Automated Mobility in Austria

Monitoring Report 2025

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Introduction

Automated mobility is evolving from a technological vision into a central pillar of the mobility transition. 2025 was a year of momentum: in Austria, new test initiatives were launched and the first steps toward future regular operations were taken. But our journey extends beyond national borders. International developments and European cooperation shaped the debate around safety, acceptance, and scalability.

In the chapter **Contact Point Automated Mobility**, we present the **development of issued test certificates** since the introduction of the Automated Driving Regulation in 2016 and provide insights into the **experiences** of organizations that tested on Austria's roads in 2025.

We take you along to the test environments of **ALP.Lab** and **Digitrans**, to national projects such as **AURORA**, **auto.GigaApp**, and **HAF-ALP-TOUR**—and into entirely new perspectives. With our field reports under the motto "**A Day With ...**", we accompanied two exciting initiatives for a day and share our impressions.

And we look beyond the horizon: to **Japan**, where the **Mobility Innovation Week** demonstrates how automation is conceived as a response to **demographic and societal challenges**. An impulse that is also becoming increasingly relevant for Austria.

The focus is also on the **European Common Evaluation Methodology (EU-CEM)**, which provides the key to well-founded assessments. In addition, we highlight the work of the **Strategic Alliance for Automated Mobility (SAAM Austria)**, which promotes dialogue between research, industry, public administration, and society.

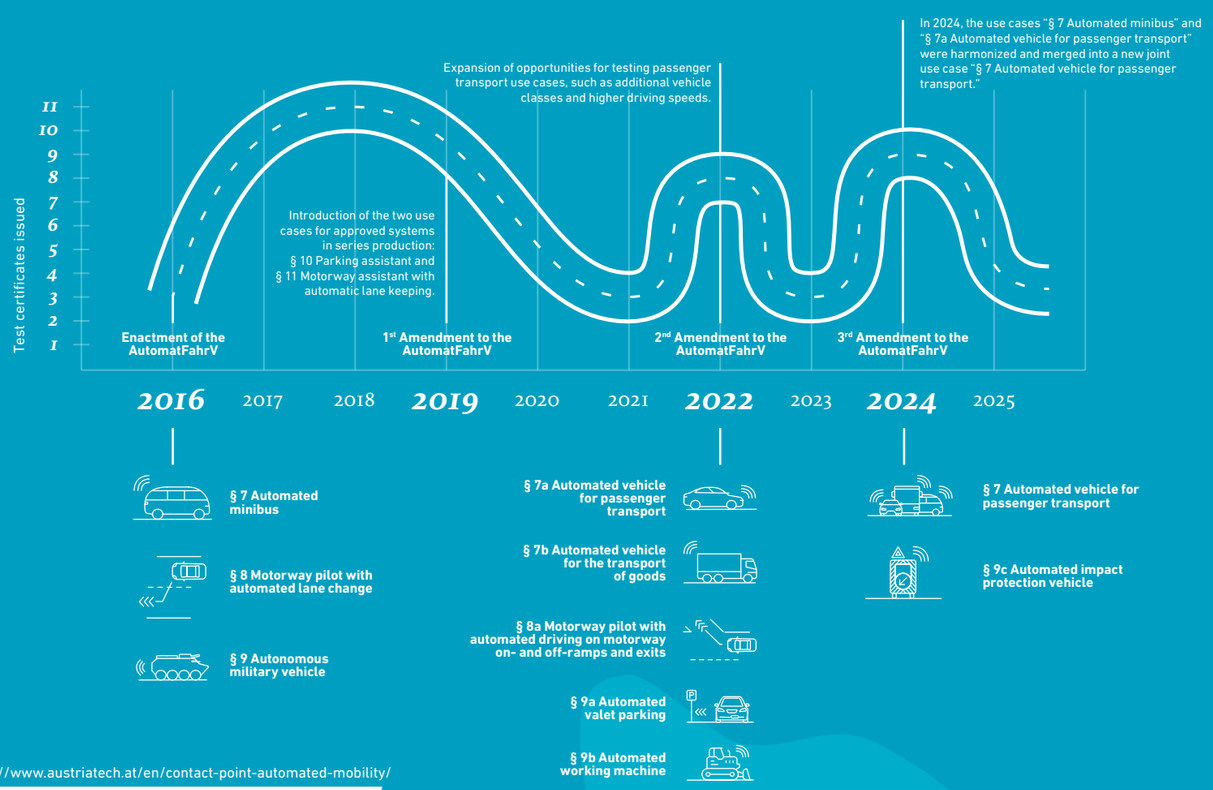
Finally, we look ahead: how can we use the insights gained in 2025 to make automated mobility safe, sustainable, and accessible to all? This report is not merely a retrospective—it is an invitation to shape the next steps together.

Contact Point Automated Mobility

In 2025, the Contact Point for Automated Mobility was once again heavily involved in advising applicants and accompanying test projects. At the same time, new developments became apparent, such as the increased use of end-to-end AI and planned test projects on large-scale road networks. In the future these trends will lead to significantly higher complexity in testing and to new requirements for the legal framework. While concrete steps toward regular operations are already being taken—for example through the development of a new legal framework for Austria—continuous testing and validation of new technologies and vehicle concepts will remain indispensable going forward.

Development of Test Certificates in Austria

The following figure shows the course of testing automated driving in Austria since 2016. It illustrates the further development of the legal framework through adaptation to an increasing variety of use cases on public roads. In addition, the annual number of certified test drives is shown.



https://www.austriatech.at/en/contact-point-automated-mobility/

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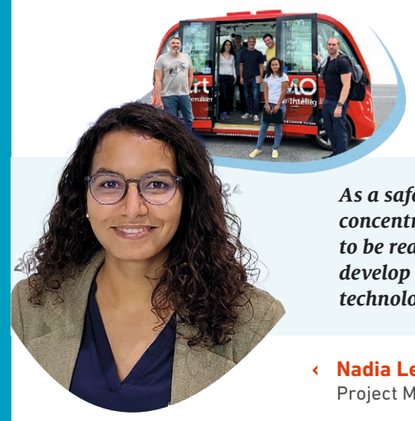
contact point automated mobility

Activities 2025

In 2025, numerous test drives took place on Austria's roads, with the aim of both the technical advancement of the systems and testing in real-world passenger transport. After the test operations within the RIAMO project were successfully completed in Pichling in 2024, the focus shifted to a new deployment area in 2025. Accordingly, test drives using the DigiTrans eVAN were carried out in St. Florian and Asten.

As part of the RIAMO project, an automated on-demand shuttle for passenger transport was tested. This made it possible to connect areas with poor public transport access to higher-level transport hubs, providing an alternative to private cars.

Hannes Watzinger ›
Deployment Manager and Project Lead, DigiTrans GmbH



SURAAA continued its test operations in Klagenfurt. Two automated shuttles were in operation in Klagenfurt West, between the train and bus stations, the university and Lakeside Park, both on a fixed schedule and on demand. Further test operations are planned for 2026.

As a safety driver, you experience every trip with a high level of concentration. The automated shuttle drives stably, but you always have to be ready to intervene. At the same time, you see how quickly people develop trust. That makes the task exciting, because you directly connect technology and everyday life and contribute to the mobility of the future.

‹ **Nadia Lemcherreq**
Project Manager, SURAAA

Virtual Vehicle carried out test drives in Graz as part of the EU project "**GAMMS**", during which the automated vehicle automatically generated a high-definition (HD) map. The collaboration with more than six research partners required close coordination to jointly and coherently deploy the various systems within the vehicle. Further test drives are also planned for the coming year.

As our test vehicles are continuously being further developed, additional test drives are planned again for next year. Further development is ongoing, particularly in the areas of software and sensor technology with regard to robustness. For example, the iEXODDUS project is testing automated driving without an HD map.

Markus Schratter ›
Lead Researcher, Department E, Virtual Vehicle Research GmbH

Fields of Activity of the Automated Mobility Team

As the competence center for automated mobility in Austria, the Automated Mobility Team of AustriaTech contributes to shaping the transformation of the mobility system in a safe and future-oriented manner. The team's diverse tasks and fields of activity are largely funded by the Federal Ministry for Innovation, Mobility and Infrastructure BMIMI and provide points of connection for cooperation with a wide range of stakeholders.

Developing and Explaining Framework Conditions for Testing and Regular Operation of Automated Vehicles

Focus on actors who want to test and develop, as well as infrastructure operators

- **Safe and transparent test operation:** Enabling test drives of automated vehicles on public roads and supporting the handling of the certification process via the Contact Point Automated Mobility.
- **Legal and organizational development**: Contributing to the design of a clear, practical framework for both testing and regular operation of automated mobility in Austria.
- **Strategic co-creation**: Active development of Austria's strategy for automated mobility, including through the establishment of and participation in the Strategic Alliance for Automated Mobility (SAAM Austria).

Focus on the research community and mobility providers as potential project partners

Development of Project Ideas and Participation in European Research and Implementation Projects

- **Project and study work on road safety**: Conducting studies and projects to analyze how automated mobility can contribute to improved road safety.
- **Co-creation of joint standards and guidelines**: Participation in national and international projects to develop standards, use cases, guidelines and practical recommendations, as well as transfer of findings for Austria.
- **Support with funding concepts**: Collaboration on the development and design of national funding calls in the field of automated mobility.

Focus on territorial authorities, mobility providers and operators, research actors, and interest groups

Continuous Provision of Knowledge and Expertise for the Austrian Community

- **Advisory services**: Trend monitoring and expert advice for authorities, companies, and research institutions.
- **Knowledge transfer**: Publication of expert information, including in the annual monitoring report "Automated Mobility in Austria", and presentations at professional events.
- **Project support**: Support of national research, pilot and development projects aimed at advancing safe automated mobility systems.
- **Strengthening industry and innovation:** Strengthening industry and innovation: Supporting and collaborating with domestic industry in the development and application of automated mobility technologies.
- **International networking:** Participation in committees and initiatives such as the CCAM Partnership, PAVE Europe, and Drive Sweden, to foster knowledge exchange and communication between national and international levels.

Team Automated Mobility - f.l.t.r.: Dominik Schallauer, Verena Sandner, Wolfram Klar, Aggelos Soteropoulos, Sarah Gross, Sebastian Raho

Our team consists of people with different educational backgrounds and areas of expertise. However, we share a common goal: to continuously expand our knowledge of automated mobility and to apply it toward building competencies in Austria as well as improving the national and European mobility system.

Wolfram Klar ›
Team Lead Automated Mobility, AustriaTech

Current Developments and Trends in 2025

Technology, governance and practice are increasingly interlinked: 2025 was characterized by discussions around end-to-end AI, tests on large-scale road networks, and the further development of legal frameworks. The EUCAD conference provided a platform for European exchange, while cities in Austria and across Europe specified their strategies for deploying automated mobility. A recent white paper also highlights the strategic importance of automated buses for the future of public transport.

End-to-End AI & Large-Scale Testing

Test initiatives are increasingly being planned at the scale of entire city districts or regions. For example, it is now widely known that in the United States, Waymo operates robotaxis in several cities. Although this is a large-scale operation, the operating area is precisely mapped, the technology is trained for this area and restricted by means of geofencing. For positioning, a combination of GPS, a generated map base, real-time sensor data, and AI are used. With the help of AI, the sensor data collected during driving is being interpreted and consequently, based on millions of trained data sets, the behaviour of pedestrians and other vehicles can be predicted. In line with current trends, Waymo is working on further developing modular AI learning toward end-to-end AI learning.

The company Wayve is already testing such approaches in mixed traffic conditions in the Stuttgart region in Germany. Instead of rule-based algorithms, Wayve relies on learning-based, end-to-end trained AI models that can respond flexibly to previously unknown situations. The end-to-end AI approach enables easy adaptation to different countries and vehicles, requiring less effort than the use of rule-based algorithms.

