Artificial Intelligence for Road Maintenance

ASIMOB
advanced services in mobility

INTERTRAFFIC
AMSTERDAM

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ROAD MAINTENANCE IS NOT ONLY MAINTENANCE

The Road Authorities * in charge of roads must:
- Manage the traffic
- Manage the roads, with special tasks in winter
- Manage the incidences
- Manage the bridges and tunnels
- Manage the pavement
- Improve the Road Safety of all the users
- Ensure the safety of maintenance workers

From different departments for each task, taken its own data ➡ To an integrated system for advanced and intelligent management

* Examples taken from DGC of Ministry of Transports in Spain and Rijkswaterstaat, Ministry of Transports in The Netherlands

ROAD MAINTENANCE IS NOT ONLY MAINTENANCE

FORENSIC ANALYSIS OF AN ACCIDENT
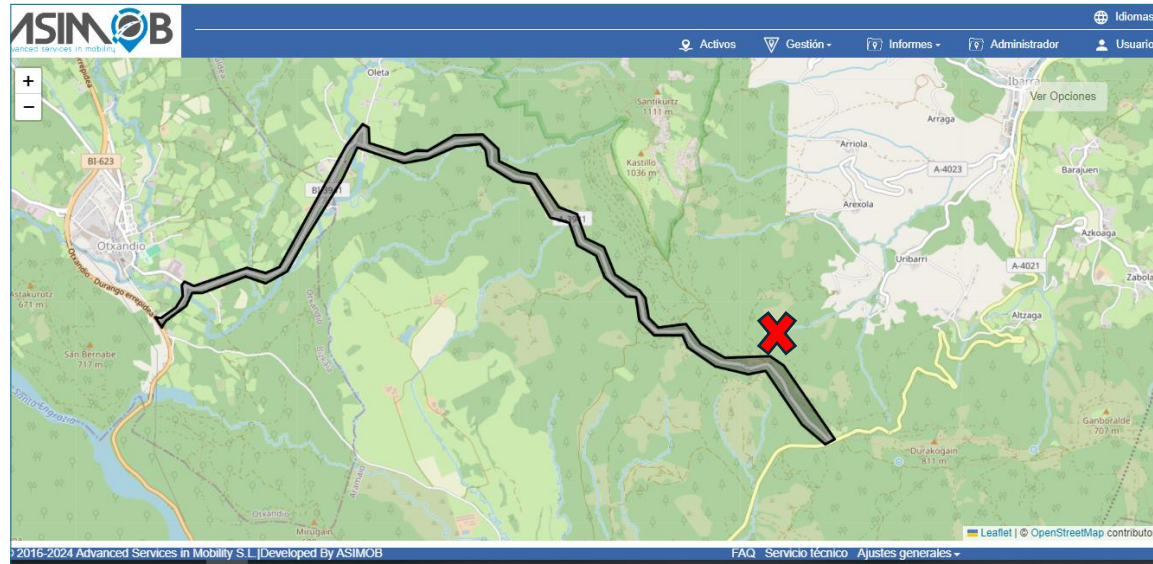
USERS
- ❑ Speed of the cyclists
- ❑ Protection of the cyclists

