

EUROPEAN COMMISSION

HORIZON 2020 PROGRAMME - TOPIC H2020-LC-GV-01-2018
Connected Electric Vehicle Optimized for Life, Value, Efficiency and Range

GRANT AGREEMENT No. 824295



CEVOLVER – Deliverable Report

D2.1. Report on requirements for the virtual simulation
framework

Deliverable No.	CEVOLLVER D2.1	
Related WP	WP2	
Deliverable Title	Report on requirements for the virtual simulation framework	
Deliverable Date	2019-06-04	
Deliverable Type	REPORT	
Dissemination level	Confidential – member only (CO) /	
Status	Final	2019-06-04

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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 824295. The information and views set out in this publication does not necessarily reflect the official opinion of the European Commission. Neither the European Union institutions and bodies nor any person acting on their behalf, may be held responsible for the use which may be made of the information contained therein.

Publishable summary

CEVOLVER focuses on a leap forward in user's confidence, functionalities and energy efficiency of future electric vehicle while ensuring their affordability by a user centric development approach.

This work package concerns the development of a virtual simulation framework that allows to develop advanced energy and thermal management strategies using connected information for different functional architectures of the thermal system. The simulation framework will be used in early phases to aid in the sizing of components for the demonstrator vehicles by supporting the engineering decisions. The framework will also use connected information in a later phase to develop the advanced energy and thermal management strategies to be implemented and tested in the demonstrators. Where needed, the simulation framework will also serve to compensate (explain and quantify) performance differences in the demonstrator vehicles caused by noise factors in environmental conditions (between reference and validation tests on the road). Similarly, it can be used to compare and superimpose performance gains of different versions of the demonstrator vehicles when all functionalities are not established in full scale in all the demonstrator vehicles.

This deliverable reports on the requirements for the virtual simulation framework for its use in the different phases of the project. It contains the vision for the platform, the general structure in the different phases of the project, and the functional requirements of the sub-system models.