

Electrification of the municipal fleet and promotion of electro-mobility

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- Testing light electric vehicles (e-bikes, e-scooters, e-kick scooters)
- Increasing smart mobility in Turku
- Starting new business models with local suppliers

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 690699.

Location: Turku, Finland

Organisations involved:

[City of Turku](#)

[Turku University of Applied Sciences](#)

[Regional Council of Southwest Finland](#)

What is the solution?

The City of Turku will test eight light electric vehicles (LEVs), including e-bikes and e-scooters, in parallel to awareness raising actions for e-mobility in different city municipal departments.

LEVs provide an opportunity to replace the use of a passenger car, especially for trips that are less than 10 kilometres (km) drives. According to the results of the Mobility Survey (2013) which employees of the City of Turku took part in, 15% of all commuting was under five kilometres, and 42% of work-related trips (during working hours) were under five kilometres, and were done by a passenger car (as a driver or passenger). 31% of these work trips (during working hours) is done by employees using their own cars. Many, if not all of these trips could be done with some other mobility device/form than a car.

The measure tests and promotes e-mobility solutions and sustainable means of transportation, carefully taking into account Turku's Sustainable Urban Mobility Strategy and other relevant strategic decisions of the city. Furthermore, the measure supports the city of Turku's target of becoming carbon neutral by 2029.

How does it work?

Different types of electric vehicles (e-bikes, e-scooters, e-kick scooters) will be tested together with awareness-raising actions in a one-year e-mobility pilot. The pilot is being implemented by various municipal departments. In the pilot, the employees of the city of Turku get to test what it is like to use LEVs for everyday travel. The pilot aims to increase the awareness of city staff and through that increase the diversity of e-vehicles used by them.

For the pilot eight e-vehicles meeting different mobility needs were selected to be tested by city staff. The vehicles will be leased from three different suppliers. The aim of the pilot was to experiment with 10 different electrically powered vehicles. After two bidding rounds, offers were received from eight providers of LEVs. The number of vehicles was considered as a reasonable number to start the implementation of the pilot. Two more vehicles will be added to the test fleet as soon as suitable providers will be found.

The goal of the pilot is to get about 200 user experiences from LEVs and increase the knowledge of e-mobility among the city's staff, in general. The LEVs will be tested in approximately 24 city units during the year-long pilot. The pilot started with the involvement of ten units at the beginning of August 2018. The involvement of further units will be sought during the course of the pilot, as needed.

Staff participating in the pilot will receive their LEV for personal use for two weeks. They are expected to use the vehicle to commute, travel during the workday and during their spare time. During the two week period, the testers can use the vehicle as if it were their own. Those taking part in the pilot are required to sign an agreement with the CIVITAS ECCENTRIC project, on which they need to agree to the terms of use of the equipment. The tester should also report their experience in using the vehicle at the end of the two-week trial period. Collecting the data will be carried out via a questionnaire.

Expected results

- An approved plan for the city of Turku on e-mobility is in place.
- Reductions in local emissions through the 10 electric pilot vehicles is approximately 10 tonnes per year of CO₂.
- In the longer term, the electrification of 5% of Turku's urban regional fleet would entail a reduction in CO₂ emissions of 7,500 tonnes per year.
- Reduction in local emissions by replacing the use of cars with electric vehicles.
- A change in the behaviour of city staff regarding mobility in favour of e-mobility.
- The efficiency of the use of the city fleet increases by 20% during the demonstration time.
- Use of own cars for work travel decreases by 20%, in comparison to 2016 by the end of 2019.

Business model

This measure is funded by (approximately) €138,813 through CIVITAS ECCENTRIC.

Timeplan:

Research and planning: 12 months - from September 2016 to August 2017

Procurement and implementation: Eight months - from September 2017 to April 2018

Demonstration & Monitoring: 12 months

Conclusions & Recommendations: 16 months

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