



# HyResponse

## Hydrogen Emergency Response training program for First Responders



### Overall objectives

Support the successful implementation of hydrogen and fuel cell demonstration projects and market transformation by providing educational and practical hydrogen safety training to First Responders, who must know how to handle potential incidents to protect the public without putting in jeopardy their own life; their understanding can also facilitate local project approval

### Methodology



#### Educational training material

- Curriculum development
- Basics of hydrogen safety for First Responders
- Regulations, codes and standards requirements to FCH systems relevant to First Responders, intervention strategies and tactic
- Teaching materials for First Responders intervention strategy and tactic



#### Emergency scenarios and first response strategies

- Selection, analysis and description of the HFC applications, their safety concept and safety features
- Development of typical detailed scenarios and evaluation of the associated consequences
- Operational emergency response strategies

#### Operational training facility

- Elaboration of multi-level operational training exercises
- Design and technical specifications of the operational hydrogen training facility
- Realisation, installation and commissioning of the operational hydrogen training facility

#### Pilot training sessions

- Establishment of a database of First Responders involved in European hydrogen projects
- Implementation of the European First Responder training sessions
- Creation of a European Emergency Response Guide

#### Recommendations and dissemination

- HyResponse web-site and online training course
- Development of recommendations for RCS to the international standardization bodies
- Recommendations on future research topics Workshop for First Responders



#### Virtual Reality training platform

- Programming of the hydrogen virtual training platforms
- Definition of the 3D Virtual Reality Serious Game exercises
- Hydrogen phenomena input for virtual training exercises



### Expected outcomes

- Develop and disseminate first-responder hydrogen safety educational materials in Europe
- Build a European Hydrogen Training Platform with mock-up real scale transport and hydrogen stationary installations on which will be realized full scale operational exercises
- Create a virtual reality platform reproducing entire accident scenarios, thereby testing the whole chain of command and communication between all members of the First Responders team
- Train 50 European First Responders during three training sessions of one week each
- Disseminate knowledge into the First Responders community throughout a website with free access to the teaching materials, an online interactive virtual training, the final version of the European Emergency Response Guide and links to European First Responders community to hydrogen and fuel cells related information



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