

RESCUER

NEWSLETTER # 1

IN THIS ISSUE

- 03 INTRODUCTION
- 04 FIRST 6 MONTHS AND PROJECT MILESTONES
- 05 RESCUER MEETINGS
- 06 NEWS & UPDATES
- 07 RESCUER AT THE PSCE CONFERENCE

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.



First responders (FRs) - medics, firefighters, law enforcement, civil protection - are society's primary force towards disaster resilience. They save lives, prevent the spread of panic and minimize the effects of the increasing number of disasters that Europe is experiencing. At the same time, FRs experience extreme occupational health and safety risks, including injuries or fatal accidents, musculoskeletal as well as other serious problems. Therefore, **our society needs to equip public safety practitioners with those tools needed to ensure both their own safety, and the safety of those they are protecting**, increasing their operational efficacy. RESCUER project aims to offer a modern, technologically advanced toolkit to FRs that enables timely and effective disaster response, able to reduce FRs' health and safety risks.

This is the first issue of the RESCUER project's newsletter, in which we are pleased to welcome you and present the RESCUER project.

Follow us for more news and updates about RESCUER



@H2020Rescuer



@h2020_rescuer



@h2020_rescuer



RESCUER will identify and address the challenges that FRs encounter - both as an **individual** and as a **team member** - in a hostile environment, **without infrastructure**, and under **adverse conditions**. RESCUER toolkit establishes the concept of the **enHanced nEw eRa first respOnder (HERO)** that will be based on the following pillars: 1) **Sense augmentation**, 2) **Precise self-positioning**, 3) **Cognitive support** and 4) **Robust ad-hoc intra-team communications**.

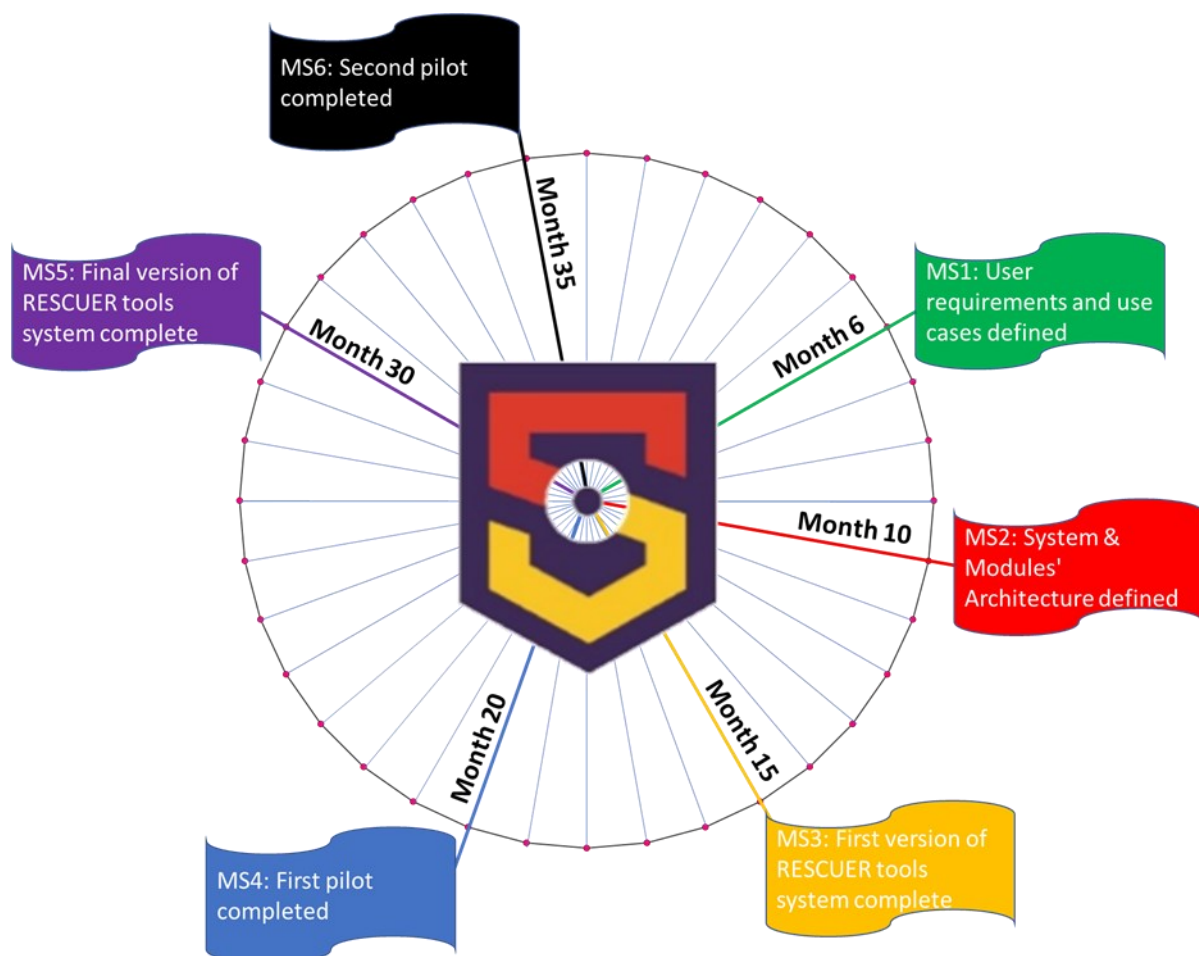
RESCUER will also provide the capacity to extract environment information "in situ and infrastructure-wise".



