



VALERANN

POWERED BY DATA.DRIVEN BY INSIGHT

SAFER ROADS: ADVANCING INCIDENT DETECTION

Valerann Case Study



Introduction

The partnership between Valerann, global leader in ATMS solutions, and **LIMA EXPRESA**, a subsidiary of **VINCI Highways** and the concessionaire of Vía de Evitamiento and the Línea Amarilla express road, stands as a remarkable example of how technology is significantly improving road safety and traffic management. Faced with the challenges of increasing traffic, rising road incidents, and data fatigue, this collaboration leveraged the power of artificial intelligence to empower control centres, achieving transformative results.

The Challenge

200,000
vehicles per day

14,000
road events

The Vía de Evitamiento and the Línea Amarilla express roads are vital for the 10 million inhabitants of the Peruvian capital. Serving as primary connectors between key transport hubs, these arteries help to alleviate congestion in the historic centre of Lima while offering a 30-min reduction in journey times for their users.

However, with the growing traffic currently standing at 200,000 vehicles per day, it is expected that the total number of road events in 2023 will reach 14,000, — **a sharp 17% rise** from 12,000 in 2022. This trend over past years showed an increased need for leveraging technology in traffic monitoring and management, especially for incidents detection.



The Initiative

In 2021, LIMA EXPRESA's initiative to deploy an innovative automatic incidents detection system received co-financing from the Ministry of Production in Peru. To accomplish their goal

LIMA EXPRESA PARTNERED WITH VALERANN, GLOBAL LEADER IN ADVANCED TRAFFIC MONITORING SOLUTIONS (ATMS)

Lanternn by Valerann™ (LbV)

is an advanced analytics and AI software platform that integrates with the existing road infrastructure, ingests, and continuously processes data streams from all available disparate sources, such as cameras, connected vehicles, loops, radars, crowdsourcing applications, satellites.

By deriving data from unrelated sources, leveraging sophisticated AI and computer vision algorithms, the solution delivers best in class data fusion. This removes road authorities' reliance on manual events verification and provides them with accurate real-time information on the exact location, type, cause, and severity of incidents – on a single pane of glass.

The Outcome



Using **Lanternn by Valerann™ (LbV)**



over **95%** detected
and classified
road incidents



The LIMA EXPRESA team significantly reduced incident response time, increased road safety and improved resource management. Enabling complete monitoring coverage, the solution proved to detect over 95% of all road incidents in under five minutes.



Further enhancing road safety, the system facilitated preventative measures for road accidents management by detecting pedestrians and stopped vehicles in potentially dangerous zones, along with conducting **predictive analysis to foresee high-risk events**.



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