Project name and abbreviation: first RESponder-Centered support toolkit for operating in adverse and infrastrUcture-less EnviRonments (RESCUER).
Programme: Horizon 2020.
Project duration: 1 July 2021 - 30 June 2024.
Budget: € 6 984 803,75.

RESCUER in a nutshell:

RESCUER aims to design and develop a First-Responder-centered technology toolkit that will empower the next generation of First Responders (FR) by enhancing their operational capacity and safety, specifically in adverse conditions, both environmental and infrastructure- wise.

Adopting the "HERO" (enHanced nEw eRa first respOnder) concept, RESCUER is developing a toolkit offering:

- Sense augmentation (robust vision modules for canceling of adverse weather and environmental conditions, exploiting the benefits of Artificial Intelligence and Deep Learning).
- Precise and infrastructure-less self-positioning (Visual ability to accurately identify FR's location in any type of environment including commercial or residential buildings and underground places, like mines, subway systems, caves, etc., in real time.
- Cognitive support and multi-sense AR interfaces (specialized health monitoring systems able to keep track of FR's vital signs and constantly assess their cognitive state to prevent risky behaviors and always operate in optimal psychophysical conditions).
- Robust ad-hoc intra-team communications for both verbal and data exchanges (ad hoc communication network – the exchange of data and interaction between modules of the AR, assuming that no communications infrastructure exists).

RESCUER also plans to introduce the capability of extracting environment information "in situ and infrastructure-wise.

The ultimate goal of RESCUER is to introduce the next generation of FRs, who will be better protected, connected, and situationally aware, with enhanced operational capacity and able to efficiently operate in infrastructure-less environments without power and a communications network.

Tools for augmenting senses, self-localization, cognitive load balancing, and situational awareness are selected and developed for the second round of testing. Tailored training is almost ready for use.

Pre-pilot session has completed in different adverse conditions (snow and frost in more than 2300 m above the sea level, abandoned military bunker, tunnel including dark and smoke) within the premises of Modane's (Savoy) fire and rescue service on the beginning of April 2023.

More information about the project: https://rescuerproject.eu/.
More information on CORDIS: https://cordis.europa.eu/project/id/101021836.