# CANADA-ITALY BUSINESS FORUM ON ARTIFICIAL INTELLIGENCE

VIRTUAL EDITION

## **Workshop Sustainable Energy and Circular Economy**

### Annibale Guariglia

Chief Executive Officer











#### WHAT WE DO?

Tailor made solutions and tools for territorial survey, environmental monitoring and anomalies detection along infrastructures.

#### FOUNDERS

The founders have combined more than 25 years of experience in Engineering and Environmental Monitoring.

#### ACHIEVEMENTS

Selected by the UN (CTBTO) for Advanced aerial mapping; Power line inspection: 120.000 Km/year in Europe and Latin America (Italy, Spain, Romania, Serbia, Brazil).

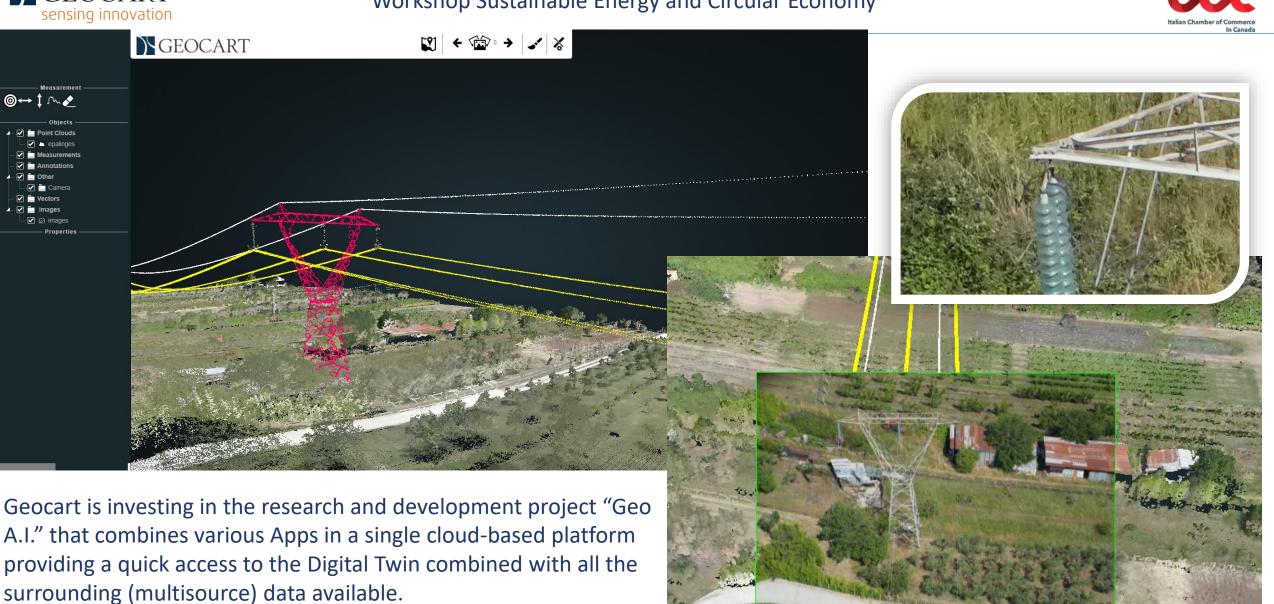
#### **HEADQUARTERS**

Potenza (ITALY) with offices in Rome, Bologna, Bucharest (ROMANIA), Montreal (CANADA), Fortaleza (BRAZIL).









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GEOCART

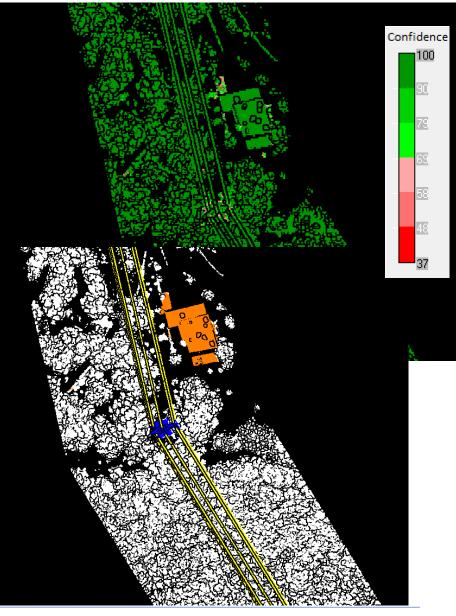






Our AI development projects (object detection and image segmentation by using machine learning/deep learning) involve high-resolution images and LIDAR point clouds. Currently, we are able to recognize all the components for Asset Inventory. Moreover, we respect the legal framework of personal information (e.g. faces, plate numbers...) by means of AI solution. The final goals are the implementation of automatic point cloud classification systems and tools for powerline anomalies identification.