Summary and outlook

Under the current legal framework in Austria, a detailed route analysis and risk assessment is required for each individual test section, which involves considerable effort for operators. This method reaches its limits at the latest when applied to large-scale deployment.

The use of fully AI-based control systems raises a fundamental question for existing verification methods. These systems generate decisions based on continuous data processing without classical, traceable decision logic. Companies that choose such approaches are confronted with requirements to make these logics transparent for safety reasons, which will partly not be possible due to the situational use of AI. This raises fundamental questions about alternative verification methods and the possible recognition of AI-supported risk analyses.

These trends also highlight current challenges at the regulatory level. The developments described will significantly shape traffic automation in the coming years and call for farsighted decisions. Work on the strategic evolution of the legal framework is therefore ongoing.

The trend shows that end-to-end systems are becoming increasingly prevalent in automated mobility. For such approaches to be tested safely and deployed responsibly, a legal framework is needed that takes these developments into account. This will require new forms of safety evidence and evaluation methods.

‹ **Sarah Gross**
Expert Automated Mobility, AustriaTech

Croatia – New Legal Framework and Verne

Since January 2025, Croatia now has a comprehensive legal framework for automated vehicles. Several Croatian laws and regulations have been amended as part of a comprehensive legislative package designed to enable their use on public roads and for commercial passenger transport. The new legal framework covers all aspects of the development cycle, from prototype testing to commercial approval. The introduction of a new category of passenger transport with specific conditions for commercial automated services paves the way for commercialization for operators and creates more clarity for users and regulatory authorities.

Verne

Verne, a sister company of the Rimac Group, is a Croatian company developing an innovative ecosystem for urban autonomous mobility, consisting of three integrated pillars: a purpose-built robotaxi, a mobility service platform (MSP), and specialized infrastructure. In each city where Verne provides an on-demand service, a dedicated "Mothership" facility will also be deployed. This specialized infrastructure is where Verne vehicles are inspected, maintained, cleaned, and charged daily. This approach supports the company's core promise of consistently providing safe and clean vehicles to customers.

The Verne vehicle, engineered from the ground up as an autonomous vehicle, offers a passenger-first user experience, offering limousine-class comfort in a compact 2.6m wheelbase.
The mobility service platform, developed in-house, includes both the frontend application through which customers customize their ride, and the backend system that enables the autonomous fleet to be operated smoothly and efficiently.

Throughout 2025, Verne has intensified deployment activities across all three key elements of its ecosystem. Autonomous vehicles have been tested on public roads with a safety driver since June 2024, and a pilot service for employees — including testing user experience and integration with the MSP — has been running since January 2025. Verne will be adding additional vehicles to its pilot fleet over the coming months, with a view to launching a commercial robotaxi service with at least 30 vehicles in Zagreb during Q2 2026. This will be followed by deployment in additional EU and GCC (Gulf Cooperation Council) cities with whose local authorities non-binding agreements have been signed, and service development activities have been underway for several years.

Opportunities and challenges

Verne autonomous mobility services, and automated mobility in general, can contribute to safer roads, reduced congestion, and more efficient urban mobility. However, Verne recognizes that autonomous on-demand solutions are only one part of the equation towards a healthier modal split. This is why these vehicles offer an experience superior to that of premium private vehicles, but do not compete with ride-pooling and public transport options. Service development plans are developed hand-in-hand with local authorities, ensuring that deployment plans are tailored to the use-cases which best fit every city.

Named after Jules Verne, who used the theme of travel as the driving force in his storytelling, we are inspired to realize our vision of shared, electric and autonomous mobility. Our integrated approach allows us to provide a superior user experience, which inspires users to change their mobility habits away from private vehicles.

Lovro Nobilo ›
Government & Regulatory Affairs Manager, Verne / Project 3 Mobility d.o.o.

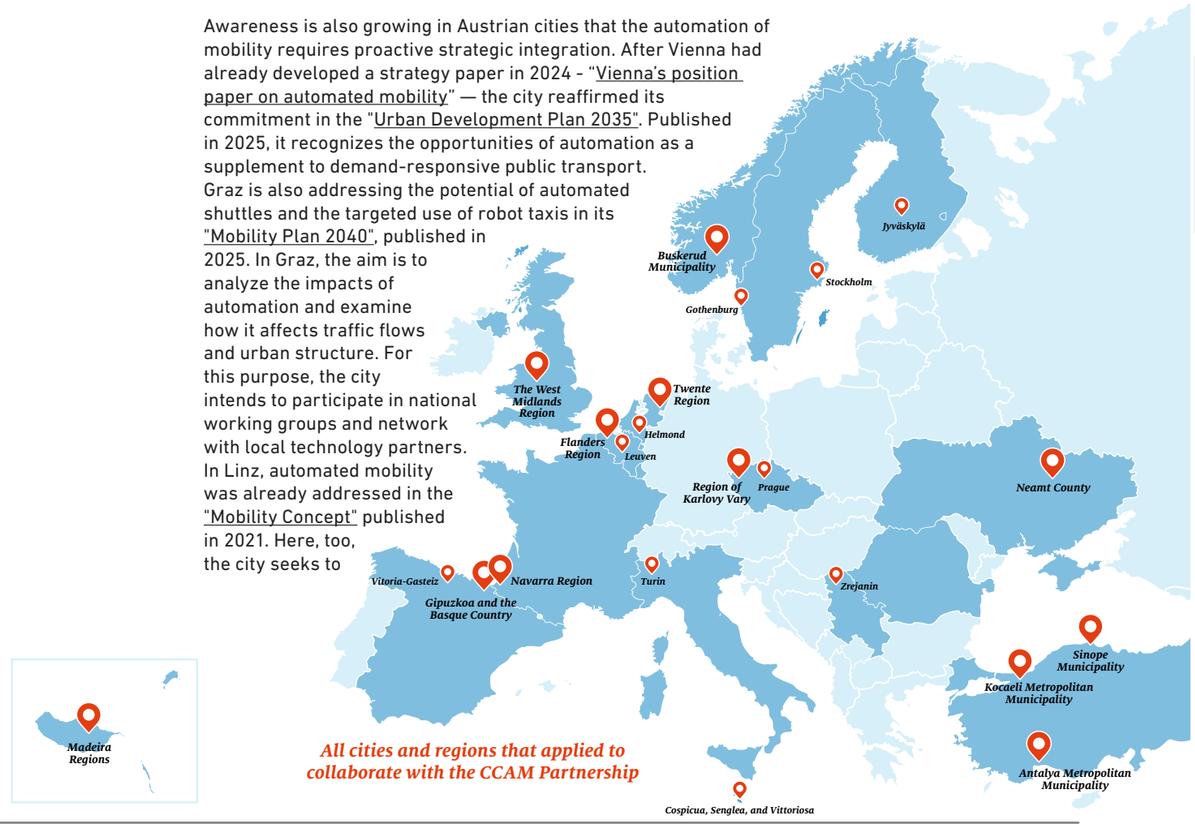
Automated Mobility in Cities: Activities in Austria and Europe

More than two thirds of the population in Austria live in metropolitan areas. For this reason, it is particularly important to make mobility in cities and their surrounding areas more sustainable and efficient. Automated mobility in particular offers extensive potential and can make a significant contribution to the environmental and climate policy objectives of cities. However, it is important that cities and regions undertake the necessary preparations in good time and create framework conditions to realize this potential. Ultimately, cities, regions, and municipalities are key actors for the implementation and scaling of automated vehicles. Consequently, in 2025 extensive activities were implemented at both European level and in Austria, in close cooperation with cities and regions, to advance automated mobility and the preparedness of cities and regions regarding automated mobility.

At European level, the "European Partnership on Connected, Cooperative and Automated Mobility" and the "CCAM Association" invited cities and regions in spring 2025 to participate in the strategic implementation of smart mobility. As of summer 2025, more than twenty European cities and regions have expressed their interest (see map). On the one hand, the aim is to understand how technical requirements can be adapted to local conditions. On the other hand, it is also about how cities and regions can put social and ecological impact assessments, governance, and public acceptance into practice.

Building on this, a workshop on the "CCAM Urban Deployment Roadmap" was held in Brussels in October 2025. This workshop took place in the context of the project "CCAMbassador", in which AustriaTech is also involved. The objective is to develop a realistic, strategic roadmap for CCAM projects in cities and regions, including the identification of key prerequisites and barriers that influence implementation. A second workshop on the "CCAM Urban Deployment Roadmap" was held in Utrecht in November 2025. Further workshops and the finalization of the roadmap are planned for 2026.

Awareness is also growing in Austrian cities that the automation of mobility requires proactive strategic integration. After Vienna had already developed a strategy paper in 2024 - "Vienna's position paper on automated mobility" — the city reaffirmed its commitment in the "Urban Development Plan 2035". Published in 2025, it recognizes the opportunities of automation as a supplement to demand-responsive public transport. Graz is also addressing the potential of automated shuttles and the targeted use of robot taxis in its "Mobility Plan 2040", published in 2025. In Graz, the aim is to analyze the impacts of automation and examine how it affects traffic flows and urban structure. For this purpose, the city intends to participate in national working groups and network with local technology partners. In Linz, automated mobility was already addressed in the "Mobility Concept" published in 2021. Here, too, the city seeks to actively shape the framework conditions for deploying new, digitalized mobility technologies. The plan is to offer public transport, automated vehicles, scooters, and other MaaS services from various providers as a combined, multimodal service on a shared information platform with a single billing system.



All cities and regions that applied to collaborate with the CCAM Partnership

To strengthen exchange between cities and relevant stakeholders in the field of automated mobility in Austria, an information webinar on automated mobility for cities, regions and municipalities in Austria was held in December. The webinar was organized by AustriaTech together with the Austrian Association of Cities and Towns (Österreichischer Städtebund). With contributions from AustriaTech, the BMIMI, and the Strategic Alliance for Automated Mobility in Austria, the webinar aimed to provide an overview of the status quo of developments and activities in automated mobility in Austria as well as at European and international level, and to outline potential courses of action for cities. Representatives from the City of Linz and the City of Hamburg also shared insights into their perspectives and activities related to automated mobility. The information webinar marked the starting point for further webinars on specific topics relevant to urban stakeholders in the field of automated mobility.

Image 1: First CCAM Urban Deployment Workshop on 08.10.2025 in Brussels © POLIS, Aloha Fred

AustriaTech also focuses particularly on the European dimension of urban CCAM projects. To strengthen this focus, a strategic partnership between AustriaTech and EIT Urban Mobility has been in place since July 2025, aimed at specifically advancing innovations for sustainable urban mobility. The goal is to intensify knowledge exchange, strengthen synergies within networks and involve stakeholders more effectively.

It will largely be decided in cities, whether the shift toward sustainable mobility succeeds. That is why it is especially important to bring as many urban centers on board as possible when it comes to testing and implementing automated driving, enabling them to actively shape the future of mobility.

Sebastian Raho ›
Expert Automated Mobility, AustriaTech

White Paper: „Next Stop: Autonomy – Seizing Europe's Public Transport Opportunity"

In a recent white paper, mobility experts from Germany, Austria, and Belgium examined the potential of automated public transport in Europe. One risk is clearly articulated: if Europe does not invest in these technologies, the gap to the United States and China will continue to widen, with negative implications for economic policy. This would also represent a missed opportunity to make mobility in Europe safer, more inclusive, and more sustainable.

The authors calculated three scenarios – optimistic, pessimistic and moderate adoption over the next two decades. They conclude that automated public transport offers great potential for an economically viable and scalable business model. In the optimistic scenario, two million autonomous shuttles and more than 300,000 buses would be operating across Europe; even in the pessimistic scenario, around half that number would still be deployed.

