MATTERS launches to advance sustainable, resilient and circular transport infrastructure across Europe

1 October 2026

A new European research and innovation project**, MATTERS – Materials and Technologies for Enduring, Resilient, and Sustainable Transport Infrastructure, officially starts on 1 October 2026.** The four-year Horizon Europe Innovation Action aims to reduce the environmental impact and improve the climate resilience of transport infrastructure while ensuring safety and functionality.

Europe's transport infrastructure faces ageing assets, increasing climate hazards, degrading ecosystems and resource scarcity, while current construction, maintenance and asset-management practices remain resource- and carbon-intensive and rely on fragmented assessment approaches. Building on partners' lab-validated results, **MATTERS** takes a **holistic life-cycle approach**, from design and construction to maintenance and decommissioning. It will create new pre-normative frameworks and an integrated portfolio of innovative materials, advanced engineering methods and digital decision-support tools, including:

- **low-carbon concrete with alternative binders and high recycled aggregate content**
- **bio-based asphalt binders and mixtures**
- advanced **service-life extension** and repair techniques
- circularity and **reuse-by-design methodologies**, supported by **Digital Product Passports**
- frameworks for integrating **nature-based solutions (NbS**) into transport infrastructure

These solutions are embedded in a **resilience and sustainability assessment framework** that turns asset-level data into quantitative network-level evaluation, with a modular digital toolbox to compare solutions and support infrastructure decision-making. Four demonstrations on road, rail and waterway infrastructure along **TEN-T corridors in Austria, France, Germany and Hungary** will validate the solutions under operational conditions, covering all relevant life-cycle stages and providing evidence on resilience, sustainability and ecosystem impacts. To support uptake, MATTERS will develop replication pathways along **TEN-T corridors**, contribute to **standardisation and Green Public Procurement (GPP) guidelines**, and establish a Community of Practice of industry and infrastructure managers.

The project is coordinated by AIT Austrian Institute of Technology GmbH.The consortium brings together 22 organisations from research, academia, infrastructure management and industry: 21 beneficiaries and one associated partner. Beneficiaries: AIT Austrian Institute of Technology GmbH; Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek TNO; Karlsruher Institut für Technologie; Universität für Bodenkultur Wien; Infrastructure Management Consultants GmbH; Université du Luxembourg; Université Gustave Eiffel; Eiffage Infrastructures Gestion et Développement; Universidade do Minho; Universität der Bundeswehr München; Stichting Wageningen Research; Bundesanstalt für Wasserbau; Universiteit Twente; PK Krakow University of Technology; Ruler Consult Ltd; Infra Plan Konzaltnig jdoo za usluge; ÖBB-Infrastruktur AG; SIKA Technology AG; Force Plan Epitomernoki Korlátolt Felelősségű Társaság; EURNEX e.V.; ZABALA Innovation Consulting SA. Associated partner: Galleria di Base del Brennero – Galleria di Base del Brennero – Brenner Basistunnel BBT SE (Austria-Italy).

Project at a glance

Project	MATTERS – Materials and Technologies for Enduring, Resilient, and Sustainable Transport Infrastructure	**Project number**	101319000
Programme / action	Horizon Europe – Innovation Action (HORIZON-IA)	**Call / topic**	HORIZON-CL5-2026-01 / HORIZON-CL5-2026-01-D6-07
Duration	1 October 2026 – 30 September 2030 (48 months)	**Coordinator**	AIT Austrian Institute of Technology GmbH
Total estimated eligible costs	€11,987,394.58	**Maximum EU grant**	€11,008,304.63

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.