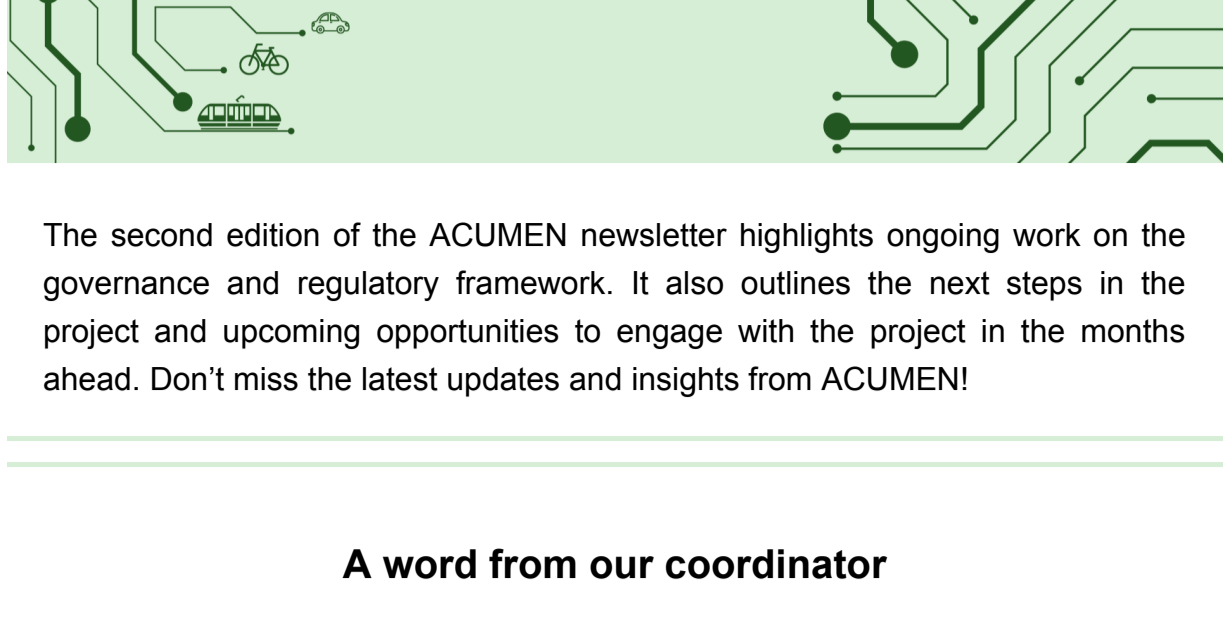


[View this email in your browser](#)



The second edition of the ACUMEN newsletter highlights ongoing work on the governance and regulatory framework. It also outlines the next steps in the project and upcoming opportunities to engage with the project in the months ahead. Don't miss the latest updates and insights from ACUMEN!

A word from our coordinator

As we moved beyond the midpoint of ACUMEN (Artificial Intelligence-aided Decision tool for seamless Multimodal Network and Traffic Management), it is exciting to witness the emergence of concrete results. Several methodological developments have been successfully completed, offering innovative, research-driven solutions in key areas such as mobility data fusion and traffic forecasting.

At the same time, technological advancements are progressing rapidly. The ACUMEN Digital Twin is currently being deployed in our pilot locations, enhanced with an expanding set of tools and functionalities that bring our vision closer to practical implementation.

Our findings have been disseminated through various international events, and we have actively engaged in meaningful discussions with stakeholders from a wide range of sectors across Europe and beyond. These interactions are essential to ensuring that our solutions are aligned with real-world needs and are prepared for broader application.

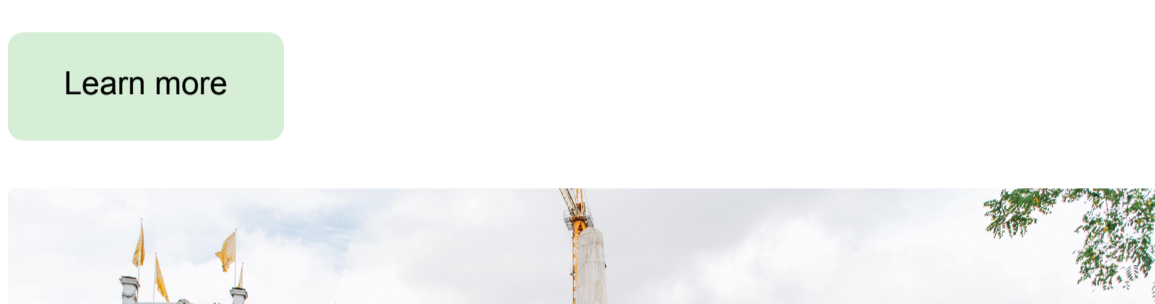
We look forward to continuing this important work and advancing the goals of sustainable, intelligent transport and traffic management!

