

Dynamic risk mapping with drones and CHRIS

Machine-learning datasets for wildfire prevention, early warning, and community impact assessment.

MEJOR Technologies is looking for RRA network partners to explore dynamic risk mapping using drones and CHRIS.

The collaboration would use drone imagery and CHRIS mapping to extract wildfire-relevant parameters with machine learning, including vegetation condition and infrastructure state.

The goal is to build datasets that can feed prevention and early warning systems such as LUCI, and help assess likely fire impact on communities and critical infrastructure.

Looking for

- Research partners for machine-learning, wildfire-risk, and geospatial modelling.
- Funding partners for applied R&D and pilot deployment.
- First responders who can validate the outputs and define operational requirements.

Pilot role

- Operate or support drone mapping in a defined pilot area.
- Validate extracted risk parameters against local field knowledge.
- Use the resulting dataset in prevention planning or early warning workflows.

Concept

- Turn CHRIS drone mapping into a repeatable wildfire-risk data pipeline.
- Extract parameters such as vegetation condition, fuel continuity, access constraints, exposed assets, and infrastructure state.
- Deliver GIS-ready outputs for LUCI, prevention planning, early warning, and community impact analysis.
- Connect local drone observations to LUCI forecast layers, including 12-month planning maps and daily maps based on 7-14 day weather forecasts.

Observe

Drone flights collect up-to-date imagery and incident-area context.

Extract

Machine-learning models identify wildfire-relevant parameters.

Use

Datasets feed LUCI, prevention plans, and responder workflows.

Contact

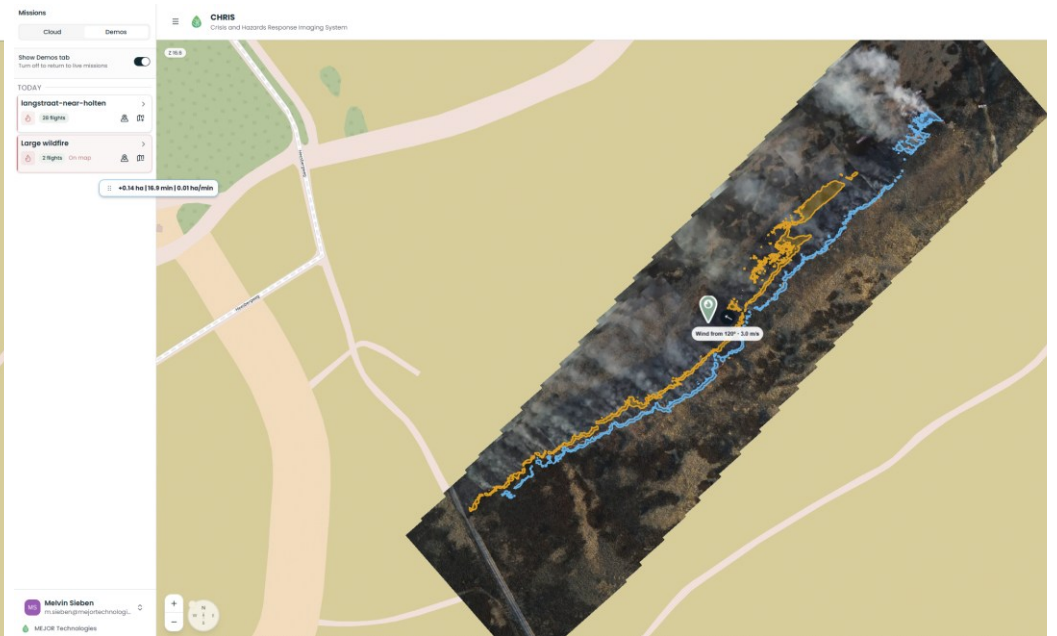
- Melvin Sieben, CEO MEJOR Technologies
- melvin@mejortechnologies.com

From live mapping to risk datasets

CHRIS already structures drone imagery as operational maps. This collaboration would extend that mapping into validated datasets for risk assessment and prevention.



