



Welcome to the Second SCALE Project Newsletter

We are pleased to share with you the second annual newsletter of the SCALE project, co-funded by the European Union. Two years of progress towards safer, smarter and more connected mobility across Europe.

During its second year, SCALE has moved decisively from technical specifications and system design towards deployment, integration and testing across its Pilot and Operation Sites in France, Italy, Spain and Austria.

From new C-ITS use cases and the installation of roadside and on-board equipment to European harmonisation activities and preparations for cross-national testing, this edition shows how SCALE partners are turning shared plans and specifications into connected mobility services ready for real-world operation.

Read on to discover the progress achieved across the four countries as SCALE continues to strengthen cooperation and interoperability, paving the way for safer, more efficient, sustainable and connected mobility across Europe.

SCALE aims to accelerate the transition to a new generation of intelligent mobility services by promoting the adoption of innovative and interoperable solutions that can be replicated on a global scale. By bringing together road network operators, industrial partners and universities, the project will realise practical cases, technology tools and impact analyses to foster a wider industrialisation of C-ITS technologies.

This ambitious work will contribute to the European strategy for sustainable and intelligent mobility, also supporting the European Green Deal, the Vision Zero strategy for road safety and several United Nations Sustainable Development Goals. SCALE represents a crucial step towards a future where roads are safer, more efficient and environmentally friendly.



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FRANCE

As part of Work Package 2, the first set of specifications is currently being developed, incorporating 37 new use cases, the new On-Board Units (OBUs), and their integration into the equipment. At the same time, the validation guide has been finalized, enabling pilot sites to begin drafting new test plans in preparation for the validation of the new use cases.

Evaluators are focusing on validating the methodologies selected for the various assessments. Whenever possible, the studies will be conducted in real-world settings. In cases where this is not possible, simulations that closely resemble the real-world environment will be recreated. On June 16, an internal meeting was held to present these methodologies to SCALE partners, along with the data needed to implement them as realistically as possible.

On the **North-West Pilot and Operational Site**, most of the new use cases relate to emergency vehicles ("emergency vehicle approaching", "traffic signal priority request by emergency vehicles" ...) whose technical specifications are being finalized. In addition, the technical specifications for the OBUs for law enforcement authorities have also been drafted.

At the same time, impact assessments have been launched to evaluate the influence of C-ITS on coordination between the various stakeholders (law enforcement agencies, fire and rescue services and road management services of the Côtes d'Armor County, DIR Ouest) during a response to a road incident. This organizational evaluation is being conducted by Gustave Eiffel University under the coordination of the DIR Ouest.

The **Centre-East Pilot and Operational Site** is leading work on connectivity for Connected and Automated Vehicles (CAV) and on ways to expand CAV's Operational Design Domain. 4 use cases dedicated to a new category titled "Tunnels" designed to guide Connected Vehicles (including AVs) when facing a major event resulting in a tunnel closure, have been specified.

The technical harmonization process for these 4 use cases was completed in July 2026 with SCALE Italian and Spanish partners, with the proposal of solutions based on IVIM and/or MAPEM and SPATEM messages.

