

5g terra

5G-TERRA: 5G infrastructure and sERvices foR public interest and sociAl inclusion



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European Union

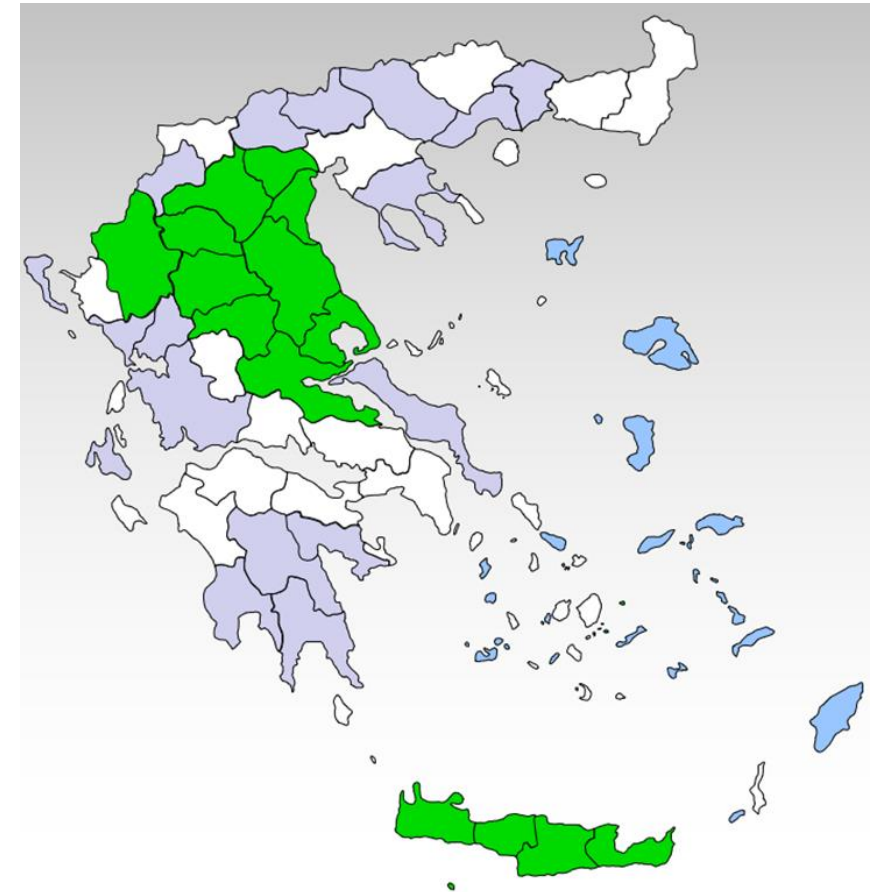
5G-TERRA project has received funding under grant agreement No 101133544.

Consortium and Objectives

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- Expansion of OTE's 5G network with almost **50 new 5G base stations**, to provide high-capacity, low latency and high reliability mobile telephony services for hitherto **degraded, rural and sparsely populated areas** in Greece, as shown on the map.
- Activation and demonstration of advanced use cases and SGI, based on the operational requirements and priorities set by 5G-TERRA SGI providers such as **Health, Education, Civil Protection**, utilizing the new 5G infrastructure that will be implemented for different use scenarios.
- Provide a blueprint for digital innovation projects for **innovative solutions in remote and/or sparsely populated regions** of the EU.
- Reaching out to the public, key stakeholders, disseminating and further exploiting the main achievements of the project



The green areas correspond to the two SGI providers represented in the 5G-TERRA consortium, the blue ones are the regions that have expressed interest in the objectives and use cases of the project and the light purple corresponds to complementary, pilot exploitation areas)



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Healthcare Use Cases: Real-time remote health monitoring & emergency notification – Wellness remote monitoring



