European Commission

Joint Research Centre

SCIENCE FOR POLICY BRIEF – TRIMIS insights



Societal aspects of transport in Research and Innovation in Europe

2026

HIGHLIGHTS

- A total of 146 projects were reviewed considering the time frame 2015-2025, including 42 Horizon Europe (HE) and 104 Horizon 2020 (H2020) projects.
- Most of the projects explored the topic of transport poverty (30%), while 16% is linked to safety aspects, 14% to travel experience, 13% to health, 11% to human-machine interaction, 10% to technology acceptance, and the remaining 6% to jobs and skills.
- The total EU contribution to the identified projects amounts to 443,6 mln euro, with 39% of the funding coming from HE, and 61% from H2020.

Introduction and policy background

The European Union's transport agenda increasingly recognises that mobility is not just about moving people and goods, but also about fostering social inclusion and equality. Recent EU strategies place strong emphasis on the concept of transport poverty, focusing on making transport systems accessible, affordable, available, and adequate for everyone, particularly those who are most at risk of exclusion, e.g. people with limited incomes, disabilities, older adults, and residents of underserved areas. This focus was recently highlighted by a Commission recommendation [1], providing Member States with clear guidance on measuring transport poverty and addressing the issue through concrete actions related to strategic planning and investment.

In addition to transport poverty, there are multiple other societal aspects of transport to be considered, such as health, safety, impact on jobs and skills, technology acceptance, travel experience, and human-machine interaction (HMI). Many of these elements are considered in the Sustainable and Smart Mobility Strategy (SSMS) [2], which sets a comprehensive direction for a climate-neutral, digital, and inclusive transport system for Europe.

Other key initiatives include the European Skills Agenda [3], which focuses on preparing the workforce for technological change, and the Zero Pollution Action Plan [4] addressing environmental and health impacts. For road safety, the key strategy is the EU Road Safety Policy Framework

2021–2030 [5], paving the way to zero road fatalities by the year 2050.

This brief, based on a corresponding Transport Research and Innovation Monitoring and Information System (TRIMIS) Science for Policy report [6], presents a summary of the findings on the European R&I activities in the societal areas of transport, based on analysis of the EU-funded R&I projects.

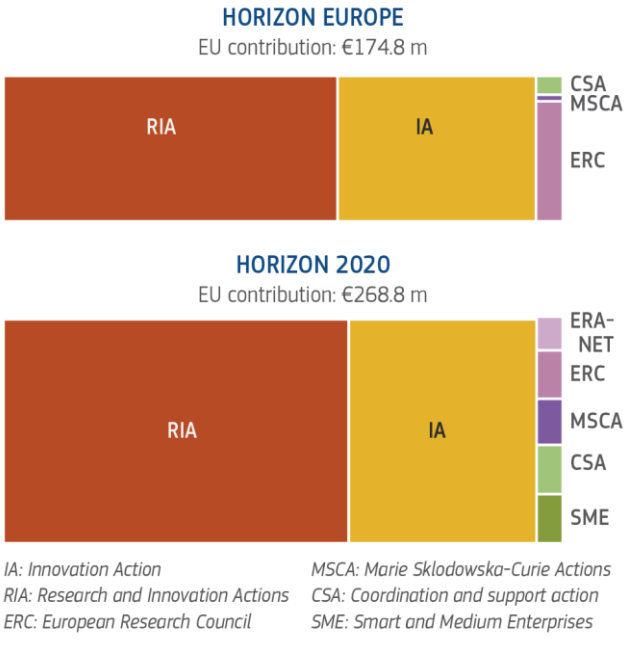
Methodology

The method used for analysis follows the **TRIMIS framework**, using the TRIMIS R&I database as the primary source for identifying potentially relevant projects. This initial list was further extended by performing additional screening of the CORDIS database and refined by an AI-assisted manual review of the identified projects, to include only those within the scope of the report. Each project was then assessed for further clustering and creating a comprehensive picture of the EU R&I activities regarding societal aspects of transport. The final assessment includes quantitative analysis regarding funding, projects distribution, etc., and a qualitative analysis of the projects and their outcomes.

Projects overview

A total of **146 projects** was reviewed for the report, belonging to the period 2015-2025.

Figure 1. Distribution of projects by framework programme and funding scheme.



