



## Citizen-centered disaster preparedness



Funded by  
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SFC 

## WHY B-PREPARED?

Even the most advanced alert systems and first responder organisations cannot entirely avert fatalities and property damage.



It's crucial to empower citizens with the knowledge and skills needed to act and react effectively during disaster situations and crises, comprehend alerts, and follow instructions.



By Jessie Williams  
Foreign news reporter

September 16, 2024 2:47 pm

**PLAN A** IS THAT FIRST AND SECOND RESPONDERS  
ARE COMING TO HELP YOU.

UNTIL THEN, YOU NEED TO HAVE A **PLAN B.**





# Building a culture of disaster preparedness...

## Spanish Flood (October 2024):



Source: <https://www.npr.org/2024/11/01/nx-s1-5175804/spain-floods-climate-change>

## Hurricane Milton in Florida (October 2024):



Source: <https://www.forbes.com/sites/maryroeloffs/2024/10/10/hurricane-milton-live-updates-more-than-3-million-without-power-but-desantis-says-storm-not-the-worst-case-scenario/>

## Forest fire in Greece (August 2021):



Source: <https://edition.cnn.com/2021/08/09/europe/greece-wildfire-warning-climate-intl/index.html>

## Earthquake in L'Aquila (April 2009):



Source: <https://www.britannica.com/event/LAquila-earthquake-of-2009>



...with the power of game-based learning...



### **GAMES CAN INCREASE ENGAGEMENT**

- By enjoyable gaming mechanisms
- With short, more consumable sessions
- Immersion through gameplay

### **BOOST INTRINSIC MOTIVATION**

- Offering autonomy
- Feeling competency
- Relatedness to real-life and to community

### **SUPPORT KNOWLEDGE RETENTION**

- Active knowledge recall
- Low cognitive load
- Gamification and the joy of playing

...and making it available for everyone.

Instead of building a closed ecosystem and a one-off game...

**...WE DECIDED TO BUILD A PLATFORM FOR KNOWLEDGE GATHERING AND TOOLS TO MAKE THEM AVAILABLE FOR ANY ENTHUSIASTS.**

The open beta version will be available as a giveaway, actively engaging stakeholders through direct outreach efforts.

Following the closing of the beta phase, B-Prepared will continue in a non-profit freemium model, where in-game purchases will be replaced by in-game donations for relief organizations, with a small percentage allocated to maintenance and further development.