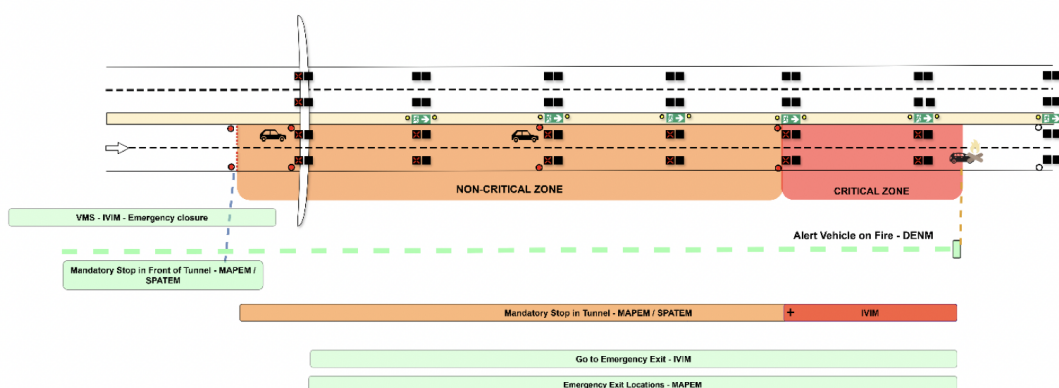


Figure 1: French example of a "Vehicle in Fire" situation, MAPEM-SPATEM + IVIM solution

On the **North-East Pilot and Operational Site**, DIR North has successfully finished the production launch process of its mature use cases to the CoopITS app. 4 use cases dedicated to logistic are studied by this pilot site: HGV (Heavy Good Vehicles) parking lots reservation on

highways, free parking spaces in city center for HGV, HGV permanent traffic ban linked to the dangerous goods transport and HGV dynamic traffic ban linked to the activation of bad weather plan will be deployed on A35, A36 and A352. The deployment feasibility of the first two use cases is considered risky as some aspects of the current functional architecture still require clarification to ensure overall coherence.

Due to changes in the political situation, GERTRUDE (company in charge of the central traffic management system in Bordeaux) will integrate the local **South-West Pilot and Operational Site** to take over the deployment of the “signalized intersection” use-cases with Bordeaux INP, with the aim to improve their performance and supporting Bus Rapid Transit with the region Nouvelle Aquitaine. An assessment will be managed by DVDH to study and test the transport patterns and modal shift use-cases among its peri-urban population in order to foster and scale-up the deployment of CoopITS app. Finally, Renault Group and Atos will join the project with the objective to test and pilot 3 new use-cases dedicated to safety between cycle and public transport in a real urban environment with a V2X solution embedded in the buses.

At the **South-East Pilot and Operational Site**, DIRMED is finalizing its tests for the production launch of mature use cases to CoopITS app. CD34 and the site's new partner, Toulon Métropole, are finalizing the technical specifications and the C-ITS message profiles. The recruitment of the equipment supplier to deploy the four new use cases – aimed at enhancing safety at intersections between departmental roads and greenways, as well as on bridges with weight restrictions – will take place by the end of 2026.

The **Paris Region Pilot and Operational Site** in the Île-de-France region, bringing together 11 key partners from the SCALE project – including Ampère Software Technology and Stellantis – has defined new use cases based on a “vehicle-centred” approach. Meanwhile, DIRIF continues to send out information updates via the CoopITS app, whilst the targeted expansion now extends to new urban areas such as the Hauts-de-Seine department. The theme of “Hybridisation and Services” guides all the initiatives undertaken and is reflected in the involvement of members of the Ile-de-France pilot site across a wide range of topics. The partners collaborate regularly within the working group on architecture and share their expertise on issues relating to service providers, the deployment of the EDGE Cloud (a technology enabling the deployment of smaller, decentralised IT infrastructure) and the hybridisation of road equipment.

ITALY

The Italian SCALE pilot is entering a decisive phase, with cities, motorway operators and technology partners moving from system design and procurement towards installation, integration and field testing. A major milestone will be SCALE’s first Cross-National Test, scheduled in Italy over two weeks, from 16 to 20 and from 23 to 27 November 2026. The **City of Turin** and the **City of Verona** will provide the main urban testing environments, while **Milano-Serravalle, A22 Brennero motorway** and **A4 (BS-VR-VI-PD) motorway**, will connect their infrastructures and services to demonstrate that cooperative mobility solutions can work seamlessly across different roads, systems and territories.

Italian Urban Areas

The **City of Turin** and **5T** have completed the design of the local C-ITS technical architecture, selected the services to be tested and defined the testing areas. Integration work is now progressing at the Traffic Management Centre.

