Take Over

TAKE Over - Surveys with Mobile Mapping

TAKE Over is an innovative company based in Pescara, Italy, that stands out in the field of spatial data collection and management using cutting-edge technologies. We specialize in the use of Mobile Mapping systems, which allow us to acquire high-precision geospatial data, speeding up and optimizing the mapping process of complex environments.

TAKE OVER®

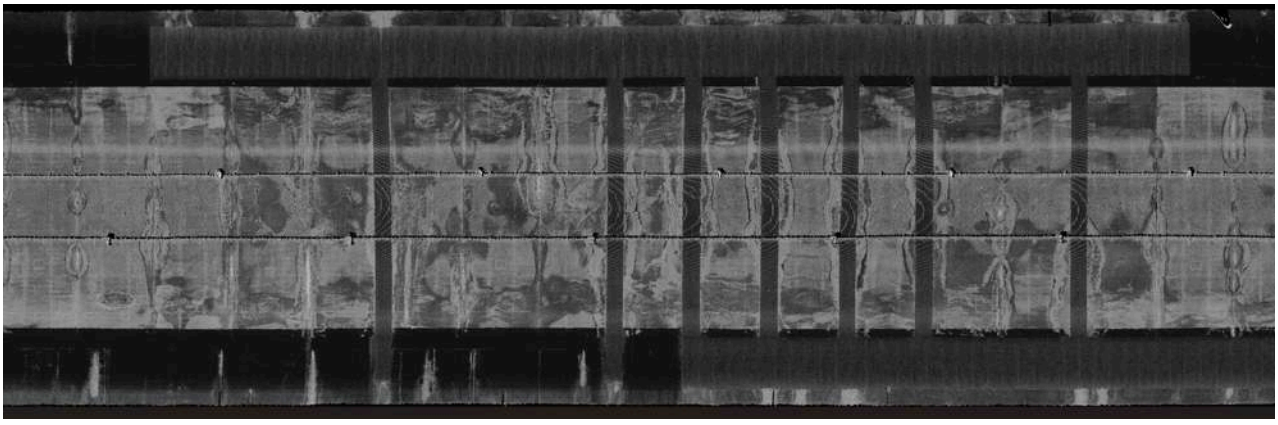
Mobile Mapping: An Advanced Solution for Precision Surveying

The Mobile Mapping system is one of the most sophisticated tools in the field of three-dimensional surveying. Thanks to the use of advanced sensors such as LiDAR scanners, high-definition cameras, and GPS, this tool is able to map and collect spatial data in real time, with millimeter precision, directly while a vehicle is in motion.

The detection process allows large areas to be captured quickly and in detail, without the need to interfere with traffic or the surrounding environment. The system is capable of generating a 3D point cloud that accurately represents every detail of the mapped area, creating a three-dimensional digital model.