Automated buses can increase the efficiency of public transport, reach new user groups – for example in peripheral regions or among people with disabilities – and encourage greater use of public transport. This is particularly true for flexible on-demand services, which show the greatest growth potential. Automation can increase the performance of public transport while simultaneously reducing costs by compensating for the shortage of drivers in Europe.

Public transport offers a scalable business model for automation for several reasons: it is publicly funded, provides socially and environmentally sustainable mobility, enables the reallocation of road space away from private cars, and creates a continuous growth market for industry, as buses typically need to be replaced every 7–10 years.

This study emphasizes that the future of automation lies in providing sustainable, efficient, and inclusive mobility services. It is now up to policymakers, public transport operators, and industry to align strategies, develop common standards, and set the course for the next step in automated transport: the transition to regular operations.

The white paper on the potential of automated public transport is available for download at www.movingfutures.de.

Automated vehicles have the potential to safeguard essential public services across Austria. This allows us to guarantee affordable, safe, and reliable public transport — even in our country's more remote areas.

‹ **Lena Köninger**
Head of Automated Driving, Strategy and Corporate Development,
ÖBB Personenverkehr-AG

National Initiatives and Projects

2025 was a year of diverse activities aimed at advancing automated mobility in Austria. The Strategic Alliance for Automated Mobility in Austria (SAAM Austria) contributed to strengthening exchange between research, industry, public administration, and society, and to developing shared positions. At the same time, Austrian test environments continued to evolve: with new vehicles, expanded services and practice-oriented tests, they are creating important foundations for the transition from test operation to application. In addition, numerous national projects were launched or continued that are testing innovative solutions for passenger and freight mobility as well as for the deployment of automated technologies in urban and rural regions. Together, these initiatives demonstrate how Austria is consistently advancing the path from research to practical application.

SAAM Austria

The Strategic Alliance for Automated Mobility in Austria (SAAM Austria) is a national platform that connects key stakeholders from research, industry, public administration and society. Its goal is to comprehensively prepare Austria and Austrian stakeholders for various application fields of automated mobility, to build essential competencies, and thereby enable the deployment and scaling of solutions with strong Austrian value creation. To this end, SAAM Austria promotes structured exchange, initiates cooperative projects, and develops shared scenarios and roadmaps to strategically advance automated mobility. The platform provides orientation within the complex innovation landscape of automated mobility, strengthens existing competencies, and actively accompanies new developments.

Thematic working groups as the focal point

Since 2025, SAAM Austria has been coordinated by the Cooperative, Connected Automated Mobility Alliance Austria (ccam Austria) consortium, under the leadership of Doris Straub, Project Manager at the Automotive Cluster of the Upper Austrian Business Agency. Four thematic working groups—passenger mobility, freight mobility, work machinery, and technology—form the central instruments for the further development of SAAM Austria. In these groups, experts from different fields work together to address key questions of automated mobility in a targeted manner. They promote professional exchange, develop shared positions and identify concrete application examples (use cases). The focus is on developing practical solutions that make the potential of automated mobility tangible and usable.

Image 2: First SAAM Austria meeting, 25 March 2025, St. Valentin ©Digitrans GmbH

Position paper as the strategic foundation

In September 2025, SAAM Austria published the first version of a position paper developed by the consortium. It serves as the basis for further strategic work and contains concrete recommendations for implementing automated mobility in Austria. In the next step, the position paper will be further specified together with the members in order to comprehensively integrate their experiences, perspectives and interests – this process was initiated at the SAAM Austria meeting in November 2025.

SAAM Austria is coordinated by the project consortium ccam Austria: Automotive Cluster Upper Austria, ACstyria, AIT Austrian Institute of Technology, FH Upper Austria, Joanneum Research, Virtual Vehicle. In 2025, the consortium published a first version of the SAAM Austria Position Paper.

SAAM Austria meetings promote knowledge transfer

The three SAAM Austria meetings held in 2025 brought together representatives from research, industry and public administration and provided a structured framework for professional exchange. Practice-oriented presentations by experts, live demonstrations and discussions on current developments provided an opportunity to share knowledge, open up new perspectives, and strengthen cross-disciplinary cooperation. The events made a significant contribution to increasing the visibility of ongoing projects and deepening dialogue among the participating stakeholders.

International study trips as sources of inspiration

To promote international exchange, SAAM Austria organized three study trips in 2025. The aim was to gain insights into international best practices, ongoing pilot projects, and regulatory approaches in other countries. Study trips to Zurich, Berlin, and Roding included visits to test tracks for automated vehicles and provided direct exposure to innovative mobility solutions. These trips not only strengthened international knowledge transfer but also delivered concrete impulses for new approaches, technological developments, and cross-border cooperation.

The year 2025 was a momentum-building year for SAAM Austria: with four working groups, inspiring SAAM meetings featuring expert input, the publication of a position paper, and three study trips—including a significant exchange with SAAM Switzerland—we succeeded in connecting key stakeholders and opening up new perspectives for further development.

Doris Straub ›
Head of SAAM Austria

Outlook 2026: Deepening and further development

SAAM Austria will continue and intensify its activities: the working groups will further advance professional exchange and the development of practice-oriented solutions. SAAM meetings will continue to address current topics and trends, involve experts, and develop shared positions for Austria. Ongoing pilot projects will receive support and visibility in this context in order to exchange experiences, make use of expert input and create synergies. In addition, webinars will be designed to involve other stakeholders and stimulate public discussion on automated mobility.

For 2026, a revised version of the position paper is planned. Based on this, a roadmap with clear priorities and concrete measures for the coming years will be developed. As a strategic guide, it is intended to foster innovation in a targeted way and to facilitate the practical deployment of automated mobility.

Funding

ccam Austria is funded by the Federal Ministry for Innovation, Mobility and Infrastructure under the program „Mobilitätswende 2024/1 – Mobilitätstechnologie“.

News from Austria's Test Environments

Austria's test environments are a central driver for the practical testing of automated mobility. In 2025, they significantly expanded their activities: ALP.Lab presented a new test vehicle for highly automated driving with the City Bus TORUS and carried out extensive Euro NCAP tests for international manufacturers. In addition, the portfolio was expanded to include innovative smart monitoring services that enable detailed traffic analysis. Digitrans also set new priorities—ranging from testing under adverse weather conditions and developing a baseline procedure for safety assessment to supporting companies on their path toward automation.

ALP.Lab

Automated city bus TORUS in operation

Since 2025, ALP.Lab has been deploying the new test vehicle TORUS (automaTed Open electRic city bUS). The highly automated city bus is designed as a test carrier with open interfaces and currently features two operational automated driving systems (ADS):

- one system by BrightDrive with a focus on commercial deployment.
- another system by Virtual Vehicle, which is specifically designed for research projects through open interfaces.

Image 3: The highly automated city-bus TORUS ©ALP.Lab

TORUS has already been deployed in several customer projects, including a comprehensive demonstration for the Dubai World Challenge for Automated Driving as well as for various testing assignments. Public demonstrations, for example at MotionEXPO Graz, two SAAM Austria meetings, the testingEXPO in Stuttgart, a bus depot of a public transport operator, and the New Technologies Summit at Vienna Airport, showcased realistic deployment scenarios and increased the vehicle's visibility.

When the 6.9-meter-long TORUS drove in highly automated mode for the first time, it was a real goosebumps moment. With this newly available test vehicle for highly automated driving, automated mobility in the bus vehicle class becomes tangible. That moment and the projects that started immediately afterward have significantly changed my view of the possible pace of implementation and the opportunity that has now emerged for stakeholders in Austria.

Christoph Knauder
Managing Director, ALP.Lab GmbH

Euro NCAP tests for international OEMs

As an accredited Euro NCAP test laboratory, ALP.Lab carried out tests for five vehicle manufacturers in 2025. The tests contribute to improving safety-relevant driver assistance systems and provide reliable ratings for consumers. As test protocols continue to evolve, both requirements and the complexity of test scenarios are increasing. ALP.Lab is responsible for the continuous development and updating of the necessary test infrastructure, as well as for expanding testing capabilities through partnerships.

Expanded activities with the Smart Monitoring Services

In 2025, ALP.Lab deployed a new mobile traffic data collection system. The battery-powered system enables autonomous operation for up to seven days and, through the use of LiDAR sensors, allows not only traffic counts but also in-depth traffic analyses. These include the analysis of conflict situations at accident-prone locations, speed analyses of motorized and vulnerable road users, congestion analyses or analyses of lane-changing maneuvers. The result is an all-in-one system that enables traffic surveys and in-depth analyses while being operated in an energy-autonomous manner. This significantly expands the portfolio alongside permanently installed data collection systems used for long-term measurements in infrastructure.

Participation in research projects

In 2025, ALP.Lab was involved in numerous research projects, either joining consortia as an industry partner (SME) or providing its services as a third-party contributor. The topics include, for example, remote management systems for automated mobility solutions in public transport, as well as the further development and deployment of sensor technologies for new, cooperative infrastructure. Ongoing projects include auto.READY, C-ITS4U, Befahrbar, NoiseSphere, auto.GigaApp, and the EU project iDriving.

Digitrans

2025 was an exciting and intensive year for Digitrans, marked by technological advancement, successful test campaigns, and new collaborations.

Testing: further development and trust in technology

In the field of testing, it became clear that continuous efforts in innovation and further development are paying off. Thanks to the expertise built up over recent years in testing under adverse weather conditions, Digitrans was able to attract an increasing number of national and international customers who place their trust in Austrian test infrastructure and know-how. A particular milestone was the development of a basic procedure for the evaluation of highly automated vehicles that function as a so-called black box for users or vehicle testers. With the help of this procedure, it can be verified whether safe behavior of these vehicles is ensured and under which conditions real operation on public roads would be possible. The procedure forms the basis for objectively assessing safety levels of highly automated systems.

Image 4: Testing with the outdoor irrigation system in the Digitrans testcenter for automated driving in St. Valentin C Digitrans GmbH

Deployment: from vehicle to overall system

In the area of deployment, the focus has been broadened. Instead of looking exclusively at the vehicle itself, Digitrans now considers the entire operational environment and the associated processes. This is because automated transport means far more than a vehicle driving itself – aspects such as safety concepts for passengers, communication with infrastructure, and operational-organizational processes also play a decisive role. Together with initial customers, valuable practical experience was gained in 2025 and tests were carried out in which precisely these interfaces were at the center. Step by step, realistic scenarios are thus being created that pave the way for safe and efficient automated transport.

Support for companies on the path to automation

Digitrans places particular emphasis on actively supporting companies on their path toward automation. Digitrans supports them in analyzing existing processes, identifying potentials for driverless applications, and developing suitable measures for integration. The goal is to prepare companies for the future – ensuring that nothing stands in the way of introducing and successfully operating driverless solutions.

Through tests with a major American customer, we were able to experience first-hand how advanced the technology already is—it is no longer a question of if it will arrive, but when. These vehicles are ready for deployment.

Alexander Barth ›
CEO DigiTrans GmbH

Kick-off 2025: Overview of New Projects

In 2025, several new projects were launched to test and advance automated mobility in Austria. What these projects have in common is a focus on sensor technology as well as the localization and orientation of vehicles.

CCAM_ArtLand

Project duration: 01.02.2025 – 01.02.2027

The two-year research project “CCAM Artificial Landmarks” focuses on the industrial research and evaluation of a new concept for artificial—i.e. synthetic and previously non-existent—digital or physical landmarks for mobility services in the field of connected and automated driving. The emphasis is on sustainability and inclusion through the use of automated buses.

