



# ESRIUM

SAFE AND EFFICIENT ROADS



EGNSS-enabled Smart Road  
Infrastructure Usage and  
Maintenance for increased energy  
efficiency and safety on European  
road networks

The overall objective of ESRIUM is to foster safer and more efficient roads towards a **smarter, safer, greener** transport system through an EGNSS-based digital map.

Our innovative **digital road wear map** will generate routing recommendations in-lane and cross-lane based on

- Road damage locations
- Road damage type
- Recent repair interventions
- Prediction on temporal evolution of road damages depending on environmental and traffic conditions.



ESRIUM regularly captures the status of the road surface. The system combines data coming from cameras, sensors and EGNSS-enhanced localisation devices. Considering a European-level business-case, only Galileo may provide such a service in homogeneous quality, even at very remote locations on the European continent.



The ESRIUM platform operator extracts relevant info from the raw data to recognise, classify, georeference and integrate road damages into the digital road wear map. It automatically generates safety warnings.



Road operators can communicate driving recommendations to balance the road usage to better manage traffic and avoid safety risks. They can also optimise their maintenance planning.

CAV drivers and truck fleet operators can increase safety by driving on undamaged road surface.

## Consortium



CHALLENGE ACCEPTED



DIPARTIMENTO DI DESIGN



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