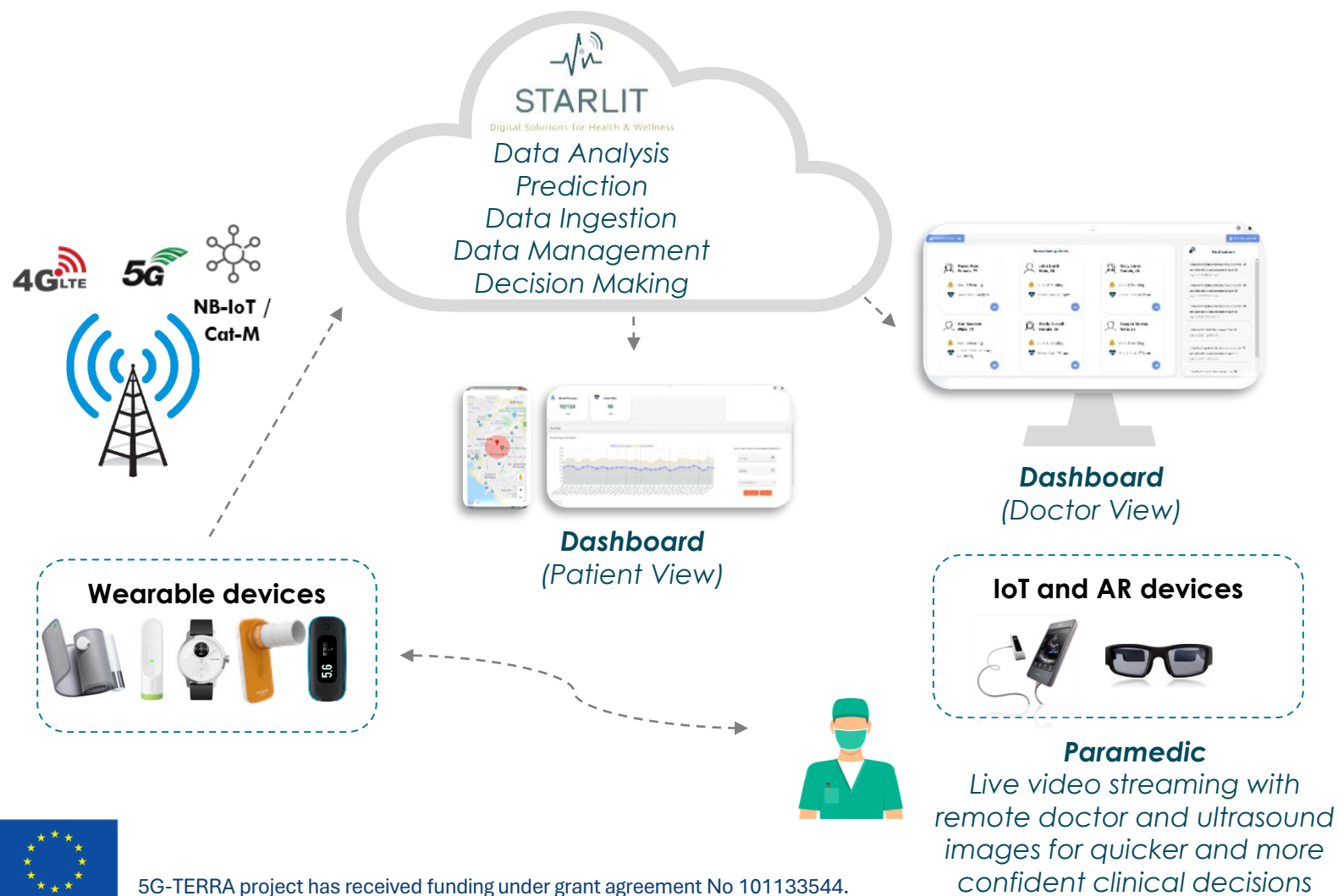
- **Vital signs monitoring** (Blood Pressure, Glucose, ECG, etc)
 - Blood pressure and or Glucose levels are monitored by the health professional, while the patient is at home or work carrying out normal activities.
 - The trainer is monitoring the trainees/athletes' vital signs real time through the app and can adapt the training programme accordingly to sustain healthy condition while maximising the potential benefits.
- **Geolocation tracking**
 - The position of the patient is available through the application to the health professional, so that in case of emergency first aid responders can be directed to the patient.
- **Data download**
 - The patients medical file can be accessed along with his current vital signs' status, so that the health professional can assess the patients' condition more effectively.
- **Patients** requiring regular medical attention
- **Vulnerable groups**
 - People with **limited access to primary health care services**
- **Public and Private Hospitals**
- **Municipal Clinics and Health Centers**
- **Emergency services**



