fidal field trials beyond 5G

FIDAL PROJECT
OPEN CALL 1 PRESENTATION

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FIDAL PROJECT

Co-funded by the European Union

6GSNS

GrantAgreement N. 101096146

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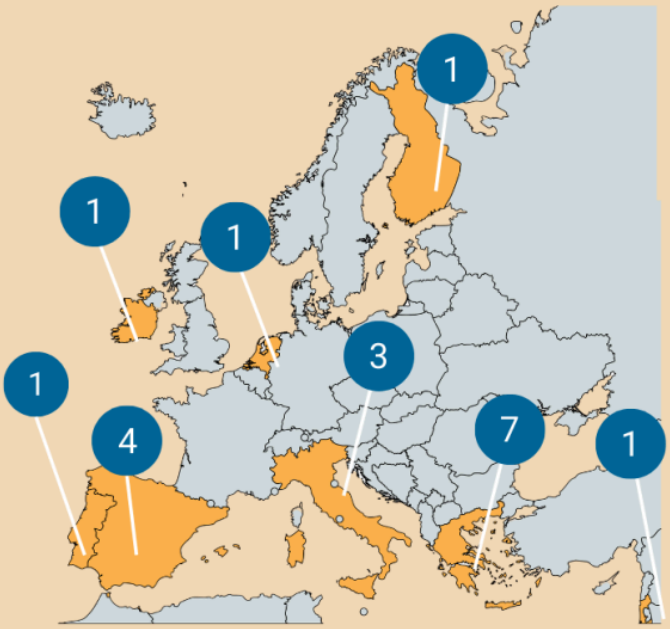
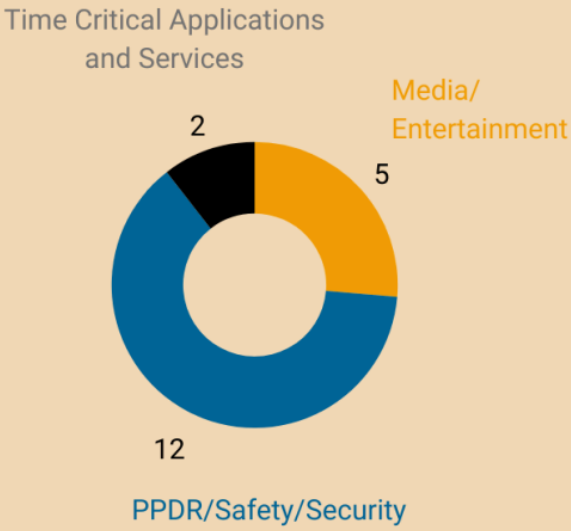
Open Call 1

19 WINNERS

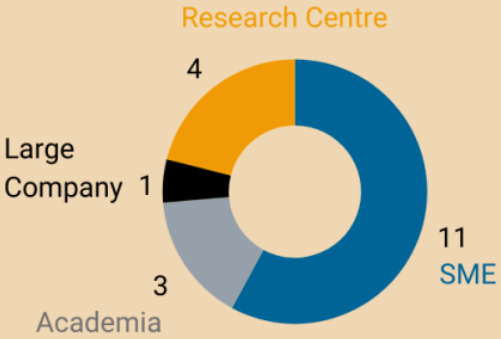
Represented countries



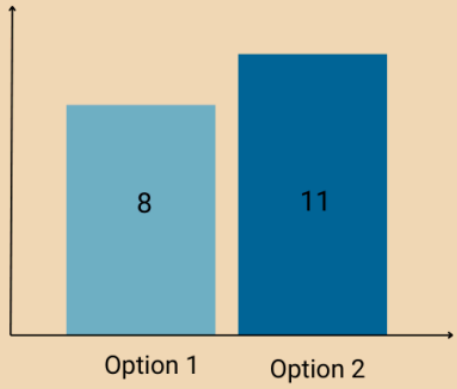
Vertical Distribution



Organizations Type



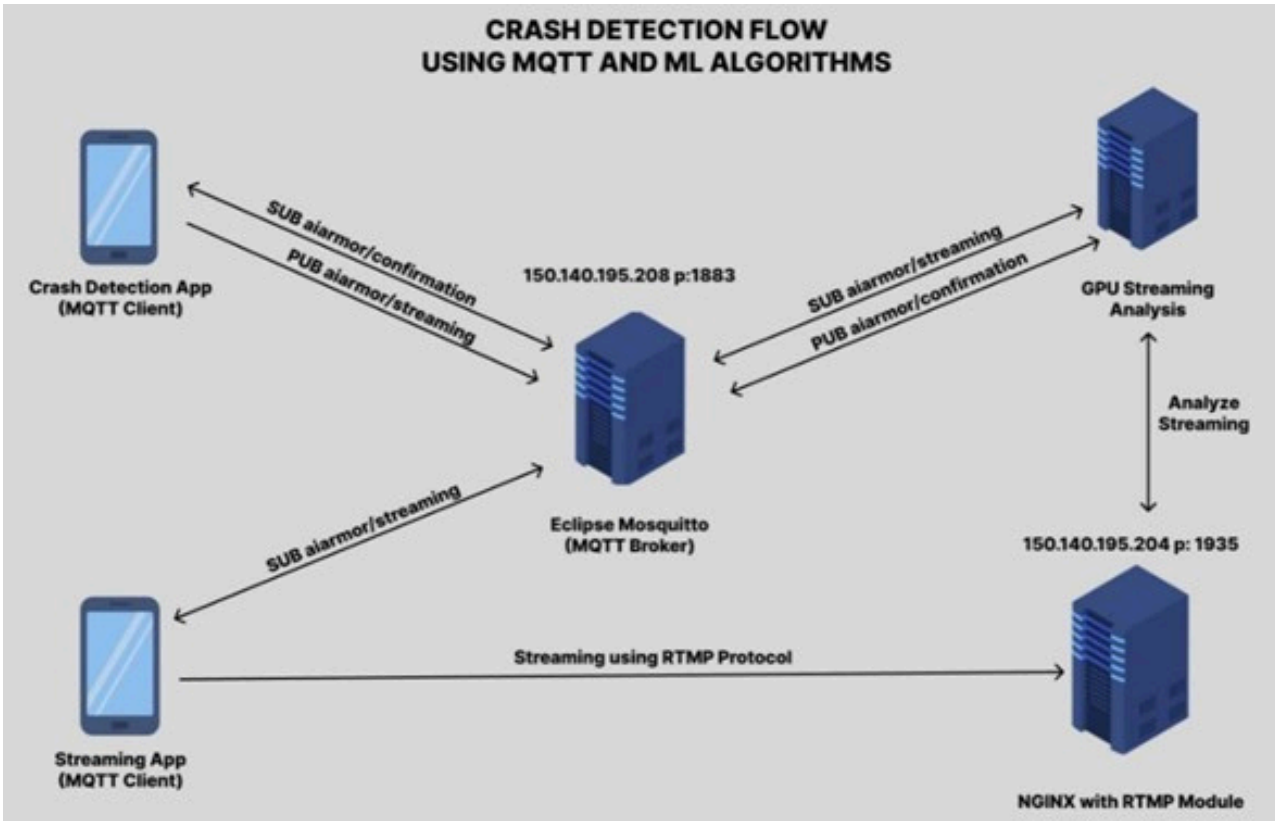
Options Distribution



Option 1= funding up to EUR 150.000
Option 2 = funding up to EUR 250.000

Patras Testbed

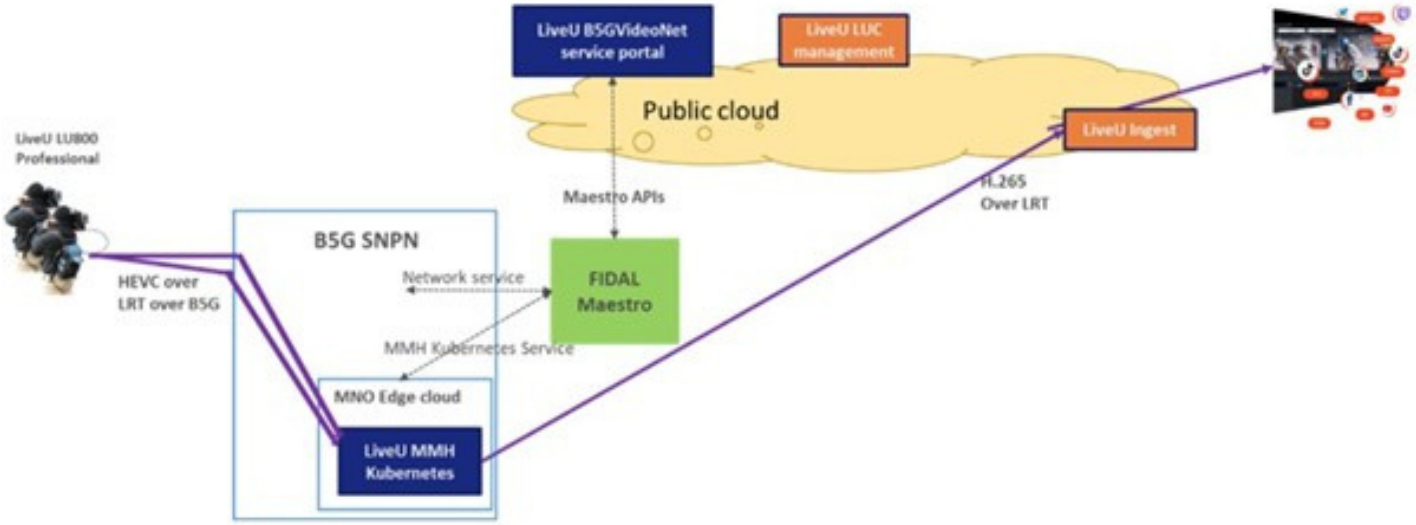
AI ARMORS



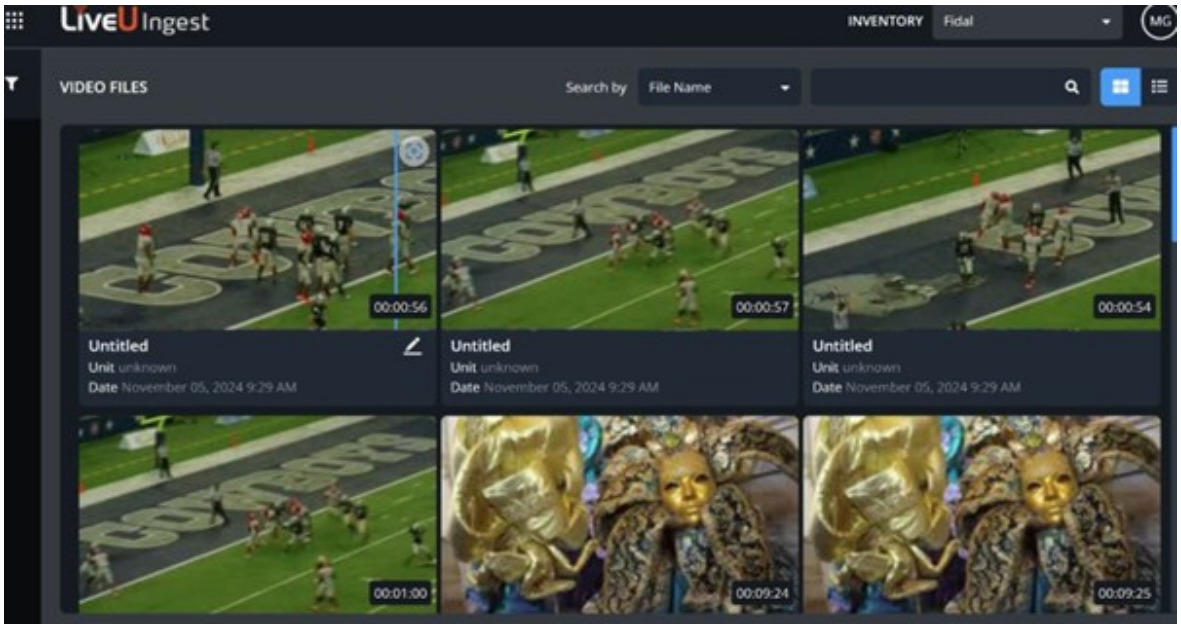
AI Armors leverages 5G and Cellular V2X (C-V2X)technology to improve road safety by enabling real-timecommunication between vehicles, pedestrians, andinfrastructure. High-end 5G smartphones act as onboardunits and sensors to detect incidents and share timelywarnings. AI and cameras support incident detection andresponse, helping prevent accidents through low-latency,reliable connectivity.

