OMI(((RON

Intelligent Road Asset Management Platform

Inspection Data

OMICRON Road Digital Twin

OMICRON Road Decision Support System

Assessment of infrastructure failure risk

Prediction of infrastructure condition

Improved intervention planning

Road Operator

OMICRON predictive maintenance solutions

The EU-funded OMICRON project developed two key components for a predictive maintenance solution: road digital twin and road decision support system. Being tested in real life demonstrations in Italy and Spain, these have the following **expected impacts:**

↘ **10% reduction in volume of major road intervention actions**
↘ **12% reduction in road infrastructure maintenance costs**

All solutions are at TRL 7.

To read more about OMICRON activities, solutions, benefits and the relevant contact partners, turn the page or visit the OMICRON website.

Road Digital Twin

OMICRON's road Digital Twin (DT) is an innovative system capable of mirroring real road assets in all relevant aspects of their geometry, to enable a comprehensive analysis.

The DT includes updated information regarding the state of the infrastructure, and is a key enabler of the management of road interventions.

The DT centralises information about road infrastructure, including easy and detailed visualisation of assets.

Key value: Better knowledge of the state of the road and allows for faster decision making (especially in combination with the road Decision Support System).

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Road Decision Support System

OMICRON's intelligent road Decision Support System (DSS) is a state-of-the-art tool for the optimal planning of road interventions and resources.

The DSS makes use of artificial intelligence (AI) and advanced optimisation techniques to perform assessments of infrastructure failure risk, predictions of infrastructure conditions and improved planning of interventions, mitigating the impacts on road users.

The system can adapt to short-, medium-, and long-term planning procedures and it serves multiple purposes. Furthermore, real-time prediction of the road conditions can help to generate maintenance planning automatically.

Key value: Enhanced prediction of the state of infrastructure based on enhanced infrastructure risk analysis. Better and faster decisions.

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