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STARLIT: Integrated Digital Health & Wellness Solutions



Patients on a single page & on the map



Real-time vital signs monitoring & predictions



Video Conference with patients



Notification/Alerts management



Live-Streaming/Remote Support

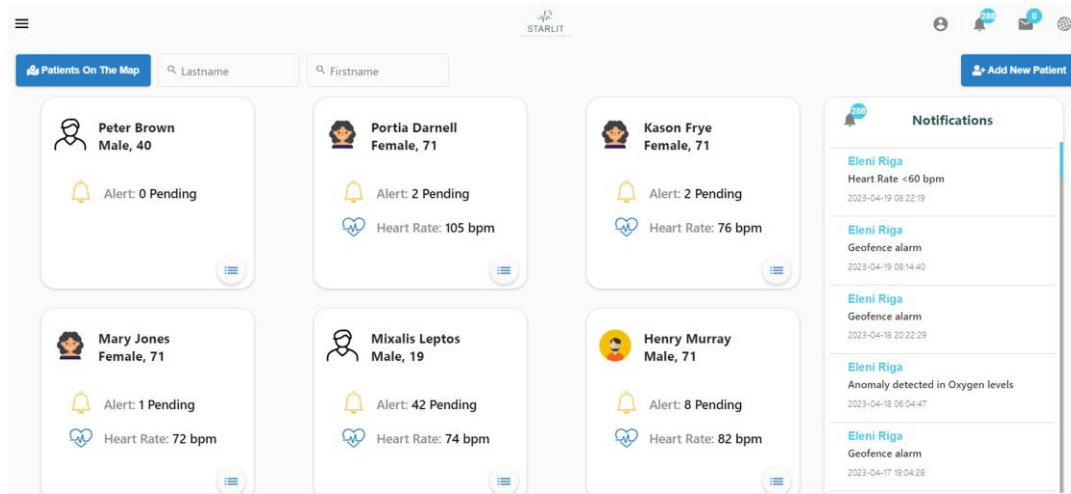


Ultrasound Images (DICOM)