Claudio Roncoli
Coordinator - ACUMEN

Workshops

The ACUMEN project is developing a governance and regulatory framework, as well as a decision support tool, to guide policy makers in integrating AI and machine learning into transport management systems. To ensure its practical relevance, ACUMEN conducted four workshops with its pilot cities - Luxembourg, Athens, Helsinki and Amsterdam - bringing together national and local stakeholders.

These workshops provided an insight into existing traffic management systems and facilitated the exchange of best practices. Feedback from participants will be used to refine the governance framework and decision-making tool to ensure its applicability in real transport systems. The final tool will be shared with stakeholders to demonstrate the benefits of AI-based traffic management and encourage cities to adopt AI-driven solutions for long-term mobility improvements.

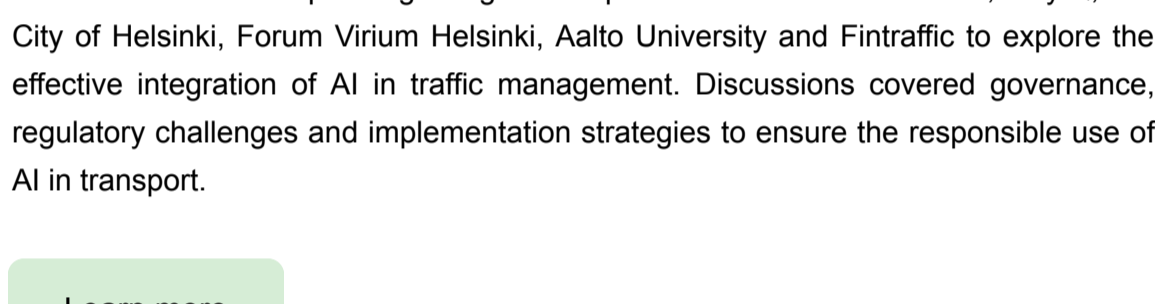


Athens
The Athens ACUMEN Workshop held on 3 February 2025, aimed to explore how and when AI can be integrated into traffic management systems. Fifteen stakeholders participated, including representatives from OSY SA Road Transports SA, GEFYRA, the Municipal Police of Athens, the City of Athens (Departments of Road Management and Sustainable Mobility), and FedEx.

[Learn more](#)

Amsterdam
Interviews were conducted with representatives from the city of Amsterdam to understand how the city currently handles traffic management and where AI could fit in

[Learn more](#)



Helsinki
The Helsinki workshop brought together representatives from Traficom, PayiQ, the City of Helsinki, Forum Virium Helsinki, Aalto University and Fintraffic to explore the effective integration of AI in traffic management. Discussions covered governance, regulatory challenges and implementation strategies to ensure the responsible use of AI in transport.

[Learn more](#)

Luxembourg
In order to get the broadest possible picture, stakeholders from HITEC, Luxinnovation, LISER, the E-Bus Competence Centre, Ataxone, the university of Luxembourg and government authorities were invited to discuss the integration of Artificial Intelligence (AI) in traffic management. In particular, the challenges, opportunities and framework conditions for the introduction of AI in mobility systems were discussed.

[Learn more](#)



