# COMPREHENSIVE UNDERGROUND MAPPING

Xplora provides an advanced Unexploded Ordnance (UXO) Risk Assessment service in compliance with Italian Regulation, designed to ensure maximum safety and efficiency during the planning and execution of infrastructure projects in areas potentially affected by unexploded ordnance.

By integrating non-invasive methodologies with advanced artificial intelligence algorithms, Xplora not only identifies genuine UXO-related anomalies, eliminating ambiguities and false positives, but also delivers objective and repeatable results, avoiding errors caused by the subjective interpretation of traditional heat maps by technical personnel.

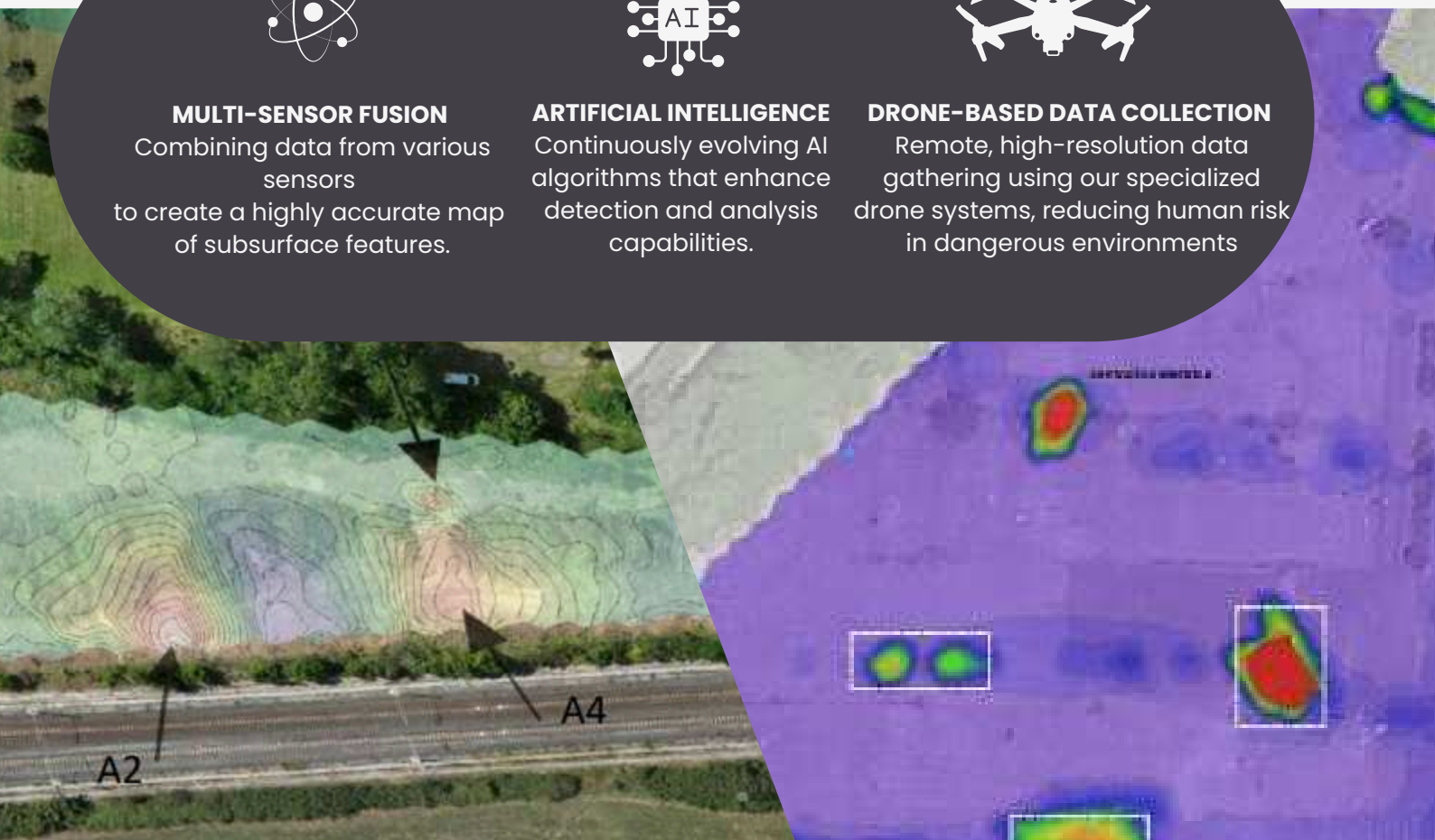
The technical outputs include a shapefile compatible with GIS projects, featuring updated digital mapping of the area and a 3D representation of UXO to depths of up to 14 meters, as well as a technical report fully compliant with national regulations.
These tools provide a reliable and objective foundation for risk planning and mitigation. This approach not only enhances the effectiveness of interventions but also significantly reduces time and operational costs, limiting the need for extensive Explosive Ordnance Disposal (EOD) operations to areas with confirmed anomalies associated with UXO. Xplora's service is therefore an essential support for tackling projects in complex environments, such as densely urbanized or railway areas.

