E – DRIVETOUR

Beyond the Border of Electric Vehicles: an Advanced Interactive Course

Erasmus+ Programme: Knowledge Alliances

Project Number: 612522-EPP-1-2019-1-EL-EPPKA2-KA

D1.4 E-learning platform requirements
Version number: 1.1
Dissemination Level: PU
Lead Partner: IHU
Due date: 31/05/2020
Type of deliverable: RE
STATUS: FINAL

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Deliverable 1.4 E-learning platform requirements

Published in the framework of:

EDRIVETOUR - bEyonD the boRder of electrIc VEhicles: an advanced inTeractive cOURse

EDRIVETOUR website: www.edrivetour.eu

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Revision and history chart:

VERSION	DATE	EDITORS	COMMENT
V 0.1	31/03/20	IHU	First draft version
V 0.2	10/04/20	IHU	Second draft version
V 0.3	30/04/20	IHU	Third draft version
V 1.0	31/05/20	IHU	Final Version
V 1.1	30/06/20	IHU, INT, CT	Revised Final Version

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1 Executive summary

The main objective of this document is to define the requirements for the EDRIVETOUR e-Learning platform and set the foundations for its implementation (WP3) and deployment (WP4).

The e-Learning platform that was presented in the proposal contains several critical functions that will allow the successful execution of the course. These functions and their requirements are analysed in order to set the basis for their development in WP3.

All 24 courses, including intermediate projects will be subject to exploit the e-Learning Platform and its functionalities. In particular 13 experiments will be directly connected to the e-Learning platform to upload live data or performed via Live Streaming & all theoretical courses can be co-taught via live streaming from consortium educators across Europe.

The current version of the document is established as the deliverable about the definition of EDRIVETOUR project foundations and will be considered as the reference point for all project activities (Application Requirements & Specifications –WP1, Academic Curriculum Development –WP2, Development of Laboratory Apparatus –WP3 and Integration, Deployment & Benchmarking – WP4).

2 Objectives of the report

2.1 Purpose of the Document

The purpose of this document is to present the specifications that surround the design & development of the EDRIVETOUR e-Learning platform. The e-Learning platform is necessary for the teachers/instructors and students' experience and understanding of important course topics. The e-Learning platform in conjunction with its accompanying necessary functionalities will be developed focusing on it being user-friendly and multi-functional. This will enable the possibility to teach the stated courses of the EDRIVETOUR project in international environment, i.e. instructors and students from various countries and universities around EU and to provide the setting of an interactive learning experience. Another important aspect of the document is the introduction material for the educators developing the EDRIVETOUR courses stating the functionalities of the e-Learning platform that they will be able to use during conducting the courses and the ability to connect the laboratory apparatus for remote access & data storage. This, along with the course syllabus, will be designed for a universal understanding to cater teachers across the EU. The e-Learning platform accompanies many courses & experiments, throughout the two educational periods (Timeslot 1 & Timeslot 2), and provides the necessary knowledge & experience for the students for preparing the EDRIVETOUR demonstrators. The structure of the e-Learning platform and the description of the functionalities are the final outcome of this deliverable.

2.2 Scope of the Document

This document is aimed to define the project foundations; to create the necessary inputs for the EDRIVETOUR e-Learning platform specifications in Task 1.4. In addition, the extraction of the platform functionalities will enable the implementation of Task 3.4 - the Development of the e-Learning Platform (in WP3).

It is clear that the work performed in this task will support the rest of project activities in WP1-WP4. Thus, indirectly, all further tasks are influenced by the following definitions and specifications.

2.3 Structure of the Document

The document includes the following contents:

- In *chapter* 2, the introductory section is provided, highlighting the scope and objective of the deliverable;

- Following, *chapter* 3, presents the projects' link between the educational curriculum and the e-Learning platform;
- In *chapter* 4, states & describes the necessary functionalities of the e-Learning platform;
- Chapter 5 describes the software that the platform will be based on & the configuration that will be necessary to develop to meet the course requirements;
- In *chapter 6*, a summary and the main conclusions of the work are reported.

2.4 Relations to other activities

The document is directly linked with all other tasks that take place in the same WP as well as in the forthcoming WPs and especially WP3 which deals with the development of the e-Learning platform and its link with the experiments & teaching material and WP4 where it will act as a central hub for all the deployment activities as depicted in Figure 1:

Figure 1: Connection of Task 1.4 to forthcoming WPs.

WP2: Academic Curriculum Development. The e-Learning platform's structure will be set according the developed course lessons and teaching material (D1.1) which will be uploaded for use by the educators & students.

WP3: Development of Laboratory Apparatus. The designed experiments & teaching software (D1.2) will be uploaded on the e-Learning platform and the software mechanism to connect the laboratory apparatus will be developed.

WP4: Integration, Deployment & Benchmarking. The Deployment & execution of the course will be based on the e-Learning platform.

WP5: Exploitation & Dissemination. Exploitation and dissemination of all project material will advertise the functionalities and originality of the e-Learning platform.

3 Conclusions

As an activity to define the EDRIVETOUR e-Learning platform, D1.4 provides the description of the requirements for the individual functionalities. This document is the outcome of the work in Task 1.4 about the e-Learning platform requirements definition.

Following the definition of the necessary functionalities, to accompany the platform, the consultation with the EDRIVETOUR educators & Moodle developers enabled the extraction of the specifications.

Crucial functions like the course & experiment content, live link with the apparatus equipment, communication tools such as the forum and teaching aids like the live video streaming/storage and the academic record database are clearly defined. The proposed platform functionalities paired with the ability to install & use 3rd party add-ons/plug-ins outlines the specifications offers valuable guidance on the development of the platform in WP3 and its deployment in WP4. The functionality list collects the software tools needed to run all the e-Learning tools and offers a concentrated view of the educational needs of the project.

The document together will set the foundations for the forthcoming WPs and especially WP3 which requires the development of the actual e-Learning platform.