



Project no. 691735
REPLICATE PROJECT
Renaissance of Places with Innovative
Citizenship And Technology



This Project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement N° 691735

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H2020-SCC-2015 Smart Cities and Communities

Innovation Action (IA)

D5.7 Transport Infrastructure Adaptation Including EV Charge Point Installation

The report is confidential, only the Executive Summary is public

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Executive Summary

This report sets out how partners in the REPLICATE Bristol Mobility Actions have adapted transport infrastructure relating to EV charge point Installation. This covers the data requirements of connecting users to new EV infrastructure, the installation of new charge points, and integration with vehicles, back offices and data platforms. REPLICATE is providing smart real time reporting functionality for ebikes through a series of innovations including integrating with ebike systems, and compressing and transmitting different types of data using technologies including LoRaWAN and WiFi. As part of REPLICATE and the Go Ultra Low projects Bristol has installed the first three EV charge points for car club vehicles. Having learnt from our experiences, planning for the next phase is now well advanced. We are successfully using the FIWARE functionality of the Smart City Platform to connect to ebikes and expect to do so imminently with EV charge points. One of the most important lessons of our work has been to understand the importance of brokers in moving data at agreed times and in agreed ways. Another important finding of the project has been that the back offices were often a much greater constraint than the charge points themselves. REPLICATE partners have begun to develop systems that will be able to make decisions based on optimal strategies. These will be increasingly important as incentives are rolled out for users who can offer flexibility in order to reduce peak loads on the system. Our grid impact assessment explored the impact on the distribution network of rolling out the sort of measures in REPLICATE on a wider scale and showed that the ability to respond to the state of the network will greatly reduce the impact of EVs on the distribution network. Coordination between actors in the EV space will be a key if the maximum benefits of e- mobility are to be achieved. Typically no one actor will have all the information to make the best decisions. So a key challenge for developers of this technology will be how to get the key information on state and intention of assets and users and then provide the “arbitrage” between them.