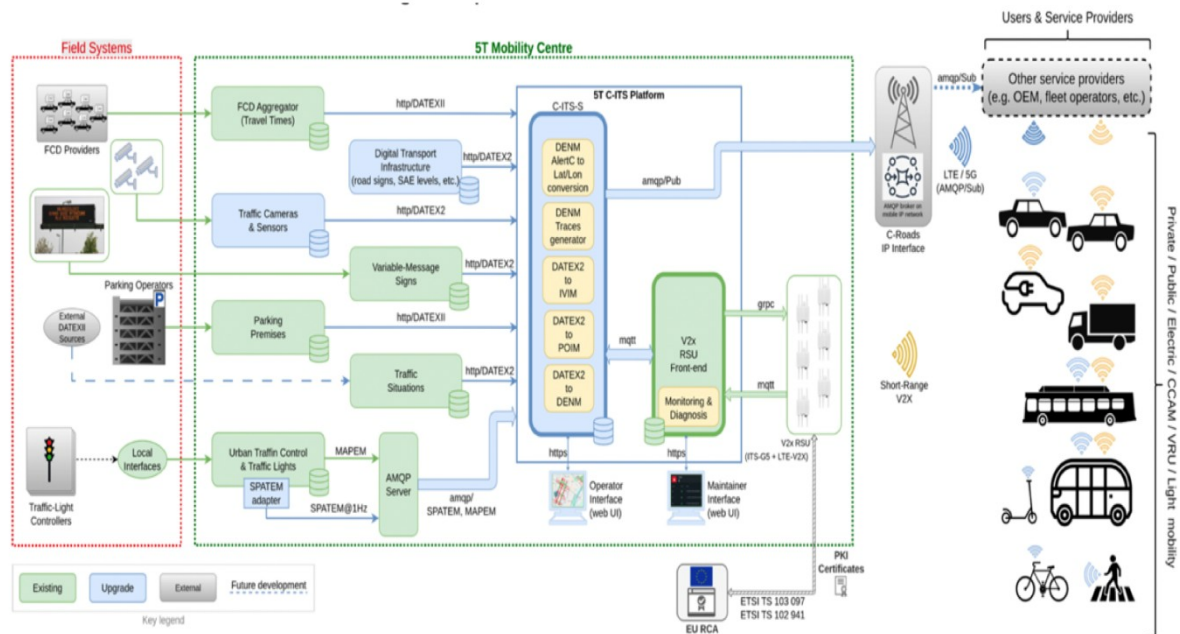


Figure 2: C-ITS technical architecture

The **City of Trento** is implementing three practical services designed to improve everyday mobility: traffic-light priority for public transport, parking availability information and warnings about temporarily slippery roads. The city also shared its experience in bus prioritisation at the C-ITS Urban Stakeholder Meeting in Brno.

In **Verona**, work focuses on services for public transport, emergency vehicles, and their integration with the installed and upgrading C-ITS Central and Stations environment. **Almaviva** is supporting the cities in the Urban Pilot with the contribution of Famas, by integrating data and services and preparing them for stable operation.

Italian Motorways

ANAS has equipped two dedicated vehicles with an additional OBU, complementing their existing ITS-G5 and C-V2X connectivity with simultaneous access to the national C-ITS broker operated by TIM within the C-Roads initiative.



Figure 3: ANAS' On Board Unit

Autostrada Brescia–Verona–Vicenza–Padova has begun testing four new services and reported positive interoperability results between equipment supplied by different manufacturers, across the A4 motorway corridor.

Autostrada del Brennero (A22) is enhancing its C-ITS system with new and improved use cases, preparing its infrastructure for the November cross-border tests. A22 also purchased 30 L1-certified dual-technology Road-Side Units (RSUs), supporting both ITS-G5 and C-V2X, with the aim of enhancing its C-ITS infrastructure and progressively replacing the existing RSUs, as part of the transition towards an L1 C-ITS system.

