

# PANTHEON Pilots

## Pilot 1 – Athens, Greece

### Disaster Resilience Testing against Earthquake & Wildfire

The Athens Tabletop Exercise tested disaster risk management operations through simulated large-scale natural disasters using the PANTHEON Smart City Digital Twin Platform.



## Pilot 2 – Vienna, Austria

### Smart City Digital Twin for Urban Heat and Cyber-Physical Threats

The Vienna pilot implemented planning and training scenarios using precise real-life data to digitally simulate complex urban emergencies.

#### Use Case 1: Wildfire at the NW of Athens

A rapidly spreading wildfire threatened the Wildland-Urban Interface area of Fyli under strong winds.

##### Stakeholders' (Hellenic Police, Hellenic Fire Service, Municipalities & Prefectures) activities included:

- Rapid traffic management to support fire service access
- Execution of evacuation orders and public safety measures
- Area security, access control, and prevention of looting
- Coordination with fire and local authorities during recovery

The scenario focused on first responder training and cross-organizational coordination using the Digital Twin platform.



#### What was tested accross both pilots:

- 01 ➡ Decision-making under evolving crisis conditions
- 02 ➡ Planning and training using realistic digital simulations
- 03 ➡ Coordination between first responder organizations
- 04 ➡ Integration of multisource data into operational workflows
- 05 ➡ Applicability of Smart City Digital Twins to natural and man-made disasters

#### Use Case 2: Western Attica Earthquake

A strong, shallow earthquake caused severe damage and cascading effects across the Attica region, disrupting transport, energy, telecommunications, and emergency services.

##### Stakeholders' (Hellenic Police, Hellenic Fire Service National Centre of Emergency Assistance (EKAB) & Volunteer Organisations activities included:

- Establishing security perimeters around unsafe structures
- Managing traffic restrictions and emergency corridors
- Supporting organized preventive evacuation
- Using drone-based information for situational awareness
- Protecting evacuated areas and assisting in damage assessment

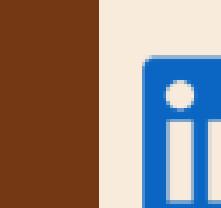
The Digital Twin supported planning and early warning through simulations, enabling informed decision-making across the response chain.

#### Key Outcomes

- Validation of the Smart City Digital Twin as a valuable decision-support tool
- Improved situational awareness and planning efficiency
- Strong engagement from first responders
- Practical feedback incorporated into ongoing development
- Demonstrated adaptability across different disaster types and urban contexts



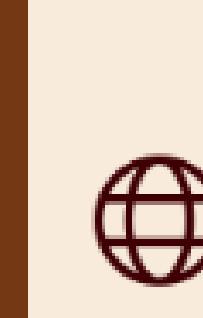
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#### Use Case 2: Cyber-Physical Attack

A high-impact man-made disaster scenario simulated a coordinated cyber-physical attack causing backup power supply systems at communication towers to overheat and explode.

##### Scenario characteristics:

- Focus on tactical-level (silver command) training
- Simulated drone-based situational awareness
- Dynamic escalation with cascading infrastructure damage
- Trainer-controlled force deployment within the Digital Twin

The exercise tested force management, situational assessment, and coordinated response to novel hybrid threats.