

From the pilot study to the practical implementation – A case study from the Oberalppass in Switzerland

Pascal Venetz*, Damian Steffen, Martin Proksch, André Burkard

geoformer igp AG, Sebastiansplatz 1, CH-3900 Brig, SWITZERLAND

**Corresponding author, e-mail: p.venetz@geoformer.ch*

ABSTRACT

The Matterhorn Gotthard Bahn railway line over the 2044 m asl high Oberalp pass is one of the most important east–west transportation corridors in Switzerland, being the only direct winter connection between the Cantons of Uri and Graubünden. Passing from Andermatt to Sedrun, more than 30 avalanche paths must be crossed, some of them reaching the railway line up to five times per year.

In a detailed hazard analysis, the five most dangerous paths were selected, and the protection targets were defined. The potential risk as well as the cost efficiency were calculated using EconoMe 4.0 to compare different mitigation measures such as avalanche towers, protection barriers and dams. Based on this analysis, the best protection measure for each avalanche path were selected, their dimensions defined and their impact on the environment assessed. The construction phase will start in Spring 2019, with the call for tenders and the monitoring of the construction process.

We will present the whole process from the pilot study to the risk assessment up to the practical implementation of the project as a case study for an integrated project management approach.