Autostrade per l'Italia S.p.A. has finalized the contracts regarding the Executive Project and RSUs site inspections are underway.

CAV has completed the project design for the Marco Polo junction and Passante di Mestre upgrades and has received its new units.

Milano Serravalle–Milano Tangenziali, has completed C-ITS installations on the A7, namely 14 dual-technology RSUs, 16 ANPR and 11 AID cameras, that are now in operation. The next steps will be to allow to test the vehicle-OBUs communication on the service fleet. The deployment of the wider Smart Road programme on the Milan Ring Roads is also progressing.

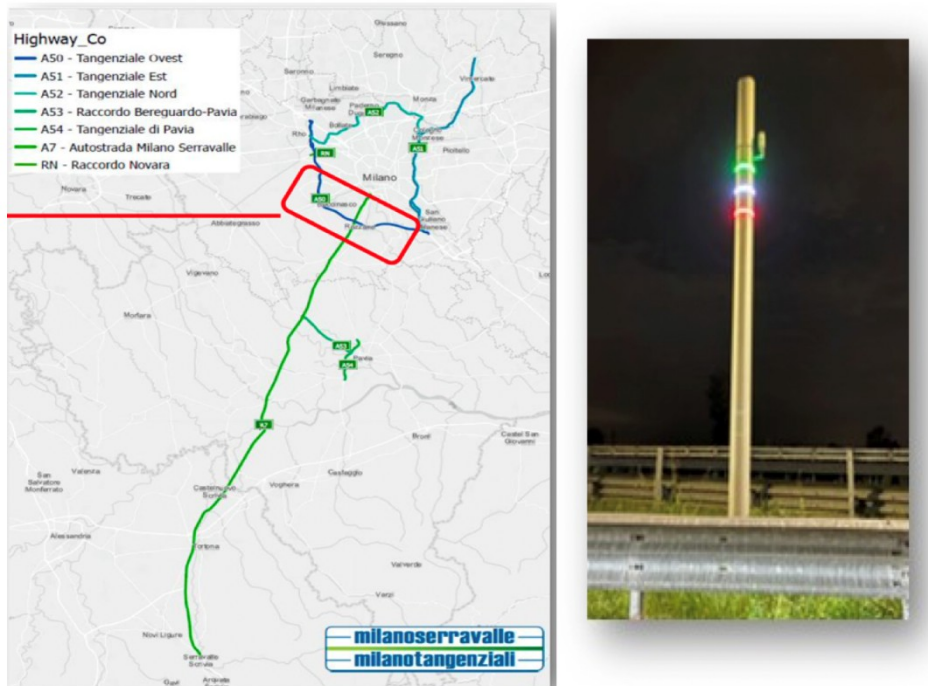


Figure 4: Map of the Road-Side Units and a close-up Road-Side Unit

Codognotto has begun installing and testing OBUs on its truck fleet and is developing a platform that will turn road messages into useful information for drivers and fleet managers.

IVECO has completed the design of its off-board architecture and tested its capacity under a simulated load of 5,000 connected vehicles, while preparing new units for integration on different vehicle types.

TIM has completed the first milestone of the SCALE project, delivering a distributed platform for the exchange of C-ITS messages via the 5G mobile network. The solution integrates cloud and edge computing, enables scalable V2X services and promotes interoperability between Italian and European ecosystems.