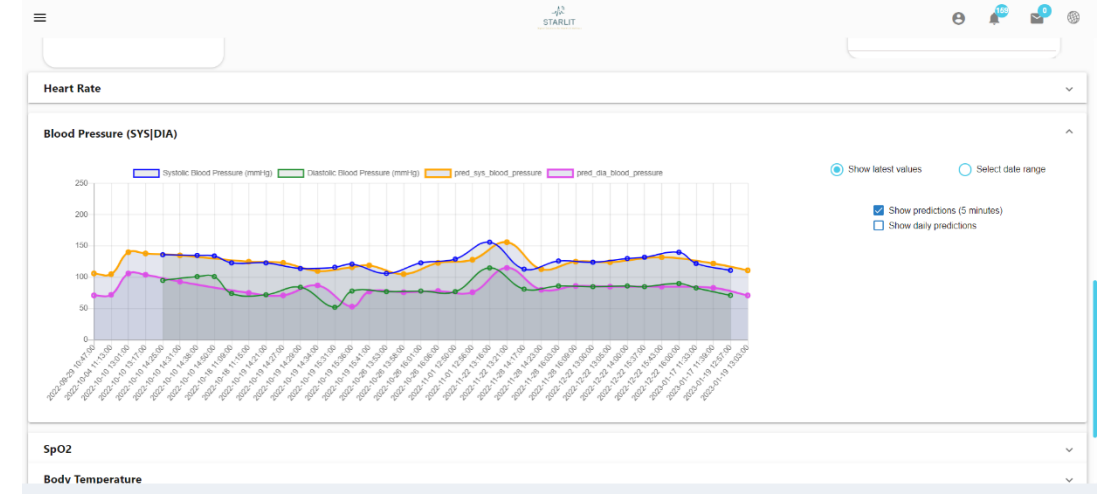


Data download

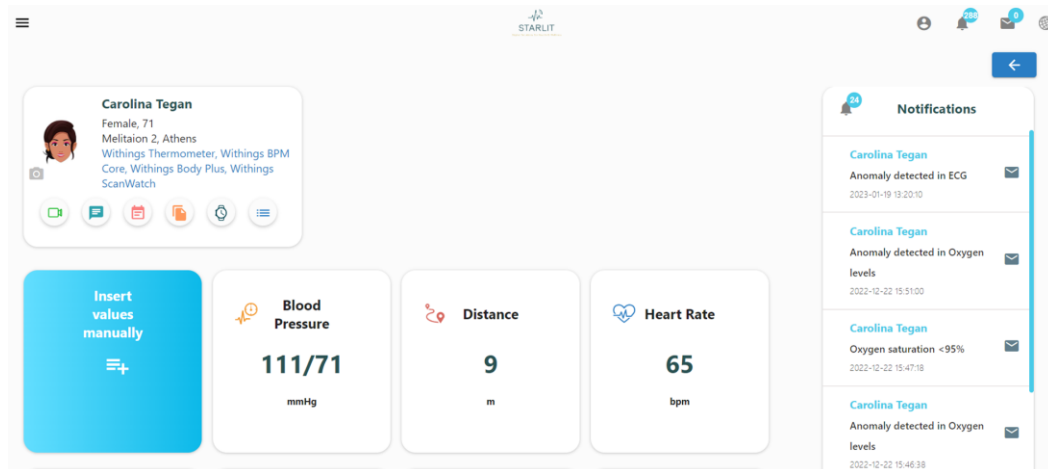




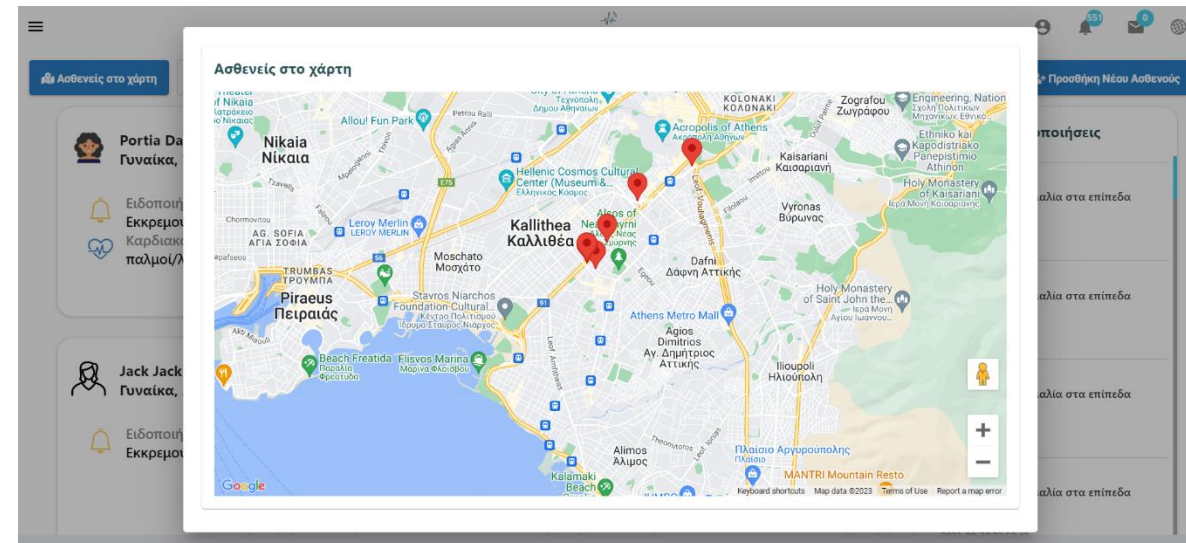
Real time monitoring:
Supervisor/Caregiver Screen



Blood pressure forecast



Real time monitoring: Beneficiary Tab



Geolocation Monitoring



Education Use Cases: Electronic Dashboard – Green School

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- **Digital Content and Student Awareness and Rewarding Platform**

