



Use Case 2: Digital Twin For First Responders

Large Scale Trial : Automatic Fire Detection Scenario

Deployment of automatic hazard-monitoring algorithms to continuously update first responders on fire evolution, ground asset status, and short-term risk predictions.

PPDR



THE LARGE SCALE TRIAL



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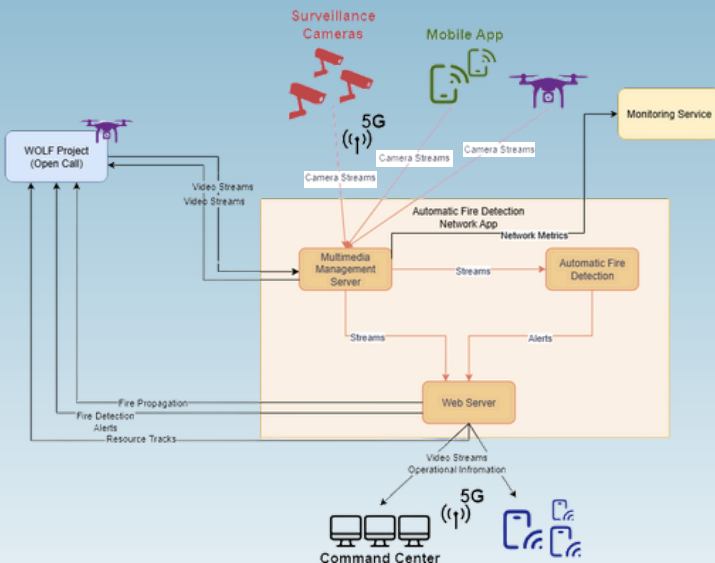


University of Patras

The large-scale trial of the UC2 of the FIDAL Project took place at the University of Patras, simulating the early stages of a wildfire. Forest cameras spotted the first signs of smoke and sent high-resolution video over the 5G network to the Automatic Fire Detection system, which confirmed the ignition point and alerted the Command Center. Operators reviewed live feeds, created an incident, and shared maps and alert data with teams in the field and with the WOLF Project through 5G-connected devices. Predictive models tracked fire spread, while body cameras and drones streamed live footage to support real-time coordination.

THE OBJECTIVE

- Demonstrate end-to-end early fire detection and coordinated emergency response using 5G.
- Enhance situational awareness and decision-making through real-time analytics and shared data.



Key Value Indicators (KVI) in Use Case 2

ENERGY EFFICIENCY

Reduced energy use in use case configuration and impact

INCLUSIVITY

Use-case reflect diversity of local communities they should benefit

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.

RESILIENT ECONOMY

Reusing existing resources and not requiring high access cost for entry/use.

DIGITAL INCLUSIVITY

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

TRUSTWORTHY

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

WASTE MANAGEMENT

Increases lifespan of products and services

SECURITY

Security matches sensitive nature of user and data

SAFETY

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