## THE TECHNOLOGY

**MULTI-SENSOR FUSION**
Combining data from various sensors
to create a highly accurate map of subsurface features.

**ARTIFICIAL INTELLIGENCE**
Continuously evolving AI algorithms that enhance detection and analysis capabilities.

**DRONE-BASED DATA COLLECTION**
Remote, high-resolution data gathering using our specialized drone systems, reducing human risk in dangerous environments



# AMPLIA INFRASTRACTURES

**LOCATION:** Genova
**DATE:** 07/2024
**TERRAIN:** Asphalt

## PROJECT

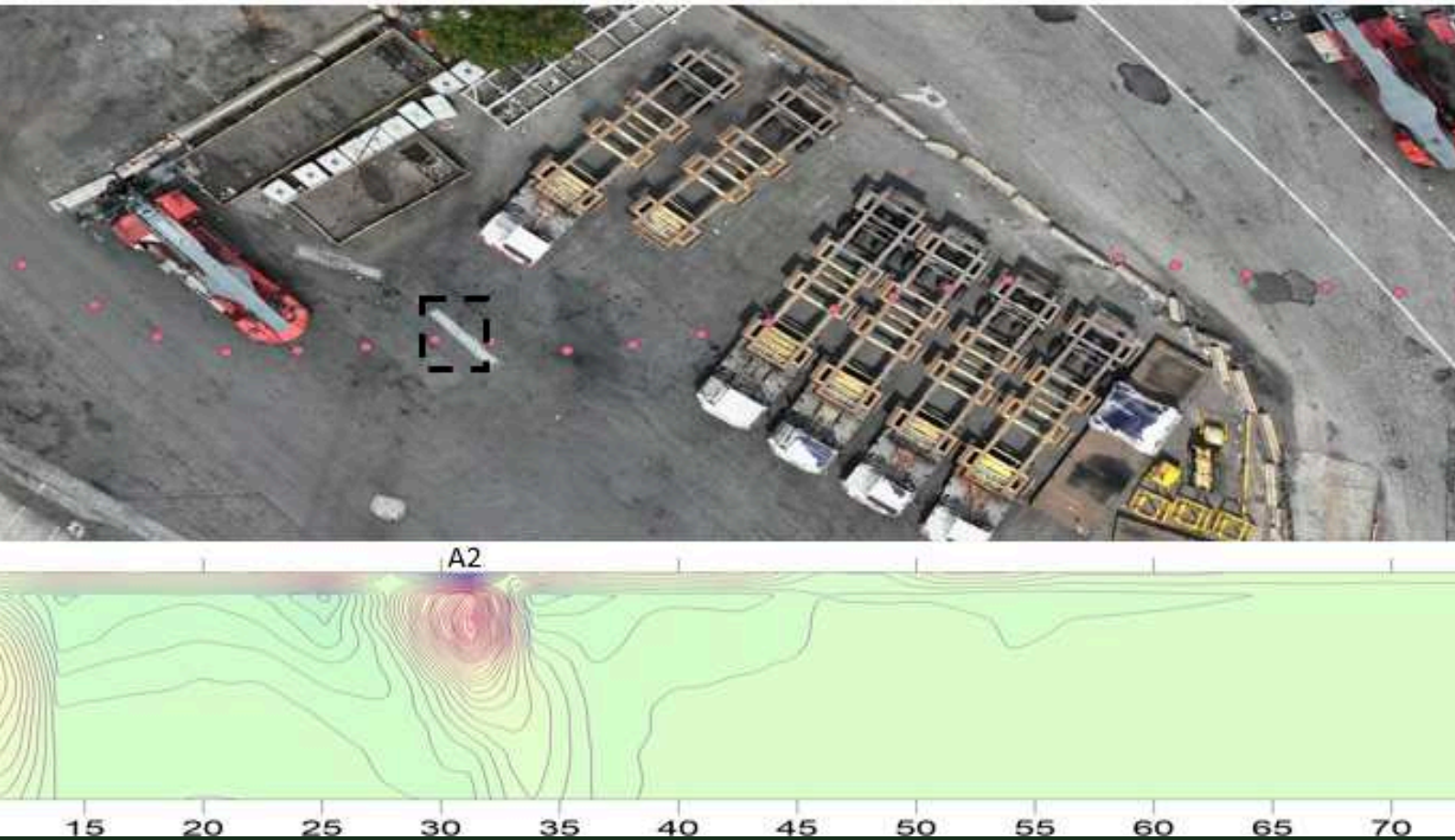
Non-invasive instrumental survey with a specialized operator within the first 10 meters below ground level to identify anomalies of a military nature over an area of 8.5 hectares.

## CHALLENGE

The densely urbanized environment required extremely precise and detailed processing, fully leveraging Xplora's advanced analytical approach. The terrain conditions, heavily anthropized and characterized by a complex stratigraphy with heterogeneous fills, caused significant interference in the raw signal. Advanced algorithms and neural networks enabled Xplora to deliver reliable results in compliance with the required technical standards.

## OUTPUT

- Three-dimensional map with characterization of ferromagnetic anomalies and identification of potential military risk evidence for possible targeted remediation;
- Technical report compliant with national regulations.




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