

PROJECT

IMPERIUM

Implementation of Powertrain Control for Economic and Clean Real driving emission and fuel Consumption

Funding: European (Horizon 2020)

Duration: Sep 2016 - Aug 2019

Status: Complete

Total project cost: €9,915,292

EU contribution: €6,625,977



Call for proposal: H2020-GV-2015

[CORDIS RCN : 204189](#)

Objectives:

Fuel economy is a key aspect to reduce operating costs and improve efficiency of freight traffic, thus increasing truck competitiveness.

The main objective of the IMPERIUM project (Implementation of Powertrain Control for Economic and Clean Real driving Emission and Consumption) is to achieve fuel consumption reduction by 20% (diesel and urea) whilst keeping the vehicle within the legal limits for pollutant emissions. The approach relies on three stages targeting the improvement of the control strategy:

- Direct optimisation of the control of the main components (engine, exhaust after-treatment, transmission, waste heat recovery, e-drive) to maximize their performances.
- Global powertrain energy manager to coordinate the different energy sources and optimize their use depending on the current driving situation.
- Providing a more comprehensive understanding of the mission (eHorizon, mission-based learning) such that the different energy sources can be planned and optimized on a long term.

The IMPERIUM consortium consist of major European actors and is able to provide a 100% European value chain for the development of future powertrain control strategies for trucks.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Avl List Gmbh

Address:

Hans-List-Platz
8020 Graz
Austria

Organisation Website:

<http://www.avl.com>

EU Contribution: €1,391,439

Partner Organisations:

Volvo Bus Corporation**Address:**

Fästningsvägen 1
40508 Gothenburg
Sweden

Organisation Website:

http://www.volvo.com/bus/global/en-gb/home_new.htm

EU Contribution: €938,500

Rheinsche Bahngesellschaft Aktiengesellschaft**Address:**

LIERENFELDER STRASSE 42
40231 DUSSELDORF
Germany

Organisation Website:

<http://www.ricardo.com>

EU Contribution: €487,133

Robert Bosch GmbH**Address:**

Robert-Bosch Platz
70839 Gerlingen-Schillerhoehe
Germany

Organisation Website:

<http://www.bosch.com>

EU Contribution: €242,673

Rheinisch-Westfaelische Technische Hochschule Aachen**Address:**

Templergraben
52062 Aachen
Germany

Organisation Website:

<http://www.rwth-aachen.de>

EU Contribution: €512,500

Iveco S.p.a.**Address:**

Via Puglia 35
10156 Torino
Italy

Organisation Website:

<http://www.iveco.com>

EU Contribution: €869,001

Daf Trucks N.v.**Address:**

HUGO VAN DER GOESLAAN 1

5600 PT EINDHOVEN
Netherlands

Organisation Website:

<http://www.daf.com>

EU Contribution: €863,458

Ceske Vysoke Uceni Technicke V Praze

Address:

Zicova 4
16636 PRAHA 6
Czech Republic

Organisation Website:

<http://www.cvut.cz> <http://www.c-a-k.cz>

EU Contribution: €35,500

Politecnico Di Torino

Address:

Corso Duca Degli Abruzzi
10129 Torino
Italy

Organisation Website:

<http://www.polito.it>

EU Contribution: €54,500

Politecnico Di Milano

Address:

Piazza Leonardo Da Vinci 32
20133 Milano
Italy

Organisation Website:

<http://www.polimi.it>

EU Contribution: €54,500

Continental Ag

Address:

Vahrenwalder Strasse 9
169 HANNOVER
Germany

Organisation Website:

<http://www.conti-online.de>

EU Contribution: €312,275

Honeywell, Spol. S.r.o

Address:

V PARKU 18
14800 PRAHA
Czech Republic

Organisation Website:

<http://honeywell.jobs.cz/>

EU Contribution: €114,500

Fpt Motorenforschung Ag

Address:

SCHLOSSGASSE 2
9320 ARBON
Switzerland

EU Contribution: €0

Technische Universiteit Eindhoven

Address:

Den Dolech
5612 AZ Eindhoven
Netherlands

Organisation Website:

<http://www.industrialdesign.tue.nl>

EU Contribution: €204,500

Fev Europe GmbH

Address:

Neuenhofstrasse 181
52078 Aachen
Germany

EU Contribution: €393,500

Chalmers Tekniska Hoegskola Ab

Address:

-
41296 GOTHENBURG
Sweden

Organisation Website:

<http://www.chalmers.se>

EU Contribution: €152,000

Technologies:

Emissions control systems
Emission reduction systems utilising ammonia

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing, Low-emission alternative energy for transport

Transport mode: Road transport

Transport sectors: Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other