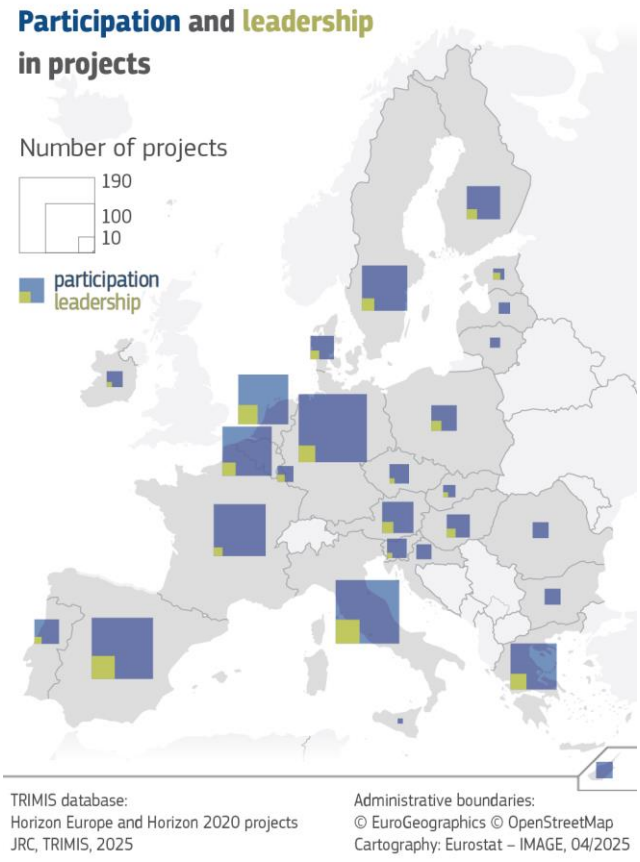
Source: TRIMIS

Among these projects there were **42 Horizon Europe (HE)** and **104 Horizon 2020 (H2020)** ones. Most of the projects were funded under Research and Innovation Action (RIA) scheme, followed by the Innovation Action (IA) scheme.

Germany was the most active country in terms of **project participations**, with 190 instances recorded in the R&I initiatives. It was followed by Italy (168), and Spain (159).

Italy and Spain were also the most represented countries among **project leaders**, with 23 and 21 project coordinators respectively.

Figure 2. Geographical distribution of projects participants.

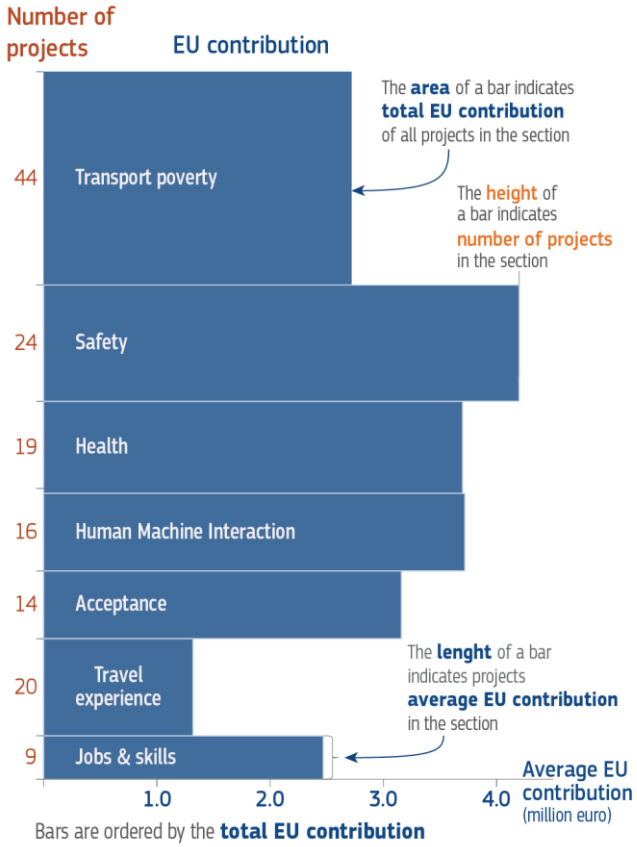


Source: TRIMIS

Most of the projects dealt with the **topic of transport poverty (44)**, followed by **safety (24)**, **health (19)**, and **human-machine interaction (16)**.

Transport poverty was also the category with the highest overall EU funding, amounting to almost 120 mln euro. The highest average contribution per project was recorded for safety-related projects, with a typical investment of roughly 4 mln euro per project. On the other hand, the projects with least average financing were identified in the category of travel experience, with 1.3 mln euro per project.

Figure 3. Distribution of projects by topic.



Source: TRIMIS

R&I highlights

The project analysis led to identification of several clusters of projects related to societal aspects of transport.

The largest cluster of projects explored different aspects of **transport poverty**. The area most addressed was mobility of people with disabilities, with projects covering tailored car concepts and car driving assistance, wheelchair extensions, and stair climbing devices. Other initiatives focused on older people, developing special vehicle concepts, dedicated electric cars, or e-bike. Remaining topics include women and children inclusion in transport, devices for visually impaired, and inclusion of people with limited IT skills. A large group of projects applied participatory measures to co-create solutions against transport poverty, e.g. methods to reduce transport dependency, neighborhood mobility, and attitudes towards automated mobility.

In case of **jobs and skills**, the projects explored the impacts of trends such as automation, digitalization, electrification, etc. on the future job market and skills requirements. Some of them looked more closely at specific transport topic, such as Cooperative, Connected and Automated Mobility (CCAM), rail, waterborne transport, and well-being of workers in evolving work environments.

Health-oriented projects address the complex relationship between transport and public health, focusing on emissions, exposure, toxicology, and health modelling. Examples of topics include measurement, assessment, and modelling of aerosol emissions, reduction of vehicle pollution, health impact modelling, and toxicology of transport emissions.

