



SmartPLAIGO in Action: Live Field Tests & Emergency Drills

Advancing Public Health Services through AI-Driven GIS Optimization

NEWSLETTER #2, MAY 2025 – 2026

PARTNERS



Taking AI from the Lab to the Frontlines

Welcome to a milestone edition of the SmartPLAIGO newsletter!

For the past 24 months, our consortium comprising the ERATOSTHENES Centre of Excellence, Cyprus University of Technology, Stremble Ventures LTD, and the State Health Services Organization (SHSO) has been working tirelessly to revolutionize emergency medical response. Our goal? To reduce ambulance response times and save lives using cutting-edge Artificial Intelligence and Geographic Information Systems (GIS).

After rigorous software development, algorithm training, and seamless integration with the existing AVARIS platform, we are thrilled to announce that SmartPLAIGO has officially entered its live-environment testing phase.

In this special issue, we invite you to explore our recent field operations. From navigating the rugged mountain trails of the Troodos region to managing the massive crowds of the Limassol Marathon, see firsthand how the SmartPLAIGO system is empowering our frontline heroes to make split-second, life-saving decisions under extreme pressure.



Pilot 1 - TUI Paphos Marathon

Seamless Communication at the TUI Paphos Marathon

The first official deployment of the SmartPLAIGO Communication Platform took place during the TUI Cyprus Marathon in Paphos on March 8, 2026. This event was selected to test the system's real-time communication framework in a moderately scaled, real-world setting.

Strategic Setup and Preparation

Hours before the race began, the main coordinator of the National Ambulance Crew and the SmartPLAIGO developers set up their operational base just a few meters away from the main SHSO tent, strategically located next to the marathon's finish line at the Paphos Castle. To ensure operational safety, the team verified both standard communication channels (walkie-talkies) and the SmartPLAIGO mobile application, which had been pre-installed on the smartphones of all participating EMS personnel stationed across the marathon route.



Live Incident Management

During the event, two main EMS teams operated, the SHSO Ambulance Services and Civil Protection, utilizing a total of four ambulance vehicles. The scenarios they faced were typical of endurance events, including older runners experiencing breathing difficulties, athletes suffering from severe exhaustion, and cases of prolonged exposure to high temperatures.

A total of 23 medical incidents were reported over the course of the day. The platform's efficiency allowed for rapid triage:

- 4 affected runners were cleared to continue the race.
- 12 runners were advised to retreat.
- 7 runners were collected by EMS ambulances.
- 2 runners required transport to the local SHSO's Accident and Emergency Department (A&E).

Every single incident, up to the final case at 16:35, was successfully communicated in real time via the SmartPLAIGO system without any functionality deviations. The developers even successfully managed a real-world edge case by rapidly deploying a pre-configured, fully charged backup device to an EMS staff member whose phone battery had depleted, ensuring zero downtime in communication.



Pilot 2 - Troodos Mountain Field Test

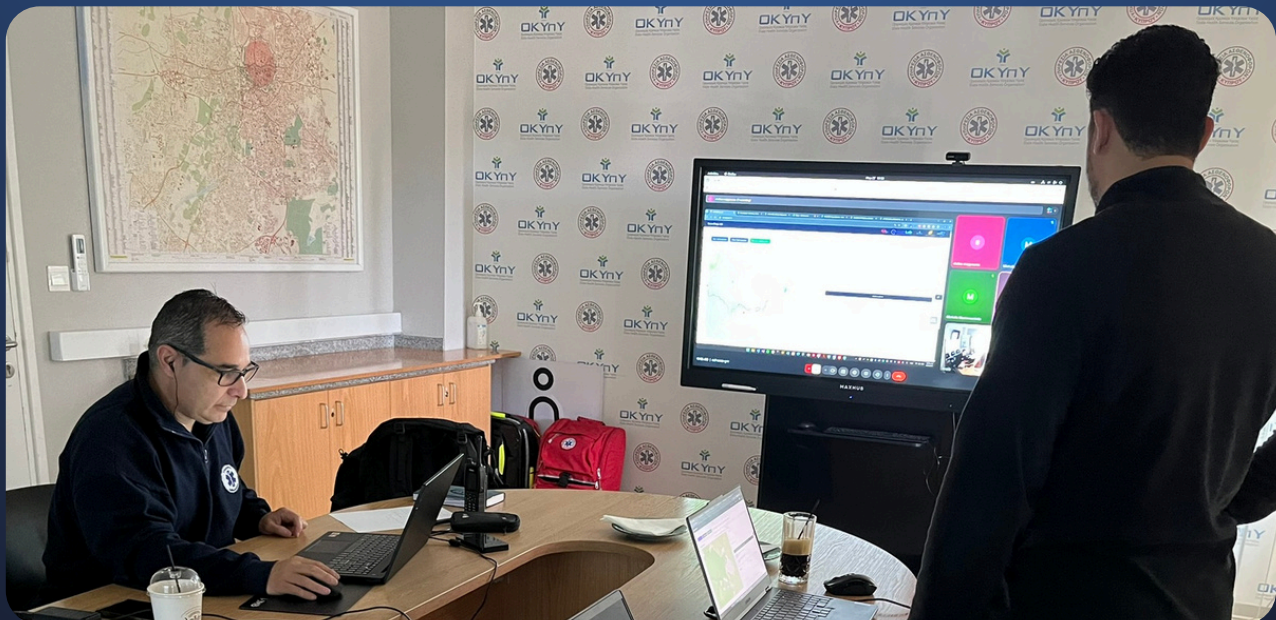
Conquering the Mountains: AI Routing in Troodos