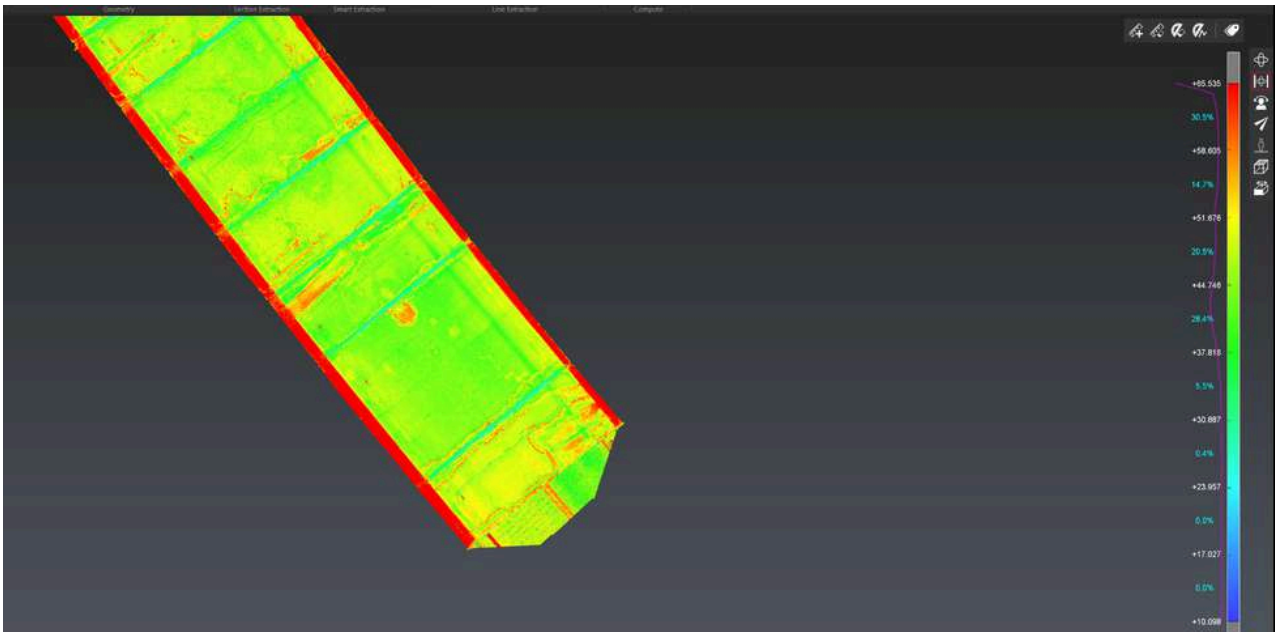
Case Study: Survey for Tunnels

A concrete example of our experience concerns the survey carried out for a series of road tunnels. The difficulty of operating in underground and confined environments made it essential to use advanced technologies such as Mobile Mapping, which allowed us to obtain a complete and accurate map, reducing intervention times and increasing safety during operations.
During the survey, the vehicle equipped with Mobile Mapping systems was driven through the tunnels, acquiring both visual and laser data. The resulting 3D point cloud provided an extremely detailed representation, with a resolution that allows even the smallest structural defects to be detected.