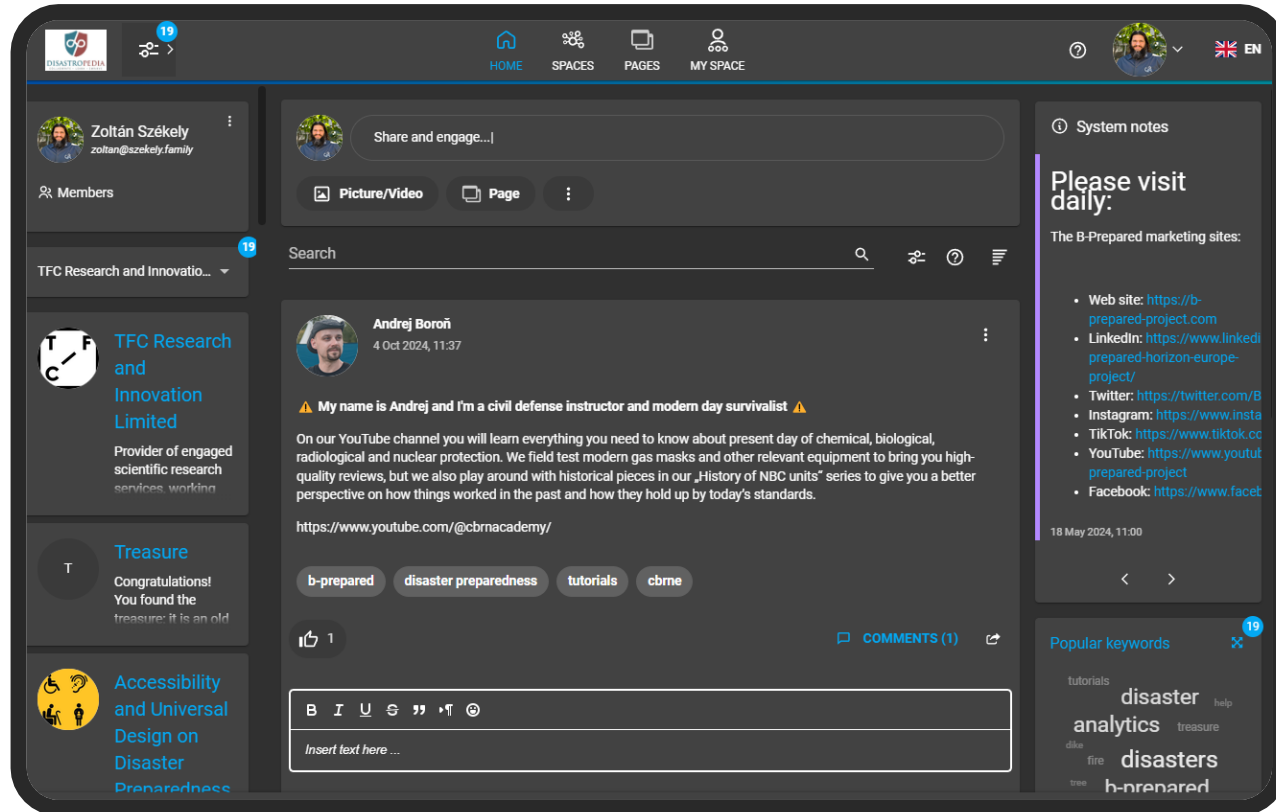


# DISASTROPEDIA

COLLABORATE - LEARN - SURVIVE

Disastropedia supports other components by collecting and supplying disaster-related content and game designs generated collaboratively by the Co-Creation Community Group and experts





## For VR-Prepared

Provides scenario ideation using real-world disasters for virtual reality experiences.

## For IM-Prepared

Delivers contextual content for interactive app-based learning.

## For RU-Prepared

Supports with a validated knowledge base for disaster preparedness education.

## For the community

Contributes to a society that is well-informed and prepared for disaster scenarios.





## VR-PREPARED

PRACTICE - PLAY - SURVIVE

The **VR-Prepared** component of the B-Prepared project is designed as a Virtual Reality (VR) serious game, offering an immersive learning experience through a variety of disaster preparedness scenarios. This innovative approach aims to engage users in realistic simulations, equipping them with the knowledge and skills needed to effectively respond to emergencies.





# VR-prepared – Missions co-designed with first and second responders



- 1  
**Resuscitation** – providing cardiopulmonary resuscitation to someone
- 2  
**Defibrillation** – defibrillating someone else
- 3  
**Reaching high ground** – moving to high ground to avoid flood
- 4  
**Render help to wheelchair user** – helping wheelchair user to reach safe area
- 5  
**Refilling and starting a generator** – resuming electric power
- 6  
**Extinguishing small fire** – extinguishing fire using extinguisher
- 7  
**Releasing animals** – releasing animals from the barn
- 8  
**Finding an escape route** – identifying an escape route and get out of harm's way, evacuate a building and find the assembly point
- 9  
**Opening slice** – releasing water into a buffer area by operating a nearby slice
- 10  
**Switching off electricity** – cutting off electricity to prevent further damage
- 11  
**Switching off gas** – cutting off gas to prevent further damage/explosion
- 12  
**Shock, panic attacks people** – helping in finding the way to escape
- 13  
**Pregnant women** – the need to help to calm down, way to escape

# Understanding our gamers

Rate the following serious game-missions. (5 means the best.)



Source: B-prepared Gaming Habits Survey 2024.03-2025.03 (n=423), available in 13 languages

(<https://b-prepared-project.com/b-prepared-we-are-mapping-your-gaming-habits/>)



