



## **Planetek Italia: 30 years of Space for the Water utilities**



# Satellite analysis to support water utilities: **real** use cases



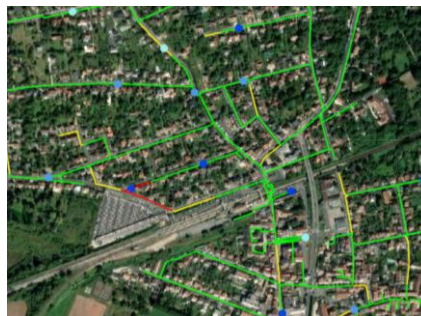
## Analysis of ground displacement

- **Site Report:** analysis of soil stability near plants
- **Rheticus Network Alert:** analysis of soil stability in relation to water and sewerage networks



## Change Detection analysis

- **Rheticus Network Alert:** analysis of changes in the territory near water and sewer pipes
- Analysis of changes to monitor sensitive protected areas
- Analysis of changes in the territory for the purposes of asset management



## Soil moisture analysis

- **Pre-localization of water leaks** to provide support to the water utilities' activities by reducing the areas on which to focus resources



## Water quality monitoring analysis

- **Analysis of physical parameters of water quality for:**
  - Assessing the impact of sewage discharges on water bodies
  - Evaluate the level of turbidity to estimate the efficiency of a purifier

# Satellite analysis to support water utilities: **real** use cases



## Analysis of vegetation growth

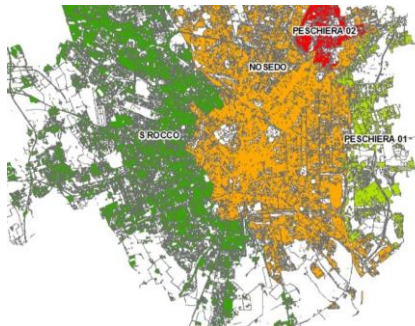
**NDVI**, analysis of the vegetation growth index for:

Detecting areas of anomalous vegetation growth attributable to leaks from the water or sewerage network



## Analysis of greenhouse gas (GHG) emissions

Remote sensing of gas concentrations in the air to estimate emissions from a plant or distribution networks



## Analysis of the land use

Land use analysis for:

- Analyzing the surroundings of a purifier for wastewater reuse strategies
- Analyzing the soil permeabilization rate to estimate the water supply to a purifier

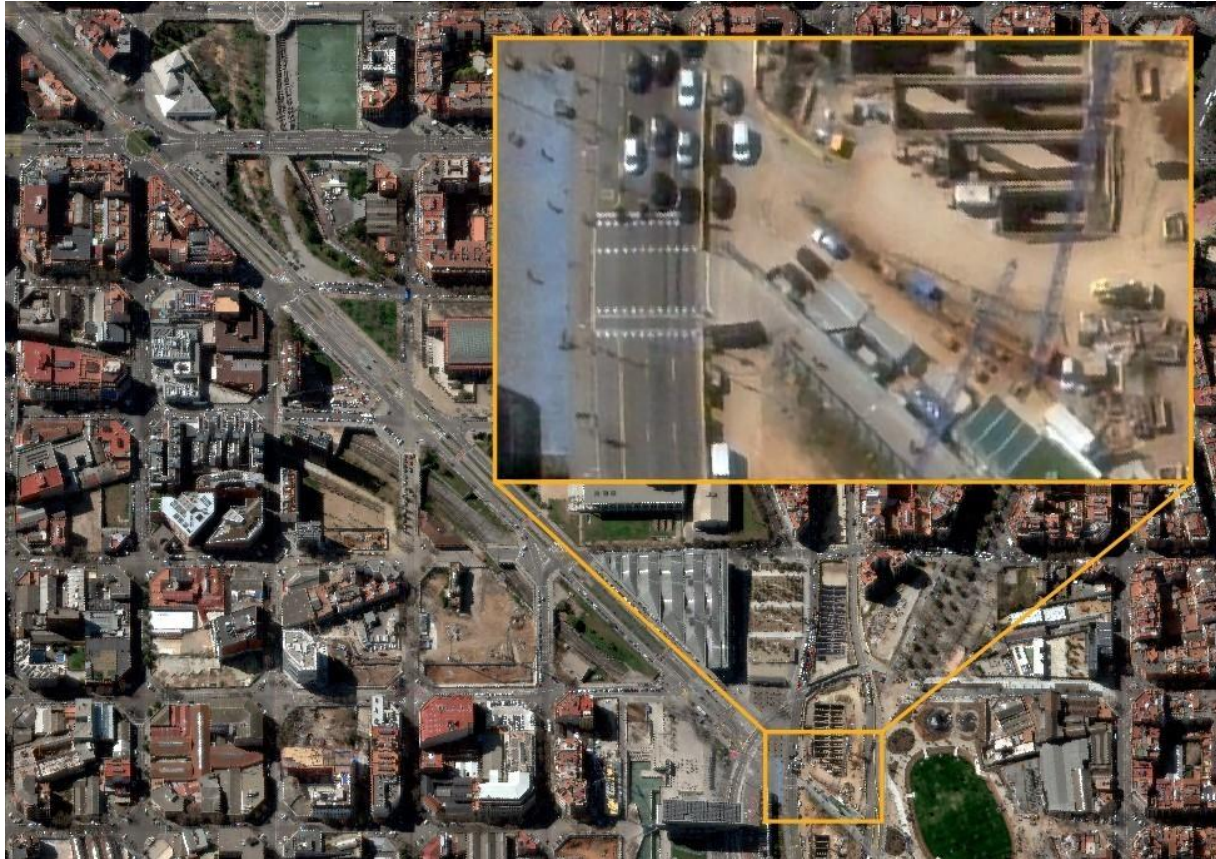


## Mapping / Census of swimming pools

Survey of all the swimming pools present in the area to cross-reference the data with asset management (consumption, declared or undeclared swimming pools)



