

EW4Fthiotida

Smart Digital Solution for Resilient Rural Areas

Regional Unit of Fthiotida

Objectives:

- ✓ Early Hazard Detection
- ✓ Faster Operational Response
- ✓ Reduced Impact on People, Infrastructure & Environment

What is EW4Fthiotida

EW4Fthiotida is a comprehensive digital early-warning solution designed to enhance the resilience of the Regional Unit of Phthiotis to natural hazards such as:



Forest Wildfires

Detection and Monitoring of
Forest Wildfires



Flood Events

Forecasting & Monitoring of
River Water Levels



Heavy Snowfalls

Road-Network
Snow-depth Monitoring

The solution is built on a combination of advanced technologies:

- Artificial Intelligence (AI)
- Field sensors (Internet of Things – IoT)
- Central digital platform for incident management & operational coordination
- Mobile app for incident reporting and stakeholder alerts

Early Fire Detection System with Cameras & Artificial Intelligence



High-resolution cameras monitor forest and agricultural areas. AI algorithms continuously analyse image feeds to detect smoke or flames in real time.

01

Continuous Monitoring

High-risk areas monitored using visible-spectrum cameras

02

Smoke Detection

Through AI image analysis and processing algorithms

03

Automatic Alerts

To the Authorities and the Operations Center for immediate response

Benefits: *Early detection can prevent a fire from escalating into a large-scale incident
Visible-spectrum cameras significantly reduce equipment and installation costs*

Water Monitoring & Flood Early Warning

Provides a comprehensive real-time view of river conditions and remote areas.