During the project's first 6 months, the effort was focused on the first milestone: identifying user requirements and defining use-case scenarios where RESCUER's tools could be tested and evaluated. A first user requirements consensus has been achieved during the project's first General Assembly (GA) in Madrid, December 15-16, 2021, in which first components of RESCUER tools have been demonstrated (i.e. HoloLens, wristband, gas and radar sensors, tactile modules, etc).



Focus groups involving different competences (FRs, technology, cognition, psychology) have been established collaborating towards the different challenges RESCUER imposes. The use of diverse technologies in the project dictates a common legal framework adopted by the consortium during research and implementation. This framework provides guidance for tentative privacy and data protection issues which might arise during the project.



RESCUER meetings

Due to the COVID-19 pandemic most communication has been done remotely, over the Internet. However, to establish a productive human network and adequate collaboration among partners, a hybrid, physical-remote meeting has been held in Madrid in December 2021. Up to now, two plenary meetings have been accomplished.

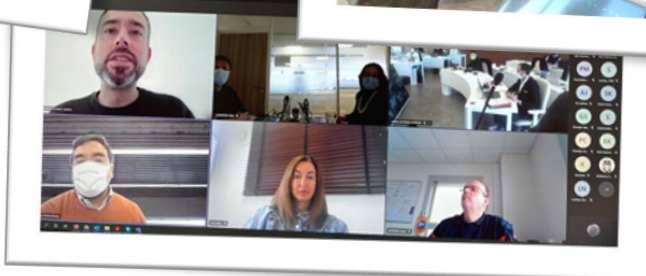
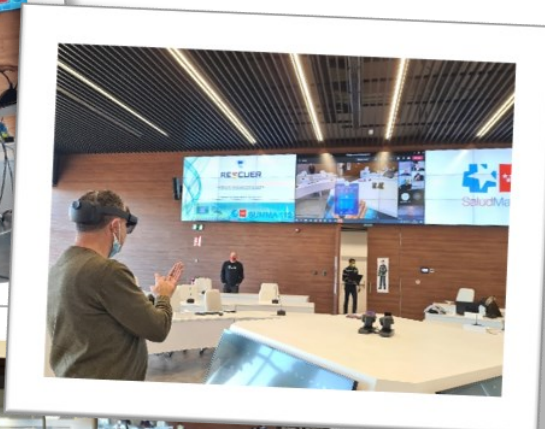
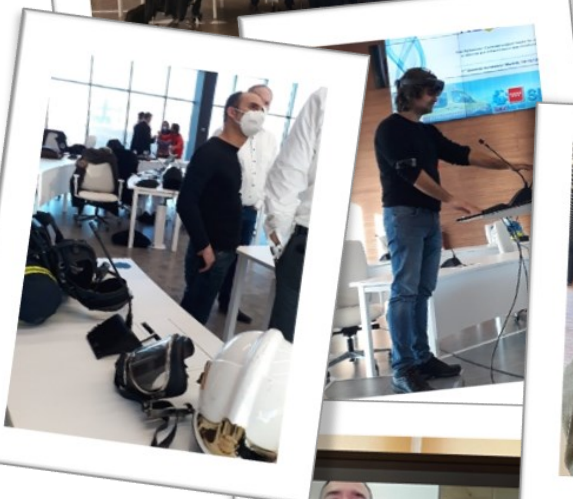
RESCUER kickoff meeting

RESCUER Kick-Off meeting was held on 13th - 14th of July 2021 virtually due to COVID-19 restrictions. For the first time more than 20 partners came together in an attempt to give the tools to our First Responder Heroes, to become Superheroes!

*RESCUER 1st General Assembly*

On 15th and 16th of December 2021 a hybrid meeting was held in Madrid, to discuss the progress of the project. Face to face

meeting provided the participants with the opportunity to present equipment and first components real time, since the beginning of the project.



