

WP3 – Development of techniques for the implementation of the remote teaching and training process with the use of support tools

IO.5 – Development of a methodology for conducting fieldwork classes with the use of communication tools

This task will be carried out within the package WP3 (Development of techniques for the implementation of the remote teaching and training process with the use of support tools). Within the framework of the developed methodology, didactic scenarios will be defined that allow for remote preparation and support for students in independent field research. The scope of this research includes identification and assessment of hazards and their source in road traffic, diagnosis and assessment of road surface condition, identification of damage, collection of input data in the form of section characteristics and geometry, etc.

Among the possible teaching methods, good practice in the preparation of clear and practical guides will be discussed, including guides with multimedia elements, the preparation of video instructions, video tutorials (i.e. step-by-step tutorials focused on learning by example, implemented in the form of videos, sometimes with elements of interactivity on the part of the user) and instruction on how to create video materials presenting the correct performance of field research. Methods for presenting field research results remotely, e.g. cloud collaboration tools, photo and video coverage, will also be collected and defined. The potential of using modern technologies, support tools and applications to effectively communicate and obtain remote assistance from the teacher and document the course of fieldwork classes will be discussed. Among these there will be examples of 360° panoramic photography technology that can be realised with an average smartphone, methods of using low-cost VR solutions (e.g. Oculus). A methodology for collecting and submitting data, also using small commercial drones, will be presented for some locations.

Target groups:

Research and teaching staff from institutions involved in the project and ultimately other European institutions.

Innovative elements:

The development of a methodology for conducting fieldwork classes with the use of modern distance learning tools and techniques.

Expected impact:

The developed methodology will enable the conducting of effective fieldwork remotely both with and without the requirement of social distancing related to the epidemic threat. It can be applied in the teaching and training process throughout Europe.

Transferability potential:

The prepared methodology in the form of instructions and a developed handbook will be available on an online platform, for the use of academic teachers throughout Europe.

The division of work:

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

- defining didactic scenarios,

- identifying problems occurring during distance learning,
- developing solutions,
- preparation of publications summarising the completed work.

The tasks leading to the production of the intellectual output:

The leading institution (CUT) will be responsible for supervising the development of the methodology. Consortium participants (apart from AAU) will cooperate in the development of these materials, supporting each other with their knowledge and experience.

Applied methodology:

Within this task a methodology will be gathered and developed for conducting fieldwork remotely, along with a presentation of detailed didactic scenarios and instructions on the use of support tools, techniques and applications.