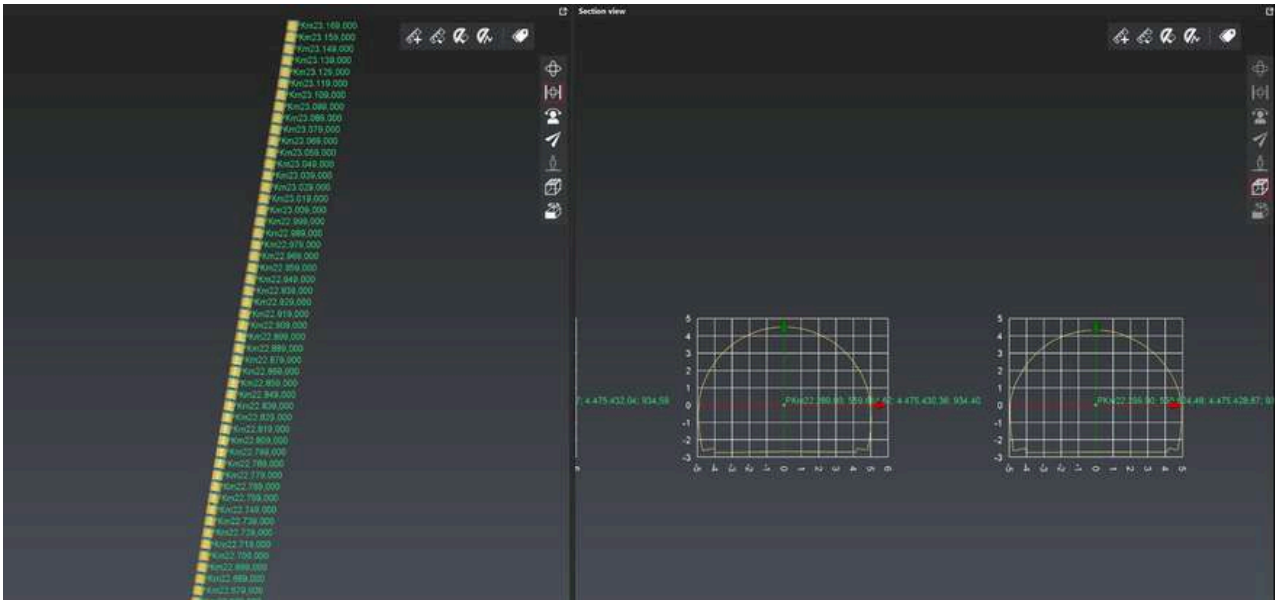


Technical Features: High Precision and Detailed Detection

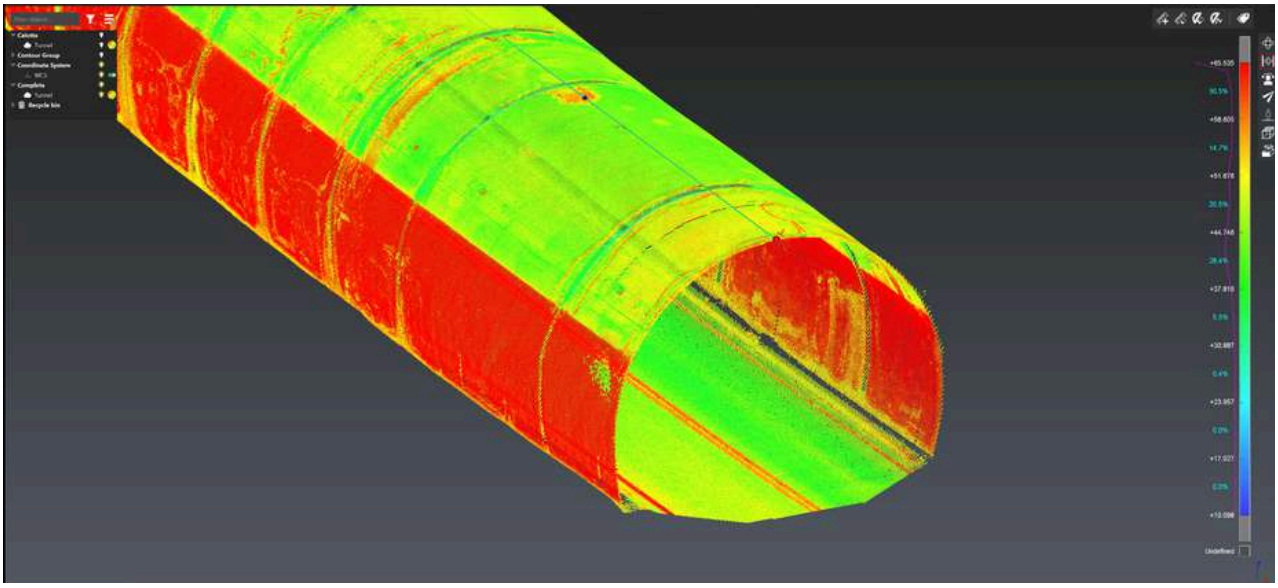
- Point cloud: The point cloud generated by the surveys is extremely detailed and contains millions of points representing every surface surveyed, from walls to internal structures. This density of data allows for precise analysis of complex geometries and small defects that could be overlooked using traditional methods.

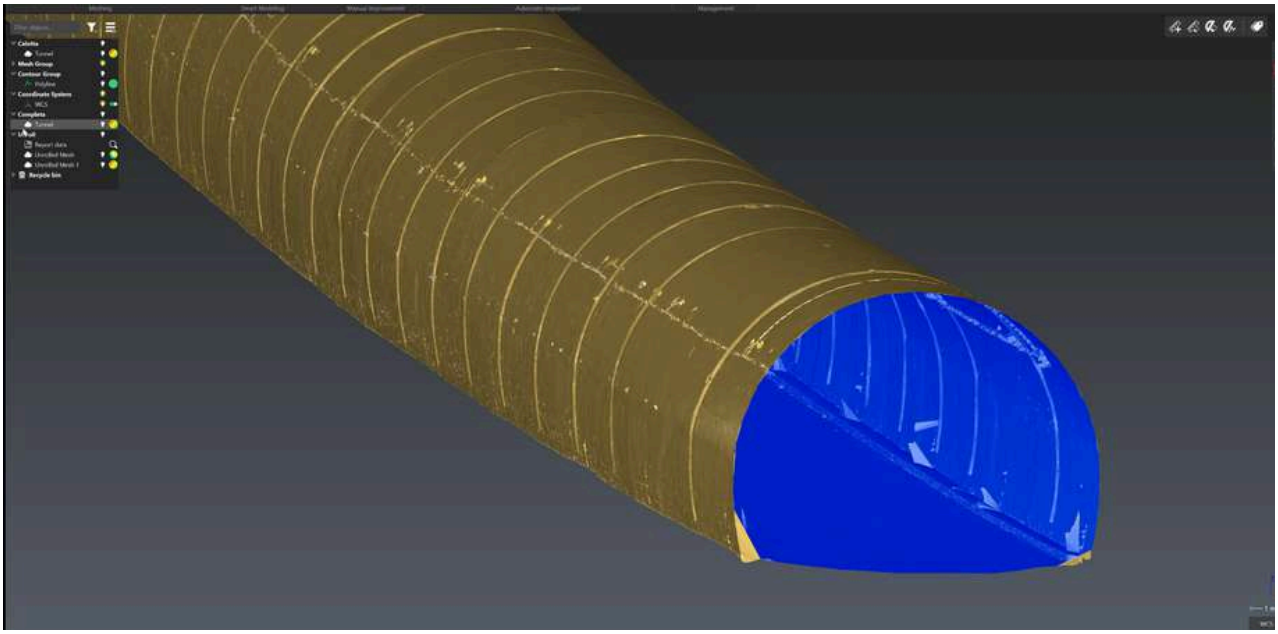


- Surface spelling: Thanks to LiDAR technology, each point acquired is enriched with information relating to its reflectance, a parameter that provides information on the nature of the surfaces crossed (such as the composition of the material and its roughness). This feature makes the map not only visually realistic, but also functionally useful for structural and degradation analysis.