# Change Detection – 30cm Sat data





# Change Detection – 30cm Sat data





# Rheticus Change Detection



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# Changes detected



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**CENTRALE  
DELL'ACQUA  
MILANO**

**MM**

# Changes detected



**SERVIZI**  
a rete

**planetek**  
italia

**CENTRALE  
DELL'ACQUA  
MILANO**

**MM**



# Rheticus vs Climate Change

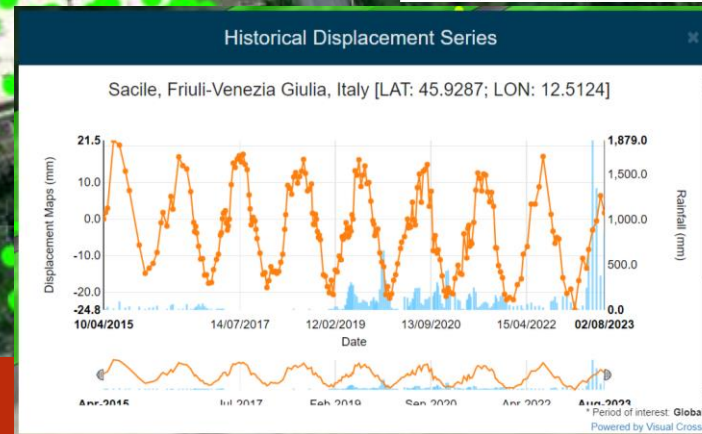
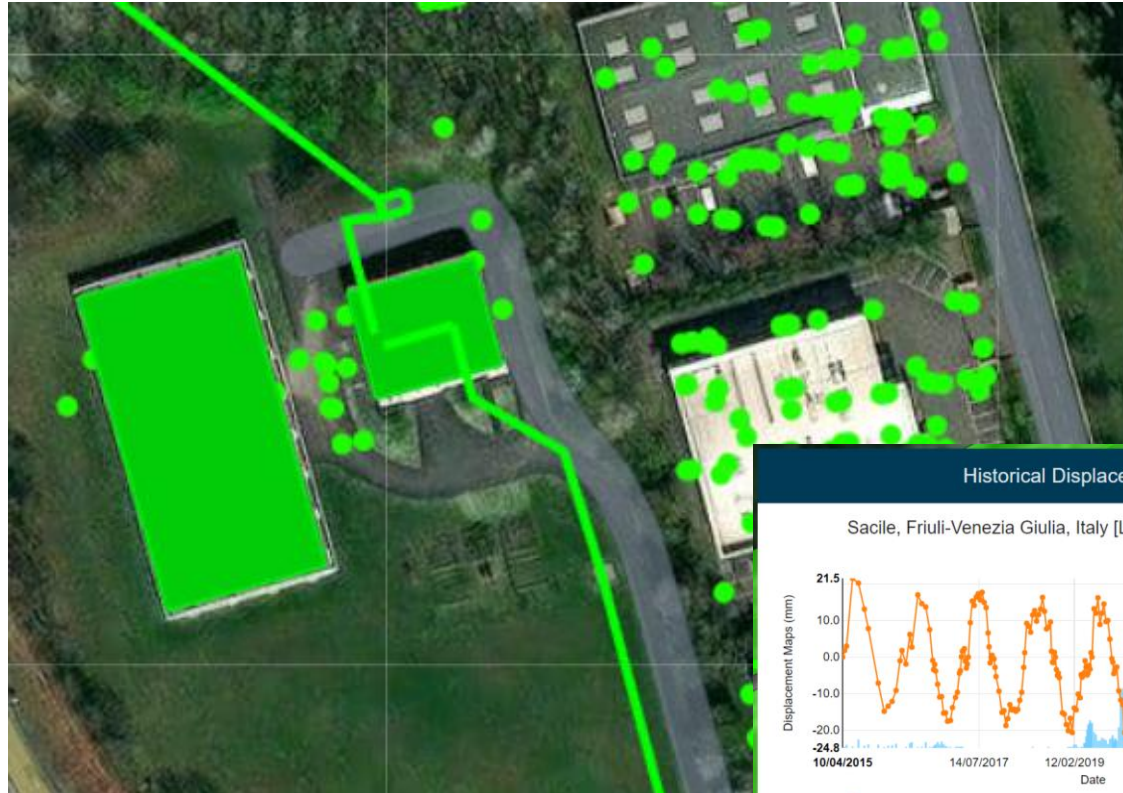


Rheticus<sup>®</sup>  
monitoring the evolution of our Earth

## Rheticus<sup>®</sup> Site Report

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Approved by: Sergio Samarelli  
Checked by: Vincenzo Massimi

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