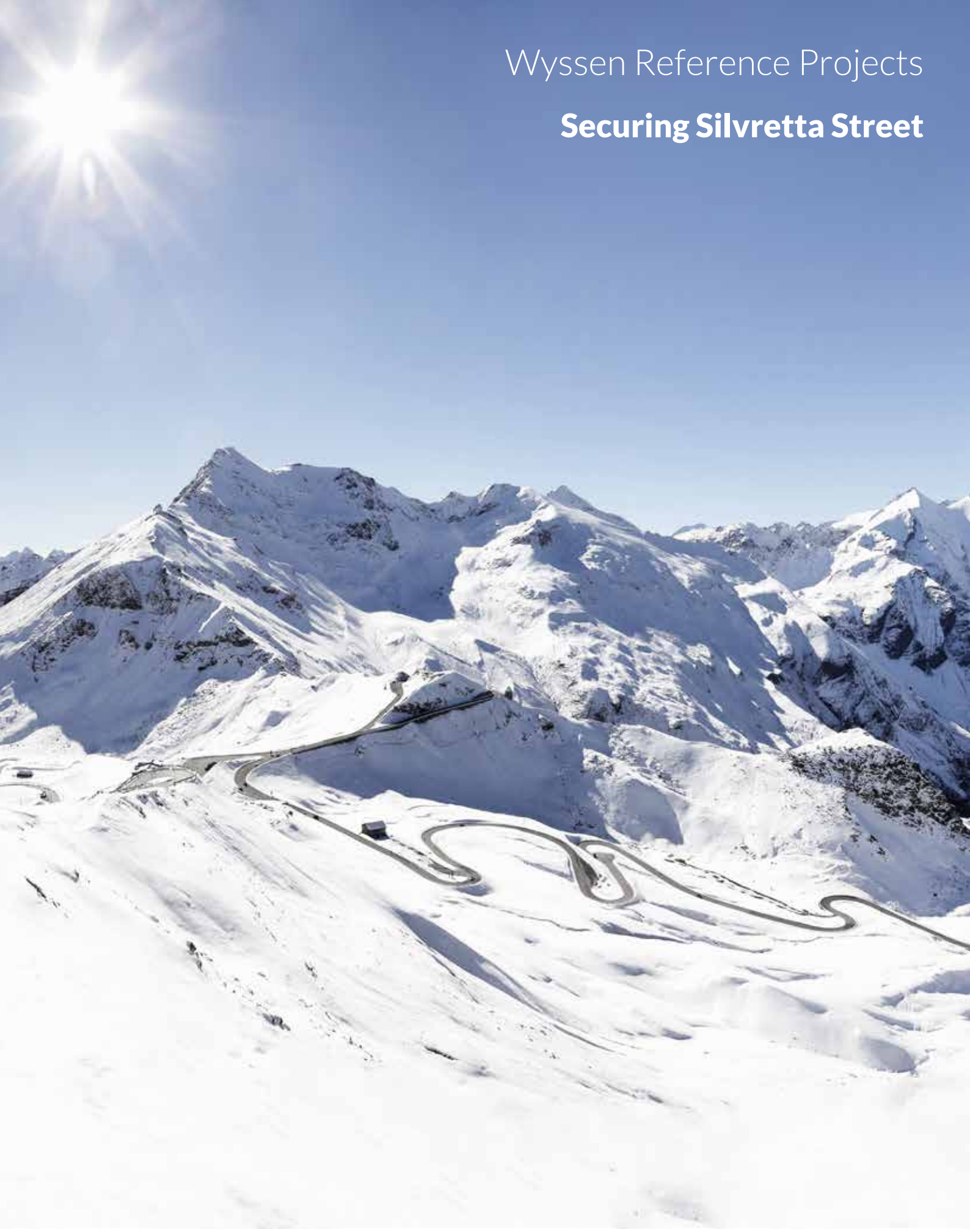
