



WORKSHOP

EMERGENCY

**MANAGEMENT
CLUSTER**



Funded by
the European Union

«Implementation of new technologies in operational activities of crisis management and civil protection services. AI, Drones, and Satellites for Real-Time Situational Awareness in Disaster Response»

The growing complexity of disaster scenarios in Europe requires stronger collaboration between research, policy, and practice to ensure emergency responders are equipped with effective and future-ready solutions.

Against this background, a cluster of EU-funded projects in the field of emergency management is joining forces in a dedicated online workshop to foster cross-project exchange, raise awareness of ongoing developments, and increase the visibility of policy recommendations.

About the [EMERGENCY MANAGEMENT CLUSTER](#):

The "Emergency Management Cluster" brings together four Horizon Europe projects – [UNICORN](#), [COLLARIS2](#), [DIREKTION](#) and [OVERWATCH](#) – to strengthen Europe's capacity to face climate-driven hazards and disasters. By combining Earth Observation, aerial systems, and advanced crisis data platforms, the cluster delivers innovative tools for early warning, real-time monitoring, and coordinated response.



FIRE AND RESCUE DEPARTMENT OF NORTH CORSICA

Commander Michaël PELISSIER

Session 2 : Challenges and needs facing the responder community

AI:

Challenges

Data issues: inconsistent, low-quality, or missing data; difficult integration across agencies.

Trust & explainability: black-box models not accepted for life-critical decisions.

Latency: limited edge computing; unreliable connectivity in disasters.

Reliability: AI fails under smoke, debris, night, or sensor degradation.

Needs

Explainable, simple, reliable AI with confidence levels.

Edge-optimized models that work offline or in low-bandwidth conditions (field).

Continuous field validation in realistic conditions.

DRONES :

Challenges

Airspace conflicts: lack of coordinated UAS traffic management.

Environmental limits: wind, rain, smoke, short flight times.

Data overload: huge video streams; slow processing and integration.

Interoperability: incompatible drone systems and software across agencies.

Needs

Unified UAS coordination and fly authorizations.

Rugged, long-endurance drones with strong payload.

Automated mapping & AI video analysis for rapid intel.

DRONES :

We are currently developing a drone with a high payload capacity (Target of 350kg)



Version 1 : 150kg payload capacity (tested in July 2025 in Corsica)

SATELLITES FOR SITUATIONAL AWARENESS :

Challenges

Revisit delays: limited refresh rate for fast-changing events (wildfires for us).

Cloud/smoke interference for optical sensors.

Difficult interpretation: raw imagery not responder-ready.

Poor integration with drone and ground data.

Needs

Near-real-time satellite services

Simple, operational actionable products (damage maps, risk layers, routes).

We are a  project partner to work on those issues.



THANK YOU!

Michaël PELISSIER
SIS2B



<https://sis2b.corsica/>

michael.pelissier@sis2b.corsica

Overwatch

UNICORN

DIREKTION
Disaster Resilience Knowledge Network

Collaris2



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