



Remote Sensing Solutions for **UTILITY COMPANIES**



PLANETEK GROUP



Bari



Athens (Greece)



Roma



Bari



- Diamond Partner of Hexagon
- Main Italian reseller of satellite data and imagery

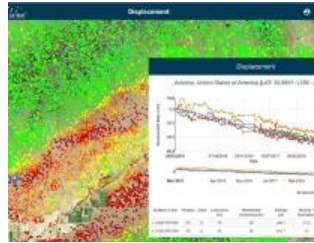


EO Services

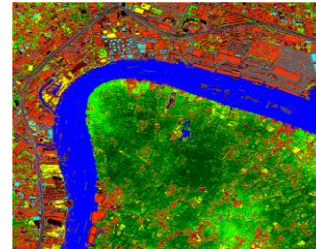
For Engineering support



SATELLITE
IMAGERY FOR
CARTOGRAPHY
(2D/3D)



GROUND SURFACE
MOVEMENT
ANALYSIS:
RHETICUS
DISPLACEMENT



TERRITORY
ANALYSIS:
LAND USE MAPS



WATER QUALITY
FOR DESALINATION
PLANNING

EO Services

For Infrastructure monitoring



CO₂ / CH₄
DETECTION



PIPELINE
MONITORING



CHANGE
DETECTION



DESALINATION
PLANTS



RHECUS
NETWORK ALERT



VEGETATION
ANOMALY
ANALYSIS



EO Services for Engineering Support

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Satellite imagery for cartography 2D/3D

Satellite remote sensing can help surveying wide areas in short times, thanks to the availability of a wide range of satellite constellations.

High-resolution sensors are able to capture images of the Earth surface up to 30 cm per pixel, achieving a huge level of details.

Through advanced photogrammetry, Planetek is able to offer worldwide **DEM** (Digital Elevation Models), produced from stereoscopic satellite images with a pixel resolution up to 0,5 meters and a plano-altimetric **error of better than 1 meter.**



Ground surface movements analysis: Rheticus[®] Displacement

Rheticus[®] Displacement is an automatic **cloud-based geoinformation service** designed to deliver fresh and accurate satellite-based data and information for the monitoring of **ground surface movements**. Using Copernicus Sentinel-1 open data or COSMO-SkyMed or TerraSAR-X data images and the PS technique, the service is complementary to traditional survey methods, providing an integrated solution to ground instability monitoring.

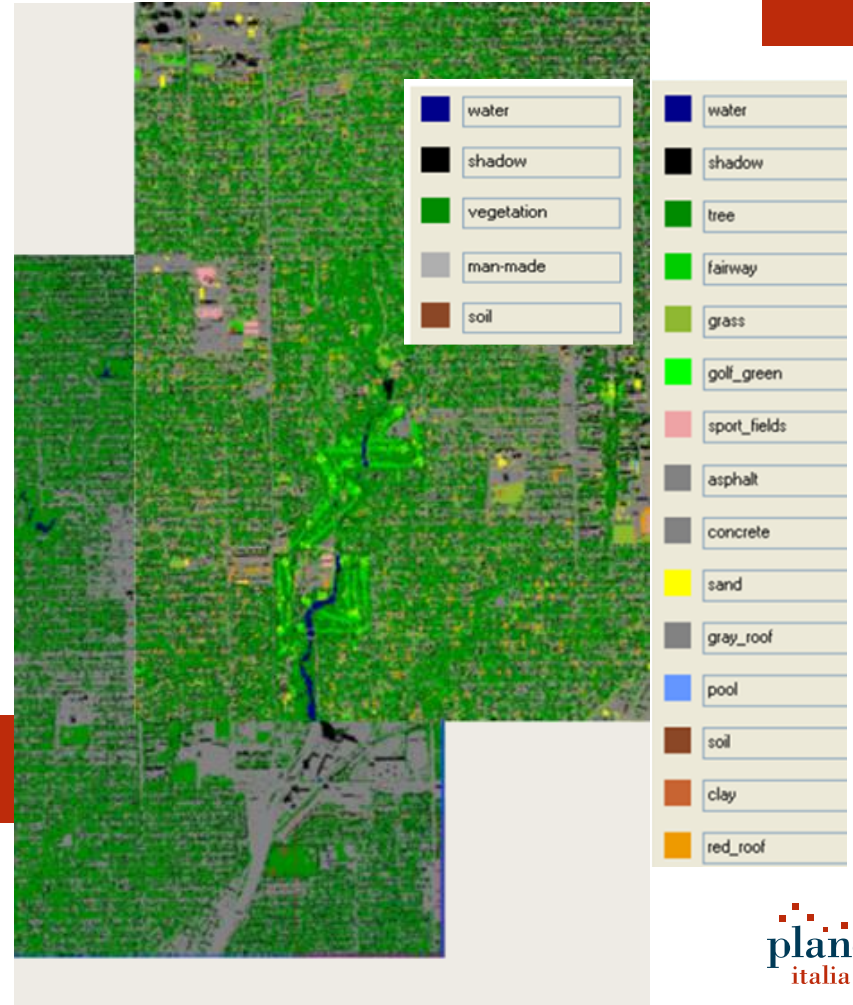
It can be used to prevent infrastructure collapsing, and to mitigate risks linked to landslide and subsidence phenomena.



