

June 2022



## MONITORING LANDSLIDE RISKS IN URBAN AREAS\_DRAFT

### >>> A few years later

Today, the Geological Service of Regione Friuli Venezia Giulia, is confidently using the solution proposed in 2018. Another component of the service is now used by the initiative Earth Observation for Sustainable Development Disaster Risk Reduction (E04SD-DRR) conducted by ESA, providing analytics to Geological Services and planners to map building instabilities.

*Claudio La Mantia, Planetek Italia Srl Società Benefit*



BENEFICIARIES	Planetek Italia Srl Società Benefit	Municipality of Niscemi, Italy	Municipality technical urban planning offices; Urban planners; Civil protection	Citizens and Society
SERVICES	<b>TIER 1: SERVICE PROVIDER</b> Sentinel-1	<b>TIER 2 PRIMARY USER</b> Thematic maps, dynamic geo-analytics and pre-set reports of ground displacement (Displacement maps); Warning maps - alert about the accumulation of instability factors in the areas of interest	<b>TIER 3 SECONDARY USER</b> Aid in assessing and predicting landslides or ground structural weaknesses (building and citizens' safety); Support during precise diagnostic actions and other interventions for prevention or mitigation of possible damages	<b>TIER 4 END USER BENEFICIARIES</b> Improved overall safety of the buildings, infrastructures and citizens

Value chain definition following SeBS Methodology - <https://earsc.org/sebs>

### The space-based solution

This Copernicus-based solution was produced by a commercial company for a Public Administration. From technical perspective, in the past few years, there have been significant performance and automation improvements.

### The Usage Maturity Level

Over the past few years, the solution has consolidated at UML=4.

Thematic Area



CIVIL PROTECTION

Region of Application



SICILY

Sentinel mission used



S1

Copernicus Service used



-

Usage Maturity Level



4

**ECONOMIC**

- Capital expenditure has been reduced or avoided
- Efficiency gains have been registered
- Reduction of risk has been registered
- The replicability of the solution was achieved

**ENVIRONMENTAL**

- Improved risk assessment, land maintenance, land planning and reconstruction after a hazardous event;

**REGULATORY**

- The solution has improved the PA's capabilities to detect and assess non-compliances

**INNOVATION**

No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

**SCIENCE**

- There was an increase in technical/scientific expertise related to Copernicus/EO within the PA

**SOCIETAL**

- Improved coordination and governance has been registered
- Sense of trust/community for the involved actors has increased
- Civil security has improved
- There have been improvements in public awareness
- An increased overall quality of life for citizens has been detected

Benefits classification following SeBS Methodology - <https://earsc.org/sebs>

**Interesting facts...**

Over the past few years, the Service Provider, Planetek Italia, has further developed the solution. Two services were released, namely: Rheticus® Safeland, a cloud-based service providing in depth analytics to Regional Geological Services for monitoring hydrogeological instabilities and Rheticus® Building Check cloud based service used to provide analytics to local Geological Services and planners to building instabilities.

**Outlook to the future**

The solution is used by different end users, Public Authorities such as regional governance and public agencies. In the future, the solution will be proposed to other additional end-users operating in domains of the planning and disaster risk reduction domain.

**Contacts**

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**ABOUT COPERNICUS4REGIONS**

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