UMPAS

Implementation of automated vehicle control based on passive localizatio

Project duration: 01.01.2025 – 31.12.2026

The UMPAS project is developing an automated logistics truck for military use that relies exclusively on passive sensor technology and operates without GNSS infrastructure. The aim is to test the prototype on pre-trained off-road routes. This technology enables supply missions in hazardous areas and offers a high level of innovation through passive localization.

auto.GigaApp

5G teleoperation for efficient automated mobility

Project duration: 01.01.2025 – 01.12.2026

The auto.GigaApp project prepares the transition to automated driving by focusing on 5G-based teleoperation. Its goal is the remote operation of automated vehicles for passenger and small-goods transport. The project overcomes the technical limitations of LTE and develops intelligent systems that gradually take over vehicle control. This approach is used to evaluate sustainable use cases in terms of efficiency and societal acceptance, with the aim of enabling large-scale deployment.

GUARDIAN

Safety-GUaranteed Autonomous opeRation for machinery under DIverse Area coNditions

Project duration: 01.01.2025 – 30.06.2027

The GUARDIAN project enables the safe automation of heavy machinery such as cranes and forklifts in unstructured outdoor environments. It develops multimodal sensor fusion and fail-safe control systems to manage weather- and environment-related risks. In parallel, the project investigates how legal frameworks and standardized certification processes can be improved to ensure public acceptance of automated machinery.

BEFAHRBAR

Methodology for assessing potential deployment areas of autonomous vehicles with regard to safe and efficient drivability

Project duration: 01.06.2025 – 31.05.2028

The BEFAHRBAR project is developing an automated methodology for assessing routes for automated vehicles in public transport. A core element is the creation of a digital twin of the route, enabling robust route and risk assessment as well as the derivation of measures to ensure operational safety. The goal is to scale and simplify approval processes for the real-world deployment of automated mobility.

Project Highlights

The diversity of projects in 2025 demonstrates how broad the spectrum of automated mobility in Austria has become. From emission-free refrigerated logistics in the AURORA project and 5G-based remote supervision in auto.GigaApp to research on user acceptance within DAVeMoS, each initiative addresses key questions on the path toward regular operations. In addition, we highlight initiatives such as HAF-ALP-TOUR for alpine regions, RIAMO for rural on-demand services, and the activities of SURAAA, which further develop public transport through automated solutions.

AURORA

The AURORA project – Automated Refrigerated Zero Emission Logistics Operations – aims to develop a safe and robust concept for refrigerated logistics that combines zero-emission technologies with automated driving functions.

Arrival and setup of the vehicle

At the beginning of the year, the automated vehicle was delivered from China to the Digitrans test center for automated driving in St. Valentin, where it was initially set up and adapted to Austrian traffic regulations. The vehicle is an AI-based Level 4 vehicle. As the project focuses on zero-emission refrigerated logistics, the project partners integrated a zero-emission refrigeration unit into the vehicle.

Subsequently, the vehicle was tested in various scenarios. Tests were conducted with different dummy road users, such as cyclists and pedestrians of various body sizes, as well as under diverse environmental conditions. Scenarios were also tested using an outdoor rain simulation facility at varying levels of rainfall intensity. The results showed that obstacle and object detection works reliably, even under challenging weather conditions such as heavy rain. It also showed that the vehicle reliably maintains a constant distance from vehicles ahead, even during emergency braking.

Development of a safety concept

As part of the testing activities, a four-stage safety concept for automated operation was developed, as the vehicle does not provide space for a safety driver. The tests were carried out step by step, accompanied by continuous observation and evaluation of vehicle behavior in different situations.

Image 5: Automated vehicle from China, which was extensively tested as part of the AURORA project, with view of the loading compartments ©DigiTrans GmbH

In the first test phase, it was verified whether the vehicle could execute commands correctly and autonomously—initially without the presence of other road users. The scenarios were then gradually expanded: first to include road users who behaved in compliance with traffic rules, and in later phases also those who deliberately violated traffic regulations.

The safety concept plays a central role, as the vehicle must be treated by Digitrans as a so-called black box. Within the project, the focus was on driving performance; however, the AI's decision-making processes could not be fully traced in detail.

The safety concept is tailored to driverless operation and ensures safe and efficient vehicle operation through multiple stages. Starting with simple driving tasks, increasingly complex scenarios and environmental conditions are safely mastered step by step.

Nadine Bamminger ›
Test and Development Engineer, DigiTrans GmbH

Funding

Funded under the TECXPORT Bilateral Cooperation Call 2022, Austria Jiangsuu/China

auto.GigaApp

auto.GigaApp develops a digital white-label solution that enables the safe operation of automated vehicles. At its core is the ability to remotely monitor vehicles in real time via 5G and intervene when necessary. The project thus creates essential foundations for stable, transparent and traceable operational processes in Austria – while simultaneously addressing structural challenges such as the growing shortage of drivers in public transport.

The objective is an integrated architecture that bundles vehicle data, route information, safety logics and communication networks. By using 5G standalone technology – with stable upload rates, low latency and functions such as network slicing – the platform is intended to enable advanced remote supervision in the future. This creates a key operational approach for safely transitioning automated bus and shuttle fleets into future regular operations.

In 2025, the project team—led by SURAAA—developed the system architecture, requirements for technical supervision, and established a shared data model. Initial modules for live monitoring, event tracking, and fault analysis are scheduled for prototype implementation in 2026. In parallel, key requirements for secure remote management were defined, including stable data channels, event logging and defined response chains in the event of disruptions.

At pilot sites in Carinthia and Styria, the project team is analyzing communication quality, 5G coverage, and the infrastructural prerequisites for remote access. The results flow directly into the specification of the platform and show which technical infrastructure automated vehicles require for regular operation. Ongoing challenges include harmonizing different manufacturer technologies as well as meeting high requirements for IT security, data sovereignty, and consistent data quality.

The results achieved in 2025 confirm the feasibility of an Austria-wide platform for remote supervision. auto.GigaApp thus lays a central foundation for making automated bus and shuttle fleets safe, scalable, and professionally monitorable—thereby contributing to addressing the shortage of drivers. In 2026, prototype testing under real-world conditions and the preparation of initial pilot operations will follow.

auto.GigaApp combines technical expertise with real operational processes. With 5G-based remote supervision, we aim to enable the safe, efficient, and scalable operation of automated vehicles—while at the same time providing new answers to the shortage of drivers.

Petra Schoiswohl
Project Assistant auto.GigaApp, SURAAA

Funding

Project lead: SURAAA (pdcp GmbH). Partners: FREQUENTIS AG, Hutchison Drei Austria GmbH, AIT Austrian Institute of Technology GmbH, ALP.Lab GmbH and Tech Meets Legal GmbH auto.GigaApp is funded by the FFG under the program "Breitband Austria 2030, GigaApp, Breitband Austria 2030: GigaApp 2. Ausschreibung".

DAVeMoS

The BMIMI Endowed Chair DAVeMoS focuses on human-centred, holistic, interdisciplinary, and transdisciplinary analyses of the potential effects of automation and digitalization in transportation and their interactions with individuals, society, the economy, space, and the environment.

This year, DAVeMoS has focused its efforts on exploring the impacts of digitalisation, including the effects of shared mobility modes, on the broader transport system. This includes examining the role of shared mobility in advancing Vienna's sustainability goals through a backcasting method. The study explores the potential of new travel modes as a key solution for reducing car trips and achieving sustainable transport. Additionally, using agent-based simulation, we investigated the impacts of the spatial distribution of shared mobility stations on both service usage and financial viability.

During this year a PhD student co-supervised by DAVeMoS completed his doctoral thesis, which examines the roles of virtual reality and biometric data in understanding human decision-making processes. This includes how these factors may be applied to remote driving, a critical skill that will be necessary when autonomous vehicles operate in the public realm.

In his dissertation "Put your heart into it: What biometrics and behavior can teach us about road users", Robin Palmberg examines the role of virtual reality and biometric data in understanding human decision-making processes

Lastly, this year, together with colleagues from Germany, Sweden, and China, we published a scientific article that, using panel data, focuses on users with real-world riding experiences on automated buses operated in a mixed-traffic environment on public roads. Contributing to the longitudinal analysis of public acceptance of automated buses, we developed a novel conceptual model integrating the Service Quality model and the Technology Acceptance Model (TAM). A dynamic structural equation model was employed to explore changes in the criteria used by adopters and non-adopters in evaluating service adoption.

Despite being experienced drivers, our respondents exhibited a significant decline in driving performance in a remote driving setting. This is particularly concerning because the ability to control a vehicle remotely is crucial for managing conflicts and disrupted situations in autonomous transport systems.

Yusak Susilo
BMIMI Endowed Professor in Digitalisation and Automation in Transport and Mobility System, BOKU University

The scientific article "Temporal patterns of user acceptance and recommendation of automated buses" analyzes the driving experience in automated buses.

The findings indicate that comfort and convenience are the most significant determinants of satisfaction and the perception of usefulness, which, in turn, positively affect adoption intentions and encourage favourable word-of-mouth behaviour. It is expected that the provision of faster, safer, more comfortable, and more convenient riding experiences with automated buses will eventually increase their usage and improve word-of-mouth communication.

Funding

This research was funded by the DAVeMoS BMIMI Endowed Professorship in Digitalisation and Automation in Transport Systems.

HAF-ALP-TOUR

Self-driving cars have attracted media attention for over a decade. As a result of this media presence, a specific image of the technology has taken hold in the public mind: robotaxis in cities and perhaps automated trucks that operate without rest periods. But does this perception already exhaust the potential of automated mobility within Austria's transport system? Of course not. Only five percent of Austria's land area is classified as urban settlement. The rest of the country would therefore not be covered by the currently dominant vision of the future of automated mobility.

Project objectives

The HAF-ALP-TOUR project explores use cases for automated driving in alpine tourism regions, a spatial type that has been strongly underrepresented in previous research. The focus is on hybrid and automated fleets (HAF), which combine automated and conventional (non-automated) vehicles.

Forerunner region Montafon

The spatial focus of the project is the forerunner region Montafon (Vorarlberg). Alpine destinations such as the Montafon valley potentially offer good conditions for testing new forms of mobility. They have many years of experience in operating high-performance infrastructures (e.g. cable cars) and a high level of innovative capacity. Tourism generates dynamic demand, which favors adaptive systems such as HAF.

Activities and results to date

In March 2025, application scenarios for HAF in the Montafon were developed together with stakeholders from the forerunner region. The range of use cases spans from tourist mobility services ("activity shuttle", "guest shuttle") to additions for commuter and occupational traffic ("employee shuttle", "HAF and Ride") and improvements in public transport accessibility ("public transport services for dispersed settlements"). Supply trips in the event of natural disasters are also considered a possible deployment scenario for HAF – i.e. situations where there is danger to life and limb. The discussions were complemented with a more futuristic use case, referred to as the "cable car palette." In parallel, the data basis for a well-founded transport demand model was compiled. In order to be able to represent tourists' mobility behavior as accurately as possible, a large-scale survey was conducted in summer 2025. The survey will be repeated in the winter to provide a comprehensive picture of tourism mobility that also reflects seasonal differences. A stated choice experiment is planned for spring 2026 to examine the propensity of tourists and locals to switch from their habitual travel modes to HAF services. A central component of the project is the learning and exchange program "HAFXchange," which promotes knowledge transfer between regions in different federal states. Building on the experiences from Montafon, region-specific use cases, implementation concepts, and business models are being refined in four follower regions: Pongau, Gesäuse, Murau, and Hermagor.

Significance for Austria and the Alpine region

HAF could make an important contribution to the future of mobility in the Alpine region. They offer significant potential for flexible, efficient, and digitally connected mobility solutions that can respond to the specific requirements of alpine tourism areas. Such new services would benefit not only tourism, but also local residents and people working in the region. At the same time, HAF could open up new market opportunities for the Austrian mobility sector, positioning it as an innovation driver and a role model for other alpine regions.

Funding

The project is funded under the call „Mobilität 2023: Regionale Mobilitätslabore & Digitalisierung für Mobilitäts- und Logistikdienste" by the Federal Ministry for Innovation, Mobility and Infrastructure (BMIMI).

