

The IN-PREP system will be tested during customised table top and computer assisted exercises (TTX), and demonstration events (Demos)



**Massive flood**

Table top and computer assisted exercise, 2019



**Earthquake and cascading failures**

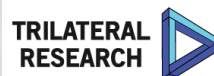
Demonstration, 2020



**Forest Fire during refugee crisis**

Demonstration, 2020

## Project Partners



# IN-PREP

Crossing New Frontiers in  
Disaster Preparedness



[www.IN-PREP.eu](http://www.IN-PREP.eu)



@INPREP\_EU

### Project enquiries:

Project Coordinator  
Dr. Angelos Amditis  
[a.amditis@iccs.gr](mailto:a.amditis@iccs.gr)

Project Manager  
Evangelos Sdongos  
[evangelos.sdongos@iccs.gr](mailto:evangelos.sdongos@iccs.gr)

Institute of Communications &  
Computer Systems



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 740627.



## The current situation

Most national agencies are well-organised at responding to crises within their countries. However when a crisis moves across borders, preparing and orchestrating an international response poses serious challenges.

Evidence reveals that:

- There is a lack of training capabilities to prepare different agencies across countries to work together during transboundary crises
- There are insufficient links between agencies, which delay response
- There is limited exchange of information as agencies use different operating systems and environments

Effective disaster planning and applied response rely on practising various disaster scenarios and having a clear picture of the changing situation so that an appropriate response can be offered.

- How do agencies that may never have worked together prepare for cascading disaster scenarios?
- Which agency takes the lead?
- How can resources be allocated efficiently in real time?
- How quickly can an overall crises picture emerge?
- How can potential risks be forecast?
- What are the best options for evacuation?
- How can support systems between responders and command & control rooms be more efficient?

## What are the challenges?

- Low capacity to make sense of multiple threats across different countries
- Limited information exchange - agencies have different systems, cultures and protocols that may not connect
- Human error in command and control room operations due to limited situational awareness.
- Systems are heterogeneous - agencies use different symbols and messages
- No up-to-date handbook on procedures for transboundary crises management
- Inter-agency training involving the entire chain of command is costly and labour intensive



## Our plan

IN-PREP draws together experts in the crisis management sector, civil protection agencies, engineering and social sciences to create a novel interactive IT platform that aims to:

- Improve collaborative response during crisis operations across Europe through better training and planning.
- Increase effectiveness of planning operations through better situational understanding.

## Our solution

IN-PREP will create a system which includes:

- The Mixed Reality Preparedness Platform (MRPP) - a novel IT-based training platform capable of exchanging data with different operational systems
- Training modules to facilitate transboundary preparedness
- A Crisis Management handbook for all agencies

The **MRPP** will be interoperable, facilitating better information exchange between existing systems of different agencies across Europe. It will be an end-to-end crisis management training system facilitating augmented reality scenarios on multiple levels. The system features:

- Decision support capabilities with built in situational awareness
- Resource allocation in real time
- Rapid remote sensing for quicker response actions
- Large scale evacuation simulation
- Coordinated C3 systems and vulnerability and risk assessment

**Training modules** will be introduced and tailored to different types of civil protection agencies so that the MRPP can be used in joint training sessions.

The IN-PREP **handbook** will enable agencies to adopt the MRPP into standard practice. It will include success and failure factors, recommendations on organisational and legal issues, and human factors in command and control rooms

## The result

IN-PREP will create a training system that enables response agencies to train, plan and collaborate together, so that responders will be better prepared for transboundary crises and more lives can be saved.

**Details can be found on our website.**