- Degradation and maintenance: An important aspect of our work is the ability to highlight the degradation of structures through orthomaps. Analysis of the points collected allows us to monitor wear and damage to surfaces, facilitating the planning of preventive maintenance interventions and improving infrastructure management.

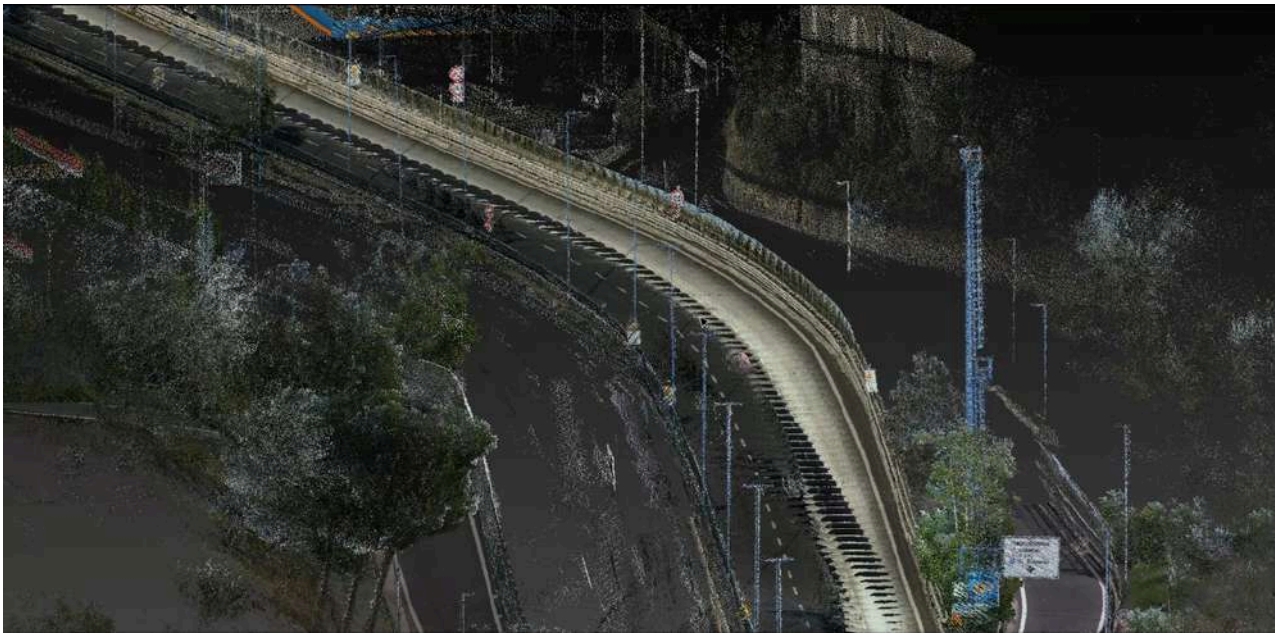




Case Study: Extended road infrastructure survey

In a recent project, our team carried out topographic and cartographic surveys on a stretch of road several kilometers long, featuring numerous portals, ramps, and junctions.

The project involved over 9 hours of field surveying and the acquisition of approximately 17 km of data using Mobile Mapping with the Leica Pegasus TRK100 system, supported by GNSS receivers and static surveys with a laser scanner.