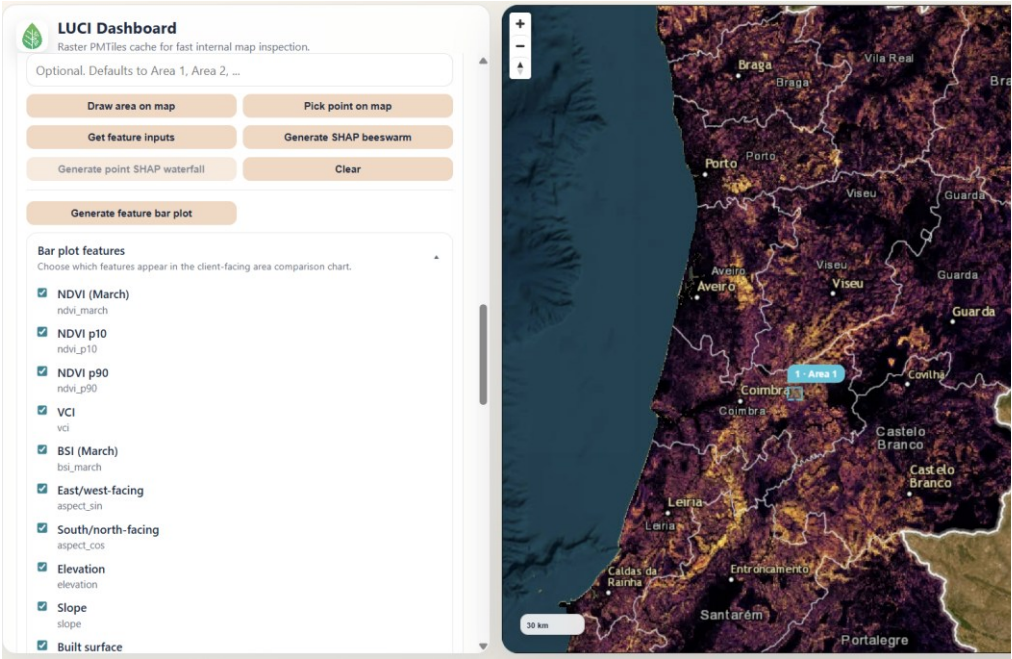
CHRIS overview map generated from drone imagery.



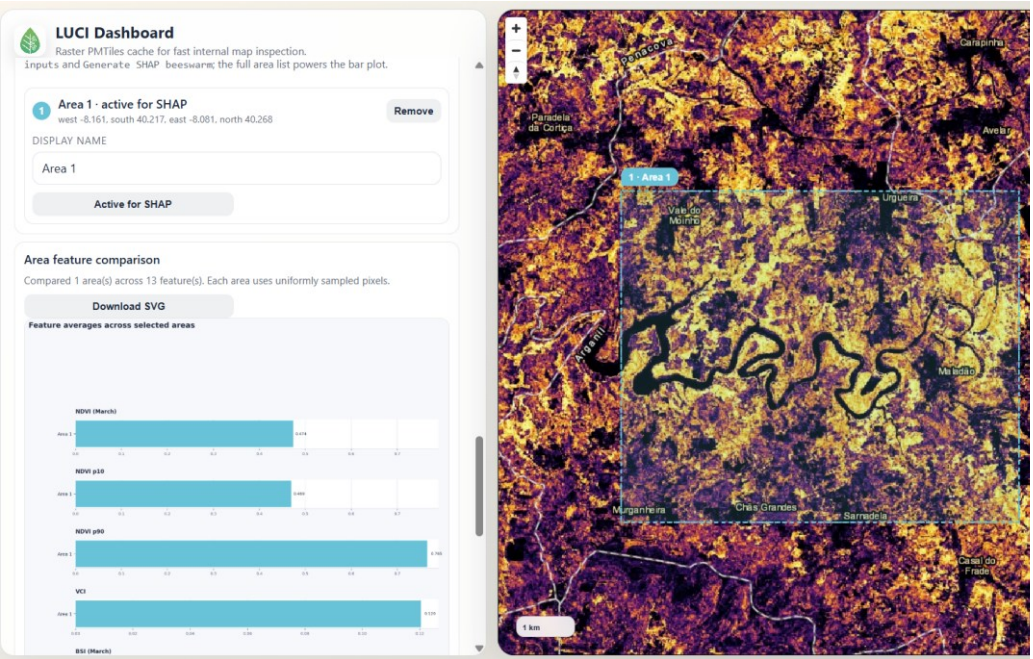
Mapped route and perimeter context for risk-layer generation.

LUCI output: wildfire susceptibility maps

LUCI can already generate high-resolution wildfire susceptibility maps as longer-range planning outputs. The same map resolution can also support shorter operational cycles when driven by 7-14 day weather forecasts for daily risk maps.



LUCI dashboard with a Portugal wildfire susceptibility forecast layer.



Selected-area analysis with feature comparison for local risk drivers.

12-month forecast

Useful for prevention planning, funding prioritisation, and seasonal preparedness.

7-14 day weather input

Can produce daily risk maps at the same resolution when short-term weather forecasts are available.

Dynamic risk mapping

Drone and CHRIS-derived field parameters can refresh LUCI inputs where conditions change locally.