Continuous Monitoring

Via sensors and wireless networks installed along regional rivers

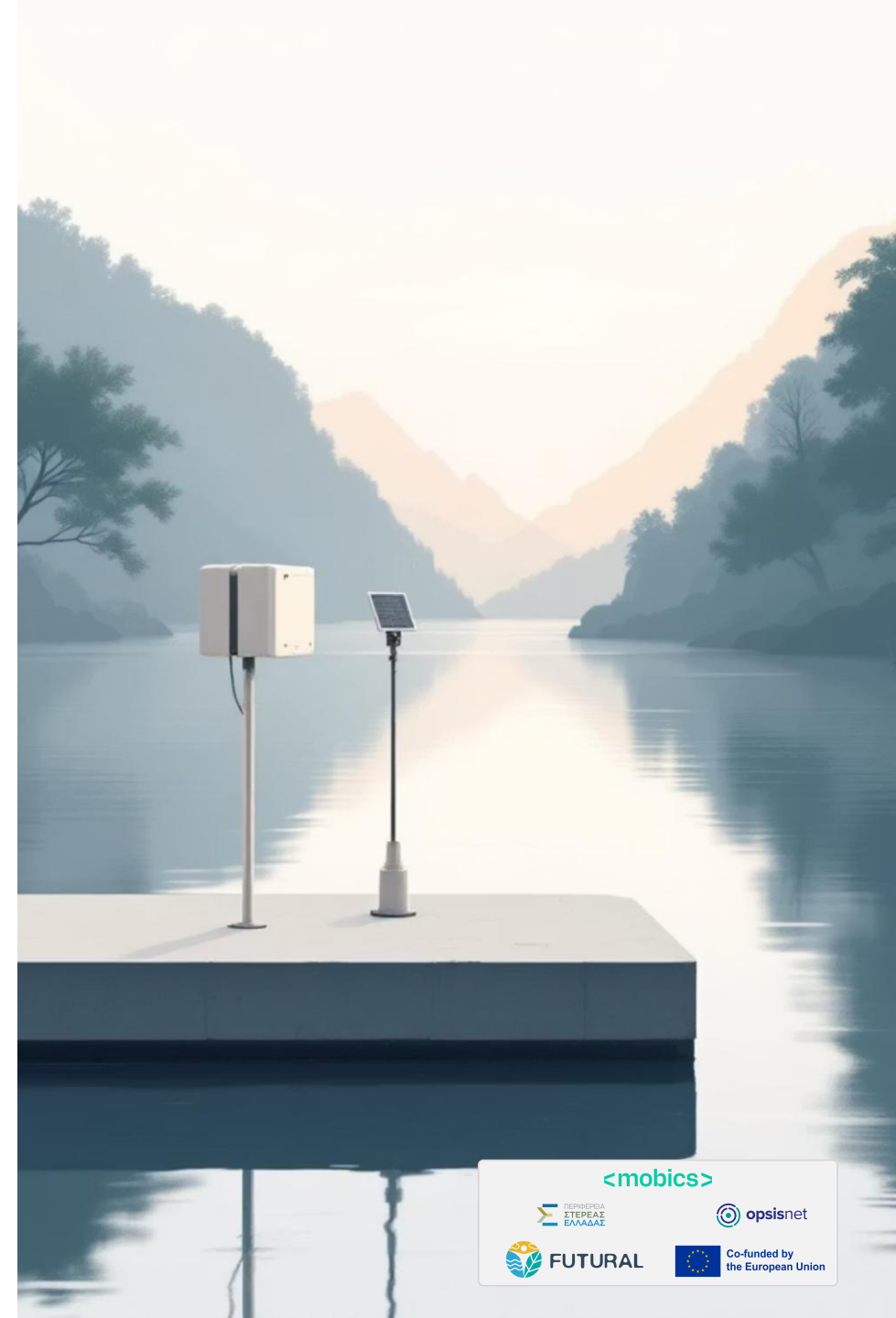
Data Analysis

Using historical data and AI-powered forecasting models

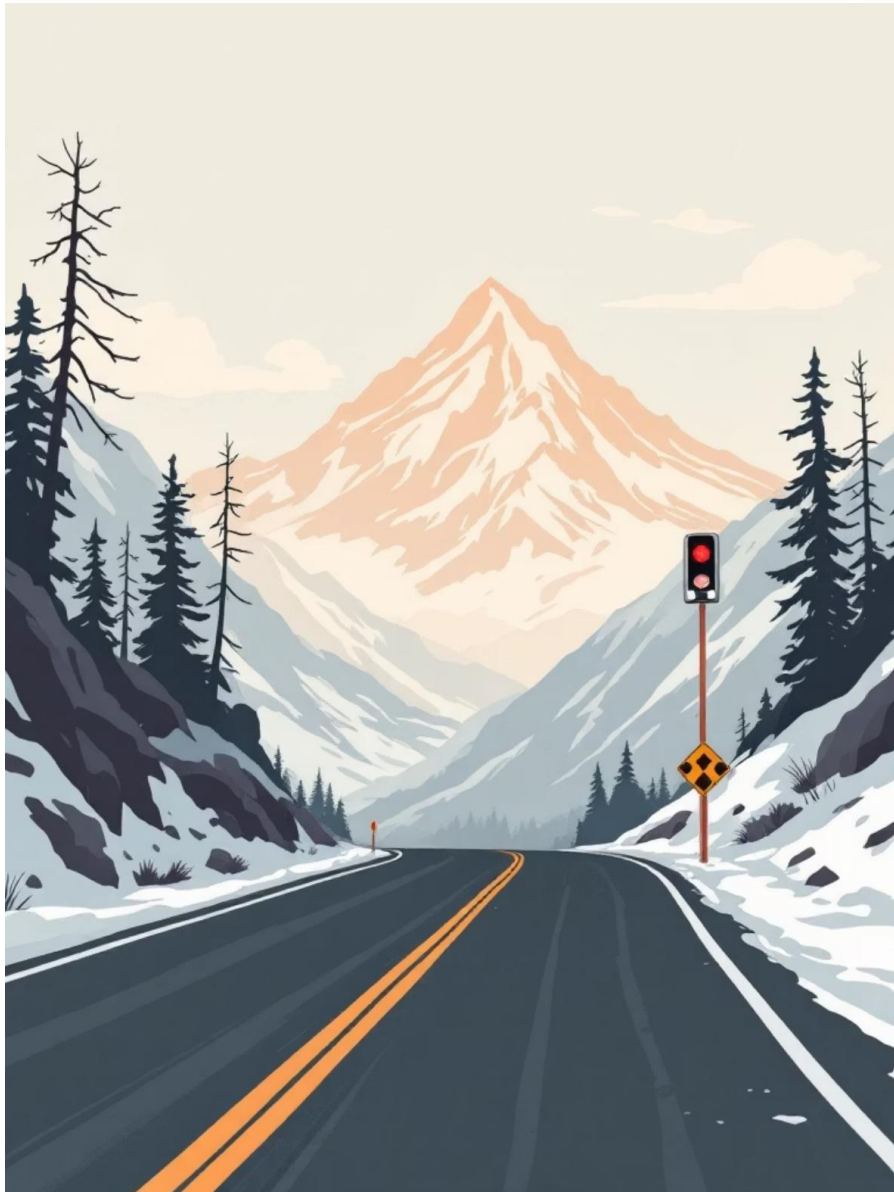
Early Warning

Detecting dangerous rising trends before overflow occurs

Benefits: *Protects farmland, infrastructure and local communities*



Snowfall Monitoring



Monitors road conditions and
snow depth in real time,
enabling rapid winter response.