- Training programs based on AR/VR technologies (Augmented / Virtual Reality)
- AR games for mobile devices (Android/iOS) on sustainability targets

- **Smart system of energy saving and management of the school building**

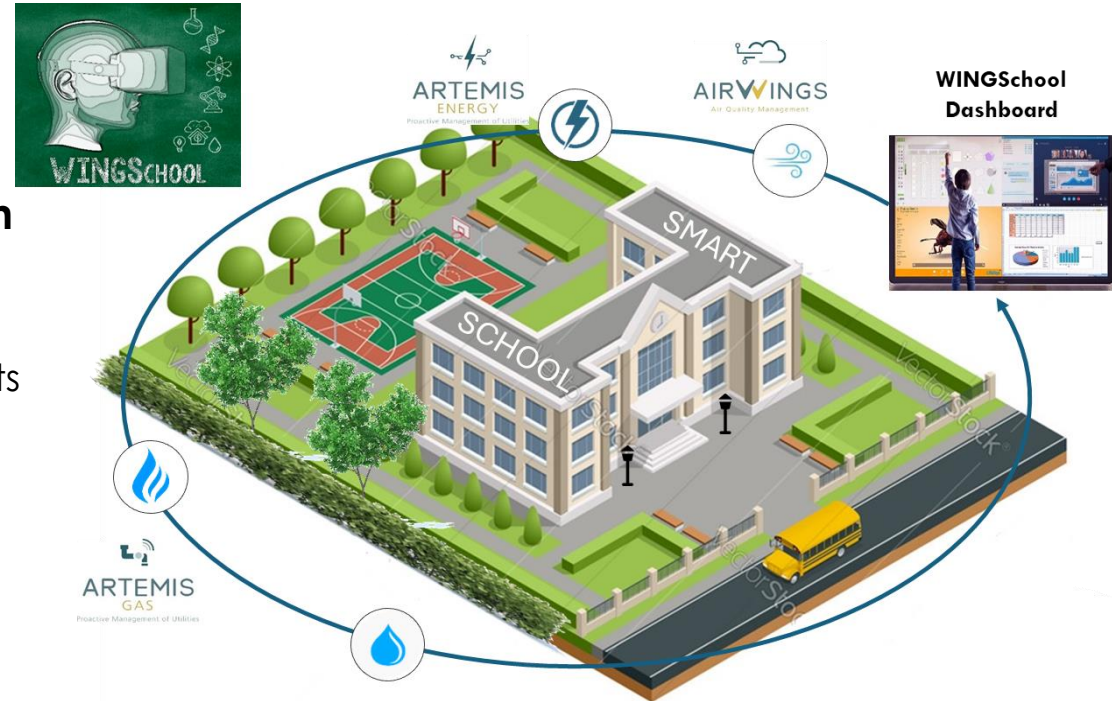
- Remote supervision of the fuel level in tanks to calculate fuel consumption and send this data in real time to a management platform in the Cloud.

- **Monitoring the levels of air quality and greenhouse gas emissions**

- Indoor/outdoor air pollution meters, Weather Station, EMF along with the management platform in the Cloud for monitoring and statistical analysis of measurements.

- **Monitoring water quality within the school unit**

- Integrated smart solution for managing water networks and water meters for real-time consumption monitoring and leak detection as well as water quality monitoring for early detection of critical events.

