

## PRESS RELEASE

### Launch of “Miranda Track”: An Innovation for Road Network Analysis

**La Chevrolière, France – 12 June 2025** – Logiroad, in collaboration with Gustave Eiffel University, announces the launch of “Miranda Track,” an advanced technological solution dedicated to the collection and analysis of longitudinal evenness defects reflecting the level of deformation in road networks. The result of more than ten years of research conducted by Gustave Eiffel University through its LAMES Laboratory (Laboratory for the Inspection, Modeling, and Experimentation of Transport Infrastructures), this mobile application represents a significant advancement for road managers, particularly on secondary networks rarely inspected by traditional equipment.

#### **An innovative and accessible solution**

Miranda Track enables the detection and monitoring of pavement unevenness (deformations), including medium-wave longitudinal irregularities (loosening, edge subsidence, lane breaks, etc.) and some smaller defects, such as potholes. Data is collected via a smartphone placed inside the data collection vehicle, which records signals from the phone’s sensors. These signals, representative of defects impacting driving comfort (and safety), are then analyzed and presented as unevenness scores (or comfort indices) on the Logiroad Center platform.

This solution offers road managers a precise overview of the perceived comfort index on their network and its evolution, thus facilitating the location, prioritization and planning of maintenance interventions.

#### **Features and benefits**

- **Precise defect detection:** Miranda Track identifies road deformations with high accuracy, enabling the delivery of indicators reflecting the level of comfort (and safety) of the network with a configurable interval (e.g., 20 m).
- **Simplified data collection:** Data is collected automatically and displayed in the intuitive interface of the Logiroad Center platform. It offers a clear and actionable overview and can be complemented by optional road asset management modules: other road surface damage, geolocated inventory of horizontal or vertical signage elements, etc.
- **Flexibility and accessibility:** The solution allows data collection anytime, anywhere, adapting to the needs of road managers.

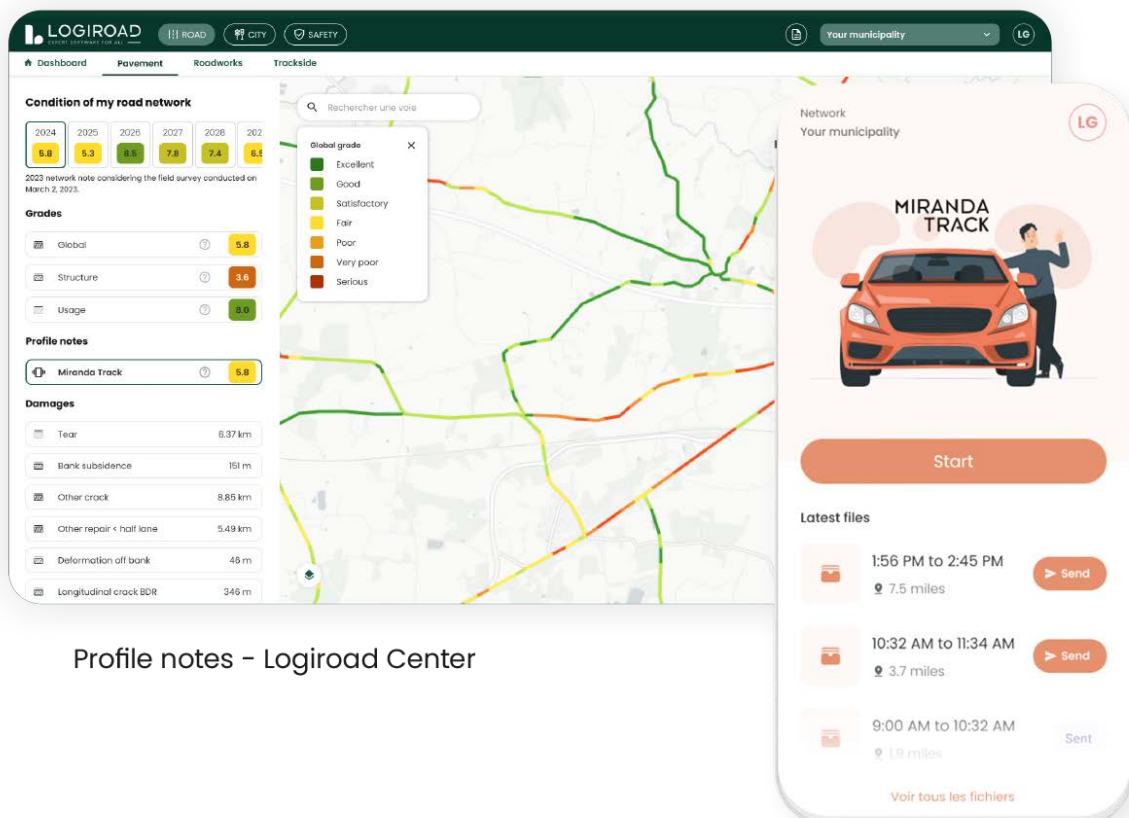
“The launch of Miranda Track marks a decisive step in our commitment to modernizing road infrastructure management. This application embodies our vision of smart road assets, where technology is used to enhance the safety, sustainability, and comfort of road users.” explains Nicolas VIOLLE, Managing Director of Logiroad.

## A research and innovation partnership

Miranda Track builds upon the research conducted by Gustave Eiffel University, which developed the MIRANDA technology ("Automated Road Indicator Measurements by Mobile Monitoring Devices"). This partnership between Logiroad and Gustave Eiffel University illustrates a shared commitment to innovation for improving road infrastructure management.

"Based on around ten large-scale experiments on secondary road networks in various departments (Eure, Eure-et-Loir, Loire-Atlantique, Manche, etc., representing over 10,000 km), Miranda has made it possible to classify the network in terms of deformation (and to monitor its evolution) in addition to surface degradation measurements taken using other methods. Comparative measurements with those of reference instruments (APL, MLPL) have been carried out to demonstrate that Miranda is capable of accurately assessing deformations in the secondary network and therefore contributing to its maintenance management."

specify Jean-Marc MARTIN, Fabien MENANT and Jean-Philippe GARROS, respectively Project Managers in road inspection and management and Software Engineer, all 3 members of the design team from Gustave Eiffel University.



Profile notes - Logiroad Center

Application

## **About Logiroad**

LOGIROAD, a company spun off from IFSTTAR (formerly the Central Laboratory for Bridges and Roads – LCPC, then Gustave Eiffel University), specializes in innovative road network maintenance management. With nearly fifty employees, the company develops the Logiroad Center software solution to optimize budgets and the management of road infrastructure maintenance, improve its durability, and reduce its environmental impact. Its offerings are specifically designed to meet the needs of local authorities and communities.

## **About Gustave Eiffel University**

Gustave Eiffel University is the only French multidisciplinary institution that, since January 1, 2020, has combined the missions and expertise of a university, a research organization, a school of architecture (ENSA Paris-Est), and three engineering schools (EIVP, ENSG, and ESIEE Paris), with the goal of preparing for the sustainable transformation and adaptation of cities and territories. A leader in France in the field of sustainable cities, it accounts for a quarter of French research on this topic.

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