Projects addressing **safety** focused mostly on the protection of vulnerable road users, such as pedestrians or cyclists, developing dedicated active safety tools for vehicles, passive safety elements like special safety belts for children, safety assessment methods, or ways to influence behaviour of road users. Other project clusters examined simulation and modelling tools for analysing user behaviour, behavioural and cultural aspects of safety, and smart safety infrastructure.

In case of **travel experience**, the main identified research directions are reduction of internal cabin noise in aviation and user-friendly design of aircraft cabin interior. Other topics include air quality in cars and aircrafts, passenger experience in public transport, impact of urban green spaces on travel experience, travel entertainment, and the ways to include travel experience in transport planning.

The projects working on **human-machine interaction** investigated two transport areas: CCAM and aviation. For CCAM, the common objective is to find more optimal ways of communication between the car driver, the vehicle, and the vulnerable road users. In case of aviation, some projects investigated the concept of digital assistants, while others examined HMI for various actors more closely, e.g. pilots, and air traffic controllers. This includes also finding the optimal training strategy to best prepare the future aviation workforce for cooperation with machines.

The work on **acceptance** was mostly focused on two technologies: drones and CCAM. The projects investigated the key issues that impact their acceptance, such as safety, human-machine interaction, and visual/noise pollution. Several projects investigated less obvious aspects of acceptance, such as emotional and cultural environment and diversity. Other projects addressed the acceptance of hydrogen technologies, vehicle access regulations, and interventions to change mobility behaviour.

Conclusions

Key conclusions are presented here.

Transport poverty projects touched upon several dimensions, highlighting the need for permanent observatory for gender-based mobility, involvement of children perspective in transport planning, development of more assistive technologies for people with disabilities, and design of universally accessible technologies for people with limited IT skills.

The projects focusing on **acceptance** looked mostly at CCAM, drones and hydrogen technologies. Many of them stressed the need for comprehensive impact assessments of these technologies to have a complete integration into urban mobility strategies. Moreover, some projects stressed the importance of considering the "emotionally intelligent" systems and immersive human-centred design.

The projects investigating **jobs and skills** concluded that a coordinated policy, education, and industry action is required to manage the workforce and technological shifts in transport. Key focus areas for the future will be reskilling and upskilling, legal frameworks, and policy roadmaps. The projects also stress the need for short-, mid- and long-term planning, and flexibility to accommodate evolving transport roles.

In case of **health**, more context-specific mitigation strategies are needed for high-risk areas, as well as more focus on behavioural aspects. Citizen engagement emerged as a critical factor for policy relevance, with participatory research improving policy acceptance and public health relevance. Other recommendations include stricter regulations to protect the most vulnerable groups, and targeted technologies and mitigation strategies for high-risk areas.

Regarding **safety**, there is a need to move from technical fixes to integrated, adaptive, and human-centred approaches. More effort should be put into developing simulation tools based on behavioural models, as well as updating current safety test protocols. For improvement of driver's fitness more attention is needed towards health monitoring, personalised coaching, 3D imaging for tailored protection and biomimetic design for injury prevention.

For **travel experience**, dedicated methods should be developed for assessments of noise depending on the source (e.g. wheel-rail, noise, traction noise). More effort is needed to increase the value of travel time spent in sustainable modes of transport, e.g. by taking advantage of ICT solutions. Overall, travel experience factors should be more closely investigated in terms of their impact on modal choice.

Human-machine interaction projects point at real time adaptability and trust calibration. Other important aspects that need to be further addressed are update of certification protocols, a deeper integration of cognitive science into automation design, further exploration of haptic and auditory cues for the users, and systemic integration of infrastructure, vehicle design, and user education.

References

[1] European Commission (2025), Commission Recommendation (EU) 2025/1021 of 22 May 2025 on transport poverty: ensuring affordable, accessible and fair mobility.

[2] European Commission (2020), Sustainable and Smart Mobility Strategy – putting European transport on track for the future.

[3] European Commission (2020), European Skills Agenda for sustainable competitiveness, social fairness and resilience.

[4] European Commission (2021), 'Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil'.

[5] European Commission (2019), EU Road Safety Policy Framework 2021-2030 - Next steps towards "Vision Zero".

[6] Grosso, M., Rataj, M., Lodi, C., Zawieska, J., Stepniak, M. et al., (2026) Societal aspects of transport in research and innovation in Europe.

Disclaimer

This document is based on the JRC Science for Policy Report: Grosso M. et al., 2025 [6]. The views expressed here are those of the JRC TRIMIS team and may not, under any circumstances, be regarded as an official position of the European Commission.

Science for policy

Scan the QR code to visit:

Joint Research Centre

https://joint-research-centre.ec.europa.eu

Contact information

European Commission, Joint Research Centre (JRC)

Contact: Monica Grosso

E-mail: monica.grosso@ec.europa.eu

© European Union, 2026

Reuse of this document is allowed, provided appropriate credit is given and any changes are indicated (Creative Commons Attribution 4.0 International license). For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders. All images © European Union, unless otherwise stated.

JRC 148041