VEHICLES
- ❑ Condition of the bicycles

RESPONSE
- ❑ Fast response after accident
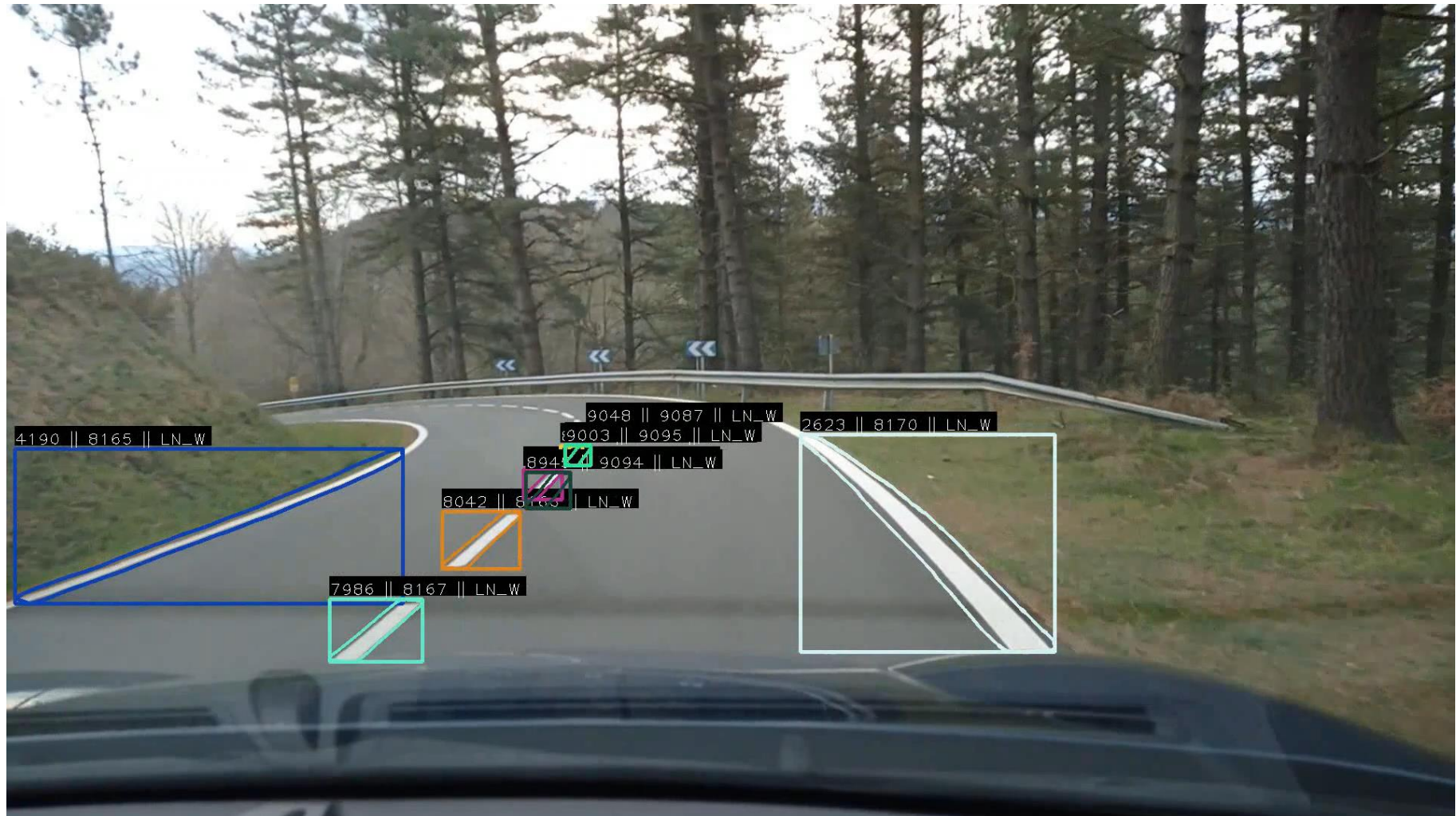
❑ Geometrical data
❑ Weather conditions
❑ Status of the pavement
❑ Vertical signage
❑ Horizontal signage
❑ Safety barriers
❑ Dangers in escapes

