

# OUTPUT 13

## **Theoretical and practical teaching materials development related to the pedestrian crossing safety management**

The task will be implemented as part of working package 5 (WP4. Teaching materials development related to the Pedestrian crossing safety management). This task will result in developing teaching materials for pedestrian crossing safety management (PCSM). The materials will form the basis for teaching students of transportation and civil engineering as well as for courses training road safety management staff.

Due to the requirements Directive 2019/1936/EC, there is a huge demand for educated staff enabling its implementation. This Directive places great emphasis on the issues related to vulnerable road users, which require a comprehensive approach. Safety at pedestrian crossings will be addressed as part of the developed teaching materials. The importance of addressing this problem is the high proportion of victims at pedestrian crossings, and in particular the high rate of the elderly in recent years. Only actions implemented by properly trained staff with the expertise for improving road safety at crossings can significantly affect the reduction in the number of victims.

Similarly, to the implementation of RSI under Intellectual Output 9, the approach of participants of professional trainings and university courses should also be changed from reactive to proactive. A proactive approach is recommended for road safety analysis at crossings for the prevention of pedestrian accidents. University courses and professional trainings should provide road management staff with information about the hazards at pedestrian crossings and about possible actions that will minimise them. It is very important to emphasise that in accidents involving pedestrians there is a very high rate of death and serious injuries.

The planned result of the task will be the development of innovative teaching materials related to road safety management at pedestrian crossings. They will be supplemented with:

- Results of empirical and analytical research carried out as part of the working package WP4. Intellectual output 11-12, Practical implementation of PCSI on the selected pedestrian crossings in Germany and Poland.
- The results of the pedestrian crossings audit conducted in Warsaw in 2016-2020 by GUT.

Materials will be divided in theoretical and practical parts and dedicated for two target groups: students and road infrastructure managers on the national, regional and local level. The following range of prepared materials is foreseen:

- Students teaching materials - a more extensive theoretical part that will allow the proper preparation of future road safety inspectors (road infrastructure managers), in the field of road safety issues, with a module of practical classes on the selected pedestrian crossings.
- Road inspectors teaching materials - a more extensive practical part with practical classes related modules at pedestrian crossings on different types of roads, considering the impact of lighting.

**Target groups:**

1. Research and teaching staff from institutions involved in the project.
2. Students of civil engineering and transportation engineering.
3. National, local and regional road authority staff.

**Elements of innovation:**

1. Development of PCSM teaching materials in accordance with the provisions of Directive 2019/1936/EC.
2. Use of results of empirical and analytical research in the teaching process
3. Building a knowledge database on pedestrian crossing hazards used in the teaching process.
4. Building applications supporting the process of assessing the safety level at pedestrian crossings, which can be used widely by road safety management staff.

**Expected impact:**

The prepared materials will be used when conducting classes with students of civil and transportation engineering as well as training of road authority staff and designers. They will contribute to the increase of the level of expertise and enable more effective identification of existing hazards and their classification.

**Transferability potential:**

The developed materials will be available on the Internet platform, which will enable their use by other universities dealing with RISM issues throughout Europe.

**The division of work:**

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

- Preparation of the syllabus.
- Preparation of the presentation.

- Development of materials based on research and implementation projects related to PCSM.
- Development of teaching materials from research implemented under Intellectual Output 10-12.
- Verification and evaluation of developed teaching materials.

**The tasks leading to the production of the intellectual output:**

The leading institution (GUT) will be responsible for supervising the development of teaching materials. Consortium participants will work together to prepare these materials. The necessary scope and detailed division of work will be defined under Intellectual Output 14.

**Applied methodology:**

In the process of developing the PCSM teaching materials, the method of combining traditional teaching (presentations, lectures) with a modern approach using the results of empirical and analytical research as well as modern multimedia techniques and support tools will be used.

Verification of the prepared materials will be based on:

- Observation of how the trainees receive the prepared materials, what problems occur, how they are solved.
- Opinions of academic teachers and those responsible for training of road authority staff about the prepared methodology.
- Evaluation of prepared materials by a selected control group of students and road authority staff.
- Assessment of the knowledge of students and road authority staff.