



Climate Resilient Infrastructure.

How can we prepare our infrastructure to handle extreme weather conditions and improve our ability to anticipate, withstand and respond to damages?

Challenge Origin

In the current environment of accelerated climate change, adverse weather events such as torrential rains, droughts and high temperatures are becoming more frequent and severe. Increased intensity and frequency of these events pose major challenges to civil infrastructures and buildings. The ability to anticipate, withstand and respond to damages caused by these extreme weather events is crucial to ensuring the safety and wellbeing of communities, as well as being able to continue essential services without interruptions.

Context of the Problem

The effects of extreme weather events are having an increasingly severe impact on our infrastructures, intensified by climate change. In the countries where we operate, we are experiencing in particular the following:

- **Landslides and loss of ground stability** in land deposits, on roadways and structural elements of infrastructures.
- **Torrential rains and flash floods** that damage structural elements in viaducts and bridges, causing undermining of the terrain, collapses of embankments, slope gulying, insufficient drainage and road closures.
- **Rising temperatures and increased solar radiation**, causing more fires and a faster deterioration and early degradation of road surfaces.



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Challenge Description

Challenge Objectives

We are looking for solutions that allow us to predict, resist and respond to extreme weather incidents that pose a risk to the physical integrity of infrastructure, to our operations, as well as to the safety and wellbeing of the people and ecosystems around these infrastructures. In particular we want to:

- **Anticipate** and **predict** effects, incidents, disruptions and service interruptions early on;
- **Resist** and **withstand** climate effects through innovative and preferably modular solutions;
- **Respond** and **mitigate** impacts and damages through rapid response systems and ecosystem regeneration and rebuilding.

Application Areas

Climate Intelligence:

Advanced technologies and methods including predictive modelling, scenario simulation, risk analysis and control, disaster prevention and early warning and detection systems.

Climate Adaptation:

Solutions around advanced monitoring, predictive maintenance and inspection. Additionally, the implementation of modular, transportable systems and retrofits that improve resilience and adaptability of the infrastructure.

Impact Relief:

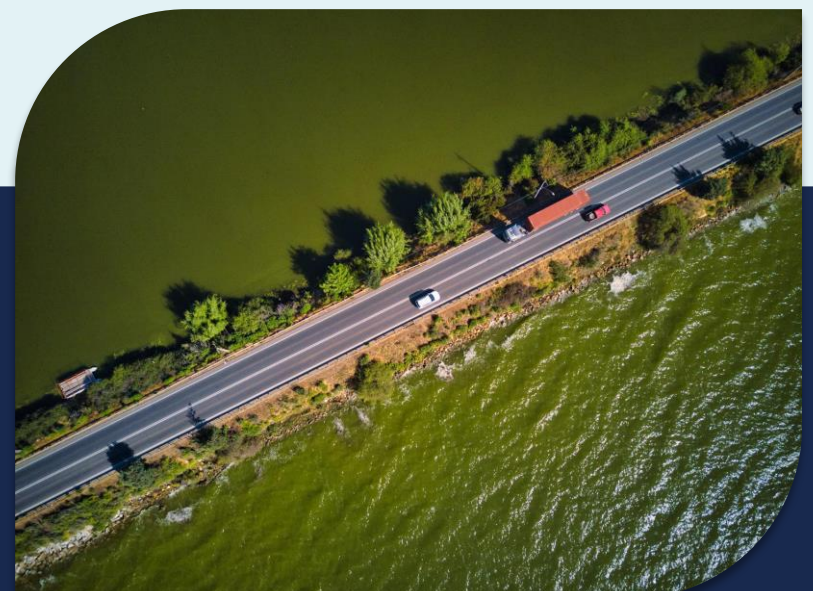
Innovative solutions for remediation, focused on rapid responses to extreme weather events, as well as the regeneration and restoration of ecosystems, ensuring the safety of people.

Why Apply?

Boost your Brand: Gain visibility and become part of a global ecosystem.

Kick start your Path to Success: Receive feedback and commercial, technical and strategic support to take your project to the next level.

Grow your Business: Implement your project in a real business environment and validate your solution.



*This challenge has a **global** scope and is open to the **professional innovation community**, including startups, scaleups, technology centres, universities and established companies.*

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