Next generation solutions for road infrastructure in H2020

Moderator: Loha Hashimy

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Speakers

Jacqueline Erhart
ASECAP
Austria

Cedrik Ferrero
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Matthias Rüther
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H2020 Projects

GAMMS
ROBOTS MAPPING FOR ROBOTS

ESRIUM
SAFE AND EFFICIENT ROADS

OMI((RON

Association

ASECAP
Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage

Organiser

enide

ESRIUM

EFFICIENT AND SAFE ROADS

ESRIUM regularly captures the status of the road surface through a sensors, cameras and EGNSS-based localisation devices to send them to the platform operator.

The data platform operator extracts relevant information from the raw data, integrates it into the digital map and automatically generates safety warnings.

Road operators can communicate route recommendations to CAV drivers and truck fleet operators to better manage traffic and avoid safety risks, while optimising road maintenance planning.

Our team

JOANNEUM RESEARCH DIGITAL

ASFINAG

FH OBERÖSTERREICH UNIVERSITY OF APPLIED SCIENCES UPPER AUSTRIA

enide

evolit we make IT yours

NLS FINNISH GEOSPATIAL RESEARCH INSTITUTE FGI

NNG

POLITECNICO MILANO 1863 DIPARTIMENTO DI DESIGN

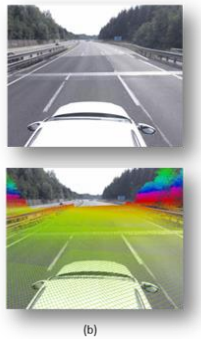
virtual vehicle

Technical Challenge

Cost Efficient Data Acquisition

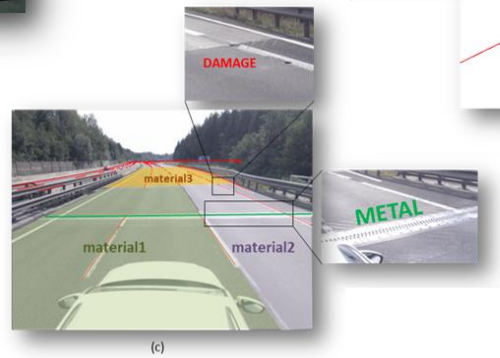
(a)

Lane Data Capture



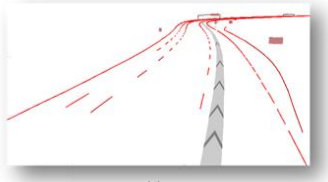
(b)

Detection of Damages and Changes



(c)

Communication of Driving Recommendations for Automated Vehicles



(d)

Reduced Road Wear

Optimized Maintenance

(e)

This project has received funding from the European Union Agency for the Space Programme under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004181

