XPLORA®

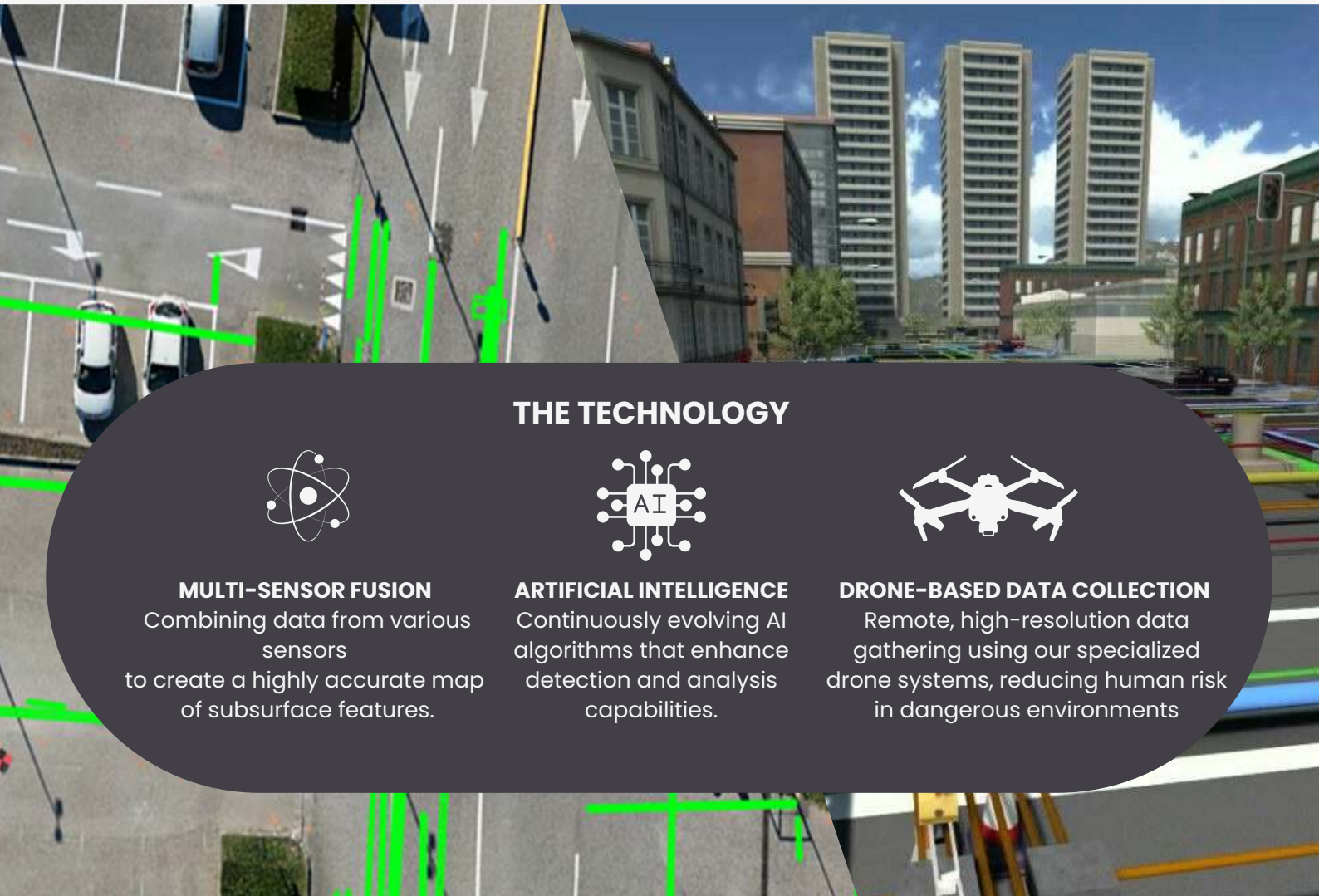
FOR ENERGY AND UTILITIES

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

TECNE AUTOSTRADE

LOCATION: Genova (GE)
DATE: 09/2023
TERRAIN: Asphalt

PROJECT

Mapping of underground linear utilities (fiber optic cables, electrical lines, aqueducts, corrugated pipes, etc.) and non-linear underground utilities (tanks and other artificial objects) up to 3 meters below ground level.

CHALLENGE

The densely built-up environment required highly detailed and accurate processing, fully leveraging Xplora's analytical methodology. The terrain conditions, heavily anthropized, were prohibitive for technical surveying as the varying grain size of the subsoil and the different fills caused significant interference with the raw signal. Xplora's algorithms and neural networks solved the problem.

OUTPUT

- GIS project with updated photogrammetry and layout of underground utilities and buried structures, including characterization, type, and depth indication.
- DWG file for CAD processing.



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