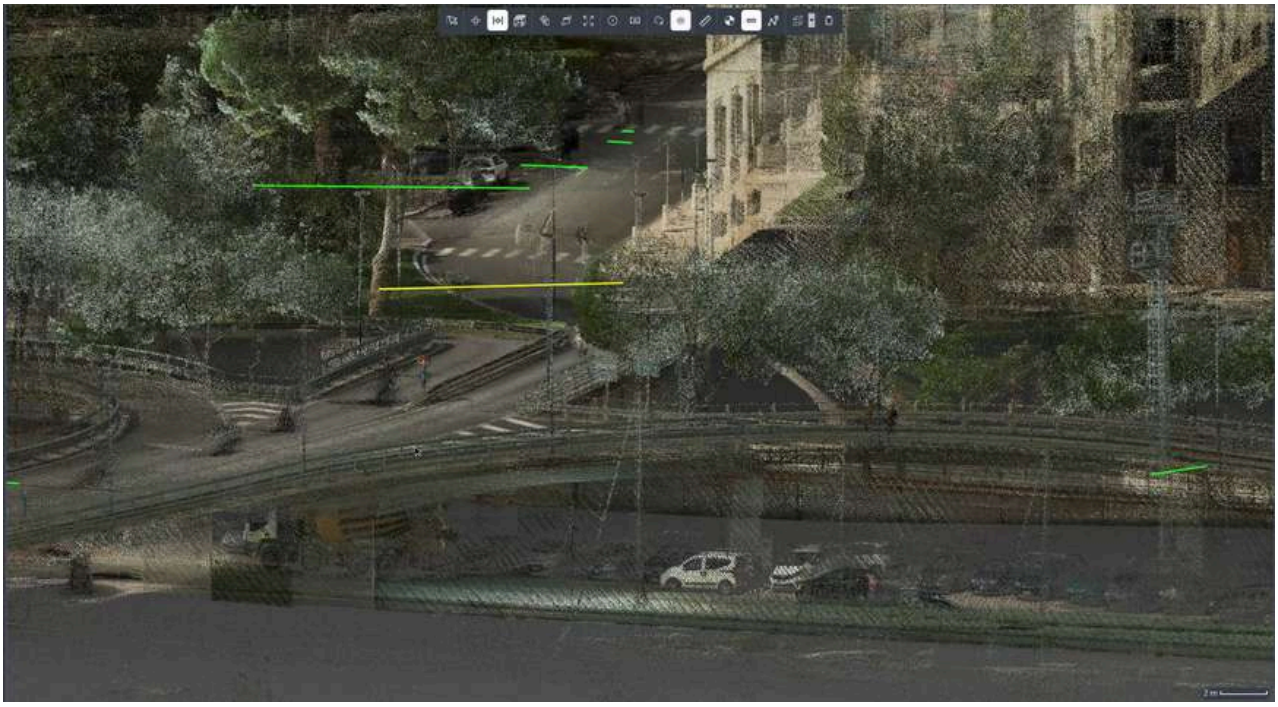


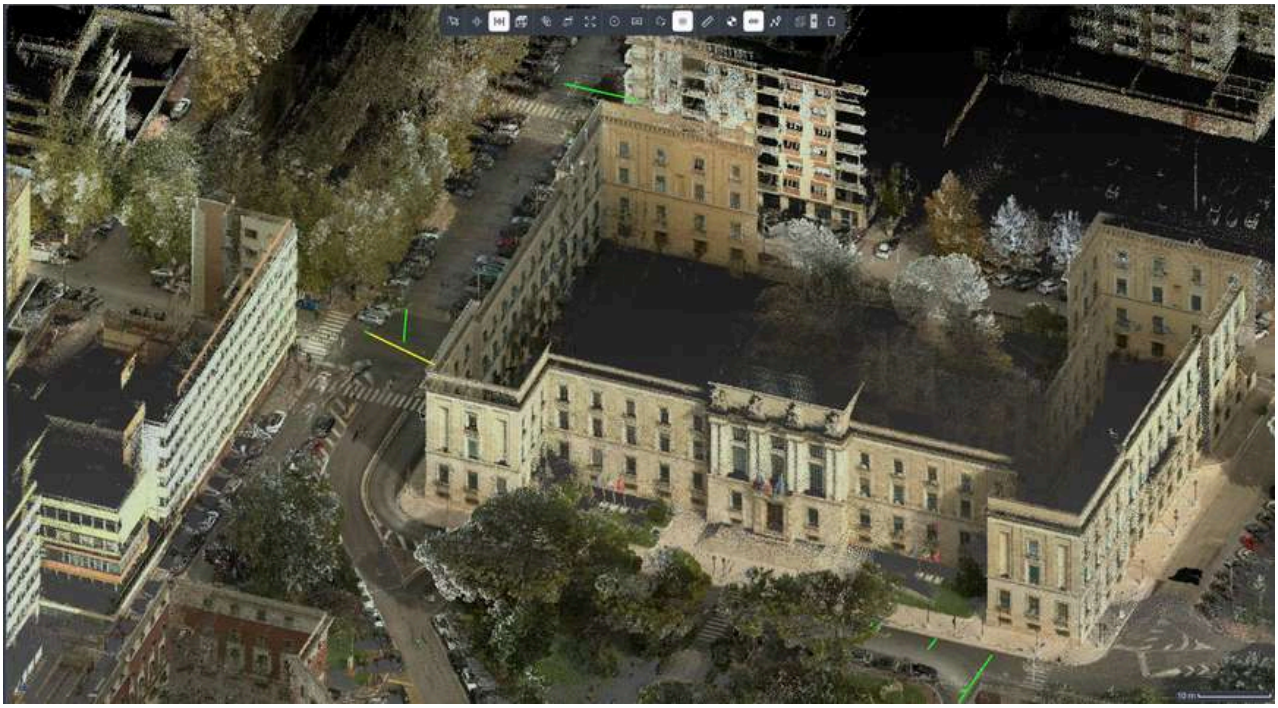
Over 35 km of trajectory were acquired in order to ensure maximum continuity and precision in the final point cloud (average resolution ≈1 cm).