## VR-PREPARED – Tutorial & sandbox area





### Forest Fire Scenario

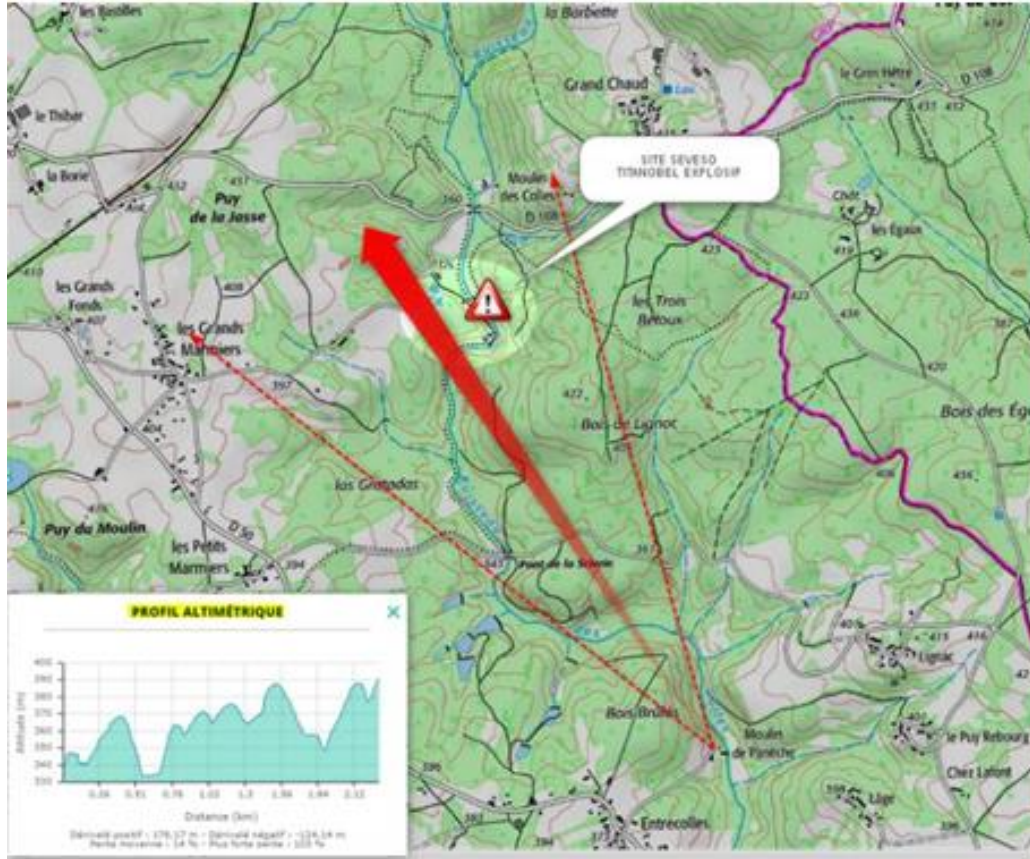


This scenario places users in the midst of a rapidly spreading forest fire, challenging them to respond effectively to protect themselves, assist others, and mitigate damage while navigating through the fire-threatened area.