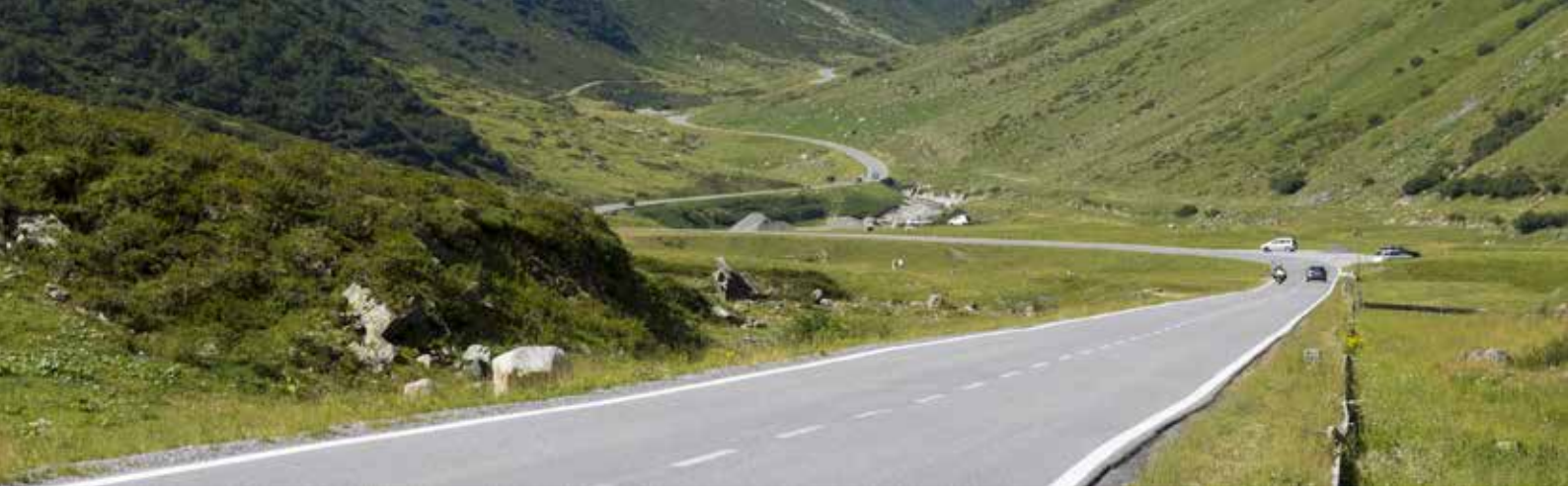
Wyssen Reference Projects