Image 6: Future vision for hybrid and automated fleets (HAF) in Montafon ©Mathias Mitteregger (MOURA)

RIAMO

Rural regions often have poor transport connections, meaning that residents do not have the opportunity to use public transport and repeatedly must rely on cars. The RIAMO project aims to address this challenge by implementing an efficient, automated on-demand shuttle service as part of a funded project. The goal is to provide residents in rural areas with better connections to higher-level public transport networks. In 2024, a first real-world pilot was successfully completed in Linz-Pichling.

Start of the second real-world pilot

The second real-world pilot started on April 1, 2025, in Südpark in Asten and St. Florian. The demo operation lasted around two months and was carried out with the fully automated test vehicle eVAN. Due to the current legal framework, a safety driver was seated behind the wheel. In addition, an automated charging solution was used within the project, enabling the vehicle to be charged without human assistance.

Findings from the test operation

During the pilot operations, surveys were conducted and data were collected and analyzed. A user survey revealed that comfort, time savings, and reliability are key reasons for using the on-demand shuttle, while many respondents also showed curiosity and openness toward new topics and services. In total, approximately 1,800 km were driven in autonomous mode. Challenges for automated operation included improperly parked vehicles and dynamically changing construction site environments. The evaluations show that utilization during peak hours was significantly higher than during off-peak times. This indicates that the on-demand shuttle represents a valuable complement to existing scheduled services, as it cannot cover high demand during peak times on its own.

Replication Roadmap

As part of the project, a Replication Roadmap is being developed and will be available at the end of the project. The roadmap is intended to serve as a practical guide for interested parties and to illustrate what automated regular operation could look like in the future. It explains topics such as the current legal framework for operating automated vehicles, route selection, and an overview of available vehicles. In addition, it includes an economic assessment and an outlook on a possible future regular operation.

Image 7: Digitrans eVAN test vehicle in its field of application in Asten/St. Florian as part of the RIAMO project ©DigiTrans GmbH

The insights and data gained from the test operations form the basis for developing the Replication Roadmap. Building on this, concrete content and analyses are derived for implementing pilot operations of automated mobility solutions through to regular operation.

Hannes Watzinger
Deployment Manager and Project Lead, DigiTrans GmbH

Funding

The project is funded by the Federal Ministry for Innovation, Mobility and Infrastructure under the "Regionen & Technologien Ausschreibung 2022".

Field Report

A Day with...

Automated mobility is not developed only in strategies and test laboratories—it also takes shape in everyday practice. With our field reports under the motto "A day with...", we provide a direct insight into the reality behind the projects: What does the installation of a LiDAR sensor for traffic analyses look like? What is it like to ride in shared automated vehicles in Norway? These reports show how technology, people and processes interact, making abstract concepts tangible. They illustrate how much practical work and detailed knowledge lie behind every new solution.

A Day with the ALP.Lab Traffic Monitoring Team

Article by Dominik Schallauer
Expert Automated Mobility, AustriaTech

In Hartberg, the first permanent counting station with LiDAR sensor technology in the state of Styria is being installed on the B50. I am on site and accompany the ALP.Lab team during preparation, installation, and setup of the sensor system.

A rainy start

It is a grey, rainy autumn day when I arrive in Hartberg to be present for the installation of the sensor system. For the data collection system itself, the weather is not a problem, explains Alexander Lebschy from ALP.Lab as he prepares the individual components for installation.

Lebschy and his colleagues have already deployed such LiDAR systems in a wide variety of traffic situations in Austria, ranging from mobile systems for conflict analyses to permanently installed setups such as the one here in Hartberg.

The installation in Hartberg is intended to record all road users in the intersection area in the long term: not only car drivers and cyclists, but also pedestrians using the underpass. In addition to high robustness against weather conditions and darkness, the use of a LiDAR sensor offers the advantage that the number and type of road users, as well as their positions and speeds, can be determined very precisely. Moreover, the system is privacy-compliant by design, as no personal image data are recorded. Instead, it captures only 3D point clouds, from which no identifiable features can be derived.

Preparation & installation

The team had already inspected the site in advance, carried out a layout plan and determined the best mounting point. From the selected position, all traffic flows can be captured simultaneously, including pedestrians in the underpass. The sensor's range is around 100 meters.

"During planning, we of course have to pay attention to clear lines of sight – for example, how vegetation and growth will develop in spring. That's why we mount the sensor here on a one-meter-long bracket. This way, we avoid interference from the tree and can see better into the underpass," explains Lebschy.

In addition to the sensor itself, the processing unit and an 80 Ah buffer battery are also mounted on the light pole. The additional weight poses no problem for the pole in Hartberg; if the structural load were too tight, the battery could also remain on the ground. The buffer battery is connected to the light pole's night-time power supply: it is charged at night and supplies the system during the day, which requires around 30 watts.

The sensor's raw data is processed by the environment perception software in such a way that external influences do not impair object detection.

Alexander Lebschy ›
Technical Project Lead, ALP.Lab GmbH

Setup & calibration

After the sensor, processing unit and buffer battery have been mounted and wired on the pole, Lebschy calls a colleague in the Graz office. This colleague accesses the system remotely and begins the calibration. Data transmission takes place via the LTE mobile network – a potential source of error, as Lebschy explains: "If the connection is lost at any point, we temporarily store the data in the cache of the processing system and transmit it as soon as the connection is restored."

The colleague in Graz can connect immediately and starts the coordinate transformation to convert the sensor's relative coordinate system into a global one. After around ten minutes of initial data collection, he displays the movement data of the road users and analyzes data quality in a GIS program in order to further optimize the sensor's field of view if necessary. The effort required for this varies from site to site.

Image 8: Wiring the lidar sensor ©AustriaTech/Schallauer

Image 9: The final sensor setup consisting of a lidar sensor, processing unit and battery © AustriaTech/Schallauer

Subsequently, static areas such as railings or reflective glass surfaces are masked in order to exclude them from detection. This saves computing power and makes the analysis more accurate. Later, only high-quality object lists are transmitted; the raw LiDAR data are usually too extensive, which is why their analysis is carried out directly in the processing unit.

After one to two hours, the system is ready for operation and records the movement data of road users with high precision. In the following days, data quality is checked on a sample basis. During ongoing operation, a quality assurance process continuously monitors data quality.

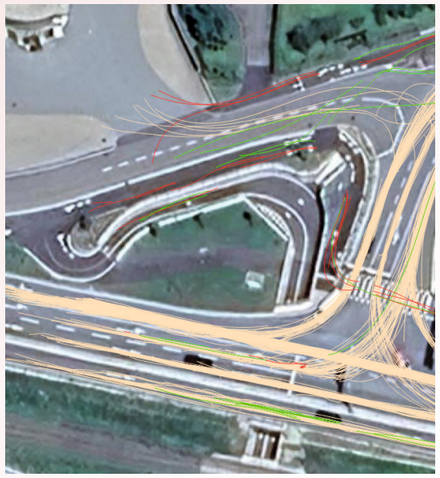


Image 10: 2D Depiction of traffic flows ©ALP.Lab

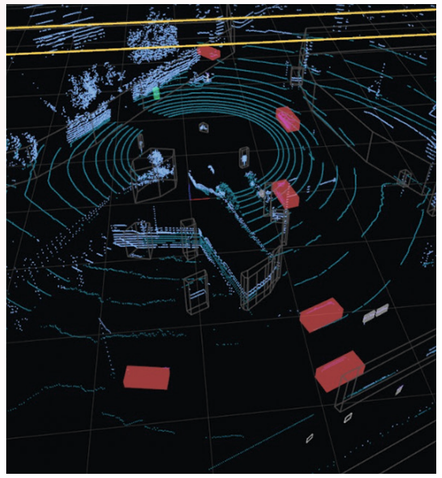


Image 11: 3D depiction of the lidar point cloud ©ALP.Lab

Ready for operation

With the setup complete, the new permanent counting station in Hartberg is ready for operation. Depending on customer requirements, ALP.Lab provides the evaluated data in dashboards or reports. In this case, the state of Styria receives cleaned raw data in the form of object lists, including object classification (e.g. passenger car, cyclist) and movement data.
“In the future, this kind of data could also be used for cooperative functions such as a digital traffic mirror,” says Lebschy. “The sensor detects that a pedestrian is crossing the crosswalk and can send this information via C-ITS message to other road users, such as a turning vehicle, even before the driver or the vehicle's sensors can see the person. This can significantly contribute to increasing road safety and avoiding critical situations in traffic.”

A Day with Shared Automated Vehicles in Norway

Article by Aggelos Soteropoulos
Expert Automated Mobility, AustriaTech

Together with more than 25 other experts from various European countries, I am traveling to Oslo and gaining insights into the local test operations of shared automated vehicles. The study trip is organized by EIT Urban Mobility and Espaces-Mobilités.

Arrival in Groruddalen

It is a typically cold Norwegian day in early April and the sky is grey as we arrive at Groruddalen station in the northeast of Oslo by suburban train. Here, the local Oslo public transport company Ruter is testing five automated vehicles in an area of around 22 km². Since the beginning of February 2025, anyone with the appropriate app can book and use the vehicles. The goal is to provide an on-demand transport service in the suburban area through shared automated vehicles as an alternative to private cars and, in particular, to improve first- and last-mile connections for residents and workers in the area to existing higher-level public transport stations such as railway stations. Through the pilot project and test operation, the shared automated vehicles are being tested in actual driving conditions and their integration into public transport is being evaluated.

Image 12: The shared automated vehicles' operating area in Groruddalen

In the Ruter bus depot directly next to the station in Groruddalen, which also houses the depot for the automated vehicles, we are welcomed by Liisa Andersson and Lars Gunnar Lundestad from Ruter and introduced to the test operation in Groruddalen, which is part of the ULTIMO project. The vehicles are provided by NIO, the ADS software comes from Mobileye, and the app— which we had already downloaded in advance — is developed by Moovit. The implementation of the test operation is carried out jointly with Holo.

Image 13: Garage for buses and shared automated vehicles ©AustriaTech/Soteropoulos

What surprised me most was how quickly people started using the service and how stable the technology has become. We see everything from first-time users to super users. This shows that automated vehicles can operate under everyday conditions in Norway, even when the weather is challenging.

‹ Johanne Dølvik
Project Manager, Radical Innovation, Ruter

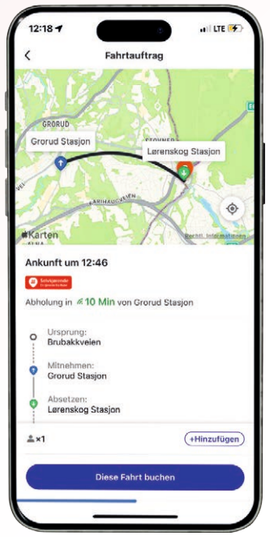


Image 14: Booking a shared automated vehicle in the app

In the app, we order one of the automated vehicles at the parking lot next to Groruddalen station – the destination is Lorenskog station in the northwest of Groruddalen. After entering the destination, we can complete the booking – during the test operation, there is no need to pay yet, as rides are free of charge. The handling of the app is relatively simple, and the waiting time varies depending on user demand.

After a few minutes, the vehicle approaches us – behind the wheel we see the safety driver who is still present during the test operation. We get in and the automated vehicle sets off. On Ruter's premises, the safety driver is still driving; then the ADS takes over, with the safety driver remaining behind the wheel, hands directly next to the steering wheel and ready to intervene at any time. We travel to Lorenskog station via roads with different speed limits, to which the automated vehicle adapts, as well as through intersections and roundabouts. At one of the two-lane roundabouts, the safety driver has to intervene; otherwise, the ride is relatively smooth. The display in the center shows passengers the current speed, the destination, and the estimated travel time to the destination.

