

## Sub-Use case 6.1:

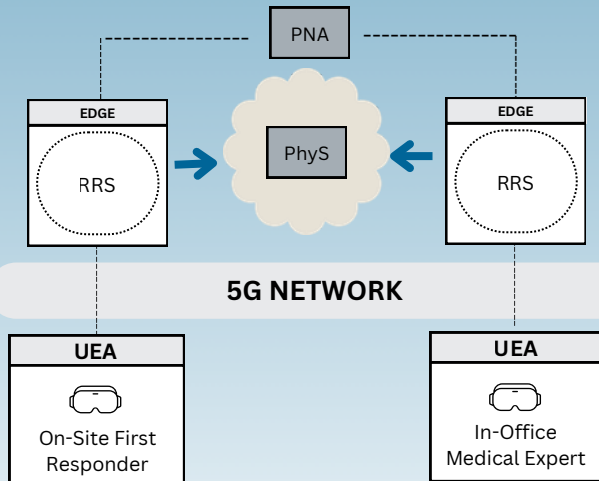
### On-site XR-assisted emergency surgical operations

*XR-based technology to assist pre-hospital treatment skills of first-aid responders on disaster sites through connection with in-office medical experts*

PPDR



#### FIDAL



**UEA:** User Equipment Application; **RRS:** Remote Rendering Service; **PhyS:** Physics Server

#### THE LARGE SCALE TRIAL



24 April 2025



University of Patras



Hellenic Rescue Team

The large-scale trial simulated an emergency situation where bystanders found unconscious civilians. Nearby Automatic External Defibrillator stations were equipped with AR glasses connected via 5G to hospital-based medical personnel. Bystanders received real-time visual and audio guidance to perform resuscitation, while medical experts viewed a VR reconstruction of the scene to provide precise instructions. The use of 5G ensured low-latency video transmission, allowing rapid processing, seamless collaboration, and timely, high-quality remote medical assistance in critical, time-sensitive situations.

#### THE OBJECTIVE

- Testing the KPIs (network stress, throughput, bandwidth allocation, latency, measuring frames per second), KQIs, jittery level and battery consumption
- Assessment of the user experience through UX questionnaires

# Key Value Indicators (KVI) in Sub-Use Case 6.1

## MITIGATION STRATEGIES

Reduced energy use in use case configuration and impact

## INCLUSIVITY

Use-cases reflect diversity of local communities they should benefit

## TRUSTWORTHY

- Create dependability of service for potential user
- Able to perform the session successfully, no matter their location

## SAFETY

- The ability to use tools while keeping a focus on the final goals (saving lives and preventing harms)
- Citizens feeling safe

## DIGITAL INCLUSIVITY

Improve ability of all to participate in and benefit from a service.

## FLEXIBILITY

Optimal Resource Allocation

## PPDR SAFETY

Improve practitioners' ability to perform and make necessary decisions.

## SECURITY

Security matches sensitive nature of user and data

## ENERGY EFFICIENCY

Reduced energy use in use case configuration and impact

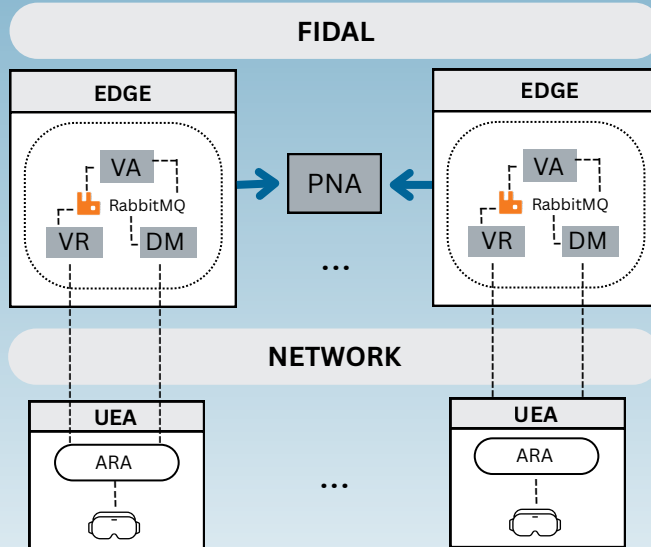


## Sub-Use case 6.2:

### Augmented Reality for Enhancing Situational Awareness

*AR-based technology to provide instant data, improving situational awareness and enabling safer, smarter decisions for Law Enforcement Agents*

PPDR



**VR:** Video Receiver, **VA:** Video Analyzer, **DM:** Decision Maker, **ARA:** Augmented Reality Video Annotator

## THE LARGE SCALE TRIAL



24 April 2025



University of Patras



Hellenic Rescue Team

The large-scale trial of sub-use case 6.2 took place at the University of Patras. The trial simulated a major car crash. The Hellenic Rescue Team (HRT) used Augmented Reality glasses to support their response. The glasses captured live video, and AI analyzed the scene in real-time, highlighting each injured person with color-coded overlays, red, yellow, or black, and annotations like “critical condition” over each person. Using 5G, this information was quickly processed and sent back to the rescuers, helping them see who needed urgent help first. This technology gave the team faster, clearer awareness in a high-stress situation.

## THE OBJECTIVE

- Testing the KPIs (network stress, throughput, bandwidth allocation, latency, measuring frames per second), KQIs, jittery level and battery consumption
- Assessment of the user experience through UX questionnaires

# Key Value Indicators (KVI) in sub-Use Case 6.2

## ENERGY EFFICIENCY

Reduced energy use in use case configuration and impact

## INCLUSIVITY/ REPRESENTATIVE

Use-cases reflect diversity of local communities they should benefit

## TRUSTWORTHY

- Create dependability of service for potential user
- Able to perform the session successfully, no matter their location

## SAFETY

- The ability to use tools while keeping a focus on the final goals (saving lives and preventing harms)
- Citizens feeling safe

## DIGITAL INCLUSIVITY

Improve ability of all to participate in and benefit from a service.

## FLEXIBILITY

Optimal Resource Allocation

## PROTECTION OF HUMAN

Greater protection of citizens by better understanding, seeing, and communicating about the kinds of hazards and vulnerabilities they face.

## SECURITY

Security matches sensitive nature of user and data