Patras Testbed

B5GVN LiveU

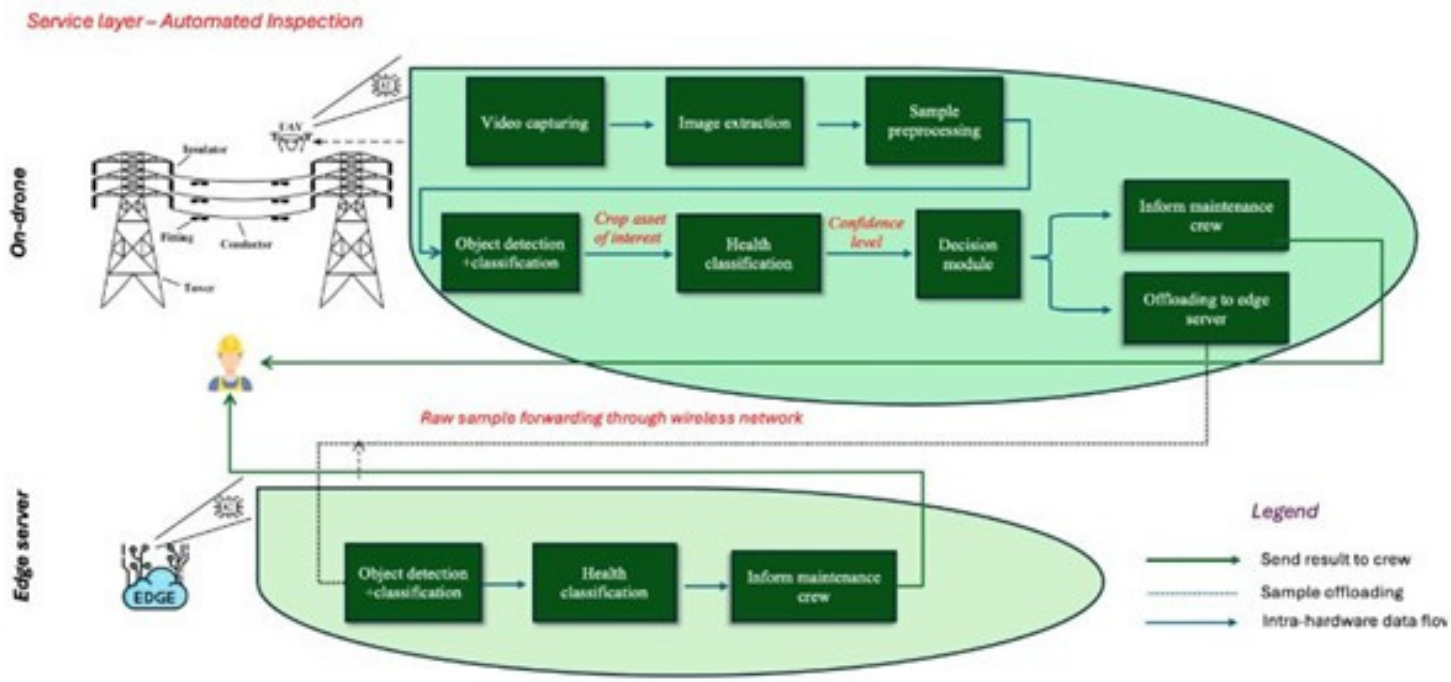


B5GVN use cases belong to outdoor media production ofnews and especially sports and events. They bring intothe workflows the capabilities of advanced 5G networkssuch as private network (SANPN), slices for guaranteedbandwidth, edge computing and network exposure. Alongwith LiveU bonding/multi-link technology and the cloudsolutions, these use cases enhance on-site and off-siteremote production.

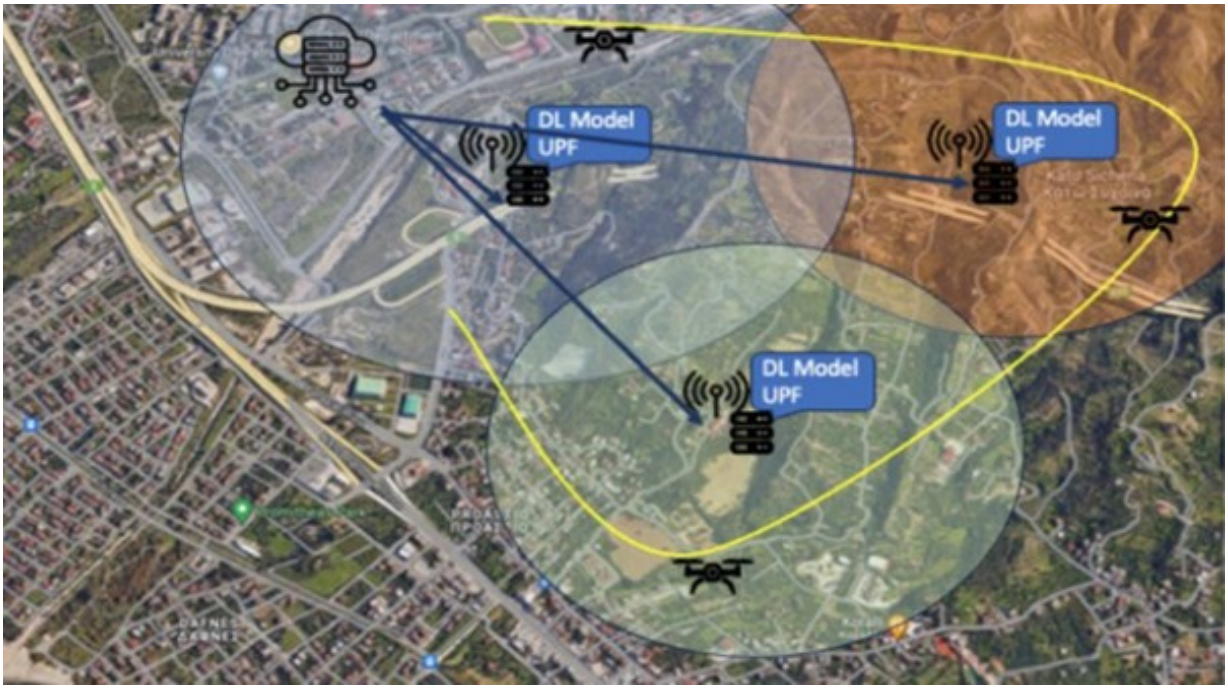


Patras Testbed

DADOLTI

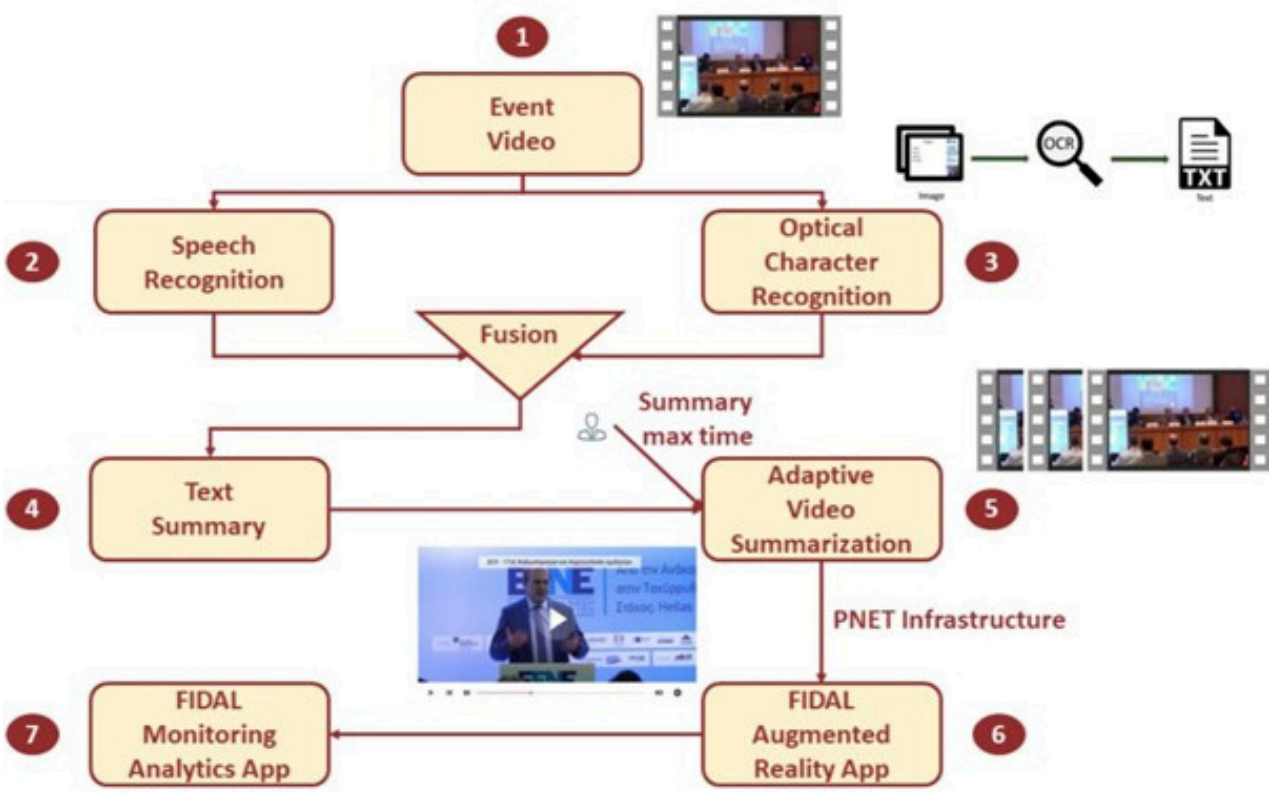


DADOLTI proposed an AI-powered droneinspection service using Hierarchical Inference. A lightweightmodel runs on the drone, while a full model is hosted onedge servers along the drone's route. Leveraging 5Garchitecture and edge computing minimizes latency and datacosts, enabling efficient real-time inspections in remoteareas.

