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This final edition of the ACUMEN newsletter marks the close of the project, covering pilot results, capacity-building outputs and a look ahead to the next generation of the MTM Cluster.

A word from our coordinator

Three years ago, ACUMEN set out with an ambitious goal: to investigate how AI-supported tools and data-driven approaches could improve the way cities manage multimodal traffic, making journeys more seamless, more efficient and more resilient to disruption. As this final newsletter goes out, we can look back on a project that has delivered on that ambition in ways that are both concrete and, at times, humbling.

The work has not always been straightforward. Deploying AI in real urban environments, across four very different pilot cities, with different governance structures, data landscapes and operational realities, quickly revealed that the technology alone is never enough. What ACUMEN has shown, perhaps above all else, is that the conditions for AI to work well in network and traffic management are as much about governance, trust and institutional readiness as they are about algorithms and data. That insight runs through everything we have produced, from the pilot results to the governance frameworks, the City Guidebook and the AI Readiness Assessment Tool.

At the same time, the results speak for themselves. In Athens, AI-assisted traffic control strategies delivered significant improvements in network performance. In Helsinki, targeted incentives demonstrated that nudging people towards sustainable travel choices can work when the design is right. In Amsterdam, simulation tools shed new light on how cities can prepare for and manage major infrastructure disruptions. And in Luxembourg, the deployment of demand-responsive transport and an autonomous shuttle service in Esch opened up new questions about what the future of door-to-door mobility could look like.

This final issue brings those threads together. It covers the results from across the four pilots, presents the capacity-building tools we have developed to help cities and transport authorities go further, and looks ahead to the continuation of the MTM Cluster work through the freshly started FEDORA and MODALSHIFT projects. We also point to the full library of project deliverables, which remain publicly available for anyone looking to dig deeper.

The work continues!

Claudio Roncoli
Coordinator - ACUMEN

ACUMEN & SYNCHROMODE final conference



The ACUMEN and SYNCHROMODE Final Event took place on 21 and 22 April 2026 in Brussels, bringing together cities, transport authorities, researchers, industry representatives and EU policymakers for two days of presentations, live demonstrations and discussion. The event marked the conclusion of three years of research and pilot testing across seven European cities, with both projects sharing their results, tools and lessons learned. Sessions covered topics ranging from AI-based traffic management and real-time data integration to governance frameworks and disruption resilience, alongside contributions from complementary Horizon Europe projects and a dedicated tools demonstration area. The event closed with a panel discussion on the future of multimodal traffic management in Europe. Both projects have demonstrated that data-driven and AI-supported solutions for multimodal transport management can deliver measurable results in real-world conditions, and have laid groundwork for further deployment and knowledge exchange across Europe.

Project Results

Across its four pilot cities, ACUMEN demonstrated that AI-supported tools can deliver measurable improvements in multimodal traffic management.

- In Athens, large-scale drone-based data collection campaigns fed into a real-time incident detection framework and AI-assisted traffic control strategies, with results showing significant improvements in network performance.
- In Helsinki, a data fusion framework combining multiple sources was used to estimate passenger flows in the Jätkäsaari port area, alongside an incentives strategy demonstrating that targeted measures can reduce travel time and increase public transport use.
- In Amsterdam, the pilot modelled rerouting strategies, public transport priority measures and perimeter control interventions, generating simulation insights into how cities can manage major infrastructure disruptions across multiple modes.
- In Luxembourg, the pilot focused on improving door-to-door travel through a demand-responsive transport service in Contern and an autonomous shuttle demonstration in Esch, generating insights into how on-demand mobility can better connect with rail services and how users perceive autonomous vehicles.

The project also produced a set of practical tools to support wider deployment, including a digital twin for scenario simulation, a governance framework for AI integration, and an online readiness assessment tool for cities. Throughout, ACUMEN was deliberate in acknowledging the boundaries of current AI capabilities, emphasising that its impact depends on the application and methods used, and that building institutional trust requires transparency about limitations as much as potential.

ACUMEN Key Exploitable Results

Over three years of research and pilot testing, ACUMEN has developed a set of Key Exploitable Results (KERs) for multimodal traffic management. To make these accessible beyond the project, we have compiled an overview that covers each result, setting out the challenge it addresses, what the solution does, and who can use it. The results vary in maturity, from early-stage concepts to solutions close to operational use, but all are designed to be adaptable and to support further development and integration in real-world traffic management systems.

[Access the KERs](#)

