

Wyssen Reference Project

# Goms valley optimizes avalanche restriction through detection and safety concept



**Safety** through **innovation**

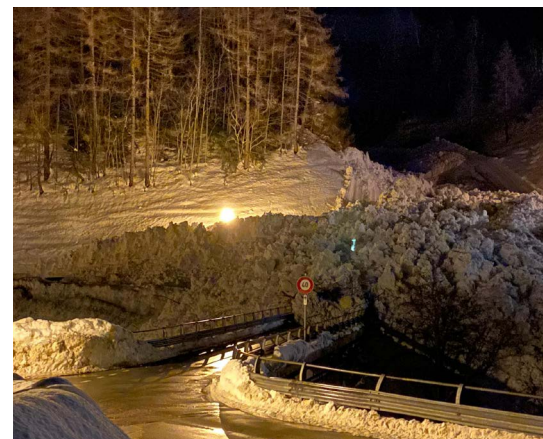
**wyssen**  
switzerland  **avalanche  
control**





## Goms valley optimizes avalanche restriction through detection and safety concept

Project:	Goms Valley optimizes avalanche restriction through detection and safety concept
Place:	Goms, VS
Country:	Switzerland
Year:	2018-2020
Customer:	Municipality of Goms
Protected Object:	Infrastructure
Installed systems:	<ul style="list-style-type: none"> <li>- 4 IDA® (Installation 2018 to 2020)</li> <li>- 1 GINA® (Installation 2019)</li> <li>- Geoformer igp AG safety concept (2019) fully integrated into WAC.3® Cockpit and Assessment</li> <li>- 8 Wyssen Avalanche towers LS12-5 <i>(available from previous projects, installation in 2008 and 2015)</i></li> </ul>



### Initial Situation

The infrasound detection system in the Goms district was designed as a development project for IDA® systems. The detections were verified on site and the underlying algorithm for avalanche detection was optimized in collaboration with the Regional Safety Service (RSD).

The original aim of the system was to verify the detonation results at night or in poor visibility conditions. In addition to this feedback, information about spontaneous avalanche activity in the valley is now essential for the RSD. Any restrictive measures can now be initiated precisely at the beginning of an avalanche cycle; clean-up work and re-opening measures can be started as soon as avalanche activity has subsided.



## Our solution: Integration of various systems

- ✓ Extensive information on avalanche activity in the valley via IDA® infrasound detection system
- ✓ Local detection in specific avalanche paths by means of the GINA® geophone system
- ✓ Preparation of the safety concept by Geoformer igp AG in collaboration with the Regional Safety Service (RSD) Goms
- ✓ Integration of the safety concept, detection systems and avalanche blasting systems in WAC.3® Cockpit: Overview of the systems, digital mapping of the logs, an observation and decision-making platform, compliance with documentation requirements

### Statement Raphael Imsand

#### Head of the Regional Safety Service - Natural Hazards Goms (RSD-GOMS):

„An avalanche safety concept has been utilized operationally in the Goms region since the winter of 2018-19. The concept was developed by the geoformer igp AG engineering office in Brig together with the Regional Safety Service (RSD) Goms and its head, Raphael Imsand. The concept takes into account all the numerous avalanche protection measures in Goms with the aim of reducing the duration of restrictive measures; more recently, however, it has also enabled us to restrict and reopen individual sections within the Goms district independently of one another. The concept has been implemented successfully on the WAC.3® platform since the winter of 2019-20.

The WAC.3® platform enables the RSD Goms to see all relevant information such as snow and weather data, weather forecasts, webcams and even SLF products at a glance. In addition, the avalanche detection systems in the Goms district are integrated in a clearly structured format. Wyssen's Assessment made it possible to map the complex workflow from snow cover assessment through situation appraisal and all the way to making decisions on potential measures in a much leaner and more user-friendly manner. The automatic documentation of decisions, their justification and the underlying data ensures strict compliance with the duty of care, which is essential for the work of an avalanche warning service. The WAC.3® platform made the work of RSD Goms easier and made an important contribution towards avalanche safety in the region.“



### Goms avalanche detection network 20-21 season

- ✓ **136** IDA® detections of spontaneous avalanches
- ✓ **23** IDA® detections of controlled avalanches
- ✓ **7** GINA® detections of avalanches
- ✓ **40** detonations with the avalanche towers

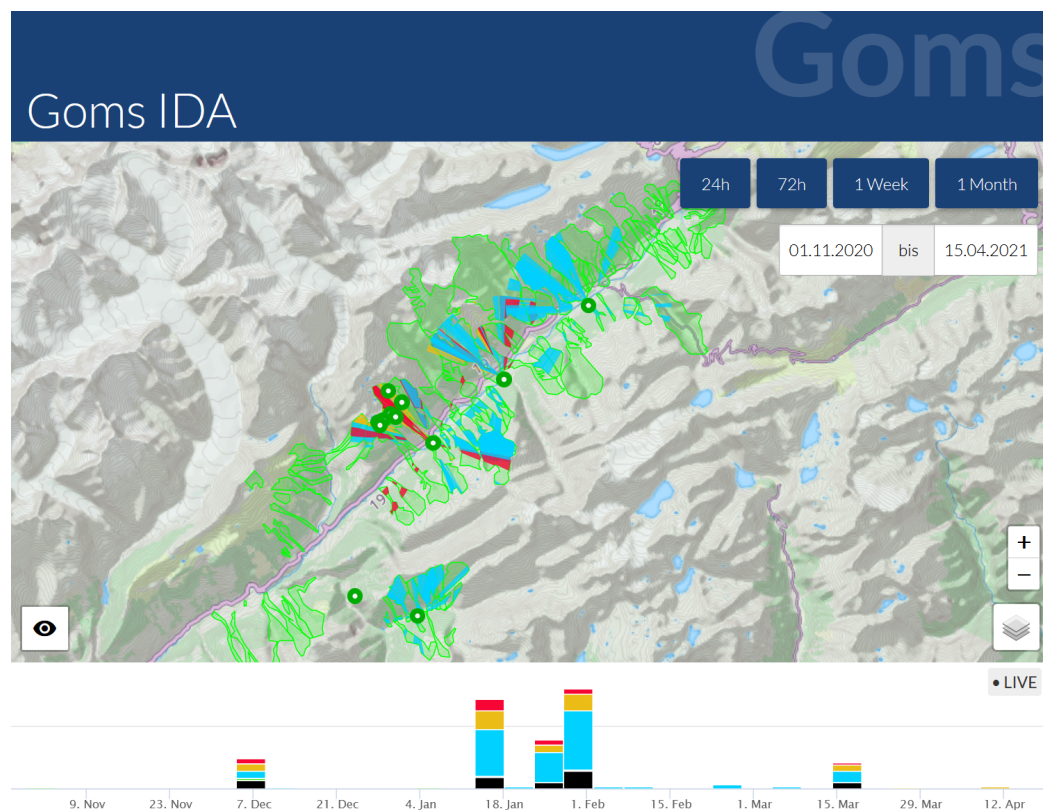


Illustration: Overview map in Goms

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## A project of:

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