



Wildfire Management in Athens

Simulation Targets

Simulation of wildfire scenarios & assessment of cascading effects.
Decision support for prevention & resource allocation.

Simulation Key Stakeholders

Hellenic Fire Service
Hellenic Police, Municipalities, & Prefectures

Technologies Used

SCDT | IoT Sensors | Satellites | UAVs | Data Sources



Earthquake Resilience in Athens

Simulation Targets

Simulation of earthquake impacts based on key variables
Decision support for resource deployment
Enhancement of situational awareness with real-time data

Simulation Key Stakeholders

Hellenic Police – Traffic control, hazard prevention, resource coordination.
Hellenic Fire Service – Rescue, disaster units, situational awareness, risk prevention.
National Centre of Emergency Assistance (EKAB) – Medical triage, evacuation.
Volunteer Organisations – Rescue, security, evacuation.

Technologies Used

SCDT | Satellites | UAVs | Data Sources



PANTHEON



Heatwave in Vienna

Simulation Targets

Simulation of heatwave scenarios & tracking cascading effects.
Prediction of resource usage & identification breaking points in healthcare systems.
Optimisation of operational planning for personnel, equipment & emergency response.

Simulation Key Stakeholders

Human Resources Managers – Monitor resource usage during heatwaves.
Volunteer Coordinators – Simulate patient transport & hospital strain.
Command Center Employees – Identify intervention strategies using real-time data.

Technologies Used

Google Solar API | IoT Sensors | Sentinel Satellite Imagery | Geospatial & Health Data



Cyber-Physical Disaster in Vienna

Simulation Targets

Simulation of cyber-attacks (e.g., on a power plant) causing physical disasters (e.g., forest fires) without expensive real-life drills.
Accommodation of realistic training for better preparedness.
Solidification of disaster response & resilience strategies.
Protection of vulnerable populations in the respective areas.
Testing of emergency coordination & resource management.

Simulation Key Stakeholders

First Responders – Lead disaster response, rescue & evacuation.
Healthcare Providers – Provide medical care & manage hospital resources.
State Authorities – Oversee management & enforce safety policies.

Technologies Used

GIS, Weather, IoT, Cybersecurity | Neo4J, UAVs, IoT Sensors | Fire & Infrastructure Impact

Building Tomorrow's Community Disaster Resilience

Community-Based Smart City
Digital Twin Platform for Optimised Disaster
Risk Management operations and Enhanced
Community Disaster Resilience



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