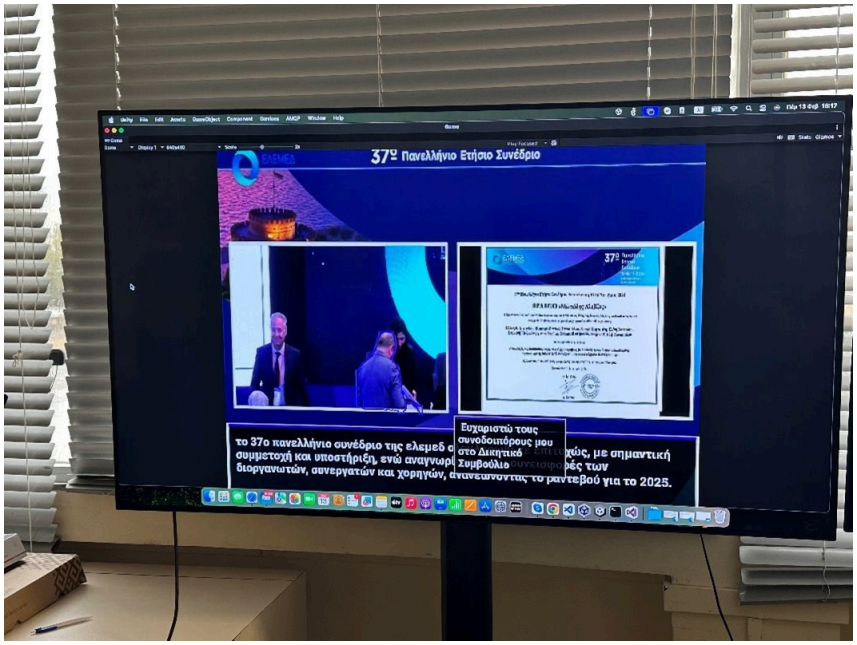


Patras Testbed

VideoGee

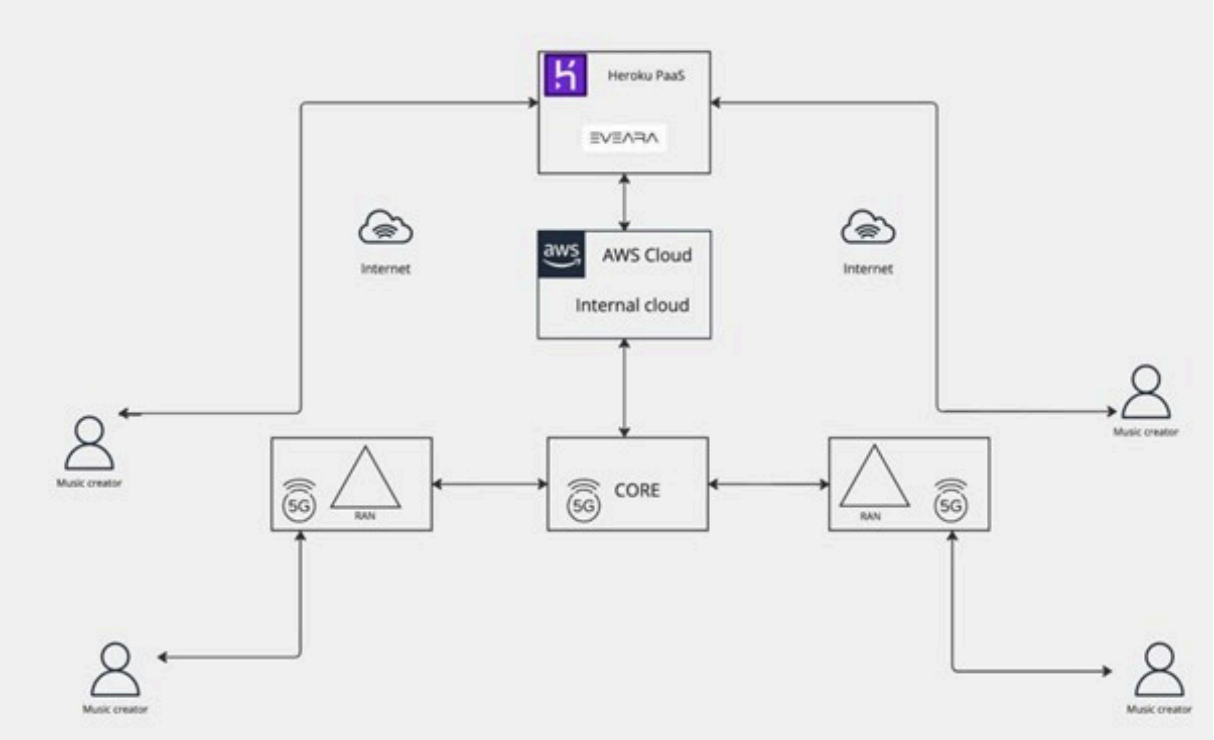


VideoGee enables near real-time, AI-powered videosummarization for LiveMedia's professional eventstreams. Using 5G, it generates personalized summarieswith AR overlays, helping users quickly extract keyinsights. This makes navigating long video content faster,smarter, and more engaging.

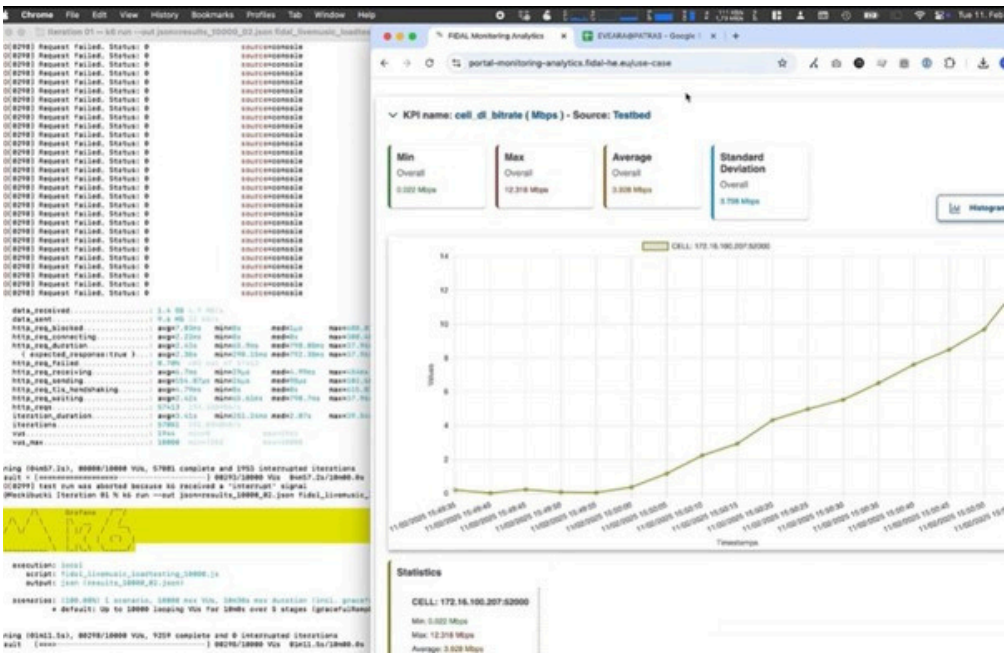


Patras Testbed

EVEARA

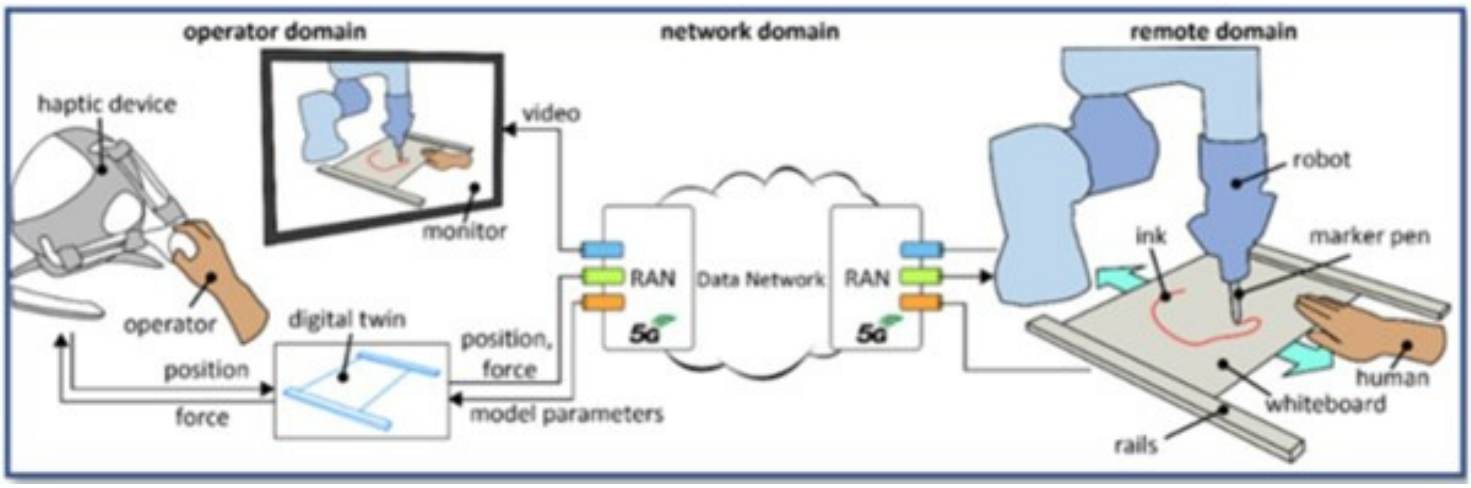


Eveara is seeking to co-create a live music streaming serviceleveraging FIDAL's 5G network for ultra-low latency and high-fidelity audio. This project focuses on real-time, distributedmusic production and co-creation, enabling seamlesscollaboration among artists remotely. The initiative aims toenhance production efficiency, creative outcomes, and userexperience during high-traffic events through 5G's scalabilityand responsiveness.

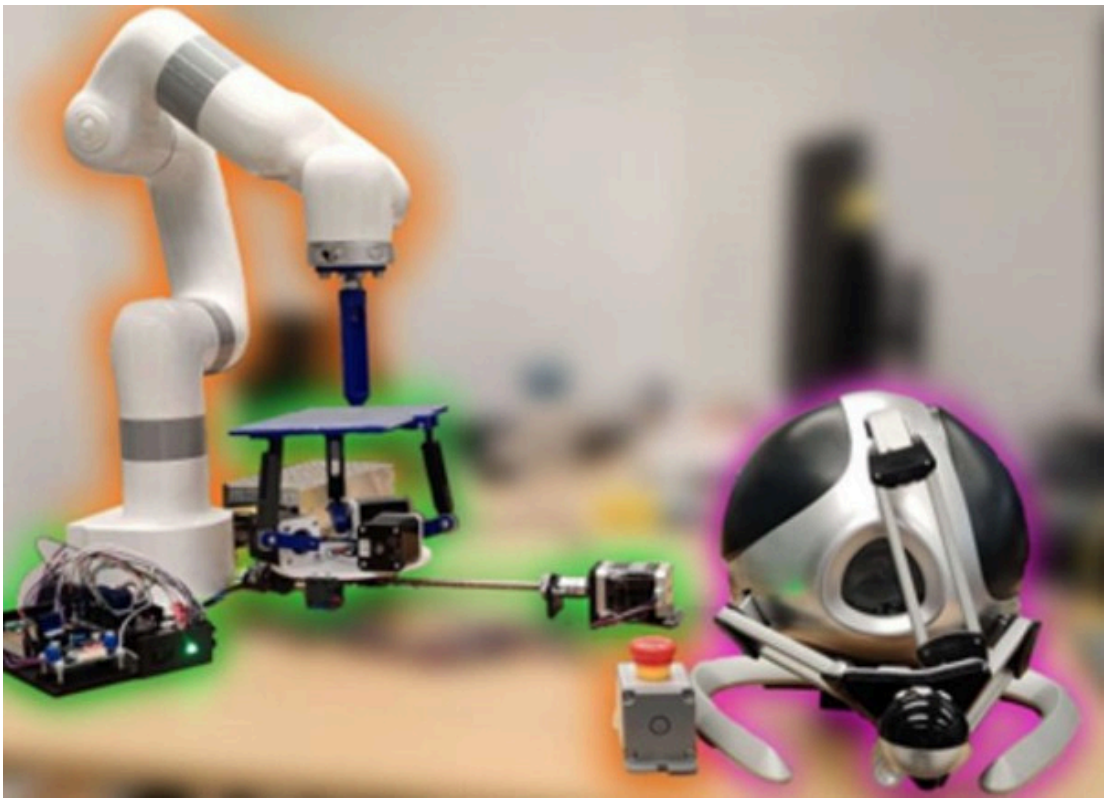


Patras Testbed

TIFI

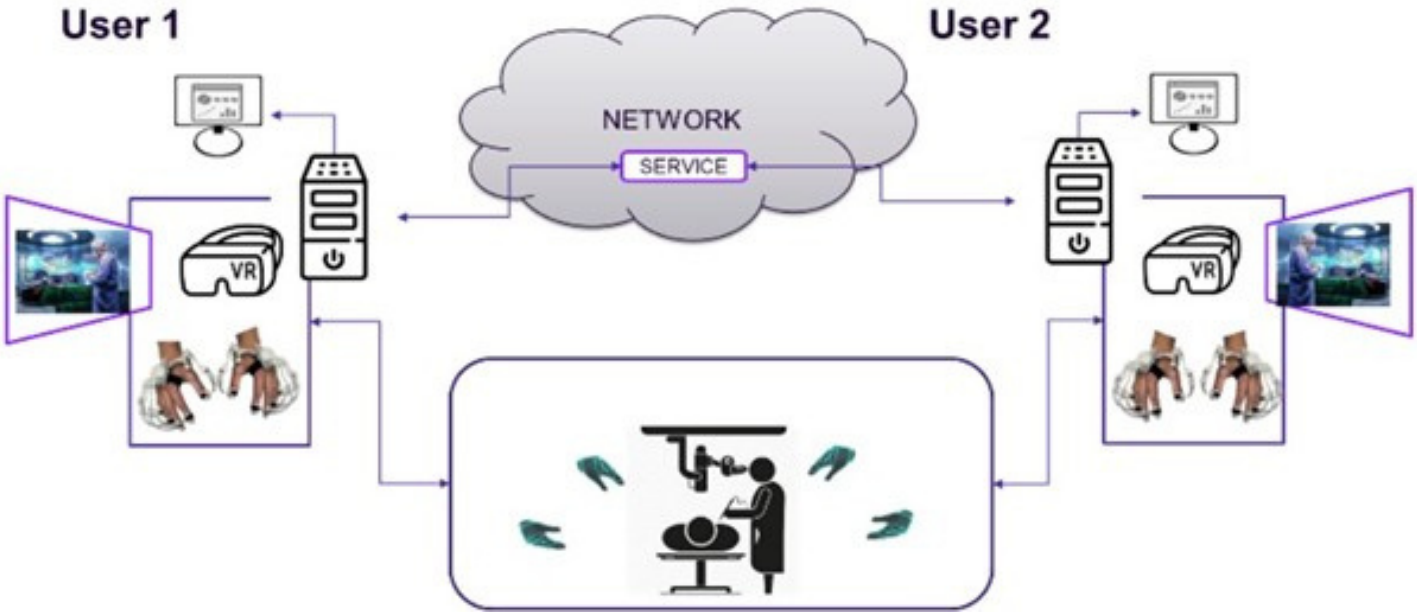


TiFi represents an innovative use case for enabling high-fidelitybilateral teleoperation over long distances using next-generationwireless networks. The core concept involves allowing humanoperators to perform complex physical tasks remotely with thesame precision and quality as if they were physically present.