**Escape sequence type scenario using linear narrative with time pressure.**



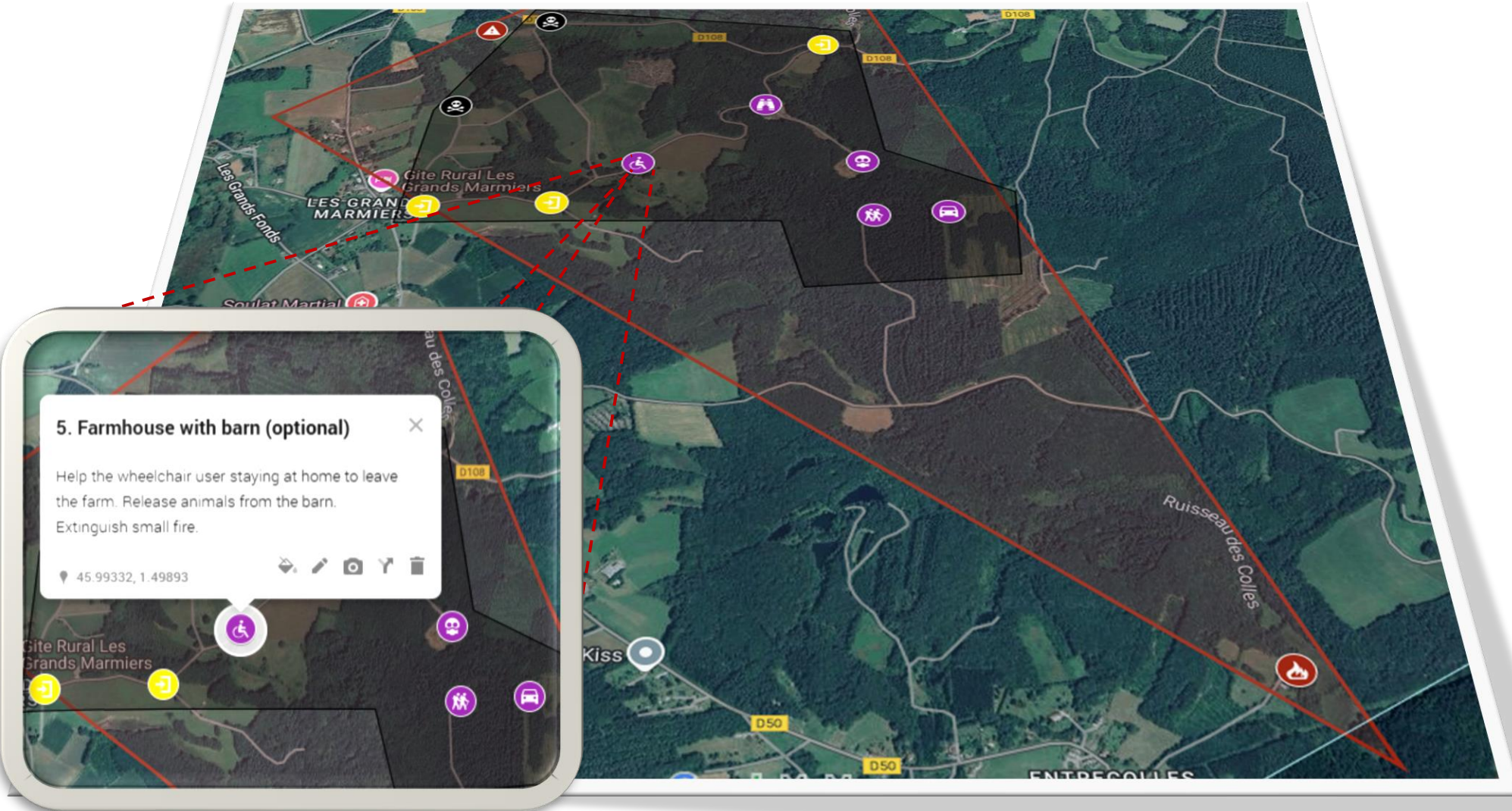
# Forest Fire – scenario and missions co-design with first responders



The forest fire scenario has three active fronts, moving towards sensitive targets; With a large amount of smoke and a wind exceeding 70km/hour, the firefighters urgently need priority information: mapping of the area, identification of access paths, urbanized areas, roads and access routes, temperature, dehydration of plants, speed and direction of the wind, anticipation of fire development and development axes, integration of changing weather conditions.



# Forest Fire – scenario and missions co-design with first responders





## VR-PREPARED scenarios

This scenario simulates the conditions of a King Tide, an exceptionally high tide event that leads to significant coastal and urban flooding. Users navigate through increasingly inundated environments, making critical decisions to ensure their own safety and provide assistance to others.

