

WP2 – Development of a concept for an online format of the teaching and training process, fulfilling the requirements of road infrastructure management

IO.1 – Identification of online learning problems and needs at partner and other European universities (based on questionnaire surveys)

The task will be carried out under Work Package 1 (WP1. Development of a concept for an online format of the teaching and training process, fulfilling the requirements of road infrastructure management.)

The necessity to conduct classes remotely involves the development of a concept for a dedicated teaching and training process, considering the specific requirements of interdisciplinary engineering knowledge. The model course to be developed within the Project will be road infrastructure safety management (RISM) as an element of road infrastructure management (RIM). Road infrastructure management requires knowledge of road safety, environmental protection, road construction and maintenance, and assessment of road infrastructure efficiency. Transferring this knowledge in remote education, due to its large scope, necessitates the use of various didactic tools (lectures, fieldwork, design, practicals, laboratories, student assignments and assessment of the progress and knowledge of students and trainees).

The development of a comprehensive concept for the remote educational process will be preceded by the identification of problems and needs in digital teaching of RIM. This identification will be carried out using the experience of the consortium's partner universities and other European and global institutions using questionnaire surveys. It is assumed that both positive and negative experiences observed in the last academic semester, when a sudden change in the organisation of classes was forced, will lead to a high response to the survey. Particular attention will be focused on implementation of practical classes in remote mode. Interpretation of the survey results will constitute the basis for assumptions for the implementation of the remote process of teaching and training, considering the requirements of RIM. It is also planned that questionnaire surveys will cover non-graduate vocational courses in the field of RIM.

Target groups:

1. Research and teaching staff from institutions involved in RIM teaching, in particular partner institutions.
2. Students of civil and transportation engineering.
3. Students of postgraduate studies and courses in the field of RIM.

Innovative elements:

1. Comparison of teaching and training processes carried out remotely in partner countries.

2. Identification of requirements and needs for remote teaching and training in the field of RIM in selected European countries.

Expected impact:

The identification of problems and needs will enable the development of the concept assumptions for the remote teaching and training process described in IO.2. The identification will allow for verification of methods, training techniques and the didactic process and its implementation in the countries where there are no such courses. It will therefore be possible to create a uniform training and teaching system implemented remotely in the field of RIM.

Transferability potential:

The identified problems and needs based on survey results will be made available on an online platform. It will therefore be available for use by other educational institutions across Europe and in other engineering disciplines to adapt teaching and training processes to the requirements of distance learning.

The division of work:

The work will be divided among all consortium participants and will include:

- Preparing the questionnaire surveys in electronic form.
- Conducting surveys in partner universities, as well as in other European countries.
- Compiling survey results and their interpretation.
- Identifying problems and needs of the on-line teaching and training process that form the basis of the implementation of IO.2.
- Preparing publications summarising the completed works.

The tasks leading to the production of the intellectual output:

The leading institution (CUT) will be responsible for survey development and interpretation of the results. Consortium participants will cooperate in the creation of the survey and the implementation of the research, supporting each other with their knowledge and experience.

Applied methodology:

In this task, a methodology will be based on questionnaire surveys. The survey will include multiple-choice and open-ended questions and information about the surveyed institution. It will be carried out among universities (in the discipline of civil and transportation engineering) and companies and organisations educating in the field of RIM. It is planned for the surveys to cover all countries of the European Union. This will help identify the problems and needs in distance learning in European countries.