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Servitization Impacts on CO2 Emissions



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Ramboll have coordinated study on the impacts of transport servitization on greenhouse gas emissions as the part of the Finnish government’s implementation of the Roadmap for Fossil-Free Transport.

The study was part of the implementation of the Roadmap for Fossil-Free Transport in which the aim is to help achieve the Finnish government’s pledge to halve greenhouse gas emissions from domestic transport by 2030. The study was completed under the co-ordination of the Ministry of Transport and Communications.

The Government has identified transport servitization as one of the means of influence on reducing emissions from transportation. However, it has lacked overall picture of servitization and quantitative estimates of how much it will affect CO2 emissions from transport in the target years 2030 and 2045.

In the study, we created scenarios for the transport servitization and its effects on supply and thus on the price and level of services and further on car-ownership. Scenarios

were examined using a nationwide passenger transport simulation model. The result of the study was quantitative assessment of the impacts of transport servitization on CO2 emissions from transport and a recommendation on measures to support servitization.

According to the study, the emission reduction potential of transport services in 2030 will be relatively small, approximately 0.080 megatons. If the proportion of e-vehicles used in transport services grows faster than car ownership, the greater use of transport services could reduce greenhouse gas emissions from transport even more than the above estimate suggests. Further in the future, the emission reduction could be significantly higher by 2045, up to as much as 0.580 megatons.

The main explanation for the reduction in emissions is the

reduction in car ownership. That also brought a challenge for the study, as data related to new transport services are not yet sufficiently available for modeling purposes, and changes in car-ownership, for example, could not be modeled. In the long run, autonomous transport and the widespread use of demand-responsive transport will also reduce emissions.

The study utilized Ramboll’s extensive traffic modelling experience, as well as an understanding of the forms and effects of new mobility services.

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