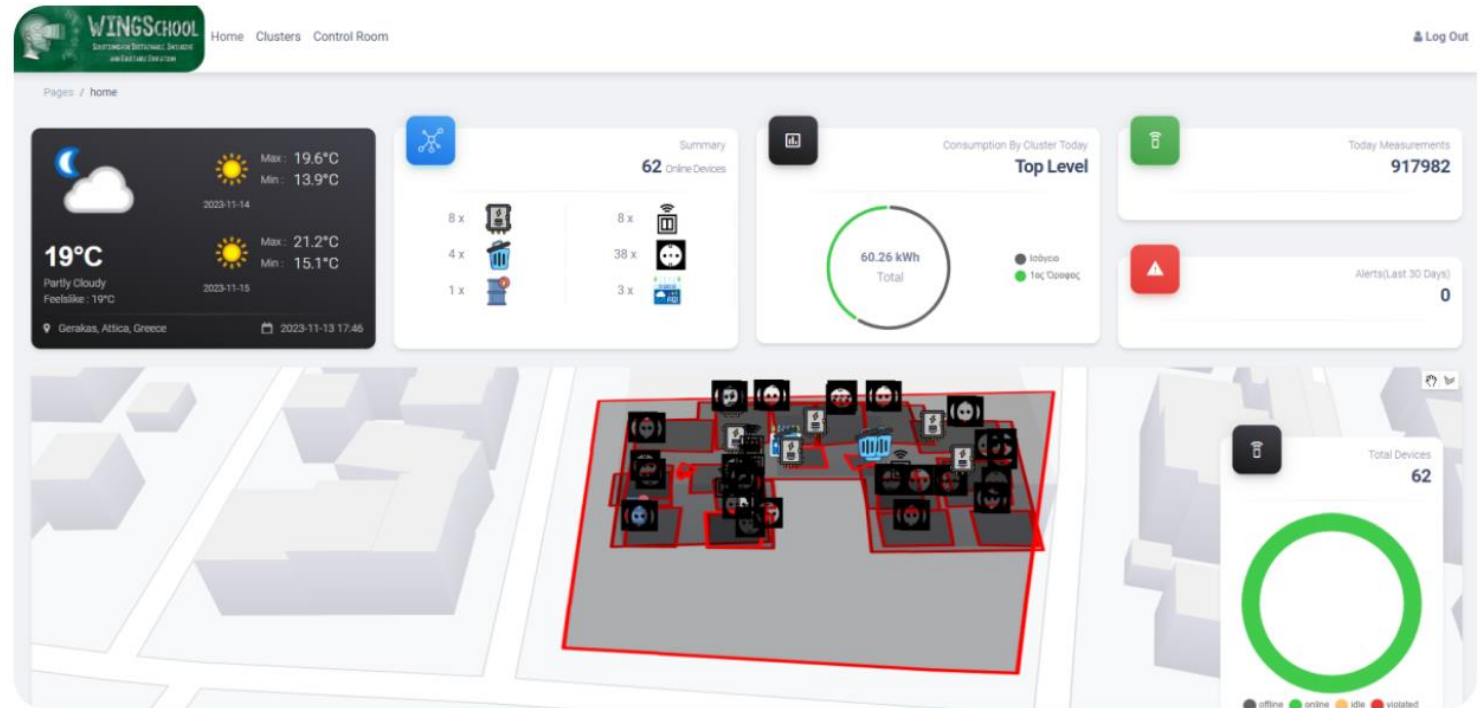


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Installations
(Indoor/Outdoor)



Monitoring Dashboard



Civil protection Use Cases: Fire prevention/detection– First responders support/medical emergency handling