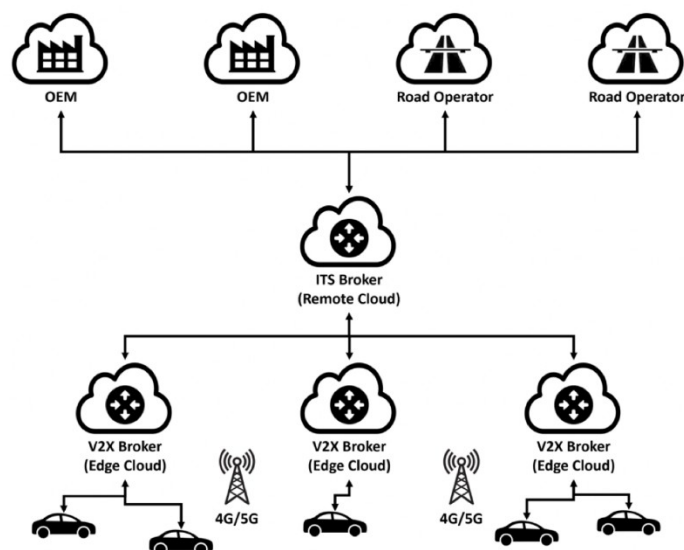


Figure 5: The two-levels architecture designed by TIM

Almaviva is also working on estimated time of arrival harmonisation for both freight and public transport.

Politecnico di Milano is preparing the evaluation activities that will measure the benefits of the Italian tests. Together, these contributions are turning Italy into a connected testing ground for safer, more efficient and more interoperable mobility.

SPAIN

The Basque Country is making significant progress in the deployment of C-ITS services under the SCALE project, across three complementary pilot areas: Bilbao, Bizkaia and Gipuzkoa.

Bilbao is taking part in the SCALE project in Spain with three connected mobility services. The first warns drivers of the presence of pedestrians and cyclists in potentially hazardous situations. The second provides real-time information on parking availability and loading areas. The third, and the one on which efforts are focused this year, is GLOSA — a service that advises drivers on the recommended speed to reach a green light, reducing unnecessary stops, improving traffic flow and lowering pollutant emissions. To enable GLOSA, Bilbao City Council completed in 2026 the installation of five roadside communication units at strategic locations across the city: Plaza Sagrado Corazón, Plaza Zaballburu, Cruce Sabino Arana/Pérez Galdós, Autonomía/María Díaz de Haro and Autonomía/Gordoniz. In May, the first coverage tests using an equipped vehicle were carried out successfully. The next step is the activation of the back-end system responsible for coordinating and transmitting messages to vehicles, which is expected within the coming months. This will mark Bilbao's transition from infrastructure deployment to live operation.