Securing Silvretta Street



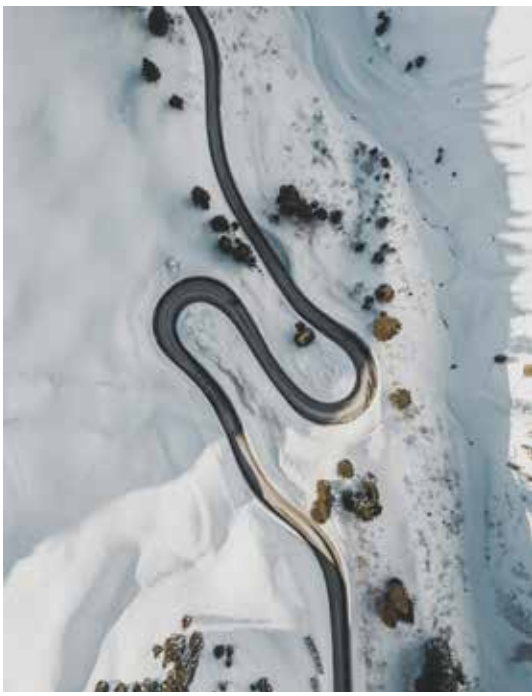
Safety through **innovation**

wyssen switzerland avalanche control



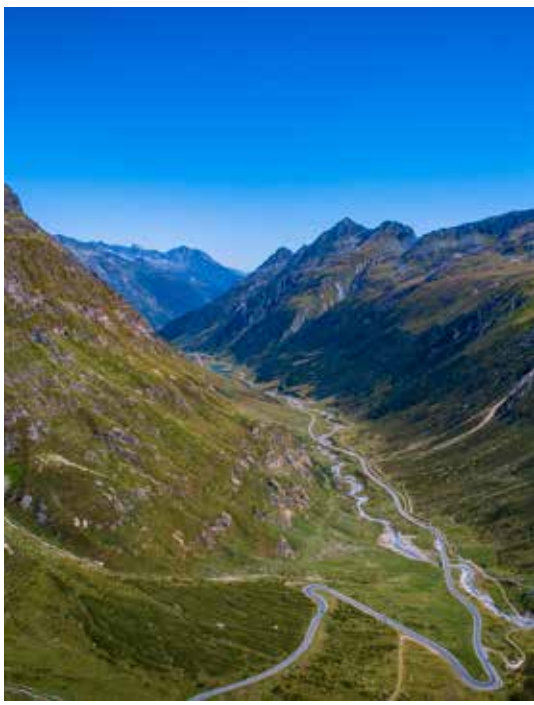
Avalanche Radar & Avalanche towers secure Silvretta street

Project:	Securing Silvretta Street
Place:	Area Ischgl / Kappl, Tyrol
Country:	Austria
Year:	Installation Ischgl 2011, Kappl 2013
Customer:	Municipal of Ischgl and Kappl
Protected Object:	Road and edges of settlement areas
Installed Systems:	- Wyssen Avalanche tower 12 shots - Avalanche Radar (LARA®)



Initial Situation

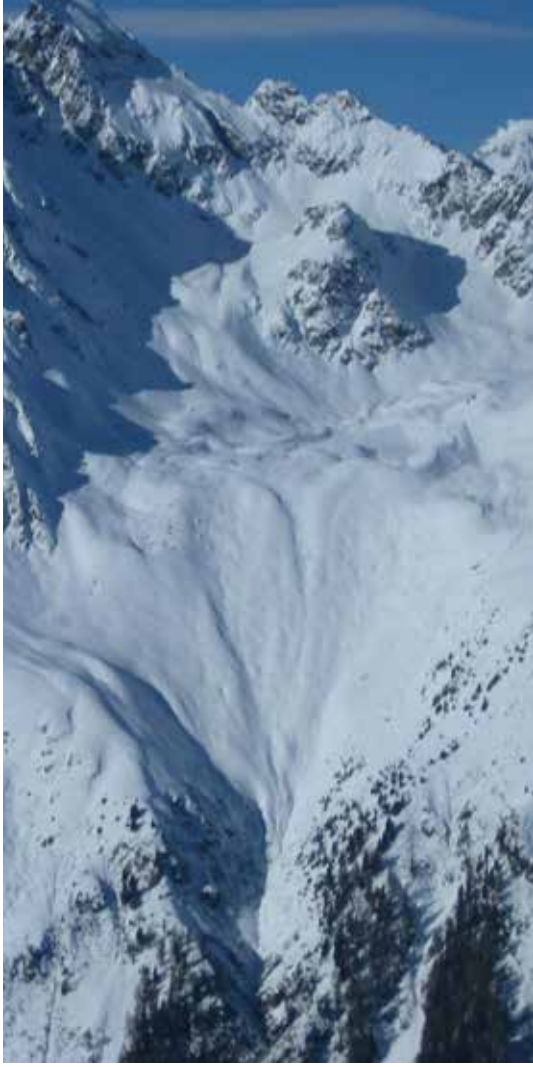
The Silvretta federal highway „B 188“ is the main traffic axis in the heavily used Paznauntal in Tyrol (Austria). Previously, each year, the centralized road had to be closed more and more often, causing major problems in commuter and holiday traffic as well as transporting supplies to the Paznaun Valley. Several avalanche paths were secured in the 1950s by steel snow bridges or avalanche galleries in the run-off area, however the „B 188“ was still endangered by avalanches from three avalanche lines in the municipal areas of Ischgl and Kappl, which repeatedly resulted in longer closures.

