

## Aerodynamic and Flexible Trucks for Next Generation of Long Distance Road Transport

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### **Publishable Executive Summary**

AEROFLEX - AEROdynamic and FLEXible Trucks for Next Generation of Long Distance Road Transport

The transport sector contributes to about 25% of total  $CO_2$  emissions in the EU and is the only sector where the trend is still increasing. Taking into account the growing demand on the road transport system and the ambitious targets of the <u>EC's Transport White Paper 2011</u>, the EC's Transport 2050 comprehensive strategy, it is paramount to increase the efficiency of freight transport.

The vision of the AEROFLEX project is to support vehicle manufacturers and the logistics industry to achieve the coming challenges for road transport. The overall objective of the AEROFLEX project is to develop and demonstrate new technologies, concepts and architectures for complete vehicles with optimized aerodynamics, powertrains and safety systems as well as flexible and adaptable loading units with advanced interconnectedness contributing to the vision of a "physical internet".

The optimal matching of novel vehicle concepts and infrastructures is highly important, requiring the definition of smart infrastructure access policies for the next generation of trucks, load carriers and road infrastructure.

The overall objective of the AEROFLEX is to achieve an overall 18-33% efficiency improvement in road transport / long haulage and contribute to the EC objective to reduce GHG emissions from transport sector by 30%. by 2025+.

This objective is supported by specific technical objectives, innovations and targeted key results:

- 1. Characterise the European freight transport market (map, quantify and predict), the drivers, the constraints, the trends, and the mode and vehicle choice criteria
- 2. Develop new concepts and technologies for trucks with reduced drag, which are safer, comfortable, configurable and cost effective and ensure satisfaction of intermodal customer needs under varying transport tasks and conditions.
- 1. Demonstrate potential truck aerodynamics and energy management improvements with associated impact assessments of the new vehicle concepts, technologies and features developed in the AEROFLEX project.
- 3. Drafting of coherent recommendations for revising standards and legislative frameworks in order to allow the new aerodynamic and flexible vehicle concepts on the road.

This document describes the Initial Dissemination Plan to maximise the potential impact of the project results will be developed. The plan's structure is developed as such that the activities relevant for a particular target group are clearly identifiable, using keywords guiding the communication supported by the sub-themes.

Keywords are Vehicle engineering, Road transport, Truck, Decarbonisation.

Supported by sub-themes within the different keywords:

Multi-modality, combined transport, aerodynamics, energy management systems, distributed drive trains, wireless communication, Smart loading units.

The plan is structured by categories, Activities and Tools: Activities:

- Conference(s) for presenting the PROJECT results, being European and international,
- Dedicated sessions, workshops with e.g. expert, associations,
- Project website for user needs for devising, implementing and maintaining an interactive project follow up, continuation beyond the project period exploiting the results supporting market uptake actions.
- Press release, professional contacts, trade fairs, tutoring at workshops

#### Tools:

- Publication of books, articles, papers and other publications like journal papers
- Consultancy, employee placement schemes
- Inclusion in EU documents, inclusion in government documents, involvement in networks

2/3 GA - 769658



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#### Project partners:

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#	Partner	Partner Full Name
1	MAN	MAN TRUCK & BUS AG
2	DAF	DAF Trucks NV
3	IVECO	IVECO S.p.A
4	SCANIA	SCANIA CV AB
5	VOLVO	VOLVO TECHNOLOGY AB
6	CRF	CENTRO RICERCHE FIAT SCPA
7	UNR	UNIRESEARCH BV
8	SCB	SCHMITZ CARGOBULL AG
9	VEG	VAN ECK BEESD BV
10	TIRSAN	TIRSAN TREYLER SANAYI VE TICARET A.S.
11	CREO	CREO DYNAMICS AB
12	MICH	MANUFACTURE FRANCAISE DES PNEUMATIQUES MICHELIN
13	WABCO	WABCO Europe BVBA-SPRL
14	CHALM	CHALMERS TEKNISKA HOEGSKOLA AB
15	DLR	DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV
16	FHG	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
17	HAN	STICHTING HOGESCHOOL VAN ARNHEM ENNIJMEGEN HAN
18	IDIADA	IDIADA AUTOMOTIVE TECHNOLOGY SA
19	NLR	STICHTING NATIONAAL LUCHT- EN RUIMTEVAARTLABORATORIUM
20	TML	TRANSPORT & MOBILITY LEUVEN NV
21	TNO	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO
22	MHH	MEDIZINISCHE HOCHSCHULE HANNOVER
23	UIRR	UNION INTERNATIONALE DES SOCIETES DE TRANSPORT COMBINE RAIL-ROUTE SCRL
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3/3 GA-769658