- **Wildfire detection and alerting**

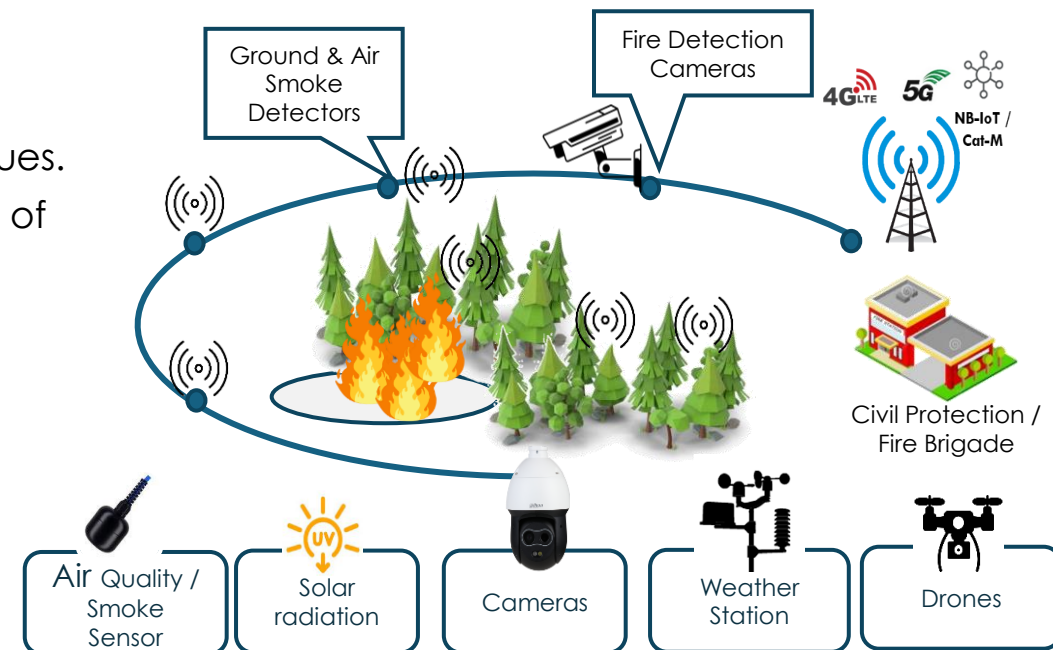
- Fire detection system with Surveillance cameras: rotatable optical thermal cameras.
- Cloud management platform, for data visualisation, forecasting and remote management.
- Fire detection (smoke or flame) within 3 minutes based on AI techniques.
- Notification is sent, together with an image or video and the location of the possible event on the map.

- **Vital signs monitoring of first responders**

- Emergency personnel (e.g. firefighters) monitored through wearable patches.

- **Connected ambulance**

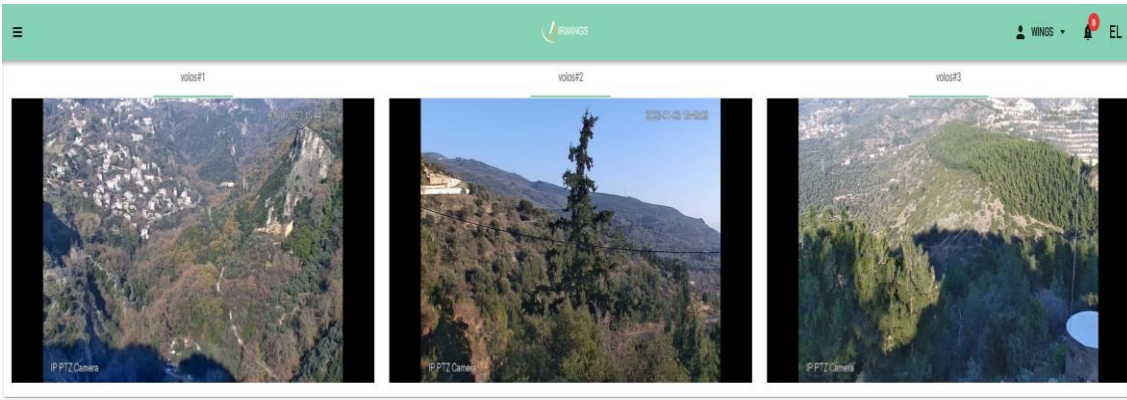
- Ambulance camera high-definition footage, digital ultrasound data streaming, VR headsets for paramedics to be guided by remote clinicians.



