

# Challenge for Costa Rica; *Slope safety*

**How can we implement an early and  
cost-effective slope monitoring & warning  
system?**

Challenge definition template

15/02/2022

## The Why

The relevance of this challenge relies on the fact that rocky and soil related material falls present a risk for users and officials on the road. These incidents also involve additional costs because, when these incidents occur on a large scale, the roadway must be fully or partially shutdown while maintenance and slope recovery tasks are carried out.

## The Context

Currently, Globalvia has measurement systems that rely on on-site readings and real-time monitoring systems. These solutions are not scalable enough as they involve a high implementation cost due to the need for hardware. In addition, Globalvia's infrastructure in Costa Rica has a high geotechnical complexity which, when combined with the rainy winters, make the terrain complex and in constant need for monitoring and analysis.

**How can we implement an early and cost-effective slope incident warning system?**

## What are we looking for?

We are looking for **innovative, efficient, scalable and low-cost** solutions that enable early warning:

- ✓ *Measuring systems without the need for expensive hardware*
- ✓ *Scalable geotechnical solutions*
- ✓ *Satellite technology accurate to small movements*

This is not an exhaustive list of solutions, if you think your idea can help us to solve this challenge, we look forward to hearing it from you!

