

Barcelona demonstrator: shared electric scooters with battery swapping



- What:** Smooth and energy-efficient sharing of electric scooters using battery swapping and smart energy charging strategies.
- Why?** Electric vehicle sharing operators are struggling to keep operational costs on a budget to assure business profitability.
- Our aim:** Enhance fleet management in terms of reduction of energy-related costs by optimising battery charging, incentivising eco-driving and selection of dropping off locations.

Target groups:

- Users of electric mobility services such as sharing services for scooters or motorbikes
- Light electric vehicles sharing operators with swappable batteries

Innovative features:

- Link trip demand with charging needs
- Optimal use of energy for charging
- Business models for rewarding eco-driving based on in-vehicle sensor information

Enabling features (state of the art):

- Fleet of sensor-fitted electric scooters
- Charging through battery swapping
- Bind vehicles need with charging strategies
- Involvement of users in energy savings

Contributors:

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