue: a round Trip Service (A->A) launching a 1-way service (A->B) to generate new revenues**



- **Fleet:** 200 electric cars (including Renault ZOE, Peugeot Ion)
- **Stations:** 62 stations, with 4 to 6 charging stations

### A mixed service:



- **ZEN Service A->A:** Round Trip Service, with reservation



- **New FLEX Service A->B:** One Way Service, with only a reservation of 15'





## 5 – Operation costs reduction & industrialization



***Costs optimization and industrialization of technologies are key factors in ensuring the success of Car Sharing services***



## 5 – Operation costs reduction & industrialization

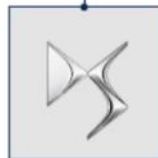
Example with VULOG contribution

### ⇒ Pre-equipped cars: PSA proposes CarSharing Ready vehicles with VULOG In-Car Technology



Reservation platform & fleet management

Real-time car-sharing interface



- Using a technology with Automotive reliability standards.
- On-Board system with **PSA warranty**
- Cars are pre-equipped with the on board unit directly as part the production: **no need to organize and worry about CarSharing Technology installation**

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**If you want to innovate in CarSharing Services,  
Contact us for partnership !**

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