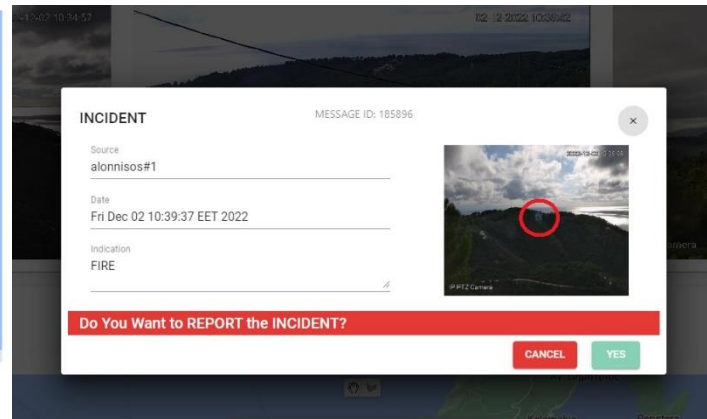
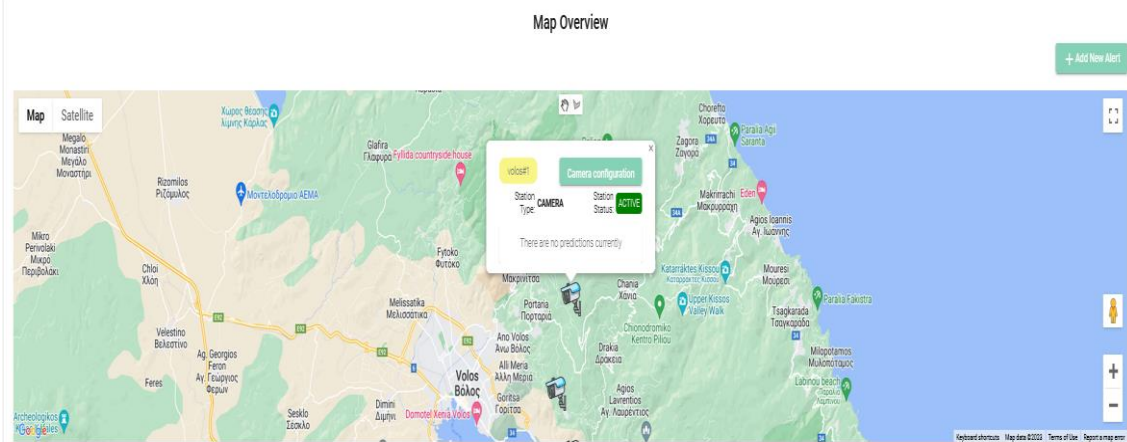
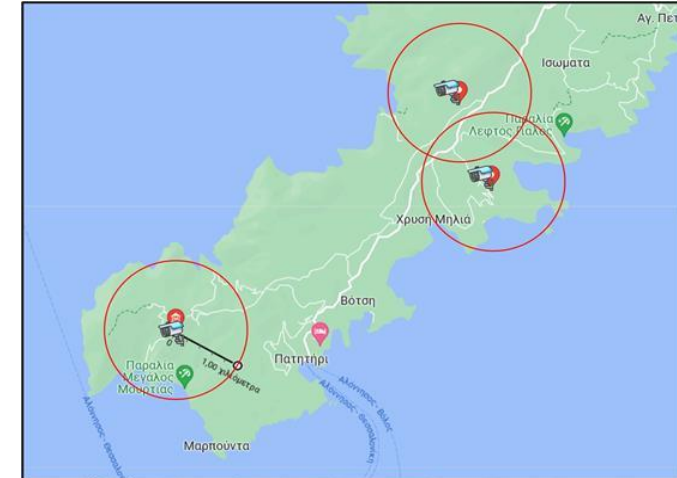


AIRWINGS++: Installations

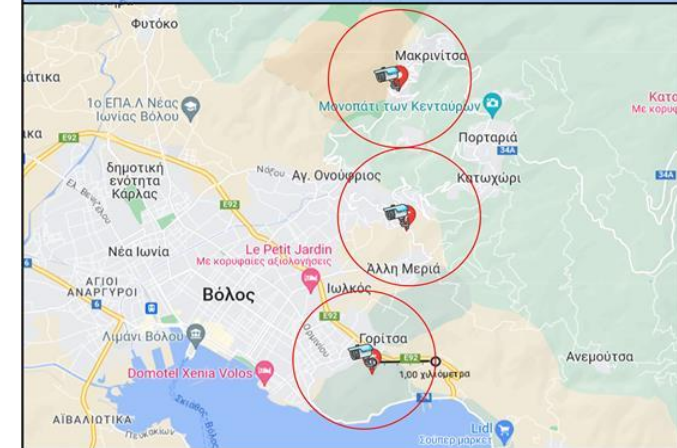
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AIRWINGS Volos



AIRWINGS Alonissos



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