INFRASTRUCTURE

FORENSIC ANALYSIS OF AN ACCIDENT

FORENSIC ANALYSIS OF AN ACCIDENT

DEFECTS IN THE PAVEMENT

FORENSIC ANALYSIS OF AN ACCIDENT

IRREGULARITIES IN THE PAVEMENT
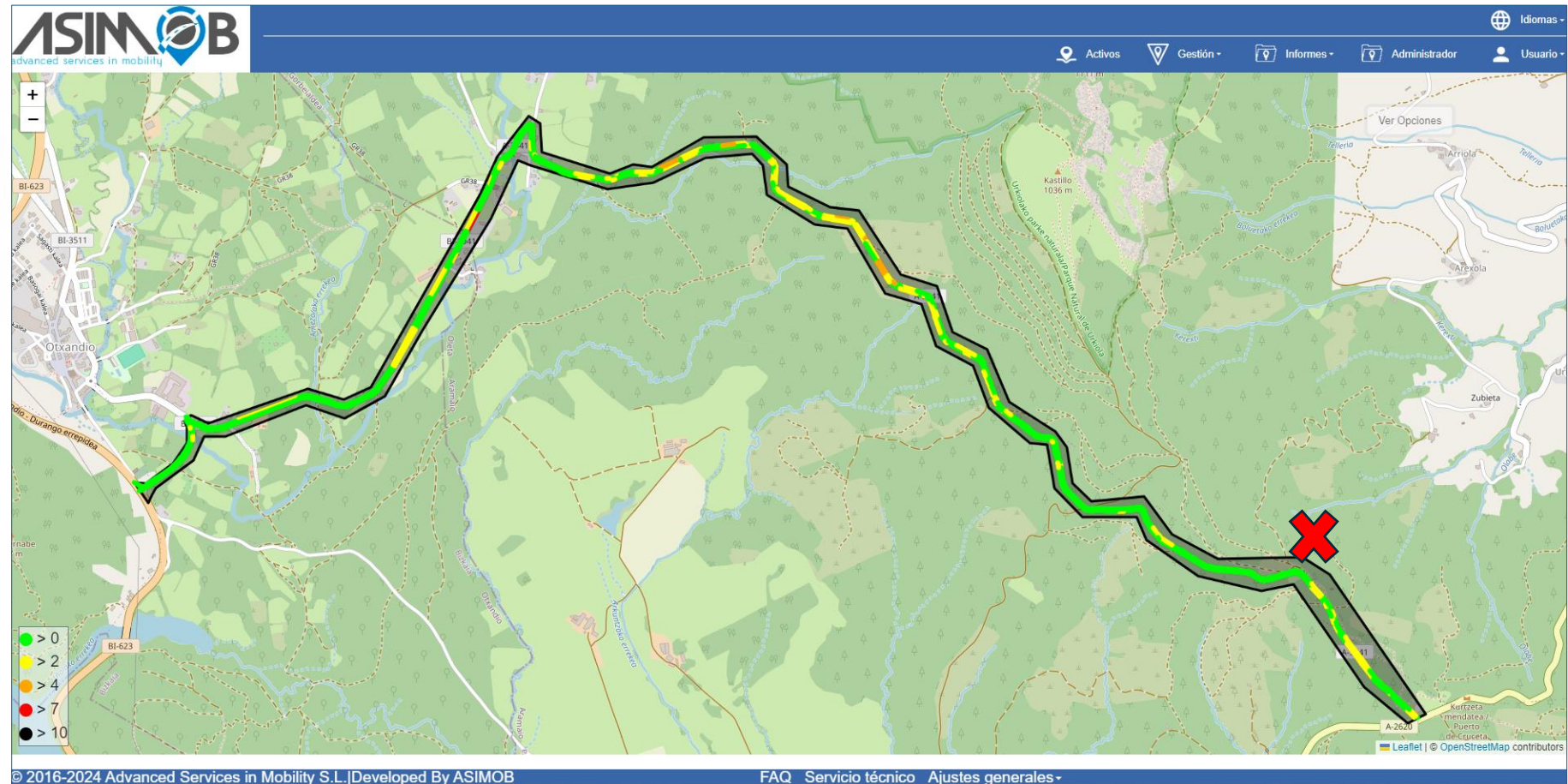
FORENSIC ANALYSIS OF AN ACCIDENT

ROAD MARKINGS

FORENSIC ANALYSIS OF AN ACCIDENT

VERTICAL SIGNAGE

FORENSIC ANALYSIS OF AN ACCIDENT

SAFETY BARRIERS

FORENSIC ANALYSIS OF AN ACCIDENT

DANGER IN SCAPES

Trees

Rocks

Gutter

FORENSIC ANALYSIS OF AN ACCIDENT

CONCLUSIONS: INFLUENCE IN THE CONSEQUENCES

Asset	Evaluation	Analysis	Influence
Pavement	Defects	High density	🟧
	Irregularities	Lack of adherence	🟧
Road Markings	Visibility defects	Good visibility	🟩
Vertical signage	Defects	No relevant defects	🟩
Safety barriers	Suitability for this user	No barriers in this turn	🟥
	Defects	--	
Danger in scapes	Presence	High risk scapes	🟥

ROADS THAT FORGIVE.
PREVENTION IS BETTER THAN FORENSIC ANALYSIS

This analysis has been applied after the accident. Real benefits appear when the analysis is applied for prevention.

Any vehicle from the Road Authotiy can be equipped in 10 minutes to apply the Autonomous Road Inspection. The inspection is applied at normal speed.

The assets management, applied automatically, can help to:
- Road Safety inspections
- Evaluation of roads, with different weather conditions
- Analysis after incidences
- Improve management of bridges and tunnels
- Improve management of the pavement
- Improve the safety of maintenance workers

Improve the roads
with us?

Thank you

ODS Commitment
The way matters

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