Includes:

- ✓ Snow-depth sensors
- ✓ Live updates to the platform



Faster Dispatch

More targeted deployment of
snow-clearing assets



Safer Travel

Protecting drivers and
passengers

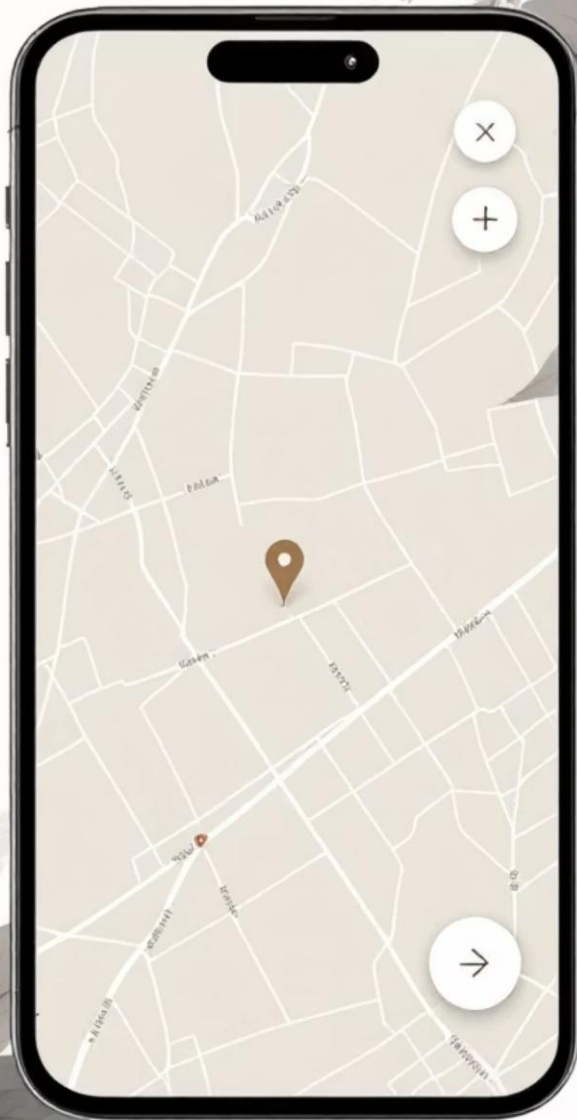


Continuous Access

Reducing community isolation

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Mobile App for Incident Reporting & Stakeholder Alerts

The mobile app strengthens direct communication between the Region and local community representatives and stakeholders.



Incident Report

Submit incident reports with photo and GPS location directly to the Operations Center



Notifications

Receive real-time alerts on emerging risks and incident developments

Benefits: *Faster incident verification*
Better coordination with remote communities
Active community engagement in risk management

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Central Incident Management & Operational Coordination Platform

All data and alerts —from sensors and local users—
are consolidated into one unified platform.
Authorities gain a Common Operational Picture
to manage each incident.

Incident View on an Interactive Map

Parallel monitoring of all incidents

Geospatial Data Layers

Highly useful for decision-making

Alerts & Alarms Monitoring

Real-time monitoring from all sources

Direct Communication

With available resources and responsible authorities

Action Logging & Incident History

For evaluation and improvement



Solution Architecture



The system integrates multiple information sources into one operational platform.

Platform
OpsisNet CivilOps Platform

Components
Fire-detection cameras
Field sensors (IoT)
Mobile application

Users
Authorities
Emergency services
Regional Administration
Local communities

Benefits for the Region and Local Communities

EW4Fthiotida is implemented within the framework of the European project **FUTURAL PROJECT**, which aims to develop and deploy smart digital solutions that enhance the resilience and sustainability of rural areas across Europe.

The **CivilOps** solution provides a comprehensive system for the prevention and management of natural hazards.



Resilience

Strengthens regional resilience to climate change



Coordination

Improves coordination among responsible services



Scalable Deployment

Can be scaled and deployed across Greece and Europe



Faster Response

Reduces response time to climate-related incidents



Economic Protection

Reduces economic losses



Public Participation

Active participation of local communities

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Stakeholders & EU Project: FUTURAL PROJECT

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