



# AEROFLEX

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

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## Publishable Executive Summary

The aim of this document is to define the state-of-the-art regulatory framework regarding the freight transport market in a clear and meaningful format, providing a good starting input for the rest of the technical work packages (WP2-WP6), the Project Coordinator and the Project Officer. This report (D7.1 *Definition of the boundary conditions and current state of EU legislation*) represents the first deliverable of Work Package 7 named *Recommendations and roadmap for a new regulatory framework*.

The present report has been divided in three parts. Their objectives are described below:

### Part A: Current state of the EU legislation

The main goal of this first part is to provide the reader the necessary input to understand how the policy making works and which outcomes from other projects can become a useful input for AEROFLEX project. The objectives of Part A are:

- i. To present AEROFLEX background through the description of the results and take away messages achieved in other research funded projects like:
  - o TRANSFORMERS (Grant Agreement No. 605170)
  - o FALCON (CEDR Call 2015 Freight and Logistics in a Multimodal Context), and
  - o FLUXNET (CEDR Call 2015 Freight and Logistics in a Multimodal Context)

In case of TRANSFORMERS project, successor of AEROFLEX project, the recommendations and conclusions presented in its final report are considered.

- ii. To describe the regulatory framework state of the art, including an explanation of the international discussion groups and the topics under discussion.

Internationally speaking, there are two organisations that play a key role: The United Nations Economic Commissions for Europe (UNECE) and the European Commission (EC). Both have similar structures and mechanisms; they are divided into discussion groups which are again divided into topics of interest. The goal of this analysis is to identify which discussion/experts' groups have a direct relation to AEROFLEX solutions.

- iii. To show the initial Regulatory Matrix. Part A finishes with the presentation of the preliminary Regulatory Matrix used to start the discussions with other Work Packages. In this matrix, a group of directions, regulations and standards are classified according to their nature (vehicle, infrastructure or use). The objective is to detect the regulations that could have an influence on the deployment of AEROFLEX solutions.

### Part B: Definition of the boundary conditions

The main goal of Part B is to discuss the regulatory matrix affecting each Technical Work Packages (WP2-WP6) and identify the relevant aspects or regulations that might need a special attention.

- iv. Regulation frame affecting AEROFLEX: For each Technical Work Package (WP2-WP5), their concept solutions are analysed from a regulatory point of view. Due to this deep analysis, a group of UN Regulations, EU Regulations, Directives and Standards are listed and classified into three categories: vehicle, use and infrastructure. Vehicle regulations include subjects like heavy duty vehicles emissions (UN Regulation No. 49), protection of the occupants (UN Regulation No. 29) or steering equipment (UN Regulation No. 79). Use regulations include regulations such as training of drivers or the road transport operators. Finally, infrastructure regulations are addressed to issues like vehicle access and manoeuvrability or tunnels in trans-European road network. As there are some regulations that might need comments, after each matrix there is a list of regulations followed by clarifications.

The objective of this part is to delimitate the project scope and establish the boundary conditions, intended to be done in the next task.

This work has been made in accordance with other AEROFLEX partners and with the comments and suggestions from the Sounding Board thanks to the workshop held previously.

- v. Topics of interest and open discussions: Regarding the current work in discussions groups, there are open discussions that are considered important because they can affect the technology solutions proposed by other

technical work packages. Examples of active discussion groups are: the Intelligent Transport Systems and Automated Driving (ITS/AD) informal group of the WP29, the Automatic Commanded Steering Function (ACSF) informal working group of the GRVA, the Deployable Pedestrian Protection Systems (DPPS) informal working group of the GRSP or the Vulnerable Road Users proximity in low speed manoeuvres (VRU-Proxi) informal working group of the GRSF. In addition, this document includes a list of current regulations that are nowadays under discussions and which could be amended in the very near future. Apart from this list, some topics are outlined as they are considered relevant to AEROFLEX. Example of relevant topics are: the CO<sub>2</sub> emissions and fuel consumption of heavy vehicles, very important nowadays due to the implementation of the new Vehicle Energy Consumption Calculation Tool (VECTO) in the homologation process, or the Cybersecurity Engineering (ISO/SAE 21434).

### **Part C: Outcomes from the Sounding Board workshops**

The Sounding Board group has been involved since the beginning of the project and they have actively participated in the project through several meetings and workshops.

During the first 18 months of the projects, a total of three thematic workshops have been held. Each workshop has been focused on a different subject:

- vi. Workshop on Logistics. This report includes the comments and conclusions of the workshop that took place on 7<sup>th</sup> of March 2018 in Dortmund, Germany. The objective was to invite the Sounding Board Members to participate in this logistics workshop to let them express their opinions or suggestions and pass them on to the other partners of the consortium.
- vii. Workshop on Regulatory Framework. This workshop was held the 20<sup>th</sup> of February 2019 in Paris, at IFSTTAR facilities. This workshop was focused on the regulatory frame, and its conclusions and next steps are included in this report.
- viii. Workshop on Intelligent Access Policies. The specific workshop took place at ACEA facilities the 6<sup>th</sup> of May 2019 with the objective to promote the concept of Intelligent Access and share the experiences of different project in several countries.

In conclusion, this document (Deliverable D7.1 – *Definition of the boundary conditions and current state of the EU legislation*) shows the results and outcomes from the first half part of the project.

This report is very important because it sets the basis for the *Book of Recommendations* (BoR). This BoR will be described in the following report (Deliverable D7.2 – *Book of Recommendation. Models validation and future regulatory framework proposals*). The BoR will be submitted at the end of the project and it will propose adjustments to homogenise standards and regulations.