GAMMS: robots mapping for robots

Galileo / GNSS-based Autonomous Mobile Mapping System

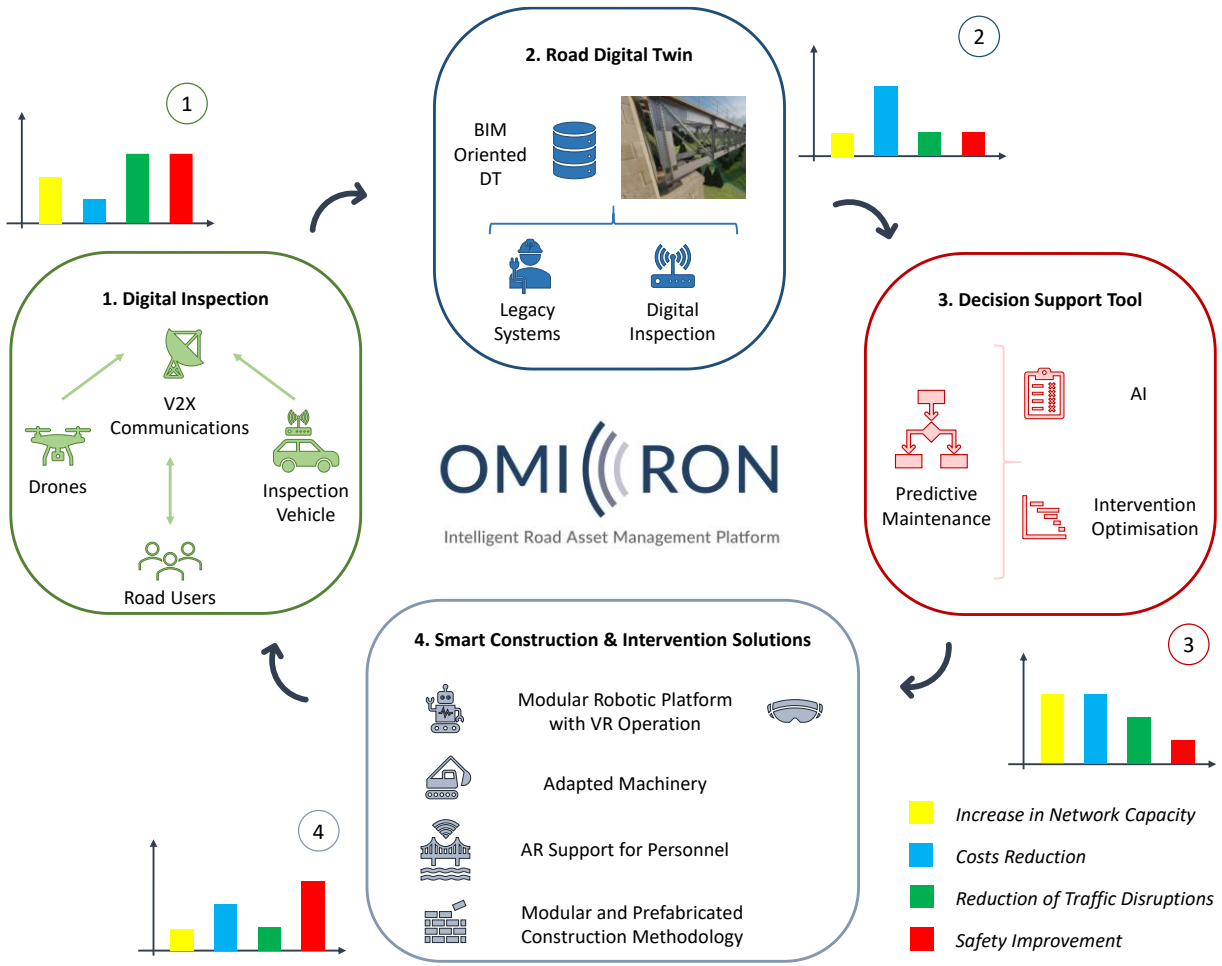
- GAMMS is a Horizon2020 project enabling the **exploitation of space data for surveying and mapping**.
- Our objective is to develop an **autonomous terrestrial mobile mapping system** (AMMS), based on the tight integration of autonomous vehicle (AV), navigation/geodetic, and artificial intelligence (AI) technologies. We are developing:
  - a **mapping robot** for geodata acquisition
  - an AI-based highly automated **mapping software** to produce HD maps from the MMS remote sensing data

This project has received funding from the European Union Agency for the Space Programme under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004255

OMICRON

cemosa Ingeniería y Control 50 YEARS

OMICRON
Intelligent Road Asset Management Platform



Road Digital Twin

- BIM-GIS oriented road digital representation.
- Integration of road information and analytics.