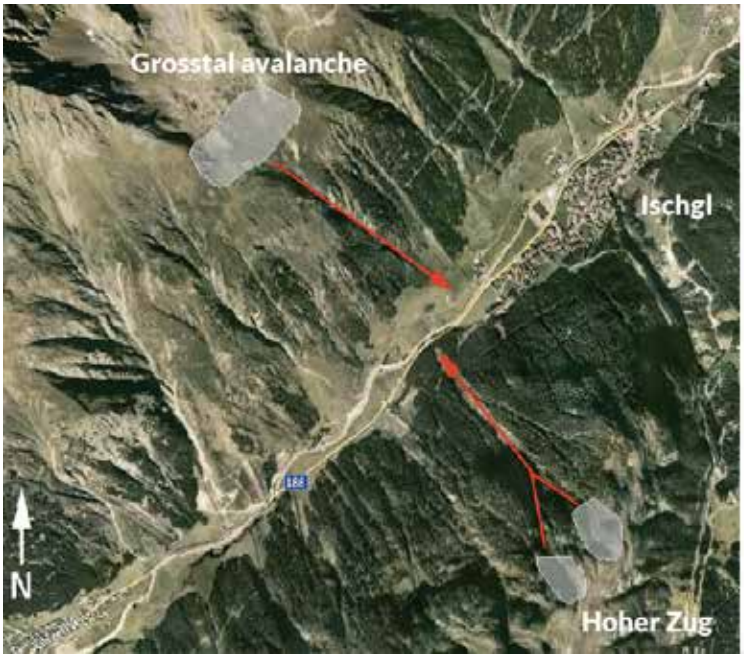


How we can protect

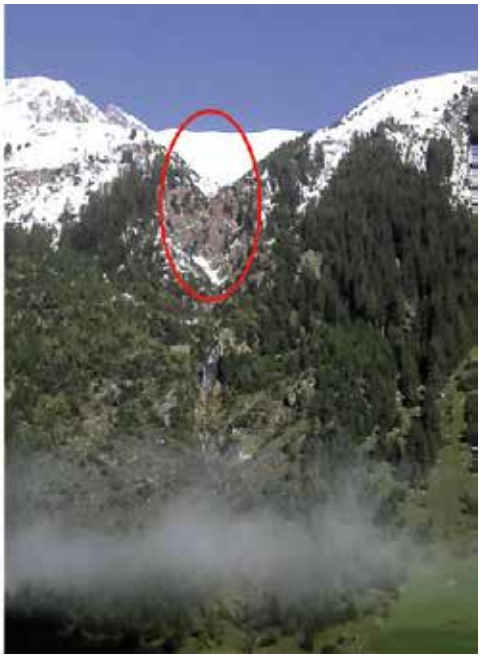
In a pilot project, avalanche towers in combination with a Wyssen avalanche radar were considered to secure this critical road. For this purpose, six avalanche towers were installed in the area of the „Grosstal avalanche“ and another two in the area of the „Hoher-Zug avalanche“. The corresponding avalanche radar is positioned 1,800 meters *(1.1 miles)* away on the opposite side of the valley, directed towards the area where the „Grosstal avalanche“ begins. With avalanche radar both remotely triggered avalanches and spontaneous avalanches can be detected at any time of day or night and in any weather. As well the radar measurements are an integral part of the decision making process of the avalanche commission for the opening and closing of the road. Before the radar was put into operation, data from some avalanches had to be recorded in order to optimize the parameters of the radar‘s automatic alarm to the respective area. After this adjustment of the parameters and some additional localizations, the radar is calibrated and ready for use. An alarm signal is sent to the control panel and initiates the corresponding procedure. The compact design and independent power supply ensure reliable operation. The same concept with three avalanche towers and an avalanche radar has also been installed in Kappl for the defusing of the „Ulmicherbachl avalanche“.

Experience has shown that the combination of detection and remotely triggered avalanches can significantly reduce road blockages. Wyssen avalanche towers enable effective avalanche triggering with minimal impact on nature, while the radar reliably detects both manually triggered and spontaneous avalanche emissions.