Image 15: View of the display in the center of the vehicle
© AustriaTech/Soteropoulos

Overall, many aspects of operating the shared automated vehicle already seem quite advanced; however, in some respects it is still noticeable that this is a test operation, which is also about learning and further optimizing the ADS, the vehicle–user interaction and the user journey.

Impressions from the study trips of Austrian stakeholders

In addition to the study trip to Oslo and the visit to the test operation of shared automated vehicles, Austrian stakeholders were also able to familiarize themselves with the test operation of automated mobility in Stavanger in 2025. For example, representatives from Alp.Lab, AIT, Digitrans and FH Upper Austria visited the test operation of the E-Atak bus by Karsan and Adastec in Stavanger in May 2025. The approximately 8-meter-long bus has already been deployed in regular scheduled service on Route 19 in Stavanger since 2022, connecting the main railway station with the northeast of the city, operated by the local public transport provider Kolumbus. In this test operation as well, a safety driver is still on board the vehicles. Johannes Adensamer was part of the group in Oslo, Christoph Knauder in Stavanger:

In principle, it was impressive for me to ride in an automated vehicle for the first time. I found it particularly exciting how the vehicle handled (even if not immediately) the complex situation of a two-lane roundabout. In addition, it was interesting how innovatively and holistically Ruter approaches the topic of automated driving.

‹ Johannes Adensamer
Deputy Managing Director, Austrian Bus, Air and Water Transportation Association, Austrian Federal Economic Chamber

What surprised me was the depth of integration into the existing public transport system in Stavanger. The vehicle has been operating in automated mode for several years now (with a safety driver and remote management) as part of regular scheduled service. Continuous operation results in a very smooth ride and, consequently, strong user acceptance. The leading role of the transport operator and the successful partnerships also make me optimistic that such systems will soon be widely available internationally.

Christoph Knauder ›
Managing Director, ALP.Lab GmbH

International Activities and Projects

In 2025, the European Commission set new impulses to accelerate the transition from pilot operation to broad deployment. Complementing this, European research projects such as AITHENA (trustworthy AI), DiversifyCCAM (inclusive mobility), FAME (harmonized assessment methods), and iEXODDUS (expansion of the Operational Design Domain) show how technical innovation and governance go hand in hand. These activities illustrate that Austria is an active part of a European roadmap that paves the way for safe, scalable, and sustainable mobility.

In Focus: European Common Evaluation Methodology

The European Common Evaluation Methodology (EU-CEM) for CCAM was developed within the EU project FAME. The target audience consists of experts who plan and carry out evaluations for CCAM projects, as well as project coordinators and proposal evaluators. The methodology provides guidance for developing a feasible evaluation plan already in the project preparation phase. The aim is to ensure high-quality evaluations that contribute to decision-making and policy design in both the public and private sectors.

The EU-CEM Handbook provides guidelines and best practices for planning and conducting CCAM evaluations, in particular impact assessments. It can be applied to three types of activities:

- (1) Ex-ante impact assessments that support the preparation, introduction and adoption of CCAM or identify unintended impacts that may need to be mitigated,
- (2) Ex-post evaluations to assess the impacts of CCAM systems that have already been implemented, and
- (3) Design and deployment initiatives of CCAM systems with the aim of maximizing societal benefit.

The EU-CEM Handbook contains guidelines for three different phases of a project:

- the preparation of the proposal,
- the start-up phase and
- the final phase

The EU-CEM Handbook and further information are available for download on the CAD Knowledge Base.

Project work is a key driver of innovative progress. It is crucial that the (research) results are utilized in a meaningful way. The EU-CEM supports the entire process – from setting up a project to evaluating its results.

Jovana Karahasanović
Expert Automated Mobility, AustriaTech

The advantages of a common approach are:

- Research community nationally and internationally: improved comparability of projects and results; reduction of projects addressing the same research question, the same use case and the same approach (avoiding duplication of work)
- Projects nationally and internationally: lower barriers to participation in European consortia/ projects through prior application of the methodology at the national level; easier, more structured planning and implementation of evaluation through a standardized evaluation handbook
- Research funding body: better overview of how funding is being used and easier assessment of (less) meaningful investments; avoidance of funding projects with the same scope (no double investment of funding)

The methodology covers 18 evaluation areas:

Image 16: EU-CEM evaluation areas (Source: EU-project FAME)

As a further development, the EU-CEM is to be established in addition to its previous stronger focus on European projects. This process was initiated in the EU project CCAMbassador. In dialogue with the responsible national authorities, the project aims to identify the potential for establishing the methodology nationally and to determine which additional requirements need to be considered in an update of the EU-CEM.

European Turning Point: Scaling Automated Mobility

In 2025, the European Commission (EC) consolidated activities related to automated mobility. In addition to the programs of the Directorates-General (DG MOVE, DG GROW, DG RTD, DG CNECT), it set new industrial, research, and societal policy impulses. The goal: to bring automated driving from pilot projects into broad deployment – "scaling and deploying".

Industrial Action Plan

The EC published an action plan to strengthen the automotive industry and identifies automated mobility as a central focus. Priorities include, among others, safety and approval, cross-border testbeds, capacity building regarding software, as well as industrialization via an industry alliance and an Important Project of Common European Interest (IPCEI) in the field of automated and connected vehicles. The goal: to move more quickly from research and pilot projects into regular operation.

Industrial alliance for the sector

Based on the action plan, the European Connected and Automated Vehicle Alliance (ECAVA) was launched in 2025. It connects manufacturers, supplier companies, software companies, operators, cities and research with a focus on competitiveness. ECAVA prioritizes implementation projects, sets up working groups on safety, data spaces and interoperability, and thereby lays the groundwork for testbeds with shared operational and approval processes.

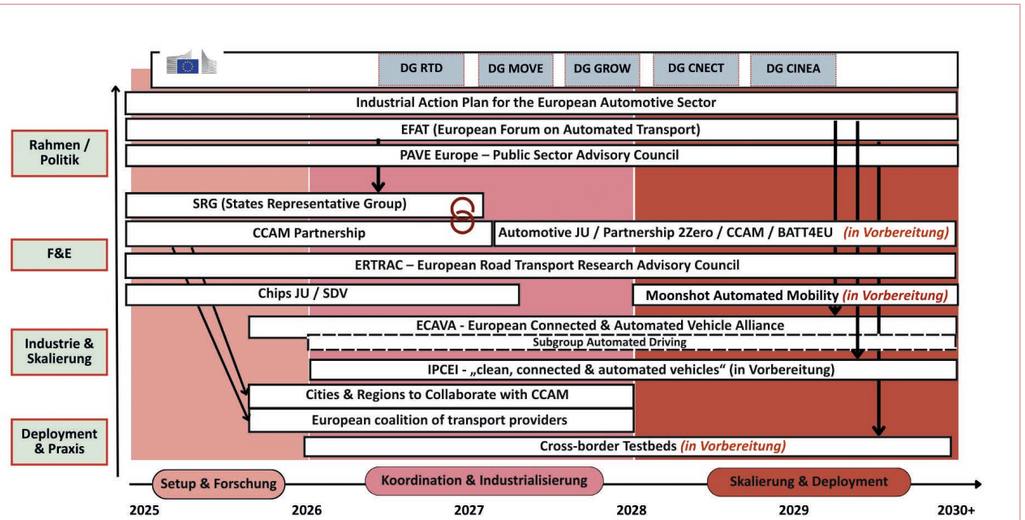


Image 17: Overview of the various initiatives and platforms at the European level © Michael Nikowitz – Own illustration

Cross-border testbeds – harmonization of legal frameworks around shared use cases

At the same time, preparations began for establishing cross-border test fields, with a clear objective: the transition from research into real-world deployment. Key focuse areas are safety validation, simplified access within the legal framework, regulated data sharing, as well as services for operators. Shared application scenarios, reporting formats and mutual recognition are intended to accelerate scaling and approval. This requires operators and cities as active partners – from planning through operation to evaluation.

Networking Cities and Operators

New platforms bring administrations, transport companies, infrastructure operators and technology providers together. They develop standardized operational requirements, define operational data needs for supervision and planning, and provide training for drivers, control centers and maintenance staff. In this way, cross-border, scalable models for shuttles, on-demand services and logistics are created. Practical operational requirements and real-world evidence feed directly into the design of IPCEIs and the CCAM successor framework—ensuring that research, standards, and funding are aligned with actual operations.

CCAM Partnership successor and IPCEI on CCAM in preparation

In 2025, groundwork was laid for coordination beyond the current CCAM Partnership. The European Commission, the CCAM Association, EGVIAfor2Zero (2Zero), and BATT4EU/BEPA signed a memorandum of understanding to align the planning of future RDI activities. The goal is a joint automotive partnership that bundles safety, decarbonization, battery value chain and digitalization. In addition, an IPCEI on clean, connected and automated vehicles is being prepared. The final design of both initiatives is still under development.

Relevance, objectives and open hurdles

The three levels interlock: R&D (CCAM, targeted funding lines) delivers evidence and technologies; industrialization (ECAVA, IPCEI) transfers them into products and supply chains; testbeds and operator networks enable scaling in operation and feed requirements back (see Figure 18). Impact arises when all levels are planned, financed and evaluated jointly. Expected outcomes are faster approvals, shared safety evidence, decreasing integration costs and viable business models.

What remains open across Europe are harmonized operating rules and market conditions, reliable start-up financing, cross-border and open data management, as well as education and training to build critical capacity. Also essential are the involvement of civil society and transparent impact evaluation. In parallel, PAVE Europe and the European Forum on Automated Transport (EFAT) address these gaps through dialogue, guidelines and the transfer of practical knowledge into regulation and operation.

Europe achieves collective impact when we agree on a roadmap from pilot projects to regular operations—with shared assets, mutually recognized approvals, and lean, joint governance. This is how speed, scale, and trust are created.

Michael Nikowitz ›
Coordinator Automated Driving, ST-IVS-DT, BMIMI

Significance for Austria: SAAM Austria

The complexity requires a synchronized approach by national actors. This is where the Strategic Alliance for Automated Mobility Austria (SAAM Austria) comes in: it bundles research, industry, operators and authorities, sets priorities and enables co-design. Together with AustriaTech and BMIMI, Austrian players within SAAM Austria can optimally contribute to European processes, set requirements and carry forward results from ECAVA, IPCEI as well as cross-border testbeds towards scaling and deployment. However, the diversity of initiatives also requires clear prioritization of where Austria wishes to be more strongly involved and thus where focal points are set.

Learning from Japan: Automation as a Strategic Necessity

Article by Martin Russ
Managing Director AustriaTech

From 10.–14. November 2025, the Mobility Innovation Week Japan took place for the third time. As part of the 2-day conference and accompanying workshops, as well as practical tests in pilot regions, participants were able to gain a comprehensive insight into Japan's strategies and key actions in the field of automated mobility.

One thing upfront: What Japan is achieving in the strategic embedding of automated mobility is exemplary at an international level. What Europe can learn from this is to orient its own strengths – for example in automated public transport or in the C-ITS field – toward long-term strategic goals and to pursue them consistently.

Societal objectives as a central driver of automation

What is particularly striking is the clarity with which the implementation of CCAM in Japan is linked to demographic crises: the rapid ageing of the population and the drastic depopulation associated with it, not only of rural areas but also of small and medium-sized cities. The consequence: more and more people in Japan are restricted in their mobility. This is because neither can conventional public transport be operated efficiently in a numerically shrinking population, nor can the mobility needs of an ageing society be fully covered by private cars and active mobility. There is an awareness that the necessary changes require a fundamental technological, but also social, system transformation.

Image 18: Population development in Japan

Social System instead of pure technology

Essential to Japan's success is its understanding of technology: technical solutions must be integrated into social systems and developed and strategically advanced as such. Technology goes hand in hand with community building, with both national government and regions actively driving social reforms and societal readiness for new solutions. The emerging Japan Mobility Data Space provides a shared data foundation and promotes technologies that enable evidence-based investment decisions and regulatory change – aimed at making regions and cities more sustainable and livable.