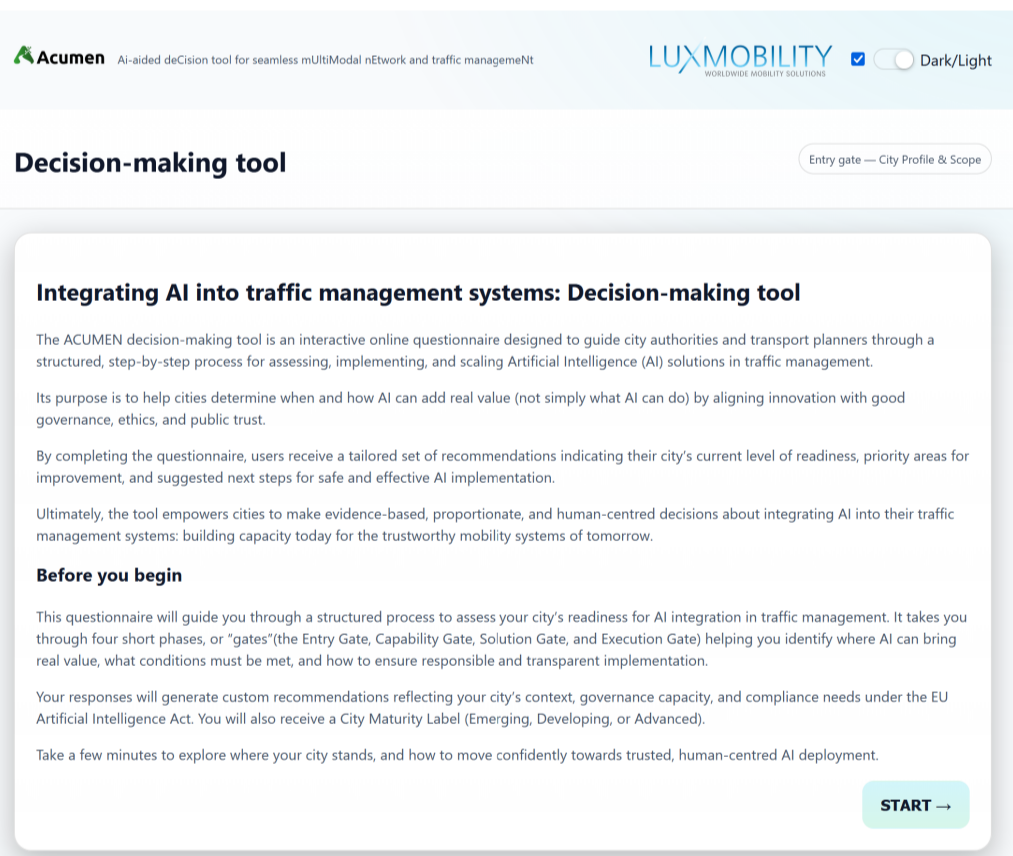
ACUMEN e-course

Throughout the project, ACUMEN developed a capacity-building programme aimed at translating research results into accessible knowledge and practical tools for traffic management stakeholders. This programme was delivered across a range of formats, including webinars, workshops and dedicated tools, and was primarily offered to the Reference Group before being made more widely available on the project website.

As part of this effort, an eCourse was developed and is now accessible on the ACUMEN website. It brings together the outputs of the capacity-building programme in a structured learning path, covering the scientific research results from the project's technical work packages, peer-learning workshops on governance for AI integration in traffic management, and tutorials on the project's tools. These include a dedicated tutorial on the ACUMEN Digital Twin, walking users through data management, scenario creation, simulation and results visualisation, as well as guidance on the ACUMEN City Guidebook and its associated online self-assessment tool, which supports cities in evaluating their AI readiness and planning responsible deployment in line with the EU AI Act. The eCourse is designed to support replication beyond the original pilot cities, recognising that scaling shared mobility and traffic management solutions requires not only technical tools but also the skills, organisational readiness and governance frameworks to deploy them effectively.

[Access the e-course](#)

Decision-Making Tool



Alongside the eCourse, the ACUMEN AI Readiness Assessment Tool was developed to support cities and transport authorities in evaluating their preparedness for AI integration in traffic management. Drawing on governance frameworks and implementation experience from the four ACUMEN pilot cities, Luxembourg, Helsinki, Athens and Amsterdam, the tool guides users through four stages: assessing AI readiness, evaluating data and governance infrastructure, identifying suitable use cases, and designing pilots with appropriate risk management and citizen engagement. At the end of the process, users receive a maturity assessment, classified as Emerging, Developing or Advanced, along with concrete next steps. Like the eCourse, the tool is freely available online and is intended to support replication and knowledge transfer beyond the original pilot cities.

[Access the tool](#)

Deliverables

Over the course of the project, ACUMEN produced a substantial body of work covering technical research, pilot results, governance frameworks, digital twin development, tools integration and dissemination activities. All publicly available deliverables, along with press materials, can be accessed on the ACUMEN website.

[Access the deliverables](#)

MTM Cluster

As ACUMEN, DELPHI and SYNCHROMODE come to an end, the work of the Multimodal Traffic Management (MTM) Cluster continues. A new generation of Horizon Europe projects, namely FEDORA and MODALSHIFT, will carry forward the research agenda on network and traffic management for future mobility systems, building on the findings, tools and governance frameworks developed by their predecessors. The cluster approach ensures continuity across project cycles, allowing lessons learned to inform subsequent research and supporting a progressive, evidence-based development of multimodal traffic management solutions across Europe.

Before you go

This section contains the latest developments that you might have missed:

The Luxembourg pilot tested an autonomous shuttle service in Esch, operating along a 1 km route with six on-demand stops managed through the ACUMEN app. The service has been running continuously since January 2023, recording an average of 32 to 56 passengers per day during the first ten months of operation. In September 2025, the on-demand app backend was integrated into the autonomous vehicle system, enabling real-time stop selection and skipping based on passenger requests. A short video was produced to guide users through the service.

[Access the video](#)

Before changing a city, why not simulate it first? Digital twins, virtual replicas of physical transport systems that integrate real-time data and simulation tools, are increasingly being used by cities to test scenarios, optimise traffic flow and improve sustainability without disrupting daily life. From Singapore to Los Angeles, early adopters are already seeing measurable results. ACUMEN contributed to this shift by developing a modular digital twin platform that integrated data from multiple European cities to simulate traffic scenarios and support better decision-making.

[Access the article](#)

What does seamless mobility actually mean, and what do we know about how to achieve it? ACUMEN partners from Aalto University, Université Gustave Eiffel and the Technical University of Delft set out to answer this question in a paper submitted to the hEART 2025 conference. Drawing on a systematic review of over 2,000 studies, the paper proposes a four-layer framework covering infrastructure, transport modes, system management and the user interface, and argues that seamlessness is a system property rather than a feature of any single component.

[Access the article](#)

Finally, thank you to everyone who has followed ACUMEN over the past three years, and to all the partners, pilot cities and stakeholders who contributed to its success. It has been a collective effort, and the results speak for themselves.



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