Ospotlite

Harnessing Satellite Data for Improved Asset Management

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• Projects

Europe	16506 Km
Asia	503 Km
LATAM	77 Km

Transportation



Energy



ascendi Brisa Arnorscut 15 GERT. EWIS GRAVUL ascendi Britsa Arnorscut 15 GERT. EWIS GRAVUL Portual Portual Strutta 27 by globaldia



ONLINE MANAGEMENT PLATFORM



Analytics based on **satellite data** for asset management

Full coverage of transportation and distribution networks

Early-warning and automated reporting systems

Maintenance documentation integration Spotlite

6

Main Modules





GROUND & STRUCTURAL MOTION

Spotlite monitors ground and structural motion for stability assessment using Interferometric Synthetic Aperture Radar (InSAR), with sub-millimetric precision on a large-scale (including remote or inaccessible locations). We are able to:

- assess risk through historical analysis;
- issue early-warnings in case of critical failure, allowing for proactive damage assessment;
- model landslide vulnerability.



Online visualization tools and early-warning system



SAR DATA



InSAR (Interferometric Synthetic Aperture Radar) is a remote sensing technique that uses radar images to measure ground deformation.

It involves comparing the phase differences between two or more radar images which allows us to detect changes in the Earth's surface providing us with precise information on the magnitude, direction, and spatial extent of ground deformation.

PRECIPITATION DATA

The correlation between **displacement rate** and **daily precipitation** is available on the platform. In this example, several **acceleration** peaks were identified prior to **slope failure**, with a close relationship between acceleration and accumulated precipitation.



L - Rainfall Intensity - Displacement Satellite

Stable

Unstable

AUTOMATED ALERTS

With high frequency remote monitoring, we can follow closely the displacement trend over large areas. Combined with **safety thresholds**, it provides regular **automated alerts** and reports that can prevent critical failures.







Unstable

LANDSLIDE SUSCEPTIBILITY



- → Utilizes static knowledge-base or data-driven methods, incorporating static and dynamic conditioning factors.
- → The model incorporates topographic, climatic, and maintenance data.







Vegetation Monitoring





FOREST FIRE SUSCEPTIBILITY MAPPING



Distance to the powerline

Vegetation Monitoring