Patras Testbed

MBBPT



The MBBPT project uses Magos gloves' precise VRhaptic technology to provide realistic, tactile surgicaltraining for procedures like Bakri balloon placement. Bydelivering submillimeter motion tracking and lifelike touchfeedback, it enhances skill development and musclememory. 5G enables low-latency remote collaborationbetween trainees and experts, making training moreimmersive and accessible.

Patras Testbed

5GSMARTDRIVE

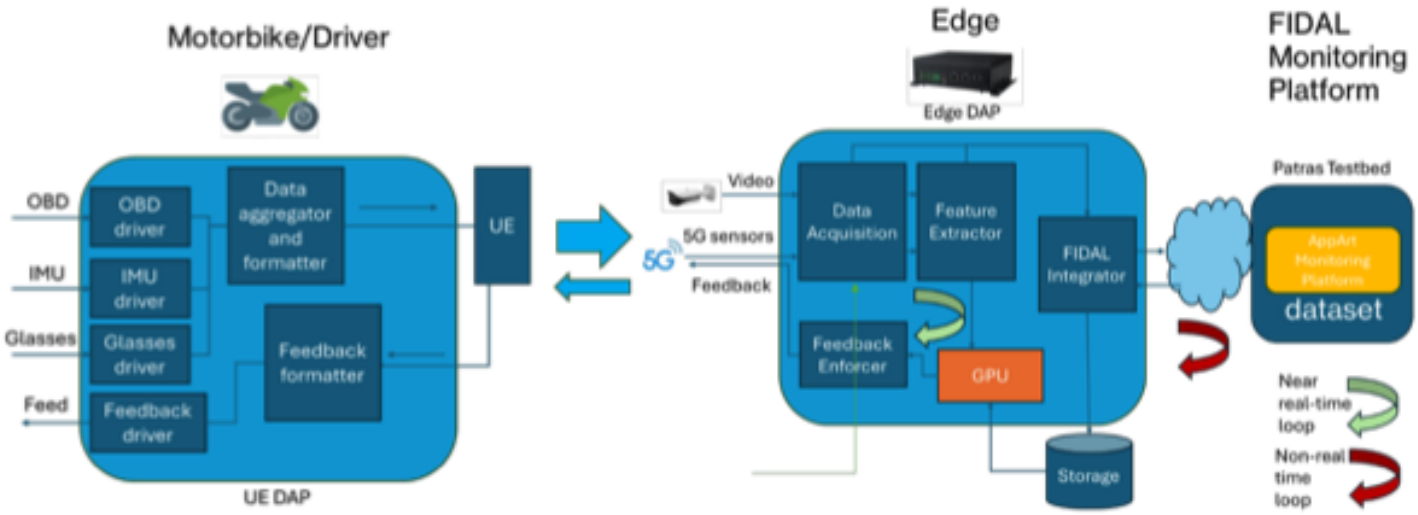
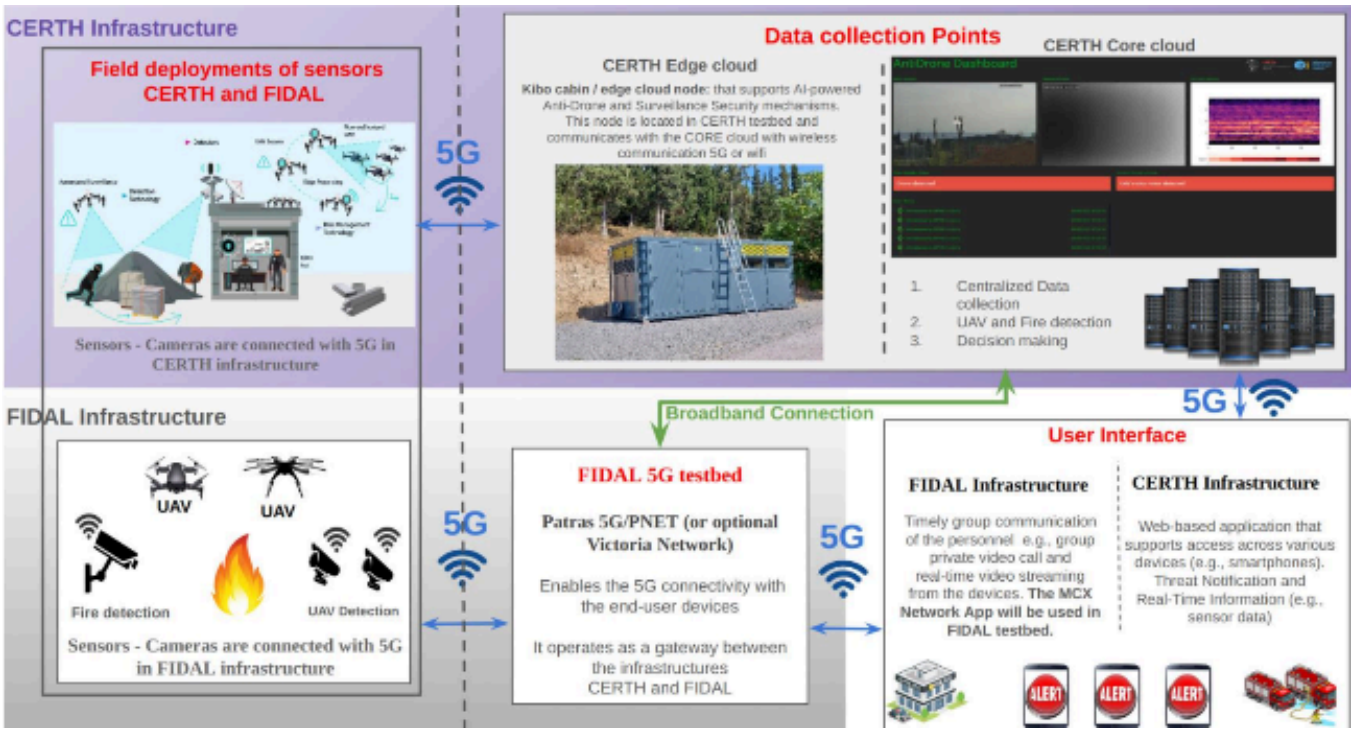


Figure 2 DAP architectural design and modules

The 5G-SmartDriveApp project designed and validated aninnovative AR-based tool providing real-time feedback ondrivers' gaze direction using smart glasses and AI analysisof video streams. Leveraging 5G connectivity for low-latency data transmission to edge servers, the solutionaimed to improve driving behavior and safety, especiallyfor practitioners with learning difficulties. The projectsuccessfully concluded under the recent open call, settingthe foundation for future sensor integrations.

Patras Testbed

SWARMCATCHER



The SwarmCatcher trial successfully demonstrated an AI-powered anti-drone and surveillance platform at CERTH'sfacilities, utilizing 5G connectivity and cloud-nativeinfrastructure. The system integrated multiple sensors withAI-driven threat detection to provide real-time situationalawareness and response for critical infrastructureprotection. The trial validated the platform's effectivenessfor law enforcement and emergency responders,establishing a foundation for future deployments in 6Genvironments

Figure 1 - Conceptual architecture of CERTH Testbed and Anti-Drone sensors (Optical/Thermal cameras, RF detector, Acoustic sensor)

Figure 2 - Anti-Drone Trials in KIBO cabin infrastructure with multiple sensors (CERTH premises)

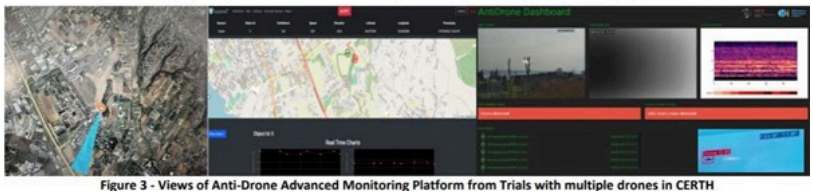
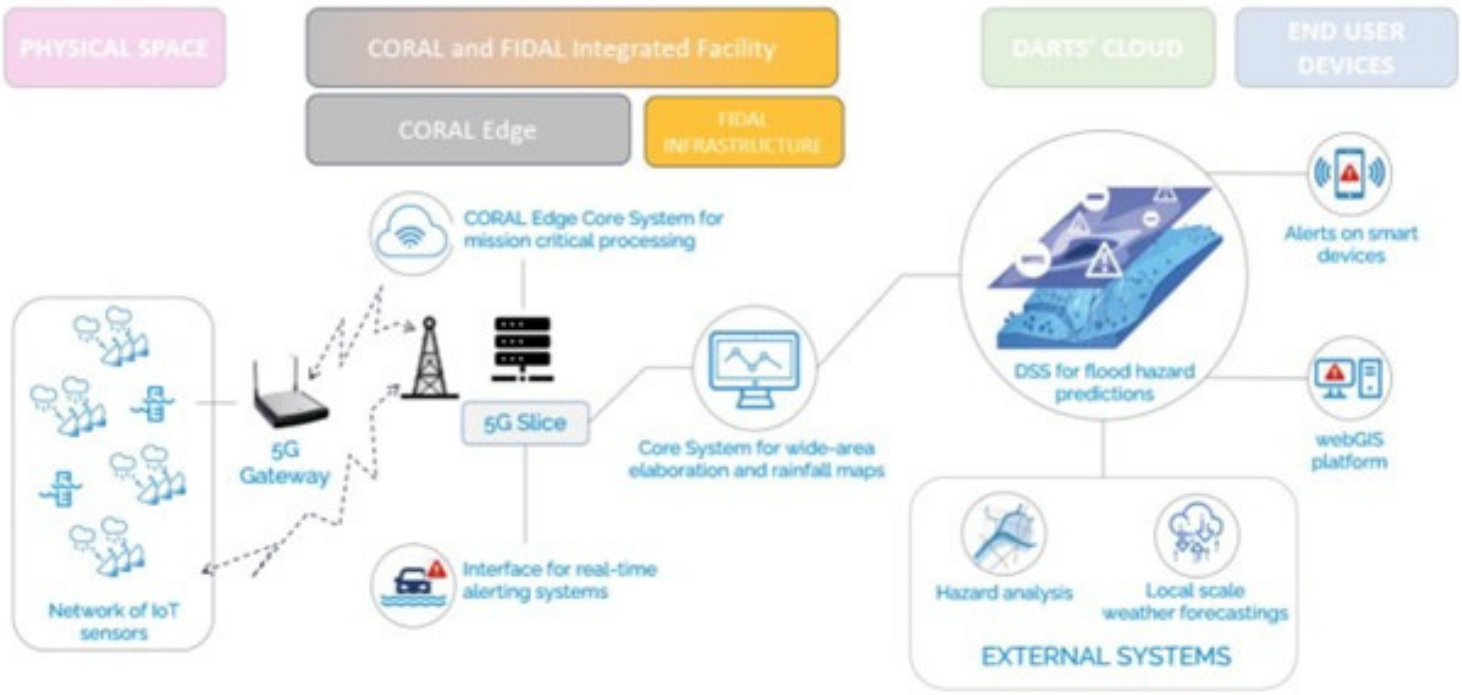