**Shrinking world type scenario with open-world exploration and critical objectives.**



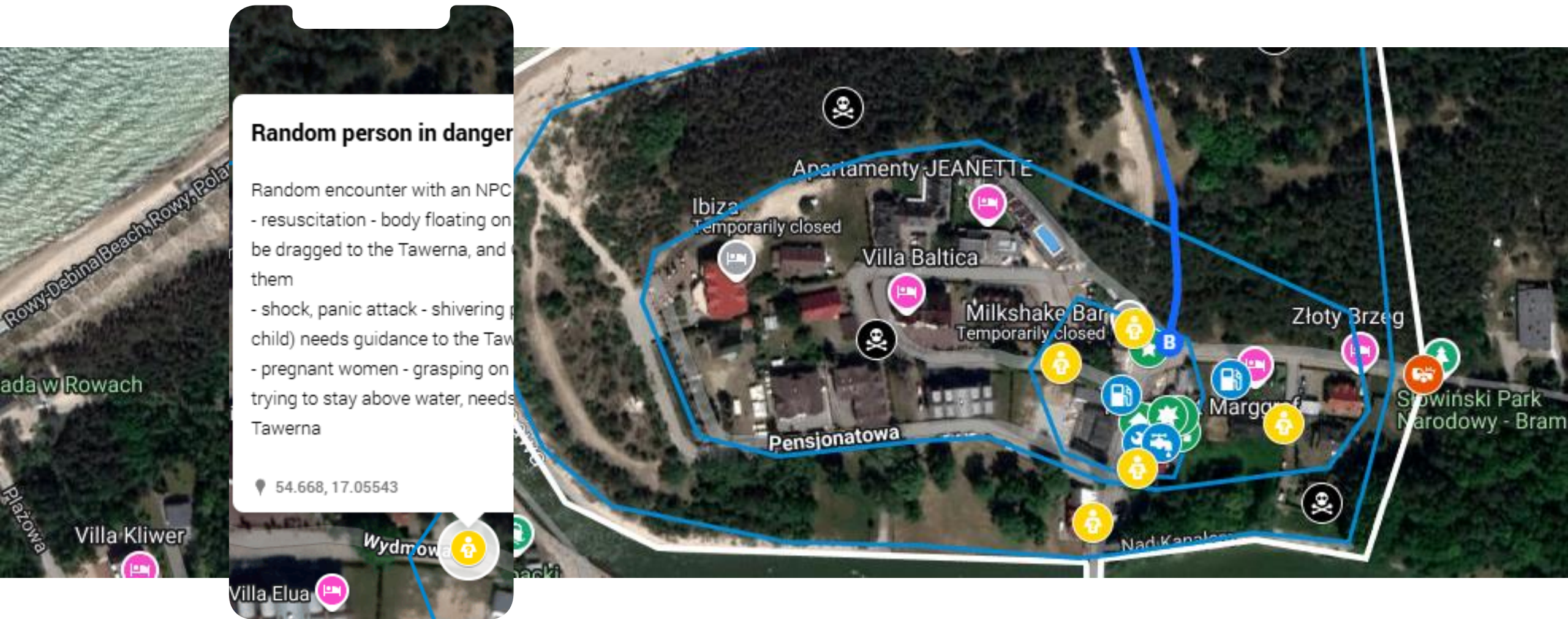
King Tide Flood Scenario







## VR-prepared – King Tide – scenario and missions co-design with first responders



# B-prepared Hackathon

Hybrid hackathon: Online selection round 2025.04.17-07.30; Live finals 2025.08.01-09.30

Four categories

- VR-prepared
- Disastropedia
- IM-prepared
- RU-prepared



Pre-registration form



Example challenge for VR-prepared category: VR optimised, UE5.5.3+ compatible 3D assets based on the King Tide blackout



## Workshop objectives and participant tasks

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1. Scenarios and missions
  1. In Forest Fire and King Tide scenario, if you as first responder could send three SMSs (max. 200 characters each) to the people inside the scenario, what those would be?
  2. In Forest Fire and King Tide scenario, based on your experience, how much time the civilians in the simulations have to escape?
2. VR experience
  1. Who did not try VR experience before, try a published VR experience on one of the headsets.
  2. Who is familiar with VR, check the video on VR-prepared.
  3. Who is familiar with game development, check the sandbox client of VR-prepared („Garage”)
3. Disastropedia - Join with other participants and resolve the „Treasure Hunt” exercise on Disastropedia together.

# Disastropedia Treasure Hunt

1. *Regrettably, the turn of events resulted in you needing a new crew and a new ship - Log in or register to Disastropedia to enter the local tavern and start recruiting.*
2. *A drink for everyone! A new Captain is recruiting! - Publish a post on newsfeed saying that you are recruiting a crew for a treasure hunt! Add #harbormaster tag to your post to give a heads-up to your friend, the harbormaster!*
3. *Hear the new Captain! - Seamen signing up as your crew have to log in or register too and like and comment your post.*
4. *A seaworthy vessel - Check your emails for the harbormaster's invitation (my notifications). (Some browsers may need relog.) Search for the space with the name "Thessaloniki Harbor". Create a page on this space, this will be your ship. Give it a great name, add a description and raise your flag by adding a banner picture to the page.*
5. *Boarding certificates - Create a text, rich text or html block on the page listing your crew.*
6. *There she goes! - Set sail by sharing the page in a Disastropedia post!*





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disaster preparedness**



**THANK YOU FOR YOUR ATTENTION!**