The restitution in a 2D/3D CAD environment provided the client with a solid and precise basis for subsequent design and planning activities.

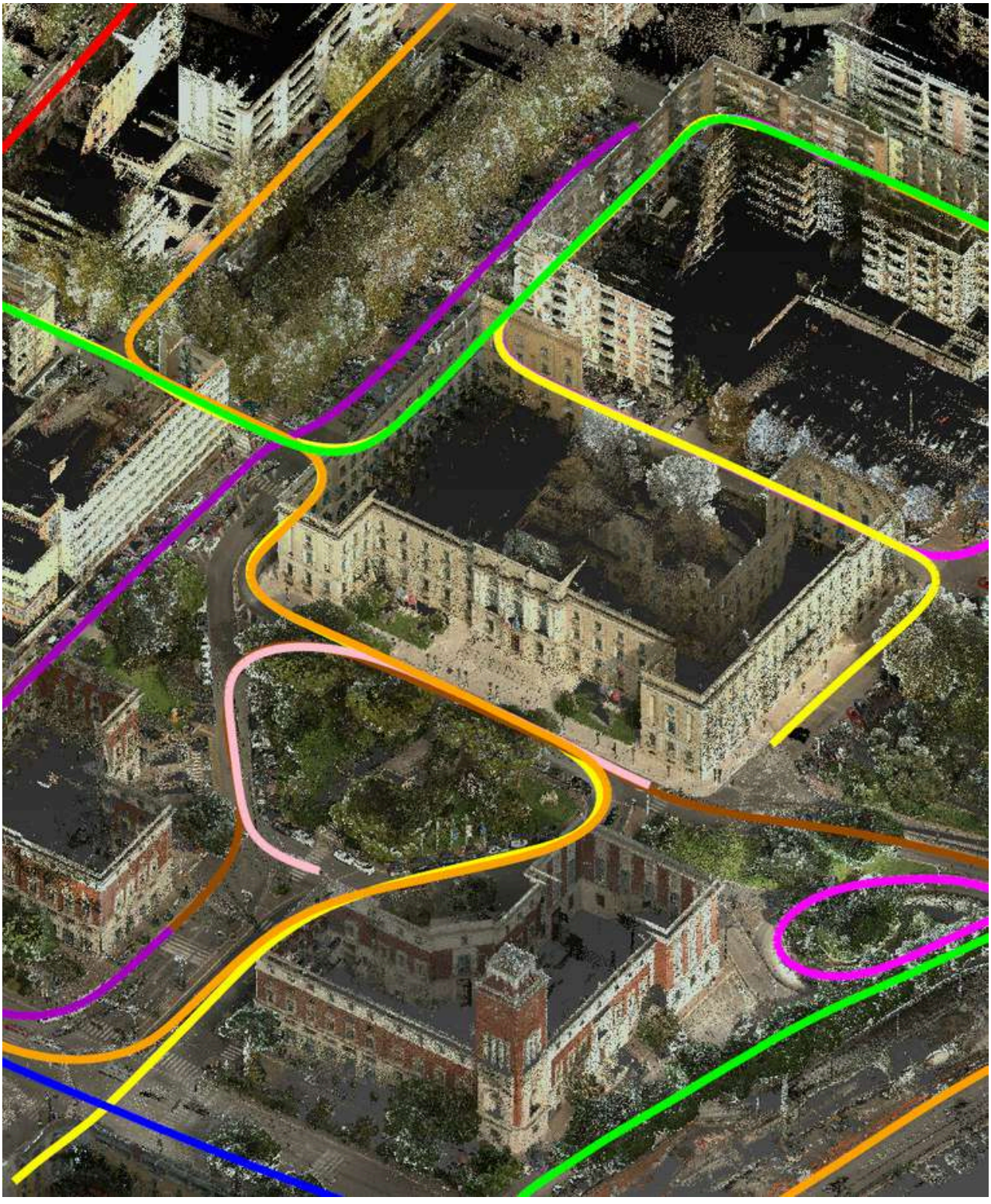
Case Study: Urban surveying for municipal asset management

The same technology was also adopted in a complex urban context, where it was necessary to document in detail the road network and infrastructure elements to support territorial planning.



