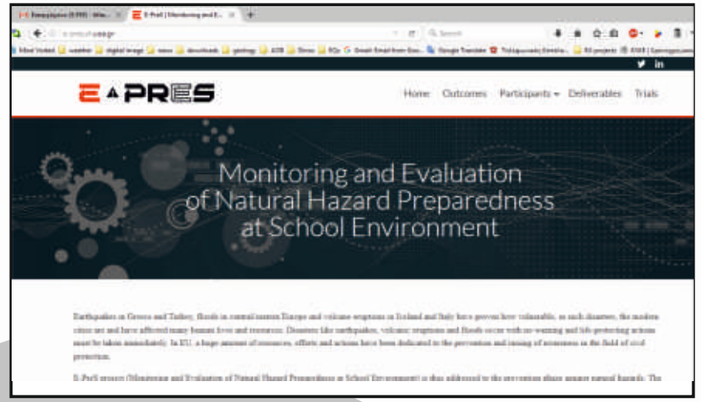
What is E-PRES project about?

E-PreS project (Monitoring and Evaluation of Natural Hazard Preparedness at School Environment) is addressed to the prevention phase against natural hazards.

The main goal of E-PRES is the design and evaluation of drills and exercises that are an extremely important part of emergencies mitigation. It will help school staff and students to understand any hazard effect and be prepared to react appropriately. Moreover, it aims to become a valuable tool to experts in the field for monitoring the evacuation process and identifying weaknesses in the evacuation plan.



http://e-pres.di.uoa.gr/

Partnership

The E-PRES project is coordinated by the National and Kapodistrian University in Greece and involves also the following partners:

Monitoring and Evaluation of Natural Hazard Preparedness at School Environment

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, GREECE

EARTHQUAKE PLANNING & PROTECTION ORGANISATION, GREECE

CENTRE FOR EDUCATIONAL INITIATIVES, BULGARIA

NATIONAL INSTITUTE FOR RESEARCH AND DEVELOPMENT IN CONSTRUCTION, URBAN PLANNING AND SUSTAINABLE SPATIAL DEVELOPMENT, URBAN-INCERC, ROMANIA

ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA, ITALY

NATURAL HISTORY MUSEUM OF CRETE - UNIVERSITY OF CRETE, CREECE

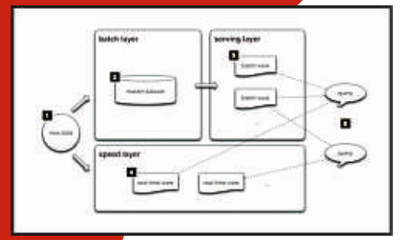
The project is co-funded under the European Union Civil Protection Mechanism, Grant Agreement No. ECHO/SUB/2014/698447

Project objectives

The main objectives of the project are:

1. to identify, share and implement best practices and methodologies gained from previous EU projects and partners activities,
2. to create smart tools which define, simulate and evaluate all hazards emergency steps and be customized to the unique district, school, and campus,
3. to involve the collaboration of interested parties and
4. to include pupils with disabilities and special needs.

From a technological perspective, E-preS is an automatic identification and data capture (AIDC) system. It will provide methods to automatically identifying objects, collecting data about them, and entering that data directly into computer systems for further processing.



Drills and dissemination

A certain number of evacuation drills were implemented in each partner initially to test the implementation and functionality of the system and later to test Evacuation Plans and Drills of schools, museums and other public buildings.

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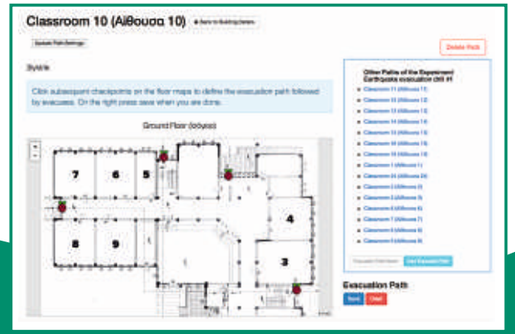
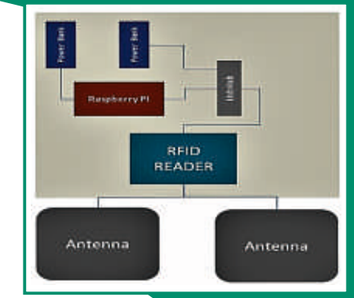


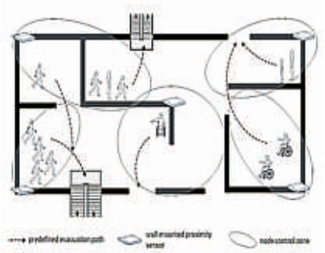
Project activities and outcomes

The main E-PRES activities and outcomes include the following:

- Analysis of User Needs
- System Design and Development action focuses on the design of the framework and tools that will facilitate the setup, monitoring and assessment of hazard-related drills in buildings and open, confined areas
- Pilot Demonstration and System Validation to monitor and evaluate E-PreS tools and activities during trials (involving school staff, students and experts)
- Development of a Dissemination Strategy

The core system consists of a sensor network and a back-end system. The back-end component is responsible for collecting and storing the data gathered during each drill. In addition, it handles the localization information and maps these data to specific user types in order to assess the success of the drill, according to the evacuation plan, and it stores the blueprints and any other location-related data for monitored area, provided by drill supervisor.





The sensor infrastructure consists of proximity sensors distinguished in wearable sensors, and wall mounted sensors deployed in the respective monitored area of interest and allowing for the localization of the people participating in the experiment.