

COMPREHENSIVE UNDERGROUND MAPPING

Xplora provides an advanced service for underground utility mapping, designed to ensure the highest scientific accuracy in the representation of subsurface infrastructure. Utilizing non-invasive methodologies and advanced artificial intelligence algorithms, Xplora delivers objective and repeatable outputs, minimizing noise and ensuring superior data accuracy and reliability.

The technical deliverables include a .dwg map of the identified utilities and a GIS project where the utility geometries are

overlaid on updated photogrammetry of the area, ensuring enhanced geospatial precision.

These outputs are fully compatible and integrable with both new and existing projects. This approach streamlines the management of underground utilities, supporting organizations in delivering projects on time while reducing operational costs. Additionally, our technical report serves as a critical resource during the detailed design phase, enabling a more precise evaluation of potential unforeseen risks.

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



LOCATION: Val Trompia, Italy

DATE: 03/2024

TERRAIN: Field

PROJECT

Mapping of underground utilities within the first 2.5 meters of depth from the ground level.

CHALLENGE

Produce an accurate three-dimensional map of the utilities below the ground surface, optimizing survey activities to minimize disturbances to vehicular traffic. This was made possible by the capabilities of Xplora software, which enables excellent interpolation of sparse data, thus reducing fieldwork activities.

OUTPUT

- GIS project with 3D geometry of the underground utility layout down to a depth of 7 meters
- .dwg file for CAD processing