News & Updates

Meet our Heroes

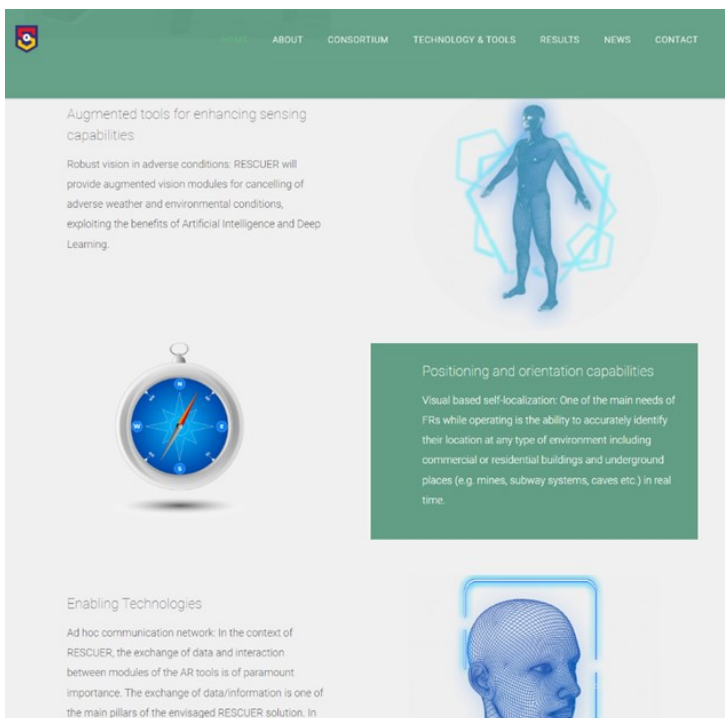


RESCUER has now its own ambassadors. Meet Bellatrix and Theseus, the two RESCUER protagonists that will lead the project dissemination of results, and make RESCUER innovative technologies public. The two heroes will help us disseminate our work and results in social media and major events.

Learn more about the project

In RESCUER, we feel that we can really make a difference and give a set of valuable tools to the First Responders community to support them in their efforts to save and protect human lives.

The project's web site (<https://rescuerproject.eu/>) is among the many different dissemination channels we will use. The website features information about the project and the participating partners, the concept behind the *enHanced nEw eRa first respOnder (HERO)* and how we plan to implement it, together with news and project results.



In 2022 the web site will be enhanced with RESCUER 360 section providing comprehensive information about similar projects, an online technology magazine (especially designed for mobile and tablet devices), a state-of-the-art technologies for supporting First Responders and a calendar of events.

is



RESCUER at the PSCE Conference, Brussels

On December 1st, 2021, the community of public safety and civil protection gathered at the Public Safety Communications Europe (PSCE) Conference in Brussels. PSCE is an independent forum specializing in civil and public security issues, where representatives of user organizations, industry and research institutes meet, discuss and exchange ideas and best practices, as well as develop strategic documents for policy makers. This year, the Conference was focused on 3 core challenges faced by the EU civil security community: How can AI enhance first responders' situation awareness? How to improve preparedness? What are the solutions for emergency communications?



At this occasion, ENSOSP had the opportunity to present the range of EU-funded projects in which the Academy is involved and more specifically the projects aiming at enhancing First Responders' safety and operational capabilities, namely the RESCUER project.

is

Want to know more about RESCUER? Contact us.

Project Manager Federico Alvarez, Universidad Politecnica Madrid, Spain: fag@gatv.ssr.upm.es

Technical Manager Dimitrios Zarpalas, CERTH, Greece: zarpalas@iti.gr

Innovation and Exploitation Manager Emilia Gugliandolo, ENGINEERING, Italy: emilia.gugliandolo@eng.it

Dissemination Manager Charalampos Z. Patrikakis, University of West Attica, Greece: bpatr@uniwa.gr



RESCUER

Turning our
First Responder
Heroes into
Superheroes

// www.rescuerproject.eu //

SIGNALS



COLLECTION

- Enhanced hearing
- Robust vision in adverse conditions
- Augmented olfaction
- Remote touch
- Radar sensing

TRANSDUCTION

- Augmented sense collection and transduction
- Smart sensing framework

PROCESSING

- Situation-aware information prioritization
- Cognitive load balancing
- Biosignals monitoring

COMMUNICATION



- Ad hoc FRs communication
- Seamless communication with Command & control

PERCEPTION



- Augmented reality interfaces
- Long term monitoring of exposure to hazardous environment



- Black box for buildings



- Perception of wireless devices for victim localization



- Signs of life detection
- Visual based self-localization
- Inertial based localization
- Galileo- assisted localization

@H2020Rescuer

@h2020_rescuer

@h2020_rescuer

PARTNERS:



101021836 - RESCUER - H2020-SU-SEC-2018-2019-2020 / H2020-SU-SEC-2020

Funded by the Horizon 2020 Framework programme of the European Union

Project funded by: European Commission Research Executive Agency (REA)