

LASMON

16 February 2018



Applicant: **Gd Test srl**

Partners Progetto:

- **Capetti Elettronica S.r.l.**
- **C-Labs**
- **CNR IRPI**

The Lasmon project (*LAndslide Smart MOnitoring Network*) aims to analyze landslides causes and related evolution, in Piemonte and Valle d'Aosta regions, caused by climate change and territory anthropization.

This phenomenon represents a strong risk for residential areas and infrastructures and, in order to prevent their triggering and evolution, a regular monitoring activity regarding typical magnitudes of main physical phenomenon (*linear and rotational displacement, accelerations, meteorological parameters, subterfance of the stratum, etc*) is necessary.

Actually, sensor networks installed in the territory, are mainly made of a data logging system, which autonomously and independently sends collected data to a centralized management system (*Basestation*).

All sensors are able to highlight anomalies managing alert thresholds, but are not able to discern warnings related to the landslide phenomenon dynamics, from interference related to the surrounding environment.

Existing technologies are developed and used in industry, so it's extremely problematic to extend it use to natural phenomenon, which requires a most complex analysis and management data system.

The project aims to improve the self-configuring wireless systems, capable to adapt to any environment and create widespread, low-impact networks, with an intelligence, that resides in a field controller.

Target can be achieved using new hardware and software development elements, provided with local intelligence and "decision-making" ability.

In this phase, the geolocation topic is extremely important, indeed, in addition to the data acquisition phase, system provides innovation regarding data feedback, using a web-GIS platform, with specifically developed features to allow maximum flexibility in consultation.

Capetti Elettronica, is involved in wireless technology integration, developed by the [C-labs](#) partner, into its own monitoring sensors; in addition, a hardware/software platform is designed and implemented for the "intelligent" analysis and data management, directly in the field.

[Gd Test Srl](#) is the project activities coordinator and is committed to web-GIS platform developing innovative features.

The working group avails itself of the [CNR IRPI](#) (Research Institute for Hydrogeological Protection) collaboration, which contributes to the project development through the definition of the operational scenarios, so as to allow to operate in very close to reality situations.

https://www.gdtest.it/images/gd_test/scheda_Lasmon.pdf