Mobility Innovation Alliance Japan

Automation in mobility is anchored as a strategic objective in several ministries and was advanced in the past as a Cross-ministerial Strategic Innovation Promotion Program. After an initial implementation phase strongly coordinated by ministries with the involvement of industry, coordination is now carried out via the Mobility Innovation Alliance Japan, which also has a strong international focus. The alliance is coordinated by the University of Tokyo – a clear statement toward openness and comprehensive capacity building, which universities drive forward not only through research but also through new teaching content. During Mobility Innovation Week, solutions, projects, researchers and companies from abroad are invited to Japan, domestic competencies are made internationally visible, and new partnerships with global actors are formed.

Technological sovereignty through investment

Investments in successful technologies play a key role in Japan's automation efforts, as does the idea of gradual technological sovereignty. While Japan still sees itself at the beginning of a learning process, it aims to gradually build up its own capabilities, which ultimately allows its own ideas to be translated into products and systems and strengthens technological independence. This is not achieved through isolation, but through international exchange and targeted investments based on the national priorities mentioned above. For CCAM, this specifically means that the current focus is increasingly on Level 2, and only then, based on the operating experience gained, further development toward Level 4. Japan plans a successive scaling from around 50 test sites currently to 100 sites by 2027, with the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) targeting 10,000 vehicles in operational use by 2030. With regard to the ADS system (driving stack), there is a strong emphasis on open source (including Autoware for buses/shuttles), thus focusing on an important key competence. Universities play a central role in gradual capacity building by using knowledge gained in projects to educate the next generation – which in turn is an advantage of anchoring the alliance at universities.

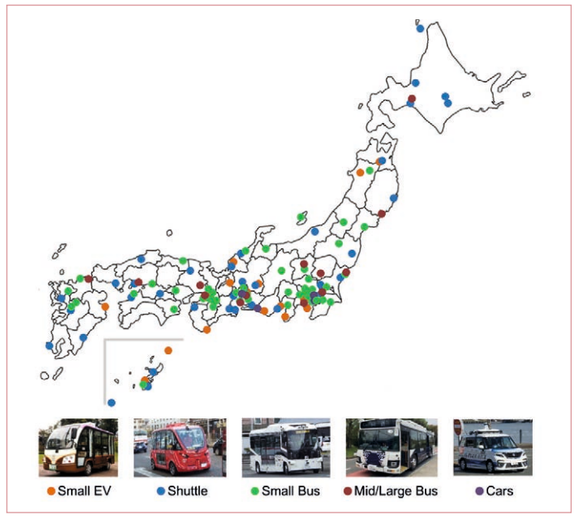


Image 19: Variety of projects in Japan

Financing models and affordability

In general, public transport in Japan is largely no longer cost-covering, and the situation will be further exacerbated by demographic developments. For example, 94 percent of bus operators in Japan operate at a deficit. At the same time, there is already a severe shortage of bus drivers today. There is consensus that automation should also be used to develop new, viable financing models. This is because the public sector cannot shoulder the financing of automated buses and shuttles alone, at least for the time being. There is a targeted search for

new financing avenues, for example in tourism and through employers. In addition, Japan deliberately invites international players (e.g. Waymo and Wayve) to engage in industrial cooperation with local actors (e.g. Waymo's cooperation with Tokyo's largest taxi operator, GO Taxi). The primary objective is not immediate business model creation, but rather technology transfer to remain competitive in the medium to long term.

Conclusion: Japan as a Harbinger and Wake-Up Call

Japan today—regarding its population trends and spatial structure—finds itself at a point that Europe and Austria will reach in fifteen years, or have already partly reached: regional outmigration in rural areas combined with strong growth dynamics in metropolitan regions; threatened financing of public transport; intense international competitive pressure on key industries alongside a shortage of skilled labor, and more. A way forward lies in a strategic approach that consistently treats automation as a means to an end—using it deliberately to address these profound crises and major challenges.

Interview Mobility Innovation Alliance Japan

The Mobility Innovation Alliance Japan represents a new governance model, with a university leading the coordination rather than a public administrative body. What are the benefits of this model?

The Mobility Innovation Alliance Japan was established with the aim of becoming a member-led organization that launches innovative mobility-related technology development and social implementation and addressing towards co-creating life-centric mobility in future. One of the strengths of academia is the ability to address issues with open-minded creativity and critical thinking. By leveraging the advantages of an academia-centered organization – where institutional knowledge and experience can be continuously accumulated, enabling long-term and sustainable activities – we bring together expertise from diverse research fields to address various social challenges related to mobility. And we aim to realize a future mobility society that is sustainable and well-harmonized by utilizing global insights.

Your primary focus is clearly on addressing the demographic crisis and making mobility more accessible. How is the Alliance exploring new financing models to make this affordable?

Japan is facing a serious situation in maintaining public transportation due to labor shortages caused by a declining population. Although we do not yet have a clear solution, some municipalities – such as Fukaya City and Shiojiri City, which we visited during Mobility Innovation Week Japan 2025 – are undertaking various forward-looking initiatives to realize future sustainable mobility by utilizing automated mobility. By learning from these efforts, we hope to develop a model case that is financially sustainable and create initiatives that can be shared from Japan with the world.

The Mobility Innovation Alliance Japan is working toward the realization of automated mobility with the relevant government ministries and agencies, contributing to the achievement of the national goals.

Manabu Umeda
Project Researcher, University of Tokyo

Project-Highlights

European research projects are significantly advancing the development of automated mobility. In this chapter, we present initiatives that address key challenges: from trustworthy AI in the AITHENA project, to inclusive mobility in DiversifyCCAM and harmonized evaluation methods within the framework of FAME. In addition, we highlight projects such as MetaCCAZE and TRACE, which are developing new approaches to safety, scaling and sustainable logistics.

AITHENA

Why trustworthy AI matters

Artificial intelligence (AI) is driving progress in Connected, Cooperative and Automated Mobility (CCAM), yet its adoption depends on public trust. It is essential to ensure that AI systems are safe, explainable and ethically aligned for large-scale deployment. The AITHENA project addresses this challenge by developing practical methodologies, frameworks and technical tools for trustworthy AI in automated mobility.

What AITHENA achieved

AITHENA delivered a comprehensive set of results connecting technical robustness, ethical governance and transparency. These include:

- (1) Trustworthiness Assurance Assessment for High-Risk AI Systems, which defines how developers and assessors can verify compliance with EU AI Act requirements;
- (2) Robust AI perception algorithms for multi-sensor fusion and adverse weather conditions were developed to improve the reliability of vehicle environment understanding;
- (3) A generative AI-based privacy masking solution that was showcased live at EUCAD2025. It demonstrates the real-time anonymisation of sensitive video data without degrading perception performance.

Methodology and frameworks

AITHENA has developed a bespoke ethical, human-centric evaluation framework for CCAM. This framework operationalises key principles such as fairness, accountability, privacy and transparency. It provides engineers, regulators and decision-makers with a practical checklist and assessment process. This methodology bridges the gap between abstract ethical guidelines and real development workflows, ensuring both societal acceptance and legal compliance.

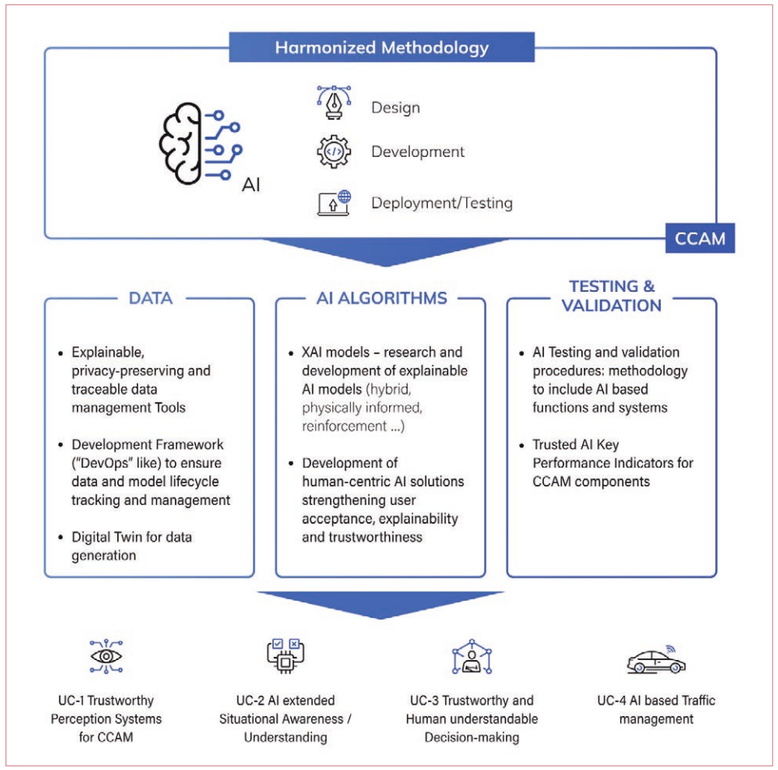


Image 20: AITHENA project methodology ©AITHENA Project

Data and Model Cards

Transparency is reinforced through Data and Model Cards, which are structured documents describing the datasets and AI models used in CCAM applications. They disclose information about the origin, curation, intended use, limitations and performance metrics of the data. These cards align with the Assessment List for Trustworthy AI (ALTAI) and the technical documentation requirements of the AI Act. They improve explainability for developers and auditors alike, thereby enhancing accountability and governance, and supporting regulatory compliance.

Impact and outlook

By combining technical innovation with ethical rigour, AITHENA enhances Europe's ability to develop reliable, human-centred AI solutions for the transport sector. The project has demonstrated that synthetic data, transparent documentation and ethical assurance can accelerate the validation of automated driving functions. However, remaining barriers include harmonised assessment procedures and industrial uptake.

Conclusion

AITHENA shows that trustworthy AI is both necessary and possible. Its methodologies, perception tools and transparency mechanisms provide a blueprint for responsible automation and support the development of safer, more reliable and more widely accepted mobility systems across Europe.

Coordinator of the AITHENA project:
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Director of Transport & Security Division, VICOMTECH
ootaegui@vicomtech.org

Funded by
the European Union

Diversify-CCAM

Diversify-CCAM sees great potential in cooperative, connected and automated mobility solutions (CCAM) for mobility systems in the EU. At the same time, the project points out that broad deployment has so far been hindered by low societal demand and limited integration into existing systems. In addition, the potential benefits have not been sufficiently communicated to all user groups.

The project addresses this challenge by developing methods and tools that support developers, transport planners, and policymakers in designing future mobility systems that meet the needs of all population groups in Europe.

In 2025, a wide range of activities took place in twelve European pilot regions, contributing significantly to the promotion of inclusive and equitable CCAM.

European Baseline Mobility Survey Launched

In early 2025, Diversify-CCAM launched its Baseline Mobility Survey to collect, understand, and analyse the transport needs of user groups across Europe. The outreach phase of this activity was hugely successful, with over 6000 individuals reached across a diverse range of citizens, marking one of the project's most extensive engagement activities to date. The ongoing data analysis will help to reveal how diversity aspects shape everyday mobility and attitudes towards CCAM solutions.

Stakeholder and End-user Workshops Held to Validate Data

Following the completion of data collection, partners embarked on an extensive data validation phase through the organisation and moderation of local workshops to collect further insights from stakeholders and transport users. As well as validating survey findings, these sessions allowed communities to discuss and share mobility priorities, ensuring that all end-user groups have a say in shaping future transport systems. As the project advances, continued collaboration with local stakeholders will remain essential to ensure that CCAM technologies evolve in ways that are inclusive, sustainable, and capable of delivering genuine value to all users.