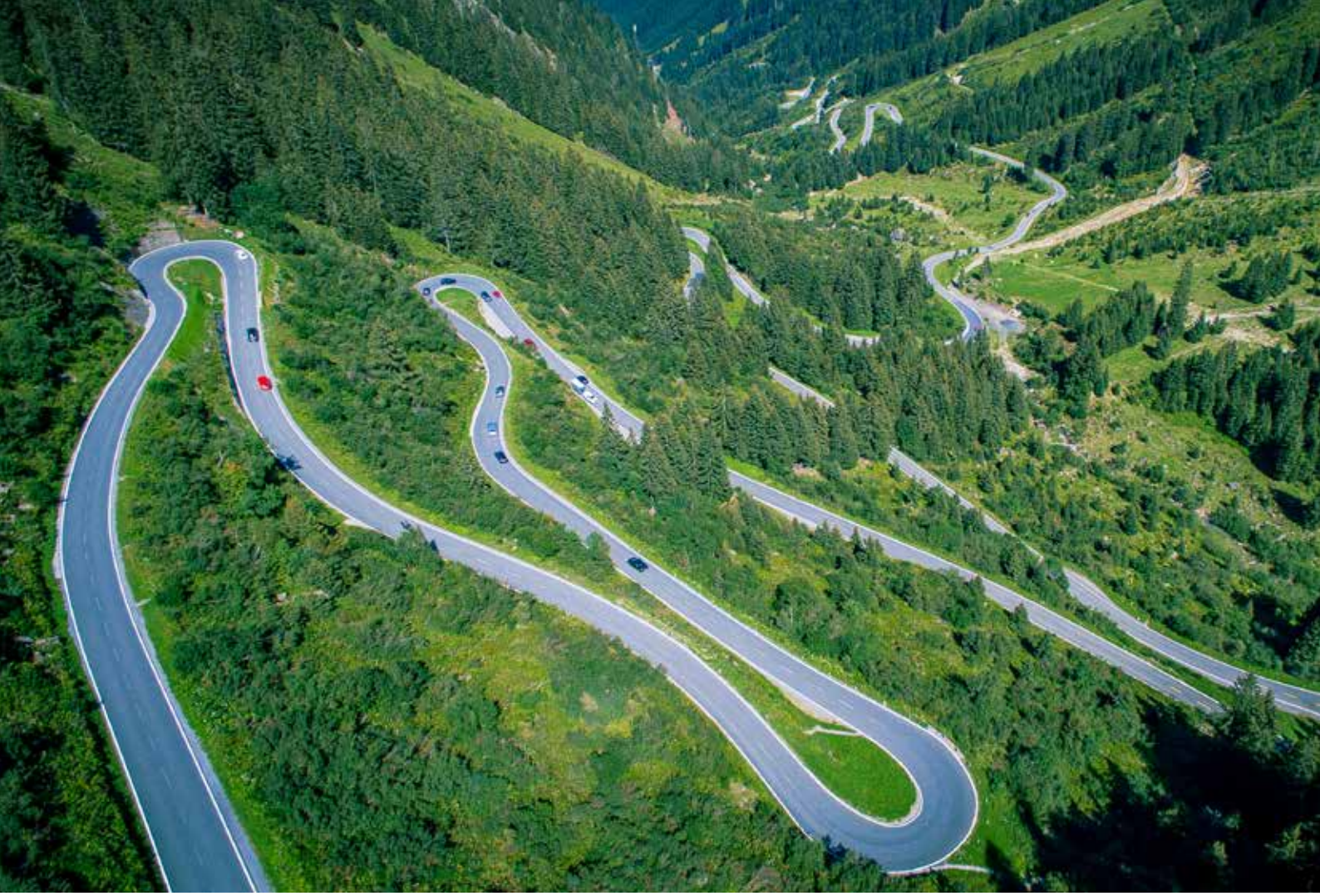




Overview „Grosstal-“ and „Hoher-Zug-Lawine“ with the endangered road (Google Earth)



View from the radar to the opening area of the „Grosstal avalanche“. The red circle marks the surveillance area.



A Project of:

Wyssen Austria GmbH
Archenweg 52
6020 Innsbruck
Austria
Tel.: +43 664 8822 9015
austria@wyssen.com
www.wyssenavalanche.com

Paul Dobesberger
Tel.: +43 664 8822 9015
paul@wyssen.com

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