On March 27, 2026, the consortium executed Pilot 2 to test the SmartPLAIGO AI Routing Plugin in the challenging rural landscapes of the Troodos and Pedoulas regions. While the developers operated alongside the Main Coordinator from the central Operational Office in Nicosia, two ambulance crews were stationed in the mountains to test the algorithm's ability to manage limited resources.

Scenario 1: The Motorcyclist Emergency

The first test involved simulating concurrent incidents of varying severity. Crew 1 was dispatched to a "red" (life-threatening) incident involving a hiker with chest pain near Chionovrysi, while Crew 2 was sent to a "yellow" (urgent but non-life-threatening) incident where a traveler had fallen at the Moutoullas viewpoint.

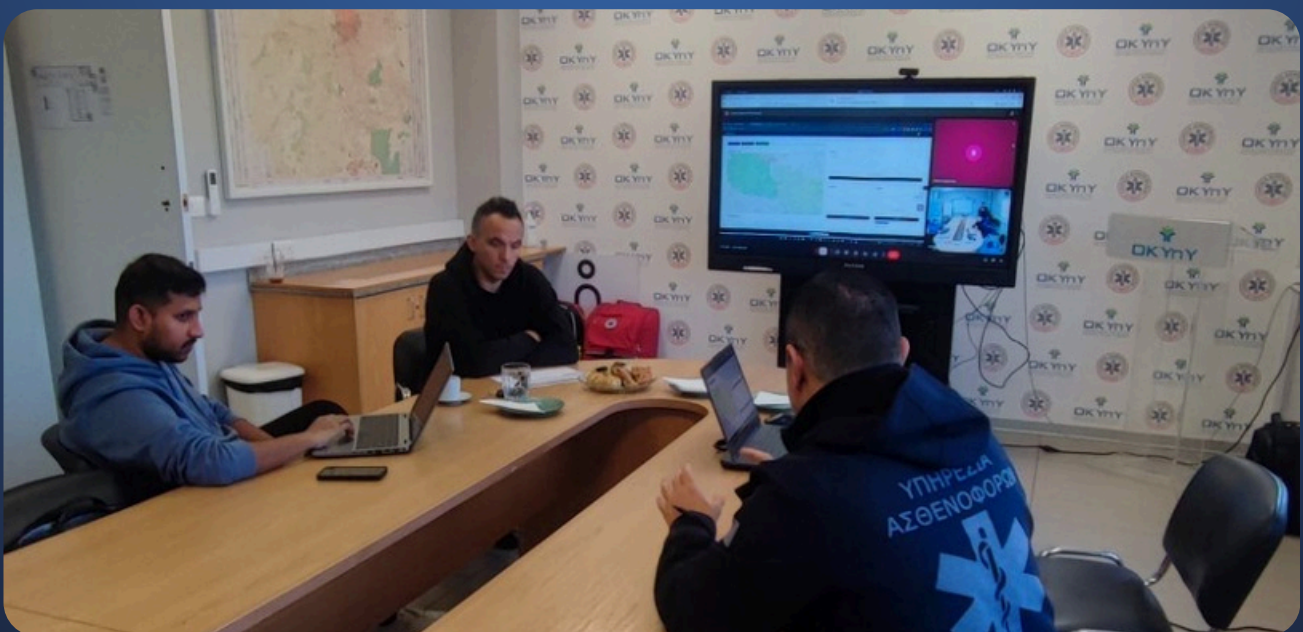
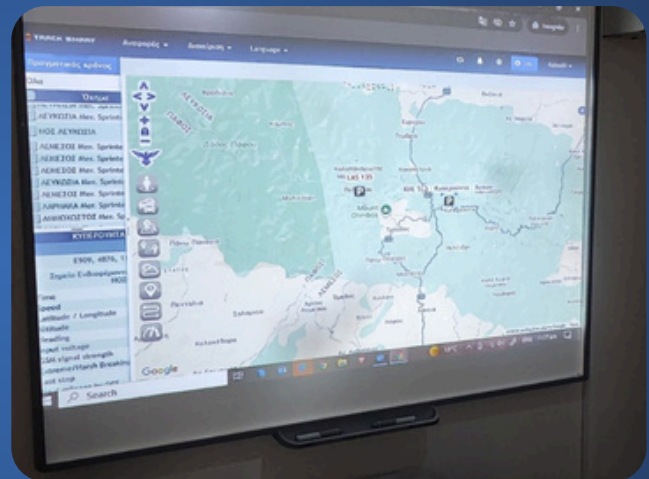
Suddenly, a new "red" incident was introduced: a young motorcyclist riding without a helmet crashed after a wild animal crossed the road at 'Livadi tou Ppsia'. Because only two crews were available in the entire region, the SmartPLAIGO algorithm was forced to re-optimize instantly. The system correctly identified that Crew 2 was handling a lower-priority call and successfully redirected them to the severe motorcycle accident. After transporting the injured rider to Troodos Hospital, Crew 2 was then routed back to manage the initial yellow incident, proving the practical value of dynamic reprioritization.