Progress

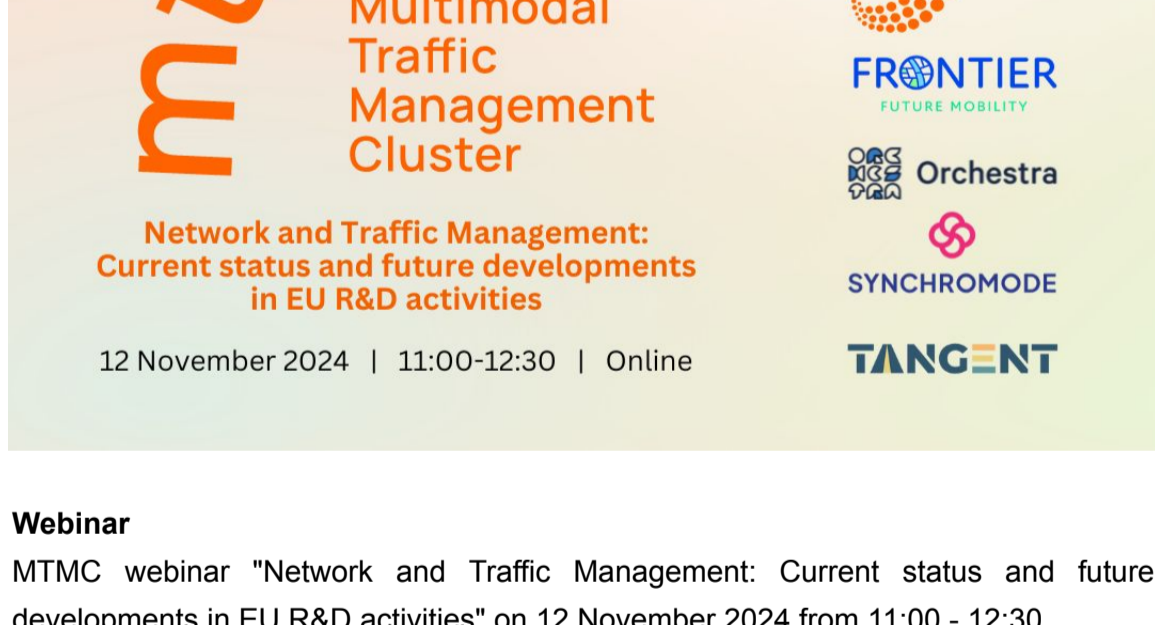
All four pilots are making progress towards their objectives, showcasing the tools developed throughout the project and integrating them into the Digital Twin platform. The Athens pilot focuses on supporting transport authorities with traffic monitoring and management in a busy urban area. In Helsinki, the aim is to encourage travellers to use alternative travel options by offering incentives. The Amsterdam pilot addresses disruption scenarios on a citywide scale. In Luxembourg, the focus is on assessing the readiness of automated vehicles and optimising on-demand services for last-mile connectivity.

A joint effort has resulted in the submission of a review paper entitled 'Seamlessness in Transportation'. Project results will be presented at several international events, including the hEART 2025 conference in Munich, the Transportation Research Symposium in Rotterdam, and the CASPT 2025 conference in Kyoto. Research on AI-based abstracted management strategies is ongoing. Several reinforcement learning methods have been developed for intersection, corridor and network-level traffic management and have produced strong results in the Athens simulation. In parallel, new approaches to data-driven reverse engineering of management strategies are being developed to support modelling for multimodal coordination.

The core services of the Digital Twin, including the data manager, API gateway, user manager, scenario manager and simulation service, have been developed and deployed. Dedicated instances have been created for each pilot and are now operational. Three simulation tools - MnMs, MATSim and SUMO - have been integrated, along with the privacy management service and data fusion tool. Future work will focus on adding further services, such as a traffic forecasting tool, a calibration tool and a stress test generator.

