



## D2.4 – Generic eco-driving strategy

Research Innovation Action

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### Publishable summary

The work package 2 entitled “Future powertrains for heavy duty vehicles” aims to support the development of the use cases (vertical WP3 to WP9) to achieve the following targets:

Prove the potential of the connectivity to further reduce the fuel consumption in real driving condition, exploiting the eco-routing, eco-driving, energy and thermal management strategies.

Prove the engine efficiency potential by thermal insulation to contribute to reach 50% brake thermal efficiency, related to Obj 3 in section1.1.

Provide pathways how highly efficient renewable fuels (from production and combustion side) can be used in existing fleets using also retrofit solutions, related to Obj 2 in section 1.1.

To develop aftertreatment systems for the reduction of regulated and unregulated emissions from powertrains operated on bio-methane and Diesel/ Dual-Fuel engines which are integrated into hybrid powertrains. This includes new catalysts, models and layout of complete EAS for two demonstrators, related to Obj 4 in section1.1.

Definition of the targets to perform the verification, validation and independent assessment, related to Obj 6.

Within this work package, the activities of task 2.1 “Connected vehicles” are focused on the first target by developing and implementing connected services to optimize the energy consumption of heavy-duty fleet. These services will be hosted on cloud infrastructure or integrated on connected devices that will interface with the existing telematic solutions embedded in the project’s use-cases.

The sub-task 2.1.4 consist of the development of a generic eco-driving strategy. The eco-driving provides a recommended speed to the driver to reduce the energy consumption induced by its driving behavior. A real-time predictive approach is proposed, considering the heavy-truck environmental constraints due to the route topology, the infrastructure impacts on speed limits and surrounding traffic conditions. The strategy has been validated in simulation with typical heavy-duty truck missions, covering standard driving situations (accelerations, decelerations, cruising, combination of all).

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### Project partners:

#	Partner	Partner Full Name
1	FEV	FEV EUROPE GMBH
2	DAF	DAF TRUCKS NV
3	FPT	FPT INDUSTRIAL SPA
4	FORD	FORD OTOMOTIV SANAYI ANONIM SIRKETI
5	IRIZAR	IRIZAR S COOP
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7	VOLVO	VOLVO TECHNOLOGY AB
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19	SIE	SIEMENS INDUSTRY SOFTWARE SAS
20	TECHNA	FUNDACION TECHNIALIA RESEARCH & INNOVATION
21	TOTAL	TOTAL MARKETING SERVICES
22	UMIC	UMICORE AG & CO KG
23	UNR	UNIRESEARCH BH
24	JRC	JRC -JOINT RESEARCH CENTRE – EUROPEAN COMMISSION
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