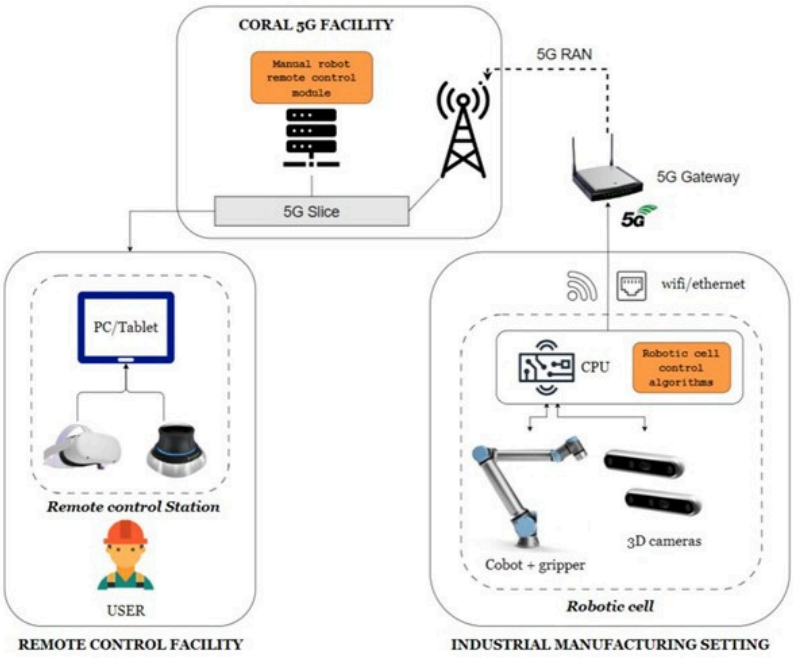
Figure 3 - Views of Anti-Drone Advanced Monitoring Platform from Trials with multiple drones in CERTH

Patras Testbed

CORAL

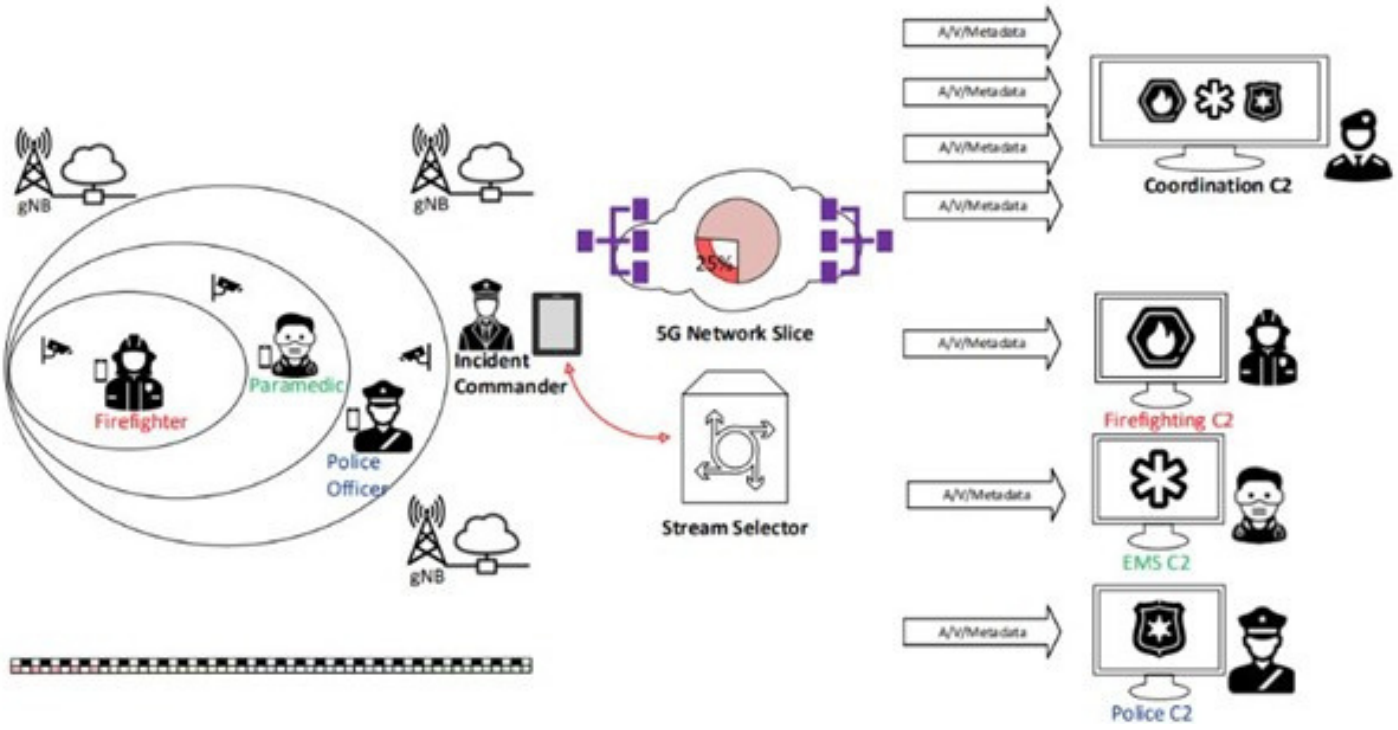


The CORAL project focused on two main use cases:remote robot control for smart warehouses, enhancingflexibility and efficiency via AR interfaces; and a real-timeurban flood alert system using IoT sensors for improvedcivil protection. The trials leverage a dedicated 5G testbedto validate technical performance and societal impact.

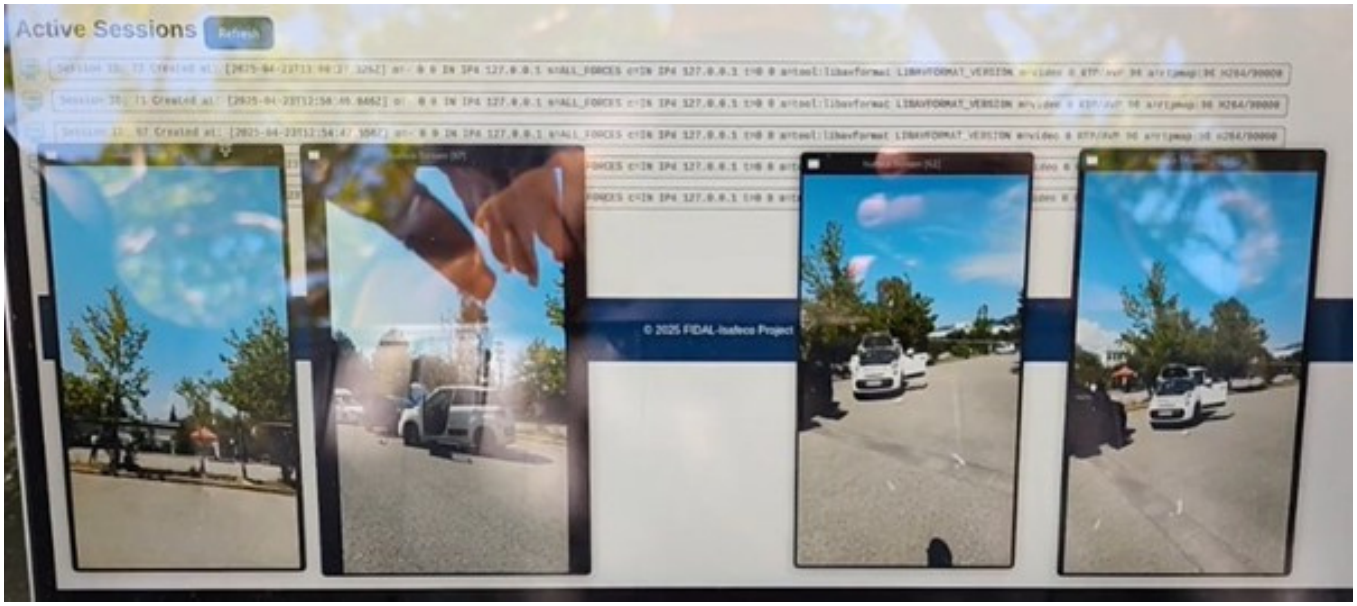


Patras Testbed

ISAFECO

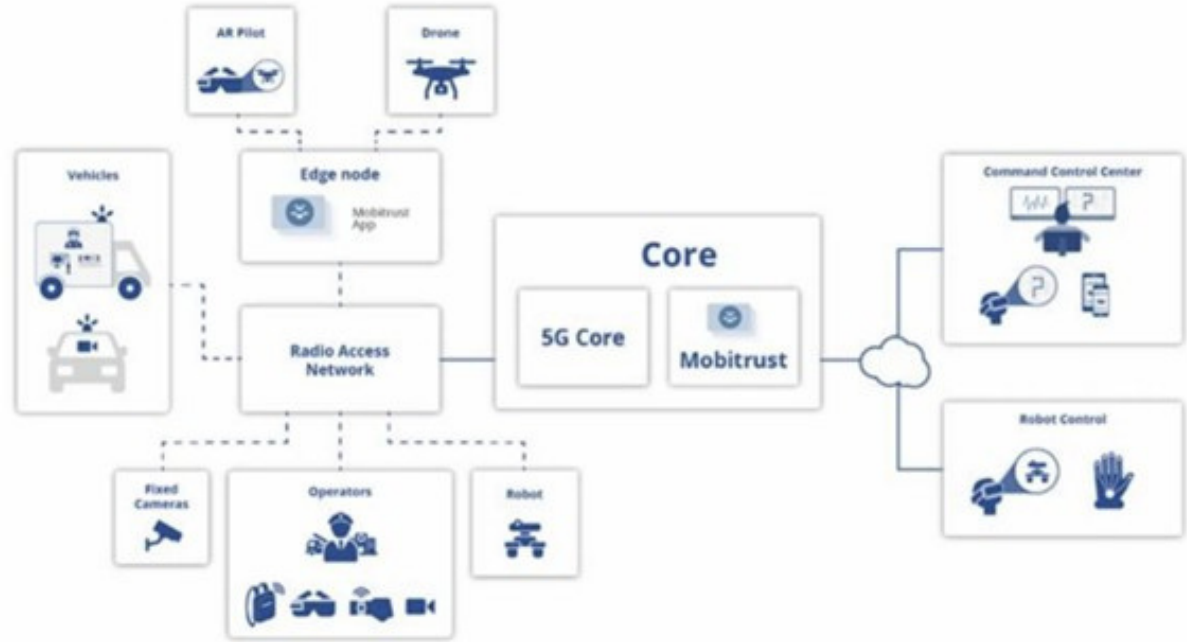


ISAFECO successfully enhances first responders' situational awareness by leveraging 5G and multi-agency video integration. The system improves real-time decision- making, resource management, and coordination, validated through trials at the Patras5G/PNET testbed, leading to more efficient emergency responses.

