

LIAISON

Making transport infrastructure
climate-neutral, sustainable and circular

INFOPACK - MAY 2026

SECTOR 1 OF 5

FRAMEWORK

New Governance framework for Transport Infrastructure

A SMARTER, MORE CIRCULAR WAY
TO MANAGE AND MAINTAIN EUROPE'S
TRANSPORT SYSTEMS

SECTOR 1 of 5
FRAMEWORK



Europe's transport networks are essential for open trade and commerce throughout the Union. However, the cost of their maintenance is not only economic. Transport infrastructure construction and maintenance has significant carbon / sustainability costs. The uptake in circular approaches in this space to date has been unsatisfactory.

To meet the EU Green Deal and digital transition goals, infrastructure governance must evolve. The LIAISON project is developing the Dynamic Multi-Infrastructure Governance Framework (DMIGF) – a practical model that helps authorities, operators, and service providers manage interconnected transport systems based on the principles of circularity.

The DMIGF provides a structured, cooperative approach to planning, operating, and maintaining Europe's multimodal transport infrastructure. The framework incorporates Multi Life-Cycle Assessment in order to quantify KPIs relating to the five main arms of circularity – risk, sustainability, material use, social impact and cost.

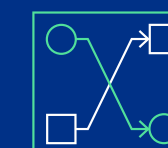
At its core, the DMIGF integrates digital twins, shared data platforms, and collaborative decision-support tools. These components make it possible to perform quantitative circularity assessment of the innovative transport solutions developed in LIAISON:

- smart and sustainable beams,
- smart rigid road pavements,
- improved railway track ballast,
- bioasphalts and automated pavement damage detection system,
- intelligent tunnel control system and photovoltaic guardrails.

Indicator-based tools help stakeholders anticipate barriers, evaluate trade-offs, and align investment priorities. The framework also includes guidance on governance processes, data standards, and roles to ensure transparent cooperation among sectors and governance levels.

This evidence-based and adaptive approach enables more resilient, efficient, and sustainable management of Europe's transport ecosystems.

BENEFITS FOR TRANSPORT INFRASTRUCTURE OWNERS



FACILITATES COORDINATION OF
MAINTENANCE ACROSS TRANSPORT MODES

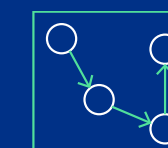


REDUCES COSTS THROUGH
INNOVATION

BENEFITS FOR PUBLIC AUTHORITIES AND POLICY MAKERS



ENHANCES THE CIRCULARITY OF
MAINTENANCE SCHEMES



ENHANCES STRATEGIC
PLANNING



SUPPORTS CROSS-SECTOR
COLLABORATION



STRENGTHENS RESILIENCE
TO CLIMATE AND DIGITAL RISKS

ROADMAP TO IMPLEMENTATION

DMIGF helps assess and rank design and operation options for transport

It scores each option and provides a confidence level for results

It builds on EU and national policies, evolving during the project

Demo cases and stakeholder input will guide its final development

The goal is a scalable tool for owners and managers across projects

It supports circularity, cuts emissions, and informs future policies



LIAISON

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