

Innovation at the Border:

Using RoadMetrics AI at the border roads for better security and efficiency in road maintenance



The Challenge:

The Indian Border Roads Organisation (BRO) builds and maintains border roads near the 15,200 km of shared borders with its neighbours.

Road condition monitoring and maintenance of this vast road network is an enormous challenge for the army personnel.

A highly dangerous and rough terrain and a manual road inspection process makes it a challenge for quick and timely road maintenance. In addition, frequent landslides and other factors make roads inaccessible.



CLIENT

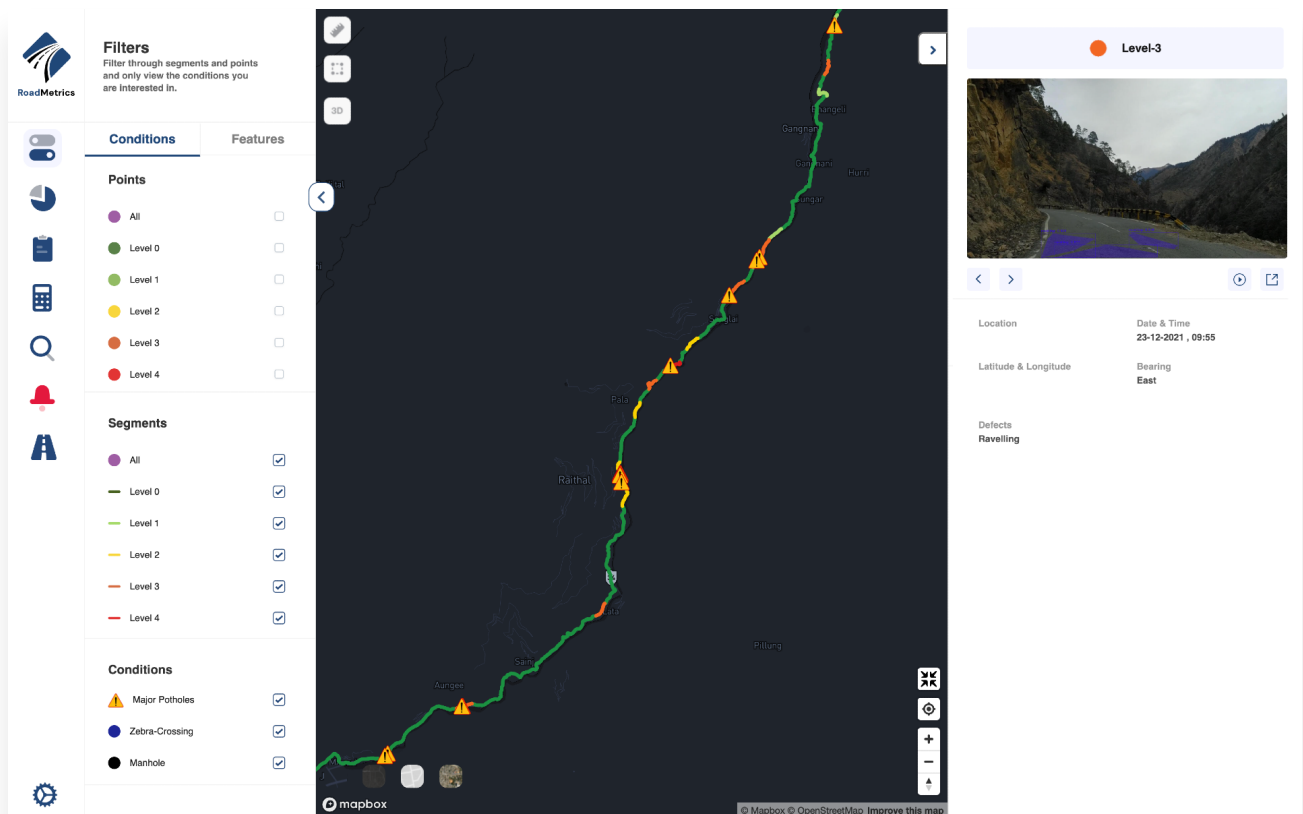
Border Roads Organisation (BRO),
India

ENGAGEMENT

Pilot to showcase RoadMetrics AI's automated condition assessment capabilities

SOLUTION

RoadMetrics AI system to effectively provide section-wise condition surveys for better security and efficiency in road maintenance



RoadMetrics Enterprise: web-based road assessment and asset inventory visualisation platform.

Proposed solution: Automated condition survey

The BRO commissioned a pilot for a selected stretch of road under their network. With road carriageway and flank video data collected, the outcome of the pilot was to showcase the RoadMetrics road condition assessment and asset identification AI system's powerful capabilities.

The software generated an automated condition assessment by accurately predicting road defect and road signage information using computer vision based Artificial Intelligence (AI).

The Data Collection: Using a standard mobile infrastructure



The data collection was performed by mounting a standard smartphone above the dashboard of their survey vehicle. The RoadMetrics Data Collection mobile application captures a video while performing the survey of the road network along with high precision GPS coordinates. Once latched on to the GPS signal, 4G network connectivity is not mandatory.

Advantages:

The RoadMetrics AI system allows survey Inspectors to collect road and sign condition data while driving thereby eliminating the need for multiple trips when performing manual inspections.

With RoadMetrics AI, personnel can perform more operations in lesser time with minimal extra effort.

By using RoadMetrics AI, the BRO can:

- Reduce time to collect road and sign data using video as opposed to manual inspections
- Visualise road network by sections
- Schedule maintenance activity plans
- Access to highly detailed road defect information with image and GPS point information
- Audit road repair quality using RoadMetrics Utilities with image and GPS points of repair work



RoadMetrics

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Data driven road assessments for road maintenance and asset management.

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