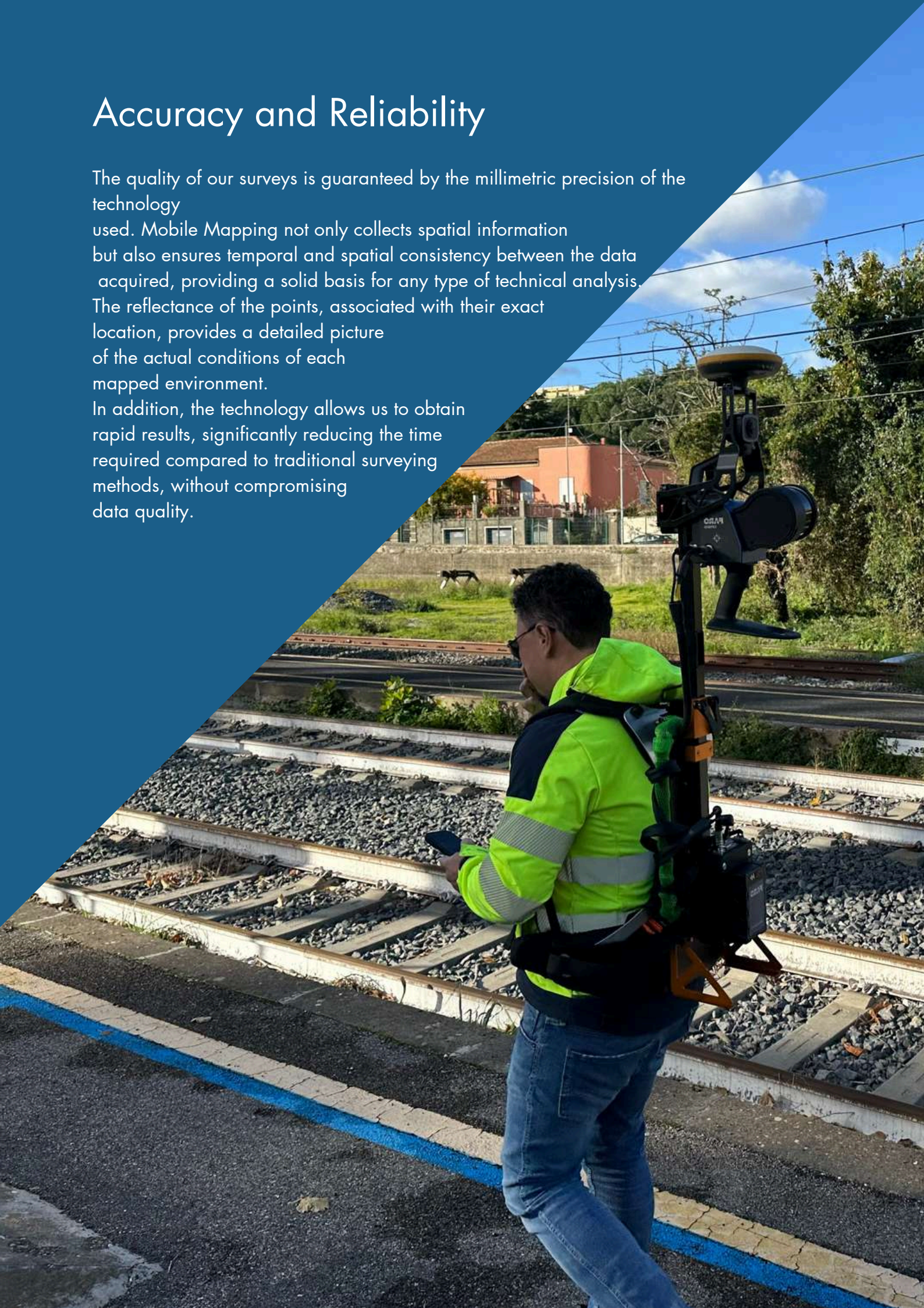


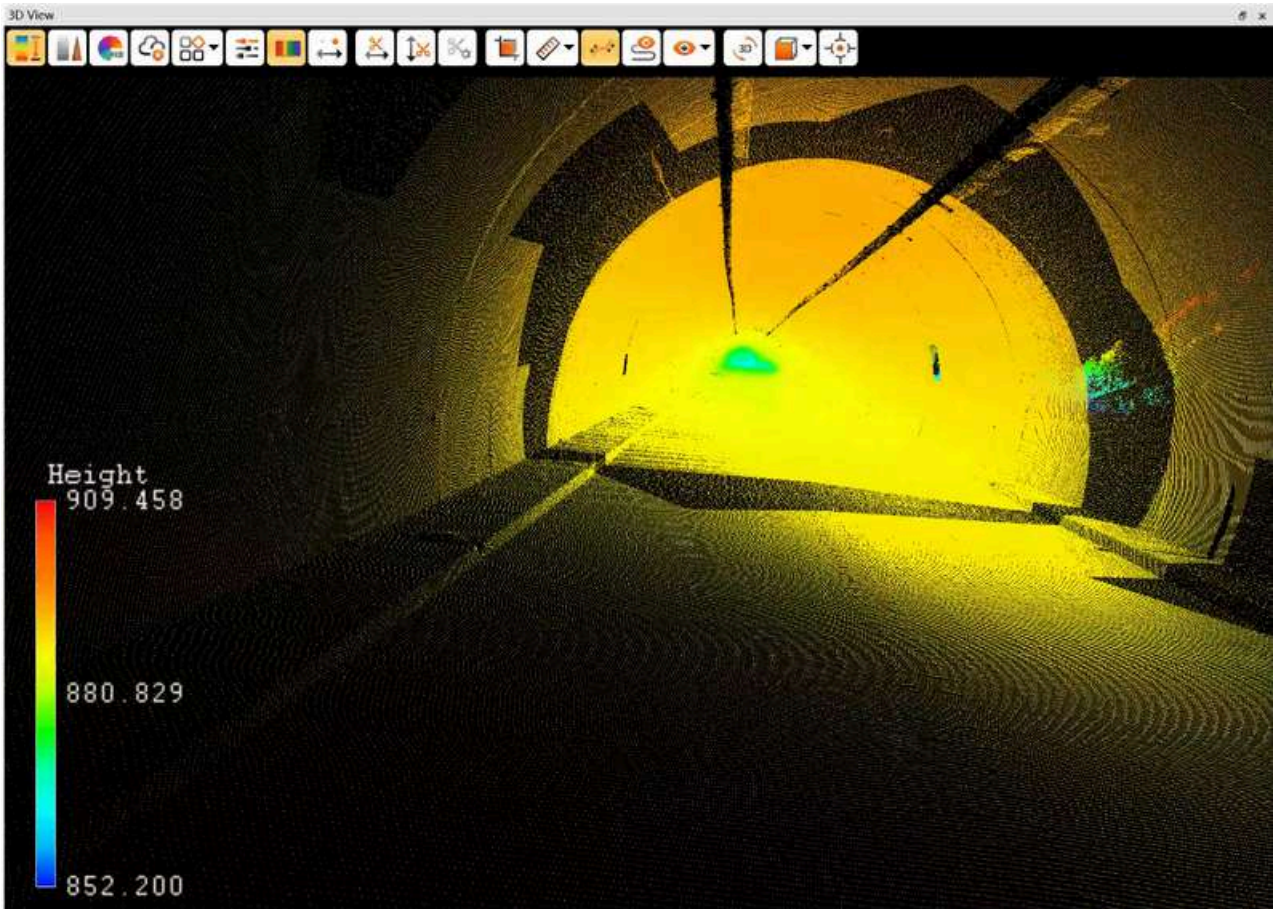
The Mobile Mapping system made it possible to quickly map large urban areas, integrating geometric information with panoramic images and GNSS data to produce a complete digital model of the urban fabric.
The combined use of mobile LiDAR and static stations ensured optimal spatial consistency, enabling high-precision analysis and management of the territory.



Accuracy and Reliability

The quality of our surveys is guaranteed by the millimetric precision of the technology
used. Mobile Mapping not only collects spatial information
but also ensures temporal and spatial consistency between the data acquired, providing a solid basis for any type of technical analysis.
The reflectance of the points, associated with their exact
location, provides a detailed picture
of the actual conditions of each
mapped environment.
In addition, the technology allows us to obtain
rapid results, significantly reducing the time
required compared to traditional surveying
methods, without compromising
data quality.





The Advantages of Mobile Mapping Surveying

- Speed: surveys can be completed very quickly, minimizing disruption to daily activities.
- High precision: LiDAR technology and advanced sensors guarantee accurate and detailed data.
- Safety: the use of this technology allows surveys to be carried out in difficult environments without risking the safety of operators.
- Data management: the acquired point cloud can be easily managed, analyzed, and integrated with other GIS systems or 3D modeling software for complete project management.

Contacts

+39 3478626213

TAKE-OVER.IT

AMMINISTRAZIONE@TAKE-OVER.IT

VIA VERDI, 23 - L'AQUILA (AQ)
VIALE BOVIO, 248 - PESCARA (PE)
VIA SAVOIA, 78 - ROMA (RM)

TAKE_OVER_PESCARA

BQC BUSINESS QUALITY CERTIFICATION

ISO/IEC 27001 SYSTEM CERTIFICATION

ISO 9001:2015

TAKE OVER®


TAKE OVER®