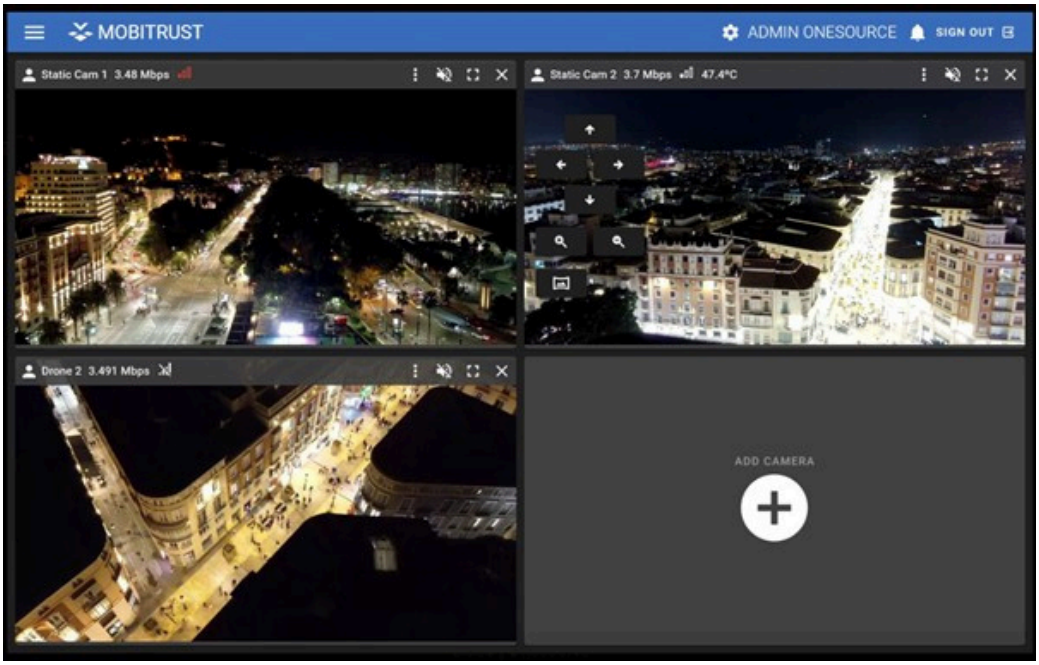


UMA Testbed

B5G-MOBITRUST

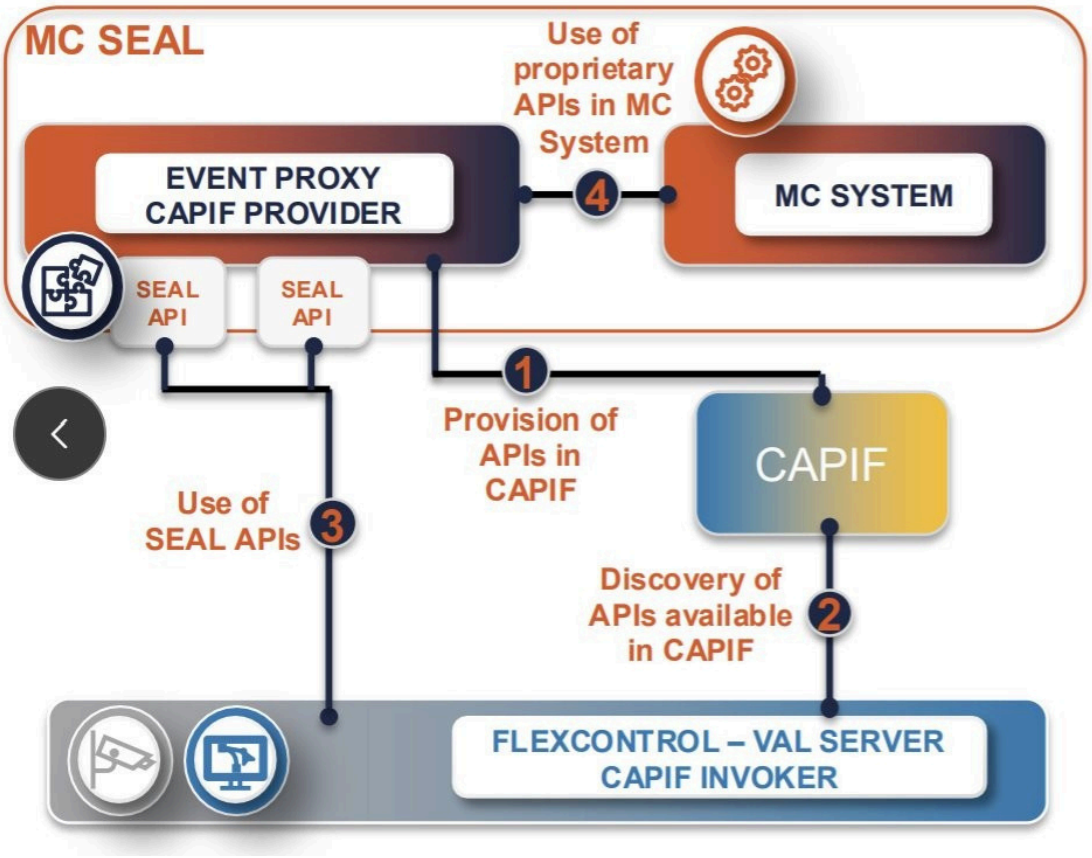


The B5G-MOBITRUST project aims to enhance situational awareness and strengthen public safety operations through the deployment of advanced 5G and beyond-5G (B5G) technologies. Its primary goal is to enable seamless communication and real-time decision-making for police forces and first responders during large-scale public events, addressing key challenges in crowd management, emergency response, and urban security.

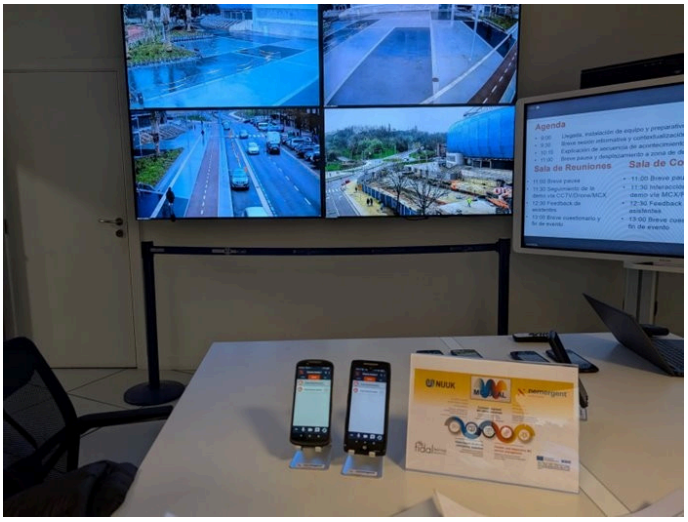


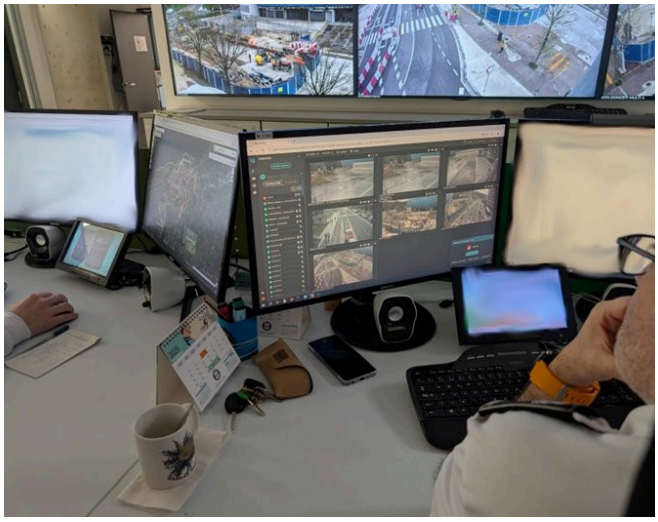
UMA Testbed

MC-SEAL



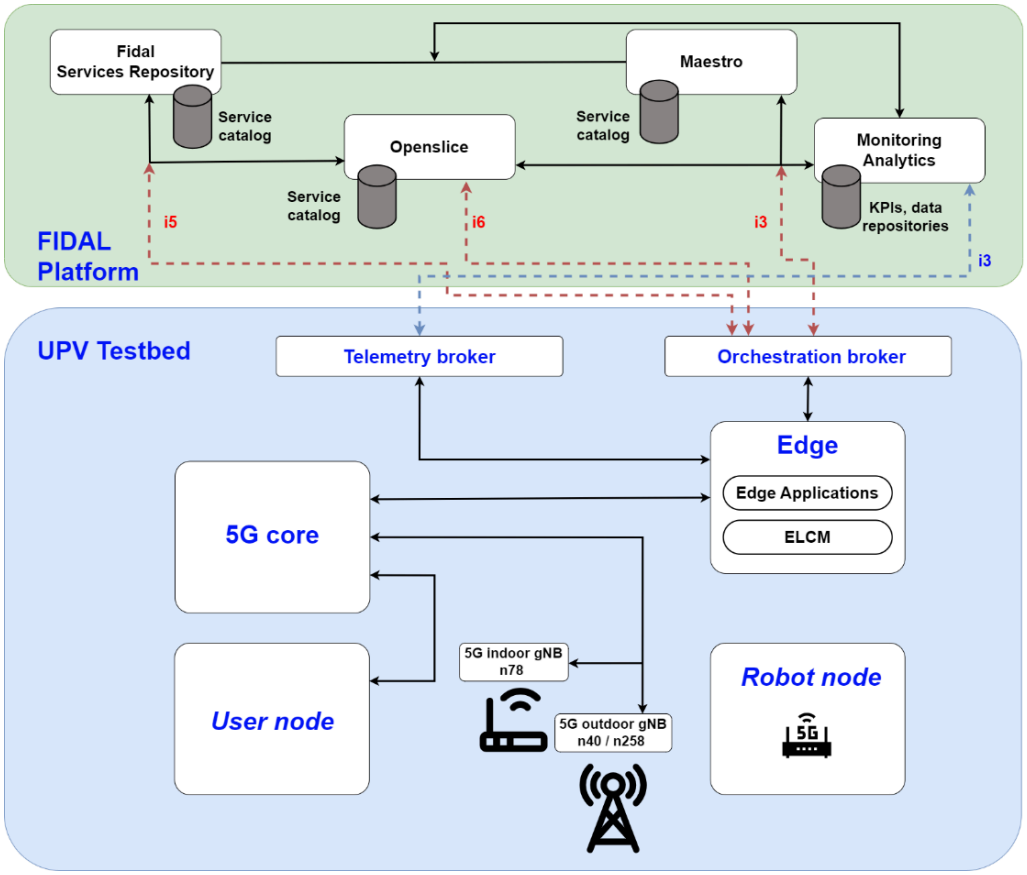
Mission Critical SEAL as enabler of AI-based emergency coordination and decision-making innovatively proposes integrated and open services where different video sources are clustered into a single handler and this way the decision-makers have full context information to process and act. These actions build on the MC-SEAL substrateby consuming MC services in a 3GPP-compliant but simplified way, democratising the use of these services and promoting integration of different verticals.





UMA Testbed

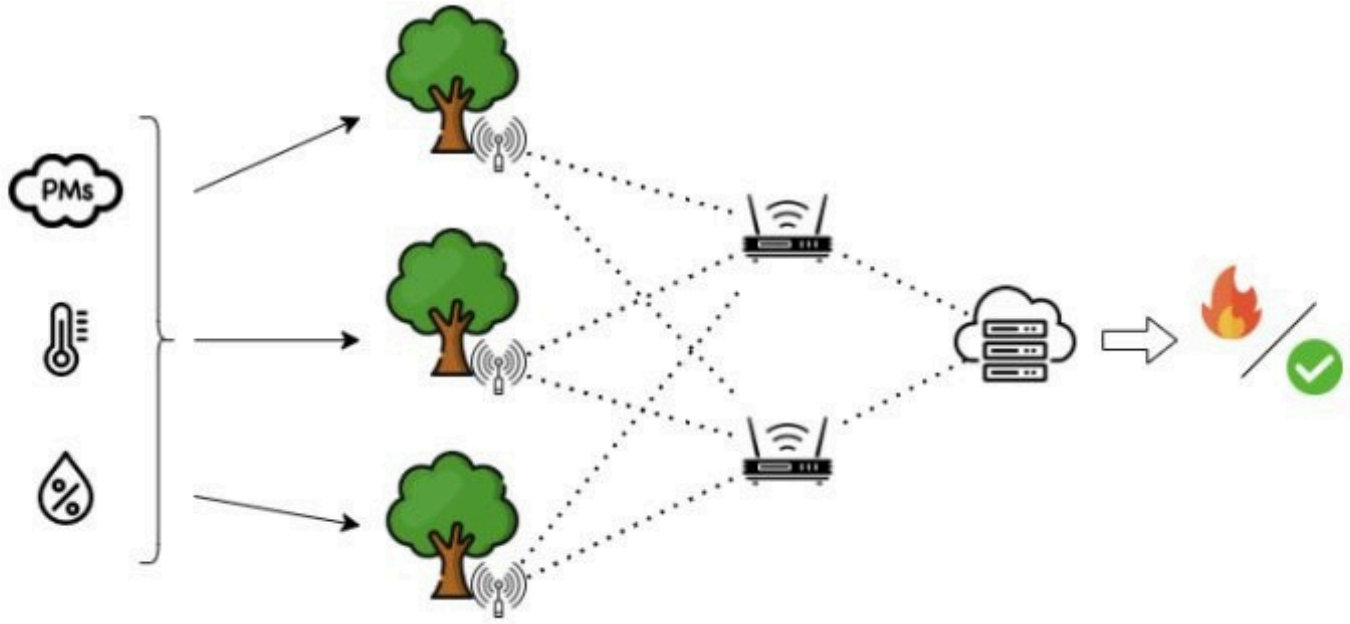
VLC-ROBOT



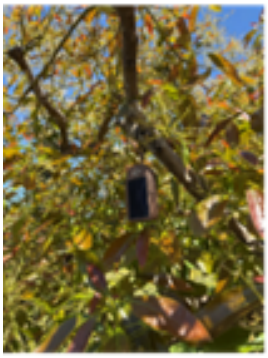
The FIDAL-VLC: 5G Robot Race project aimed to demonstrate the integration and validation of an advanced Beyond 5G (B5G) testbed for remote driving applications, combining cutting-edge technologies such as real-time control, immersive teleoperation, AI-enhanced perception, and Digital Twins.