Image 21: Meeting of Diversify-CCAM partners in Monheim am Rhein, June 2025 ©Diversify-CCAM

Establishment of the Stakeholder Advisory Board

The project's Stakeholder Advisory Board has been established during the last year, holding meetings in Brussels and Rhodes. Chaired by Prof William Riggs from the University of San Francisco, the board includes representatives from Japan, industry experts, academic partners and pilot site representatives. The board examines best practices for equitable CCAM design and strengthens international collaboration.

The latest news and insights can be found on the Diversify-CCAM LinkedIn page.

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FAME

The European research project FAME – Framework for coordination of Automated Mobility in Europe – was successfully completed in June 2025. FAME pursued the objective of developing harmonized structures, evaluation methods and digital tools to support authorities, research institutions and industry across Europe in the testing and assessment of connected, cooperative and automated mobility (CCAM). The project results create the basis for coordinated further development of CCAM and are already feeding into follow-up projects, European policy processes and national implementations.

Key project results
Based on the analysis of the legal, administrative, ethical and technical framework conditions for testing automated vehicles on roads with public traffic in Europe (see the 2023 edition of the Monitoring Report Automated Mobility in Austria, pp. 46–48), the consortium developed policy recommendations for the harmonized design of future legal frameworks – in particular for test drives with automated vehicles in public space. These recommendations serve as guidance. They offer a comprehensive yet flexible approach to supporting national and local authorities, technical services, OEMs and R&D centers in managing and assessing test applications.

Two policy briefs developed within the project provide a further look at current legal developments in the CCAM field. One policy brief addresses how CCAM can contribute to achieving climate neutrality in the EU by 2050. The second policy brief examines the empowerment of cities for the deployment of CCAM.

Another central project result is the EU-CEM Handbook, which provides standardized evaluation approaches for CCAM. This methodology allows direct and indirect effects of automated mobility to be captured in a transparent and comparable manner.

In addition, the Taxonomy Tool established a unified, openly accessible vocabulary comprising more than 400 terms, facilitating communication and documentation of CCAM initiatives across national borders.

The project also delivered a first prototype of a CCAM Test Data Space, designed to enable secure and trustworthy data sharing among different stakeholders—an essential enabler for the future scalability of pilot projects and use cases.

The project results of FAME are available in the EU CAD Knowledge Base.

Next step: implementation and further development in the follow-up project CCAMbassador

Image 22: CCAMbassador kickoff meeting in july 2025 ©CCAMbassador

As a follow-up project, CCAMbassador builds directly on FAME and pursues the goal of further advancing the practical use of the project results. This includes, among other things, making the policy recommendations from FAME applicable at national level, adapting the EU-CEM Handbook to specific national requirements, and strengthening knowledge transfer within the CCAM community. In CCAMbassador, the focus is on regular operation of automated mobility.

Funded by
the European Union

MetaCCAZE

The metaCCAZE project, cofunded by the European Union, aims to revolutionize mobility in European cities, serving both passengers and freight, with innovative electric, automated, and connected solutions designed to make transport smarter, net zero, and more efficient for all. In four trailblazer cities (Amsterdam, Munich, Limassol, Tampere) metaCCAZE tests and demonstrates cutting-edge technologies that support shared zero-emission mobility solutions for people and goods, contributing to climate neutrality. Successful technologies and activities will be shared and implemented in six follower cities (Athens, Krakow, Gozo, Milan, Miskolc, and Poissy, Yvelines).

Remote operation of autonomous buses in Tampere

In Tampere, Finland, the startup REMOTED is pioneering remote operation technology, moving safety operators from inside autonomous vehicles to a remote control center. Operators can now oversee multiple AI-driven vehicles simultaneously, improving efficiency and reducing operational costs. The first automated route in Tampere was launched in November 2025, using an OHMIO LIFT vehicle equipped with upgraded LiDAR and camera systems. The bus is classified as M2 with a 12-seat configuration. This deployment is the first fully commercial automated route in Finland.

Image 23: The OHMIO LIFT vehicle with upgraded LiDAR and camera systems is being prepared for the operations at Remoted depot in Tampere. ©REMOTED / Tatu Nieminen

Image 24: Modular NEXT Pod ©MetaCCAZE

Advanced driver assistance in Milan

In Milan, Italy, an on-demand service with "on board-interchange" called FRIMBO, will be launched. For this service, NEXT is developing an Advanced Driver Assistance System (ADAS) for modular pods. This system enables vehicles to perform key functions such as parking, docking, and navigation using AI and sensor data. By 2025, the ADAS model has been successfully tested in a controlled environment, bringing the project closer to real-world deployment.

On-demand automated e-buses in Gozo and Malta

In Gozo and Malta, partners are consolidating an on-demand automated e-bus service across two routes: one in Malta and one in Gozo. The 2025 activities focus on testing the service concept and refining operational processes to ensure reliable automated mobility for passengers.

Looking ahead

The 2025 activities across cities show the promise of automated, connected, and electric mobility to cut emissions, boost efficiency and enhance urban transport safety. Key insights include the feasibility of remote operation, the value of AI-driven optimisation, and the operational hurdles that must be resolved before scaling services. These solutions will guide further deployment in 2026

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TRACE

In the Horizon project TRACE, a platform is being programmed that bundles existing data sources (e.g. data from logistics companies on transport mode availability and suitability, road maps, goods information, traffic data, etc.) in order to make logistics processes more efficient with the help of automated delivery vehicles. Based on the available information, decisions are made on which mode of transport to use and the optimal route for each delivery.

Pilot projects in public road space

In 2025, the functionality of the TRACE platform was tested through the simulation of deliveries with automated vehicles in road space: simulations with automated delivery robots took place in the BTC area in Ljubljana and at the NKUA university campus in Athens. In Modena, Italy, a test with cargo-bike platooning is planned. In addition to the TRACE platform, preparation of the test cases was an essential step: this included obtaining the necessary approvals from local institutions, conducting public outreach to inform passers-by, and taking data protection into account.

Image 25: Testing of the TRACE platform in the BTC Area in Ljubljana ©TRACE

Routing: Which route leads to the destination?

A central component for route assignment within the TRACE platform is the evaluation of individual streets in the reference area regarding their drivability (is the sidewalk wide enough?) and their compatibility (how high is the existing pedestrian density? And how high is the additional disturbance factor caused by automated vehicles?). This street evaluation, called the Suitability Framework, ensures that social compatibility is not lost from sight when introducing technological innovations and that no displacement effects arise.

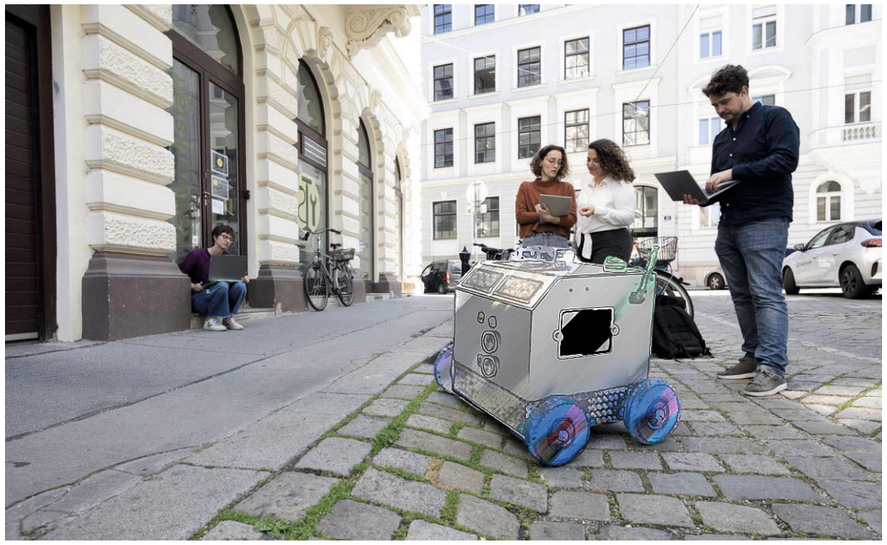

Image 26: TRACE also develops a framework for assessing roads for the deployment of automated delivery vehicles ©Patricia Bermudez

Barriers & conclusion

The TRACE platform demonstrates the potential of bundling infrastructures. At the same time, it is important to conduct context-specific problem analyses in order to develop suitable solutions: a report published by the OECD points out that automated vehicles are not the appropriate answer to all challenges in urban freight logistics. The assessment of road infrastructure for the use of automated vehicles also creates a valuable factual basis in the discussion on the potentials and limits of their possible applications. While drivability can be assessed according to objective criteria, evaluating compatibility with pedestrians and other uses of street space remains challenging.

Co-funded by
the European Union

Apart from road safety considerations, automated delivery vehicles should only be deployed in areas where they can deliver clear benefits. Acceptance by the people affected and enabling communication between vehicles and humans are also critical.

Magdalena Bürbaumer ›
Project Assistant, Research Unit Transportation System Planning, TU Wien

Summary and Outlook

The 2025 monitoring report shows how broad the spectrum of developments in the field of automated mobility is. The Contact Point Automated Mobility supported Austrian test projects, while national initiatives such as SAAM Austria fostered exchange between industry, research, and public administration and laid the groundwork for future measures through the development of a first position paper.

The Austrian test environments ALP.Lab and Digitrans expanded their activities: new test vehicles such as the city bus TORUS, Euro NCAP tests for international OEMs, Smart Monitoring Services and procedures for the safety assessment of highly automated vehicles. In addition, projects such as AURORA (zero-emission refrigerated logistics), auto.GigaApp (5G-based remote supervision) and RIAMO (on-demand shuttle for rural regions) were launched, testing concrete solutions for the deployment of automated mobility.

Internationally, the EUCAD conference provided important impulses for European exchange, while research projects such as FAME (harmonized evaluation methods), AITHENA (trustworthy AI) and DiversifyCCAM (inclusive mobility) addressed key future topics. Technological trends such as end-to-end AI, large-scale test areas and the integration of automated solutions into public transport are shaping the debate alongside questions of acceptance and governance.

Looking ahead, it is clear that the coming years will be decisive in translating these insights into regular operations and establishing automated mobility as a core component of a sustainable transport system. This requires coordinated strategies, clear governance, and the courage to implement new solutions.

AustriaTech publishes this monitoring report annually to provide an overview of current developments in the field of automated mobility, covering activities, projects, and initiatives in Austria as well as internationally. For questions, suggestions and professional exchange, the experts of the Automated Mobility Team are happy to assist: automatedmobility@austriatech.at

List of Abbreviations & Image Credits

ADS	Automated Driving System
AI	Artificial Intelligence
AIT	Austrian Institute of Technology
AV	Automated Vehicles
BATT4EU	European Partnership for a European Industrial Battery Value Chain
BMIMI	Bundesministerium für Innovation, Mobilität und Infrastruktur, in Eng.: Federal Ministry for Innovation, Mobility and Infrastructure
C-ITS	Cooperative Intelligent Transport Systems
CCAM	Connected, Cooperative & Automated Mobility
EC	European Commission
ECAVA	European Connected and Automated Vehicle Alliance
EFAT	European Forum on Automated Transport
EU	European Union
EU-CEM	European Common Evaluation Methodology
FFG	Österreichische Forschungsförderungsgesellschaft, in Eng.: Austrian Research Promotion Agency
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HD Map	High-Definition Map
IPCEI	Important Project of Common European Interest
LTE	Long Term Evolution (mobile network standard)
MaaS	Mobility as a Service
MSP	Mobility Service Platform
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
SDV	Software-Defined Vehicle
SME	Small and Medium-sized Enterprise
PAVE	Partners for Automated Vehicle Education
TAM	Technology Acceptance Model
WKO	Wirtschaftskammer Österreich, in Eng.: Austrian Federal Economic Chamber

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