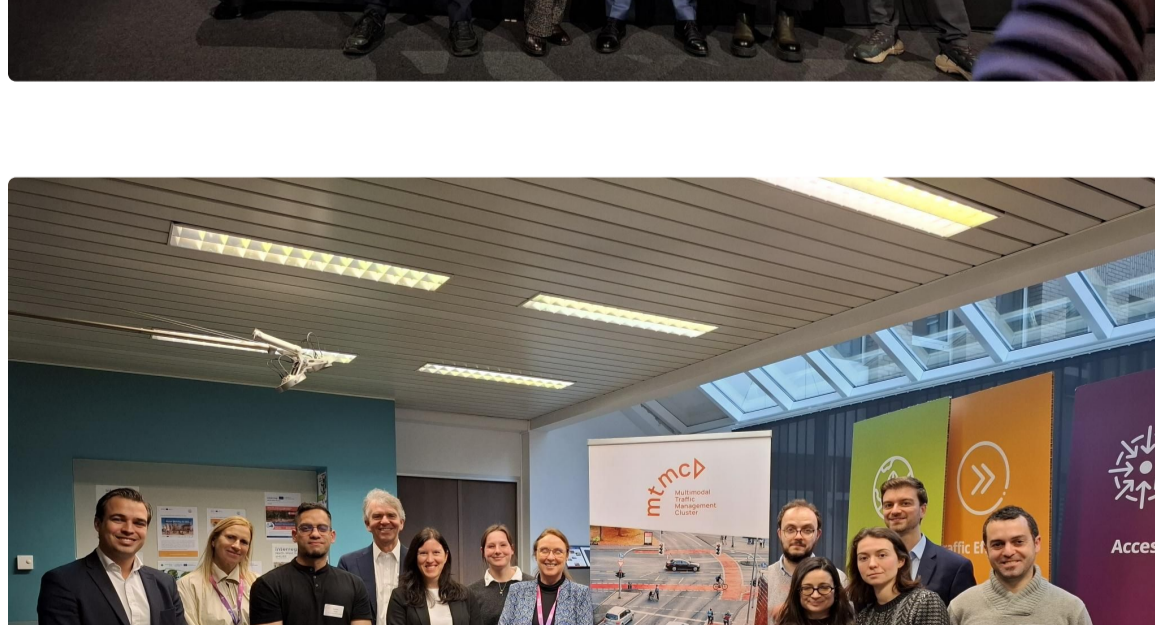
MTM Cluster

ACUMEN has continued its contribution to the Multimodal Traffic Management (MTM) cluster, an important initiative that not only provides an opportunity for knowledge exchange but also gives it a key position in shaping the European Union's approach to network and traffic management



Webinar
MTMC webinar "Network and Traffic Management: Current status and future developments in EU R&D activities" on 12 November 2024 from 11:00 - 12:30.

RTR 2025
The Multimodal Traffic Management Cluster has published a new policy brief focusing on data sharing for traffic management. This collaboration between EU-funded traffic management projects aims to improve traffic management strategies through better data sharing and governance.



MTMC Workshop
The Multimodal Traffic Management Cluster came together in an informal setting to explore common challenges, lessons learned, and future research opportunities

[Learn more](#)

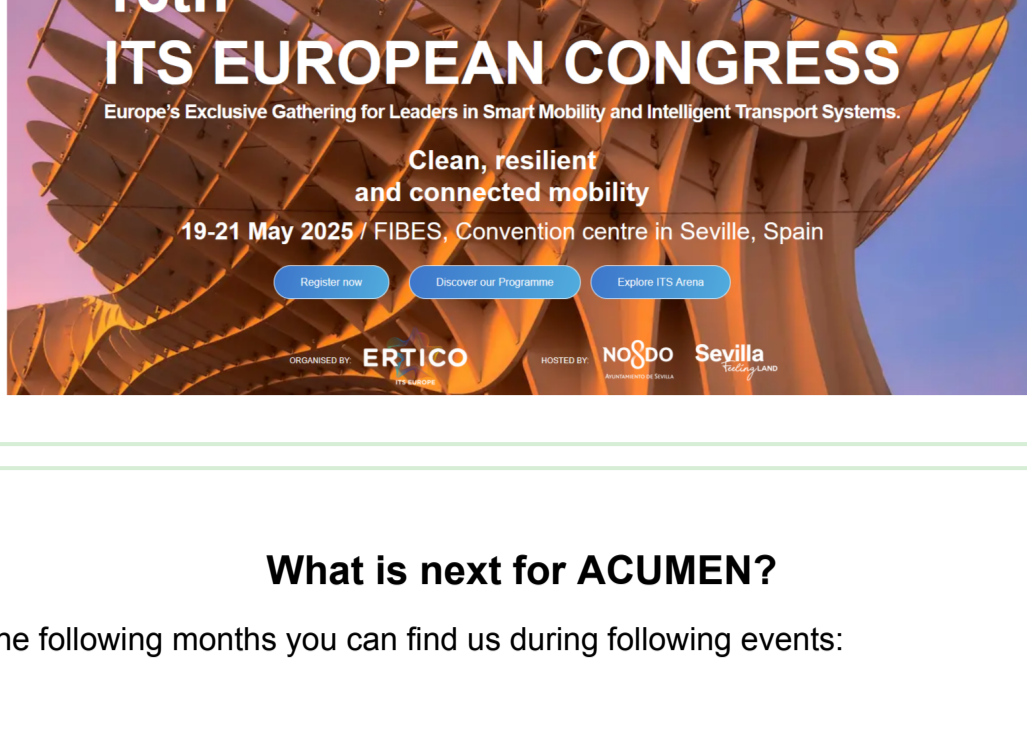
Internal Meetings

The latest consortium meeting took place in Delft (NL) in March. It brought partners together to discuss key challenges, review progress and plan the next steps of the project.