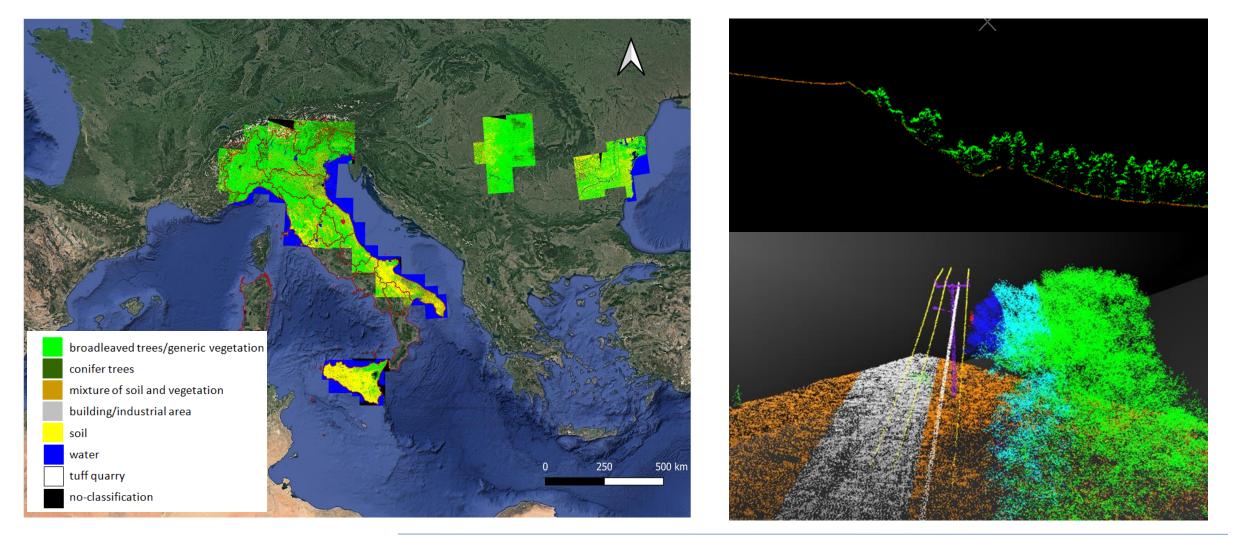








Vegetation interference detection. The integration of aerial and satellite data permits the detection of broad leaved and coniferous woodlands, which helps in Vegetation Management and Predictive Maintenance.



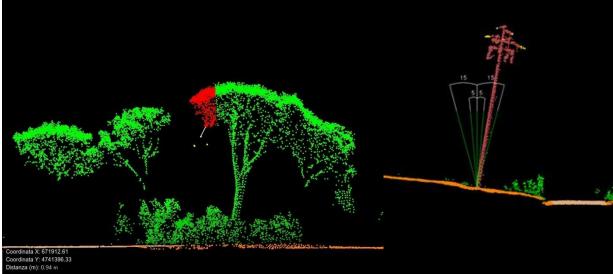




The effective management of power grid maintenance is strictly related to environmental protection due to its contribution through the predictive analysis of the damage caused by the electrical infrastructure's interference on vegetation and, more broadly, on local plants and animals. Network monitoring prevents natural disasters, costing human and animal lives, as well as financial effects, and impoverish the landscape due to land deforestation that will take decades to recover.











## Summary

- The project rationale is offering customers a single cloud-based platform that provides a quick access to the Digital Twin combined with all the surrounding (multisource) data available.
- Al tool will assist to obtain the inventory of all the components and anomalies along the infrastructure in order to optimize maintenance processes and prevent technological aging.
- The platform consists a valid tool to support decision-making process to reach a perfect balance between effectiveness and efficiency such as maximum service reliability combined with resource savings, environmental impact mitigation and protection of individuals as well as the environment.









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a.guariglia@geocart.net www.geocart.net