Road Decision Support Tool

- Assessment of road condition state.
- Optimisation of road maintenance actions.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°955269

ASECAP

Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage

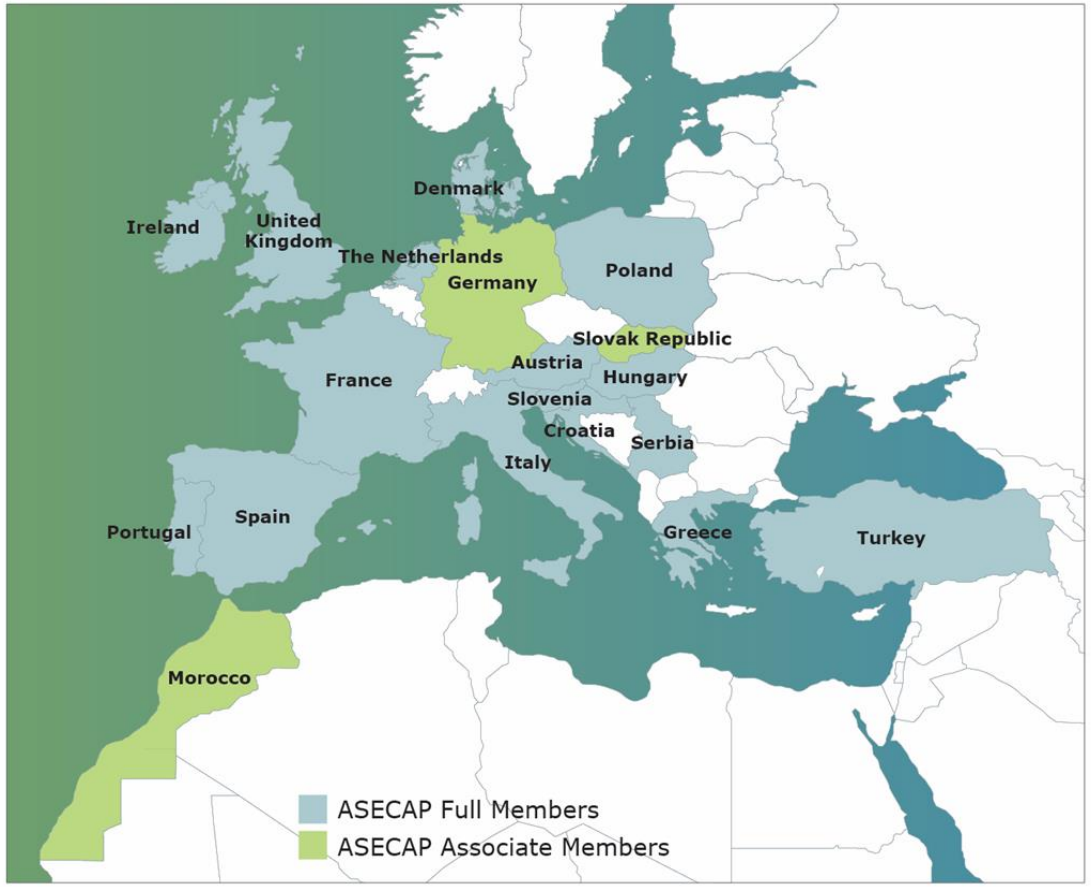
European Association of Operators of Toll Road Infrastructures, whose members' networks today span more than **86,000 km of motorways, bridges and tunnels** across **20 member countries**.

ASECAP's purpose is to **defend and develop the system of motorways and road infrastructures in Europe** applying tolls as a means to ensure the financing of their construction, maintenance and operation.

AUSTRIA | CROATIA | DENMARK | FRANCE | GREECE | HUNGARY

IRELAND | ITALY | POLAND | PORTUGAL | SERBIA | SLOVENIA

SPAIN | THE NETHERLANDS | TURKEY | UNITED KINGDOM



ASECAP believes that technology improves road maintenance and allows to maintain it at a lower cost and more sustainable thanks to its predictive capacities.

- Road damage prediction system and digitalization help:
  - to calculate and display probabilities of road damages and their prioritisation
  - to identify objects, classify them according to the degree of damage and save them in a database.
  - to control repairs and document actual/target analysis comparisons.
  - to distribute vehicles based on the road status.

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Smart and
Sustainable
Mobility
for all.
its
EUROPEAN
CONGRESS
TOULOUSE
30 May - 1 June 2022

Thank you!