Past Events

In order to disseminate our findings and engage with other projects and initiatives, we participated in several relevant events:



What is next for ACUMEN?

In the following months you can find us during following events:

A banner for the International Symposium "Navigating the Future of Traffic Management". It features the text "International Symposium 'Navigating the Future of Traffic Management'" in large, bold letters. Below the text is the date "June 29, 2025 - July 3, 2025 Athens, Greece" and a button that says "REGISTRATION IS OPEN". The background is dark blue with a blurred image of a highway interchange.

Navigating the Future of Traffic Management

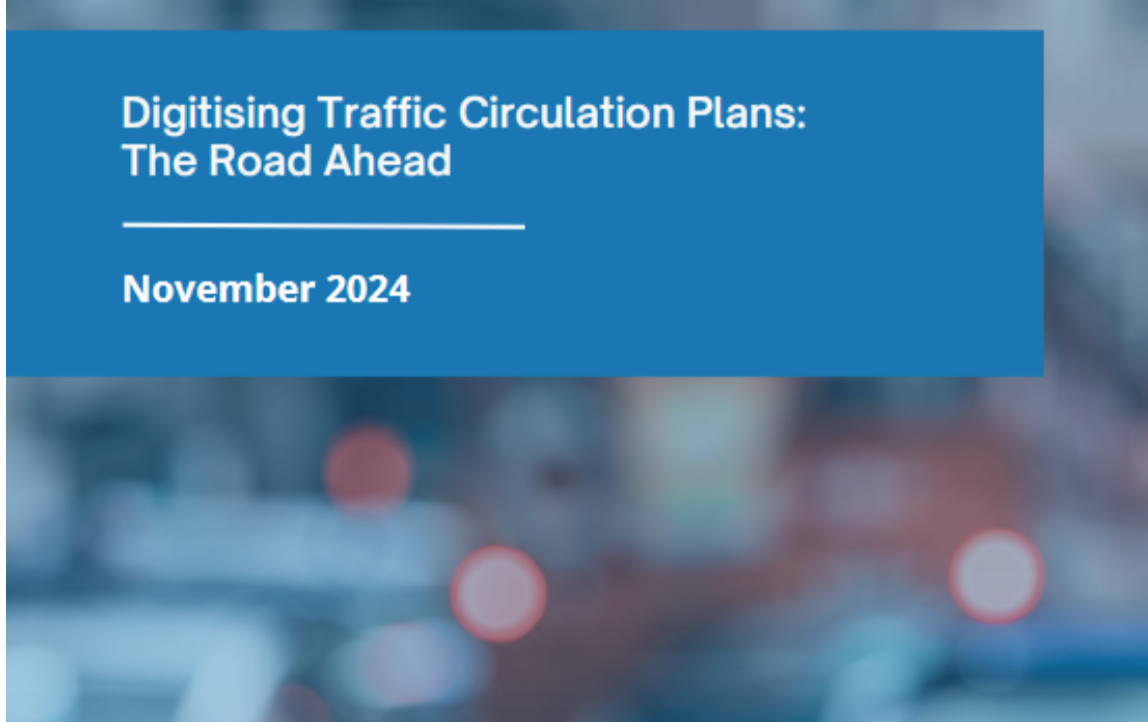
The International Symposium will take place in Athens from 29 June to 3 July 2025. This event will bring together experts from around the world to share their ideas on how to advance traffic management through innovation, technology and practical experience.

[Learn more](#)

9th International IEEE Conference on Models and Technologies for Intelligent Transport Systems

The Mobilab Transport Research Group of the University of Luxembourg and the IEEE ITSS Benelux Chapter are co-organizing the 9th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2025) to be held on 8-10 September, 2025 in the Kirchberg Campus of the University of Luxembourg.

[Learn more](#)



Resources

Getting to the end of the Newsletter and looking for more? Here are some resources and projects you may find interesting:

A banner for POLIS. It features the POLIS logo and the text "CITIES AND REGIONS FOR TRANSPORT INNOVATION". Below the logo is a button with a right-pointing arrow. The background is a blurred image of a city street with cars.