Territorial analysis: Land Use Maps

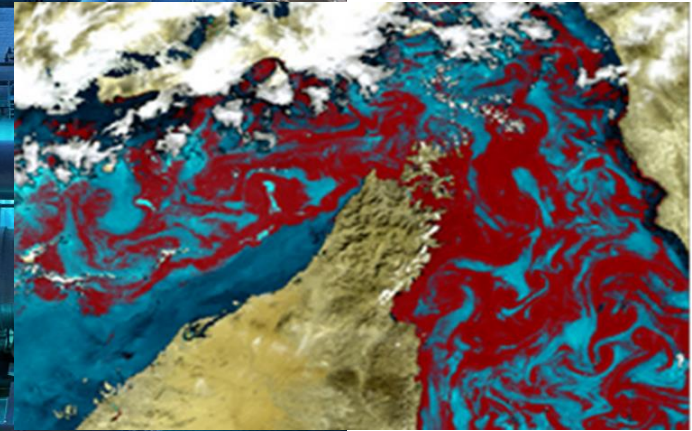
High-resolution satellite image can be used to analyze the state of the vegetation and to monitor, for example, how many hectares have changed their coverage from forests to impervious soil.

The land cover is detailed with 42 classes in compliance with Corine classification (such as building, transport network, etc).



Desalination

Statistical analysis of water quality, algal bloom and sediments, for the optimal localization of uptake points for desalination plant.





EO Services for Infrastructure Monitoring

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CO₂/CH₄ Detection

Planetek Italia can provide **maps of gas concentration**, with specific focus to green house gases (Carbon Dioxide-CO₂ and Methane-CH₄).

We use specific intelligence data, such as columns of gas concentrations (see figure attached), to deliver **customized analysis** of your site of interest to support activities like gas detection, emission rates detection, infrastructure's leak detection.



* CH₄ column averaged concentration in excess of
Background image: Google Earth Pro

Pipelines Monitoring

High resolution optical satellite data help to obtain a synoptic view of the whole network.

This service helps to detect possible illegal activities affecting the infrastructure network.



Change Detection

Thanks to the great number of high resolution satellites available and to its almost daily revisit, monitoring areas of interest like airports, construction sites, infrastructure networks, boundaries is now very simple.

Moreover, the use of cloud platforms to share images and the results of the processing gives the user the advantage to access information he needs every time and everywhere.



Desalination Plants

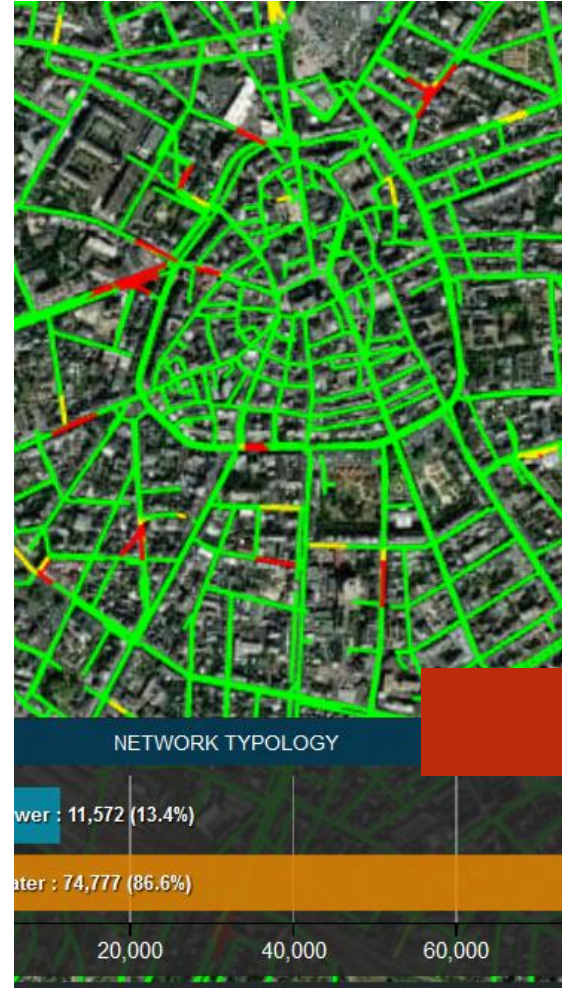
Continuous monitoring of water condition, to prevent and manage algal bloom events.



Rheticus® Network Alert

Rheticus® Network Alert improves inspection planning & efficiency of water and sewerage networks, providing actionable reports of critical pipe segments based on continuous radar satellite monitoring. Using ground displacement as indicator for likelihood of failure the service enables predictive analysis to prevent structural failures.

Inspections and maintenance activities are thus scheduled more efficiently, and simplified as a whole.



Vegetation Anomaly Analysis

Several high resolution satellite images are processed to get the NDVI, an index of how much healthy vegetation is.

A comparison of the values of this index in areas close to pipes makes it possible to **analyze differences in the state of vegetation**, and relate these anomalies to possible water pipes leakages.



Customer Reference



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