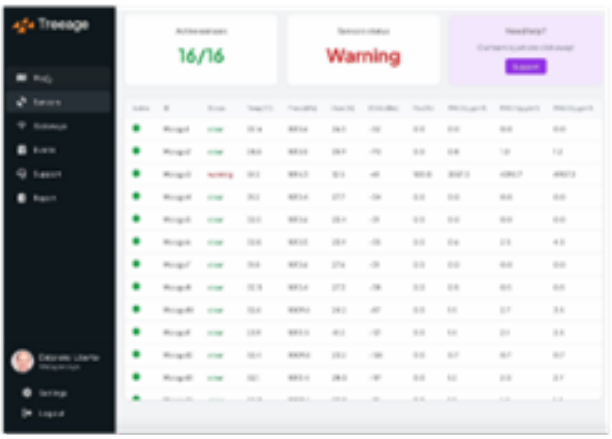
UMA Testbed

EFFECT



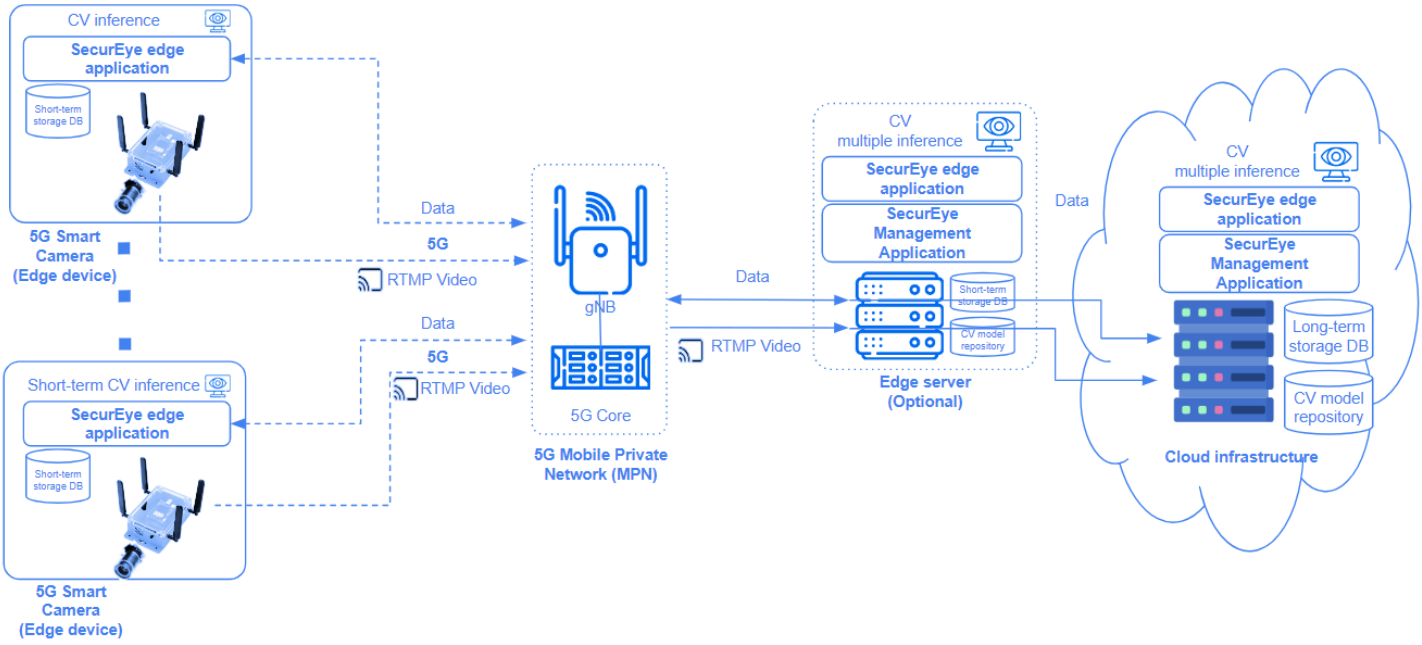
The EFFECT project delivers an integrated system for the detection and classification of early fire risks and environmental anomalies, powered by a network of smart sensors and real-time data analysis over 5G+.



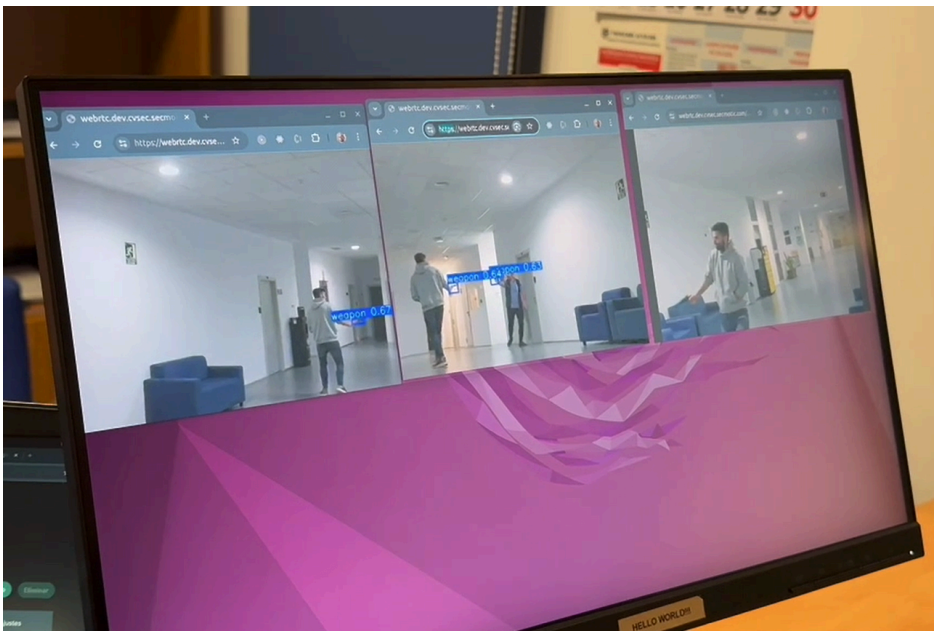


UMA Testbed

Secure Eye

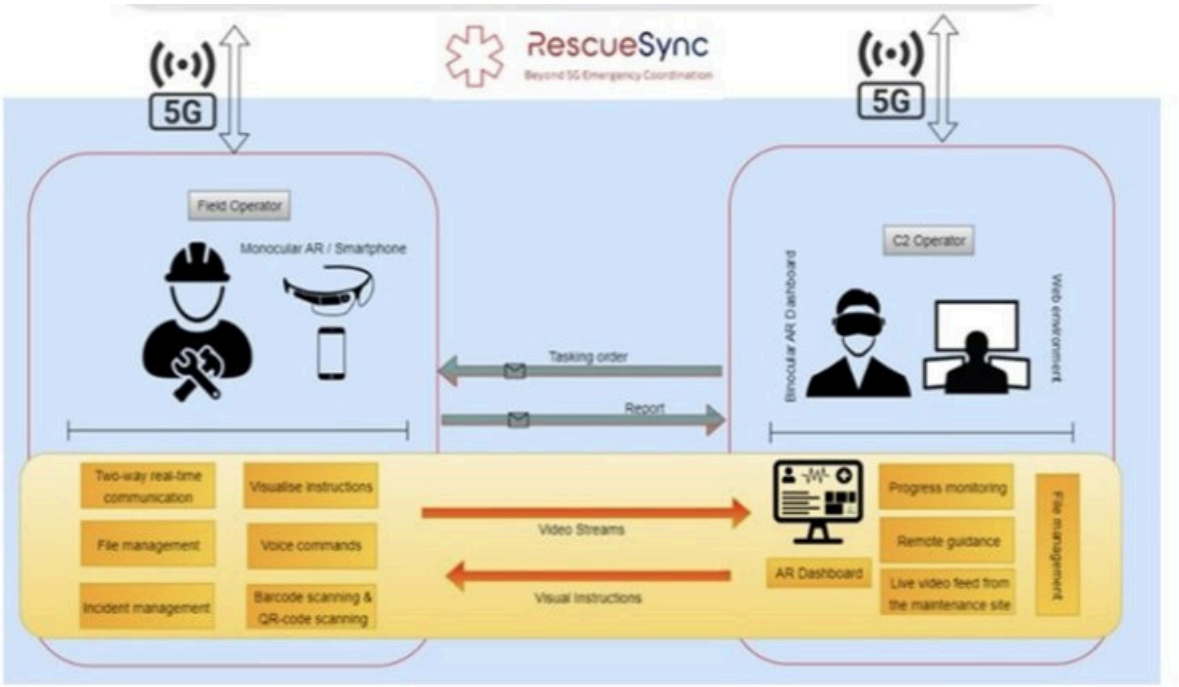


SecurEye has been developed as a technological response to the growing challenges in the field of urban security, situational awareness and emergency management. It focuses on enabling real-time video analytics through artificial intelligence and advanced 5G connectivity, providing security operators and emergency teams with actionable information derived from automated video analytics. The aim is to detect and classify incidents such as violent behaviour, the presence of weapons, health emergencies, abandoned objects or fire and smoke, with high precision and low latency, improving the ability of public safety services to act quickly and effectively.