Digitising Traffic Circulation Plans: The Road Ahead

November 2024

POLIS RTTI Task Force



Digitising Traffic Circulation Plans - The Road Ahead

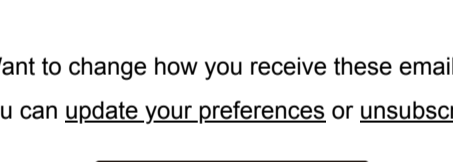
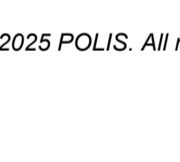
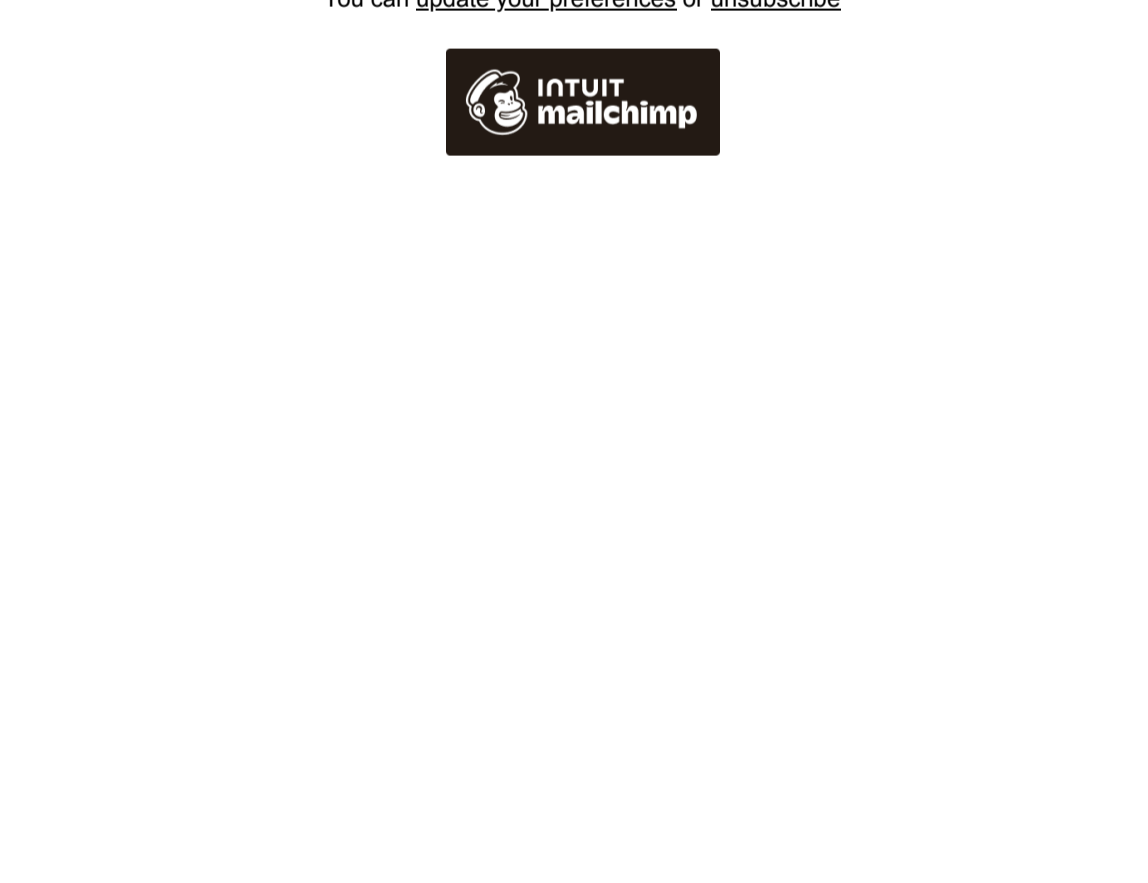
The paper advocates for standardised digital TCPs to streamline communication between road authorities and service providers, facilitating optimised traffic flows and environmentally friendly travel. It also outlines plans to incorporate TCPs into existing traffic data frameworks for enhanced data accessibility and interoperability across European cities.

[Learn more](#)

The Future of Traffic Management: Embracing AI for Sustainable Urban Mobility

This literature review synthesises research on different traffic management systems and technologies, focusing on solutions such as real-time image processing, IoT-based systems, wireless sensor networks and deep learning models.

[Learn more](#)



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