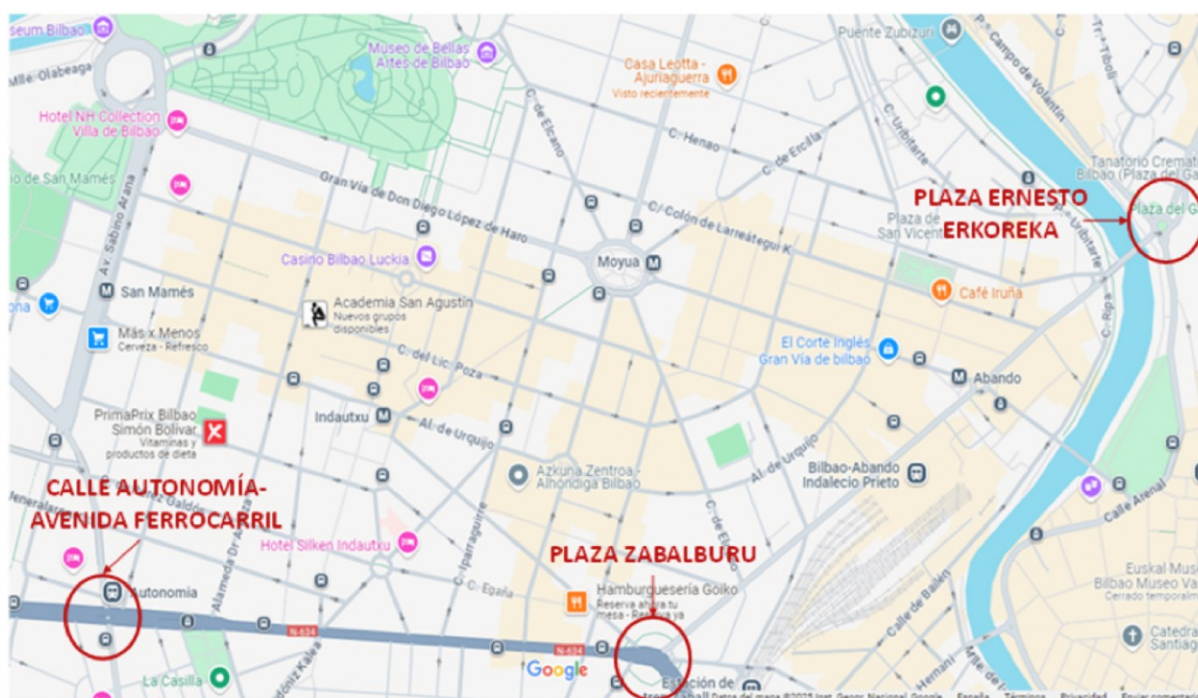


Figure 6: VRU service deployment intersections

In **Bizkaia**, the activities required for the implementation of the use cases began in late 2025, following the award of a public procurement contract in November 2025. Current efforts are primarily focused on the development of the IT platform, which will provide the technological foundation necessary for the deployment and operation of the project's services. During the first months of work, the project's use cases have been defined and specified. In addition to several mature use cases currently under development, Bizkaia plans to implement the VRU Protection and CACC (Cooperative Adaptive Cruise Control) use cases, with deployment foreseen for mid-2028. The deployment of RSUs across the road network in Bizkaia is expected to begin by the end of 2026 and be completed by May 2027. Once the necessary roadside infrastructure is in place, testing activities are expected for some of the more mature use cases.



Figure 7: Area of application. Extension of Day 1 C-ITS services

The **Diputación Foral de Gipuzkoa** is committed to advancing the deployment of C-ITS services. As part of the Gipuzkoa Living Lab initiative, it has installed 27 RSUs along the AP-8 and AP-1 motorways, creating a cross-border testing environment where technology and mobility companies from the region and beyond can trial their C-ITS systems. Within the SCALE project, this C-ITS communications environment will be extended to the A-15 and N-I roads, with the installation of 50 additional C-ITS units. In addition, 15 wrong-way driver detection systems will be deployed at selected locations. These systems detect wrong-way vehicles in real time and alert road control centre operators, to warn the wrong-way driver directly. The project design phase began in November 2025 and was completed on 16th June 2026. Construction works started on 29th June 2026 and are expected to be completed by February 2027, with an estimated duration of 30 weeks.

