

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**

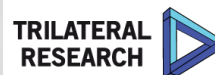
Demonstration, 2020



**Forest Fire during refugee crisis**

Demonstration, 2020

## Project Partners



# IN-PREP

Crossing New Frontiers in  
Disaster Preparedness



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## The current situation

There is a lack of training capabilities to prepare different agencies across countries to work together during transboundary crises. While many national agencies are well-organised at responding to crises within their countries, when a crisis moves across borders, preparing and orchestrating an international response poses serious challenges.

- How do agencies that may never have worked together prepare for cascading disaster scenarios without connecting their systems?
- 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 human factors be part of the training system?
- How can support systems between responders and command and control rooms be better?

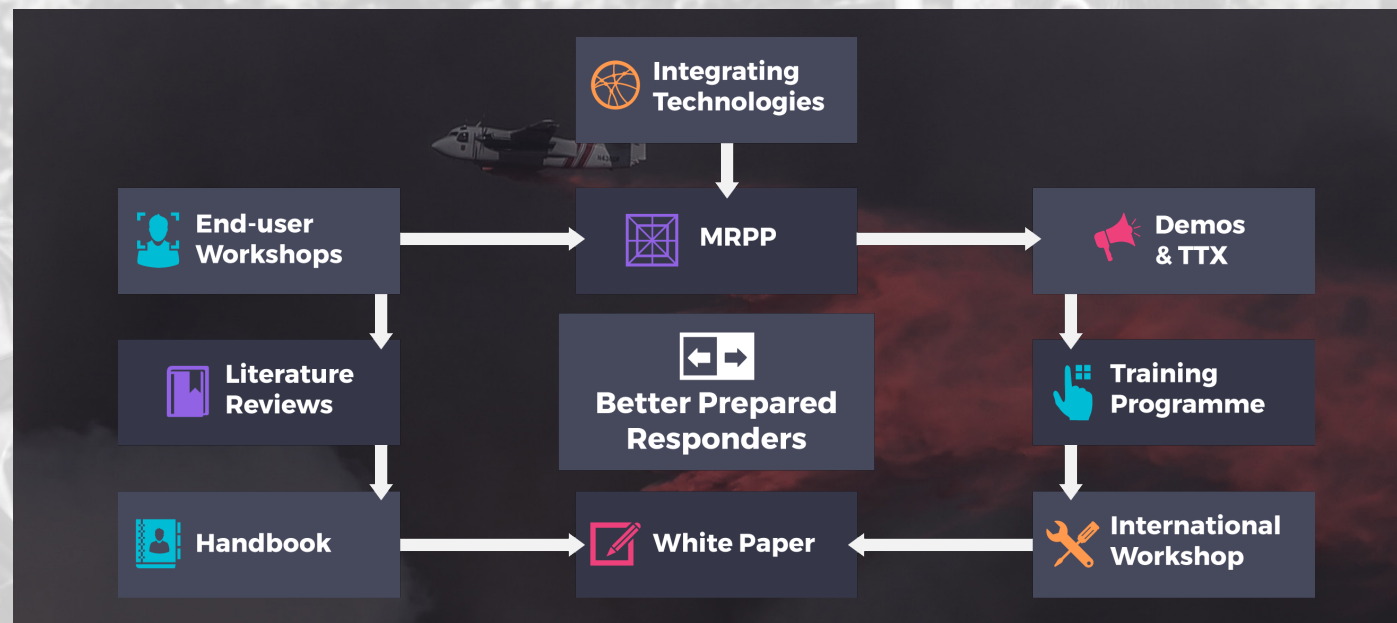
## What are the challenges?

The present solutions of transboundary crises management rely on the expertise of specific individuals, who receive only a part of the picture of the unfolding events. Evidence reveals insufficient links between agencies during transboundary crises, which delay response. Challenges include:

- 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

Effective disaster planning and applied response rely on practising various disaster scenarios and



having a clear picture of the changing situation so that appropriate response can be offered.

IN-PREP brings together experts in the crisis management sector, civil protection agencies, engineering, human behaviour and social sciences. They will collaborate to create novel processes and technology to enable emergency practitioners to meet the following objectives:

- Improved collaborative response during crisis operations across Europe through better training and planning.
- Increased 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 and connect with existing systems used across Europe. 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

It will be an end-to-end crisis management training system facilitating virtual scenarios on multiple levels.

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 implement the MRPP in 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 may be saved.