Scenario 2: The Priority Switching Test

A second complex scenario pushed the algorithm further by introducing four simultaneous calls. Both crews were handling newly assigned yellow incidents, one involving a person feeling unwell at Chionovrysi, and another involving a child who fell from a tree at the Adventure Mountain Park.

While Crew 2 was en route to the injured child, a new "red" incident appeared: a farmer experiencing a sharp chest pain during heavy agricultural work. Concurrently, a "green" (low priority) call for a minor wound also entered the system. The AI algorithm successfully evaluated the geographic proximity and priority levels, immediately interrupting Crew 2's route to the park and redirecting them to the farmer experiencing chest pain. The system actively held the "green" call in the queue until the urgent cases were resolved, ensuring the most critical patients received immediate care.



Professional EMS Drill - Limassol Marathon

The Ultimate Urban Stress Test: XM Limassol Marathon

The Professional EMS Drill executed during the XM Limassol Marathon on March 22, 2026, represented the most extensive urban stress test for the SmartPLAIGO system. With over 5,000 runners participating, the event provided a highly complex, dynamic environment to evaluate the platform's operational readiness, scalability, and ability to coordinate large-scale emergency medical responses.

Massive Multi-Agency Coordination

To manage the immense scale of the event, a dedicated local Operational Coordination Center was established near the start-finish line at the Molos area. This center was directed by the Head of Operations of the National Ambulance Services and supported by two specialized dispatchers tasked exclusively with managing incidents and coordinating across the various rescue units.

The physical response network was vast, integrating seven distinct coverage teams. The core medical fleet consisted of 6 ambulance vehicles and 6 rescue motorcycles, which were strategically positioned to handle severe incidents and hospital transfers. Furthermore, to ensure comprehensive coverage, volunteer teams from Civil Defence, the Red Cross, F.A.S.T., Rescue 1, and Life Rescue First Aid Cyprus were evenly stationed across the marathon route to address minor medical needs.



SmartPLAIGO as the Central Communication Hub

Prior to the marathon, all participating ambulance personnel and collaborating authorities installed the SmartPLAIGO mobile application on their devices. During the drill, the app functioned as the unified communication and reporting backbone for the entire event. It enabled instant map coordinate sharing, facilitated efficient cross-team dialogue, and allowed frontline responders to log incidents in real time, providing the coordination center with unprecedented situational awareness.

Execution and Real-World Outcomes

The system's capacity to scale under high demand was rigorously tested as the day unfolded. A staggering total of 347 medical incidents were reported through the platform. Because the system allowed for rapid triage and resource allocation:

- 330 affected runners were treated on-site and safely continued the race.
- 10 runners were advised to retreat from the marathon.
- 2 runners were collected by ambulance crews for further monitoring.

2 runners were transported directly to the local SHSO's Accident and Emergency Department (A&E) for conditions requiring a doctor's care.

Every single incident, up until the final report was logged at 13:40, was communicated flawlessly via the SmartPLAIGO framework. By seamlessly coordinating a multi-agency response and managing hundreds of real-time medical reports without a single communication breakdown, the Limassol Marathon drill definitively proved SmartPLAIGO's capacity to handle extreme urban operational demands.





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