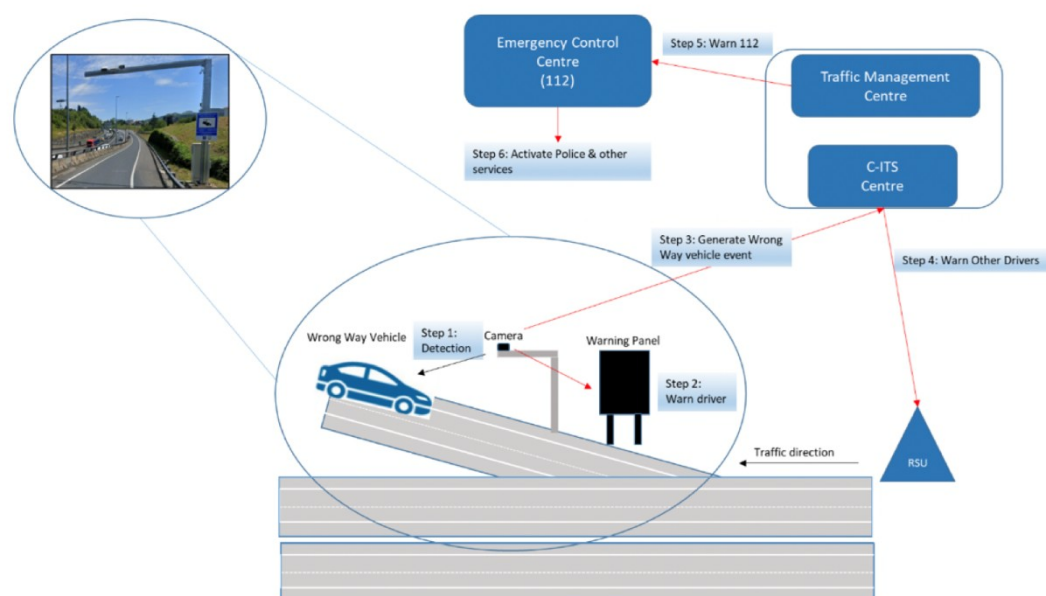


Figure 8: Wrong-way driver detection systems

SCALE advances the deployment of C-ITS services in Spain

The Spanish partners plan to install or upgrade around 330 RSUs and to equip around 100 vehicles, mainly maintenance and public service fleets. By zone, this means roughly 110 RSUs in Galicia-Norte, 135 in País Vasco, 50 in Cataluña and 35 in Madrid-Centro. RSUs installations are scheduled to start at month 24 of the project and on-board unit installation at month 26, with the full figures to be reached by month 36. Manufacturing of the new RSU model is already under way. Validation on public roads comes after that. Reporting the behaviour of the services in real traffic, and the evaluation of their impact on safety, traffic efficiency and emissions, belongs to a later stage of the project.

Spanish partners are also involved on the European side of the work. CTAG leads the technical harmonisation task of the project and, within it, the working groups on vulnerable road users and on parking. These groups compare how each country intends to implement a given service and agree on a common functional description and a common message profile before anyone builds it, so that the services deployed in Spain behave the same way as their equivalents in France, Italy or Austria.

All the groups have now completed the functional description of their use cases and have moved on to the message profiles, which is where the exact content and format of each message is agreed. The aim of this work is a joint report to the C-Roads Platform, so that the new use cases developed in SCALE are taken up in its specifications.

What comes next: the coming period will be dominated by deployment. The priorities are the start of the roadside and on-board installation campaign in the four zones, the adaptation of the traffic management platforms to the new messages, and the completion of the specification work for the use cases that are still open. The first phase of the C-ITS centre interoperability work is also under way, with the European profile planned for a later stage.

AUSTRIA (GRAZ)

During the current reporting period, the **Graz Pilot and Operational Site** reached several important implementation milestones within the SCALE project. Following the completion of key infrastructure deployment activities, RSUs were installed at selected signalised intersections, providing the basis for the planned C-ITS services. Building on this foundation, public transport priority functionality was successfully implemented and integrated into the existing environment. The final phase of functional testing is currently being completed, while remaining optimisation activities are being carried out to prepare the system for full operational use.

Beyond the technical deployment, Graz has actively contributed to the national exchange of knowledge and experience in the field of Cooperative Intelligent Transport Systems. Project progress and lessons learned have been regularly presented to Austrian stakeholders, including other cities, ASFINAG, and the Federal Ministry for Innovation, Mobility and Infrastructure. These activities support the alignment of national C-ITS initiatives and foster collaboration between public authorities and infrastructure operators. In addition, ongoing updates on Austrian C-ITS projects, achievements and events are shared through the LinkedIn page "C-ITS in Österreich", which serves as a valuable communication channel for the national C-ITS community.

Current activities are focused on identifying the most suitable test intersection for the remaining project objectives. Various options are being evaluated to ensure optimal conditions for validation and demonstration activities. The final selection and subsequent implementation are planned for 2027 and will mark the next major step towards completing the remaining tasks within the SCALE project.

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