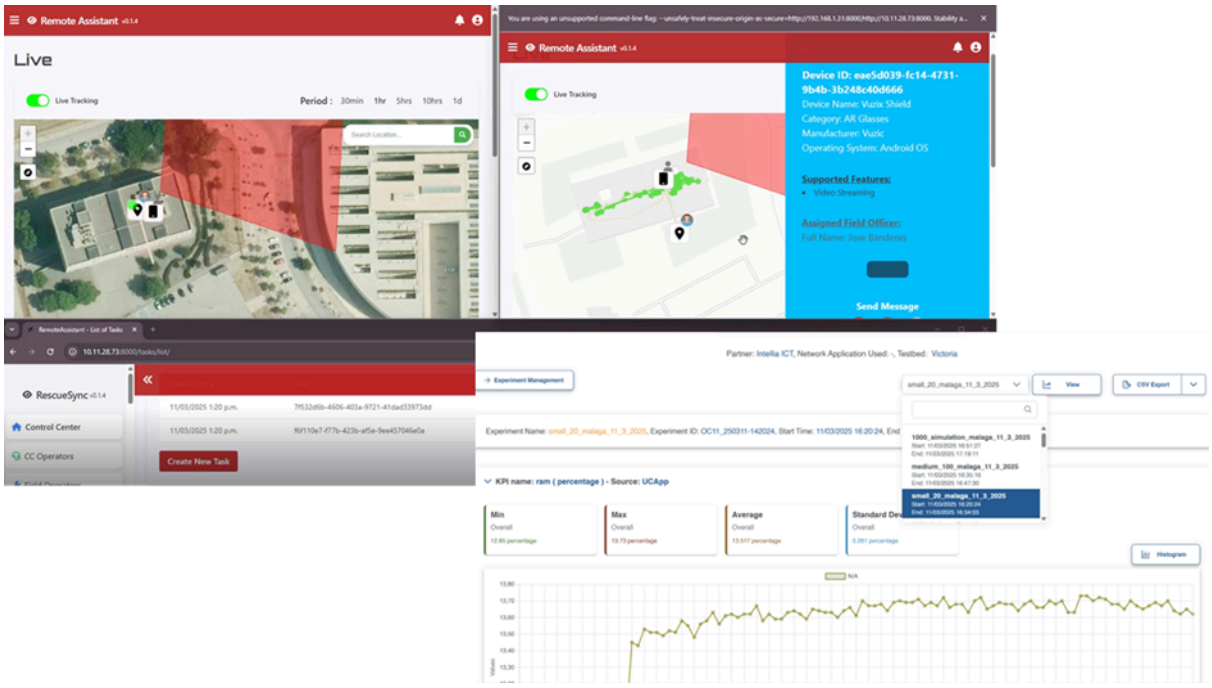


UMA Testbed

RescueSync

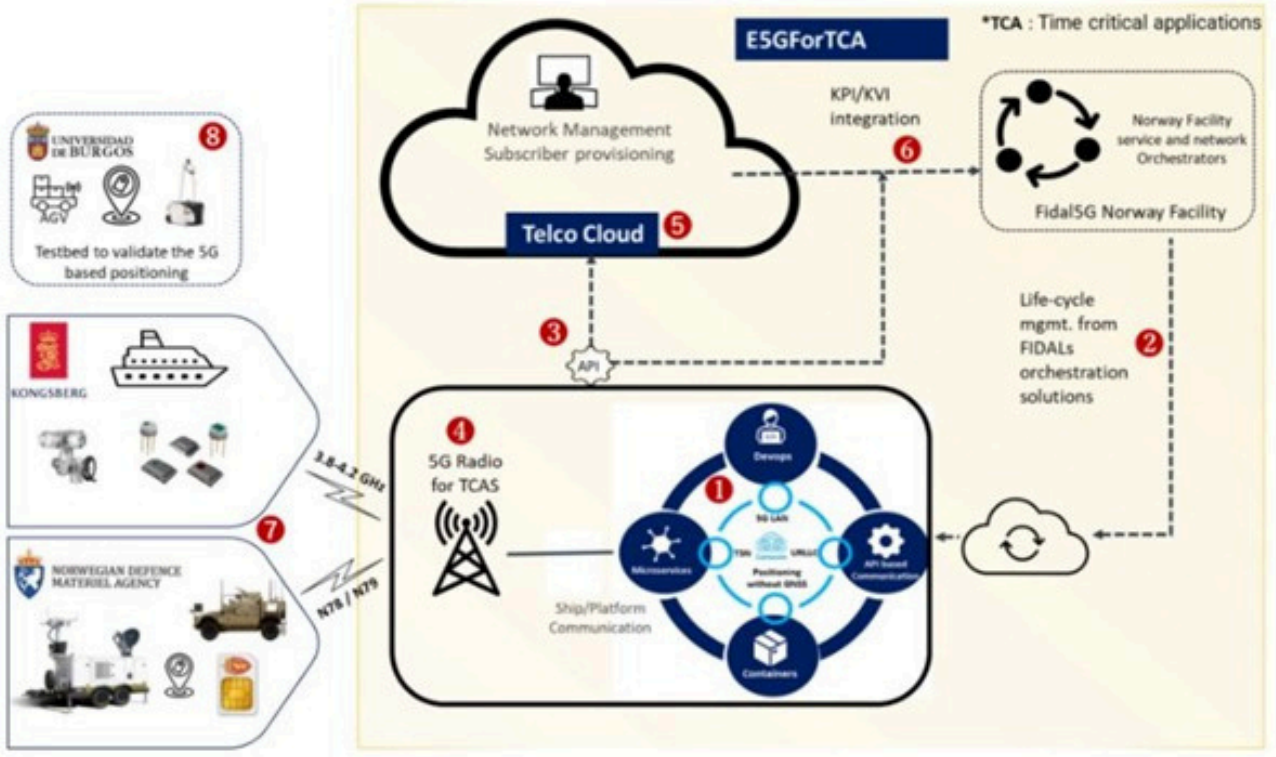


The RescueSync system is composed of an AR application running on any mobile device or monocular/binocular AR glasses and a set of software components that form the backend support service of the mobile and AR application. The backend AR support service supports the remote expert on site through its web view application (CC-Assist). The mobile application (SafeAssist) is designed to deliver comprehensive functionality to first responders in an intuitive and user-friendly manner, ensuring it does not interfere with their daily tasks.

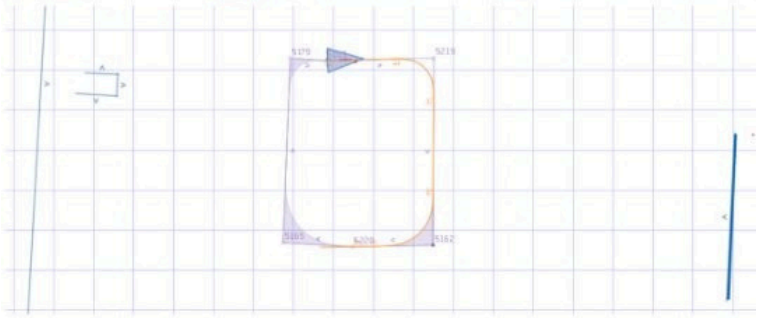


TNOR Testbed

E5GForTCA

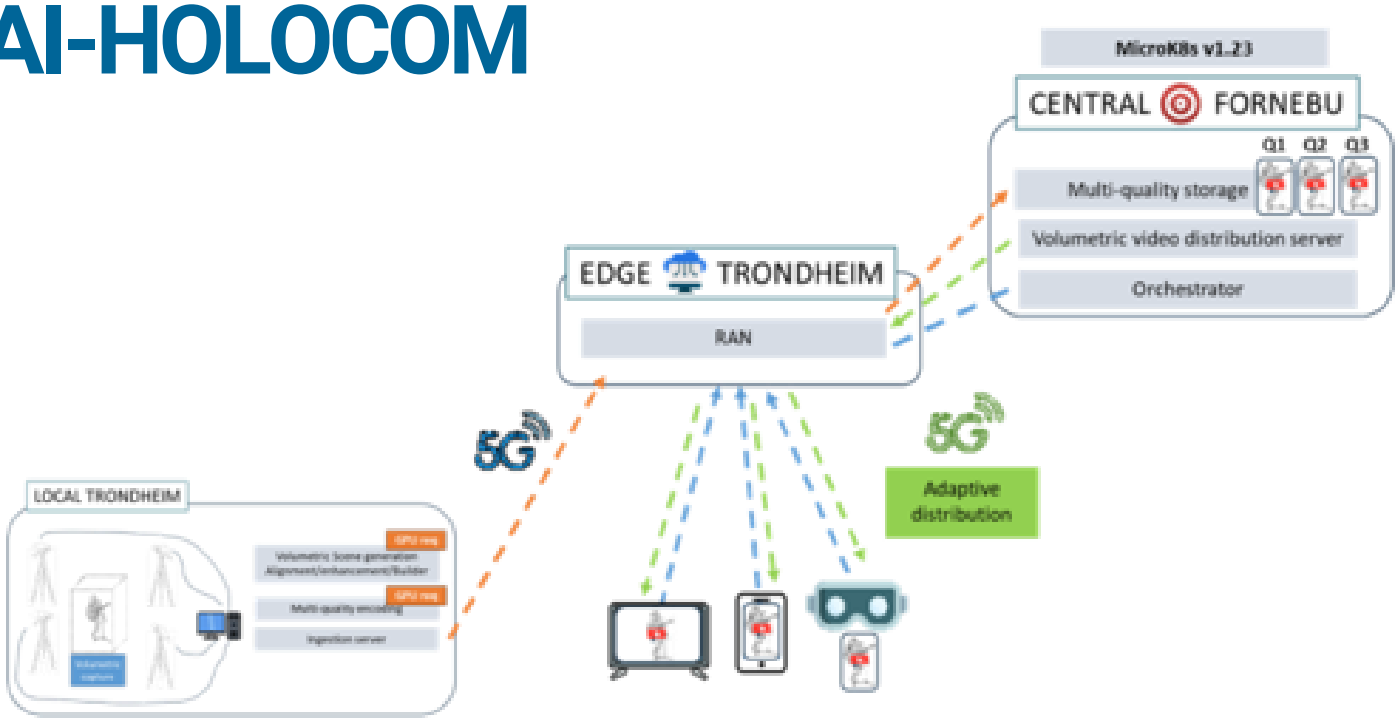


E5GForTCA focuses on the deployment and field testing of private 5G capabilities for supporting Time CriticalApplications. The project also supported the development of use cases for Kongsberg Maritime andKongsberg Defense in Norway, which involves 5GLAN group communications and multicast support in thecore, respectively. In addition, the third site at University of Burgos served as a testbed for positioningvalidation using industrial robots.

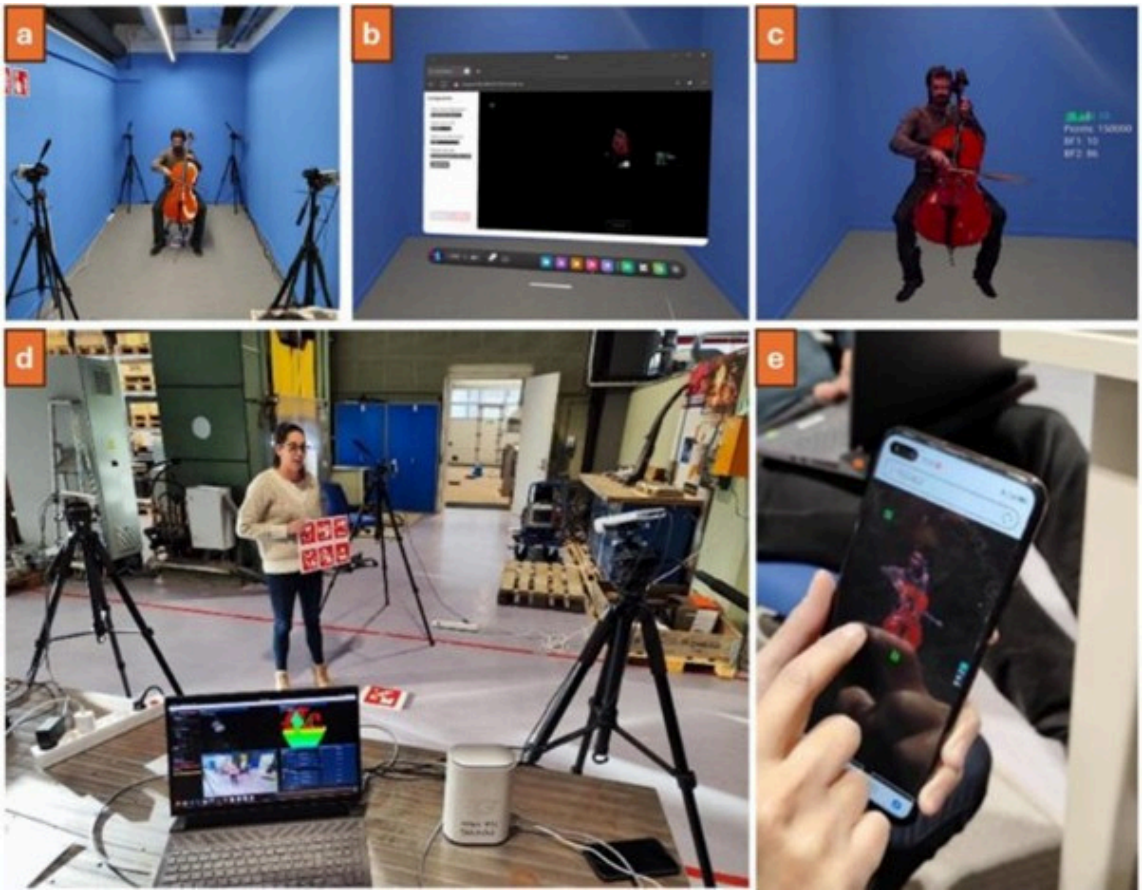


TNOR Testbed

AI-HOLOCOM



AI-HOLOCOM aims to provide portable and easy-to-access holographic experiences relying on an affordablesetup and leaning on the features of beyond 5G networks to compensate for other technical limitations. Itfocuses on solving problems related to holographic content production, distribution, and consumption over 5G.



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