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Connected Electric Vehicle Optimized for Life, Value, Efficiency and Range

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CEVOLVER – Deliverable Report

5.1 - Documentation of the additional functional and architecture for realizing connected energy and thermal management for a Fiat class A cloud-connected vehicle

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1 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.

Work Package 5 - WP5 (System and component testing and demonstration using Fiat A class electric vehicles) focuses on optimal predictive control of mostly existing pre-optimized vehicle hardware with the additional benefit from the innovation of cloud-based user-centric predictive optimization algorithms.

While WP1 is dedicated to brand-independent use cases, requirements and specifications, CRF has analyzed in the task 5.1, their effects on its brand-specific existing hardware, software and information infrastructure. Specific requirements for the communication between the car and the OEM cloud have been defined, taking care of data security and user privacy for data exchange between vehicle and OEM cloud and especially for the interface between the OEM cloud and the independent cloud.

The main results of this activity has been summed-up in the deliverable D5.1 describing the modifications to the brand-specific existing hardware, software and information infrastructure that enable the CRF demonstrator.

The defined specifications describe in detail the communication between the FCA vehicle (FIAT 500e) and the CRF cloud (host by Amazon Web Services - AWS).

As starting point, the infrastructure developed during the NeMo EU H2020 project has been taken into account.

2 Acknowledgement

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Project partners:

#	Partner	Partner Full Name
1	FEV	FEV Europe GmbH
2	BOSCH	Robert Bosch GmbH
3	FORD	Ford-Werke GmbH
4	CRF	Centro Ricerche Fiat
5	IFPEN	IFP Energies Nouvelles
6	RWTH	Rheinisch-Westfaelische Technische Hochschule Aachen
7	VUB	Vrije Universiteit Brussel
8	UNR	Uniresearch BV
9	I2M	I2M Unternehmensentwicklung GmbH
10	RBOS	Robert Bosch AG



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