Memorandum of Understanding

between

C-Roads Platform

and

MERIDIAN

and

C-Roads Germany – Phase 3

and

X4ITS

and

MATIS

and

SCALE

and

C-Roads Austria 3

Partner Organisations

C-Roads

The European C-Roads Platform is a joint initiative of European States, which can be both, EU and non-EU Member States, and road operators deploying C-ITS services all across Europe in order to significantly improve the exchange of information between vehicles and road infrastructure. The C-Roads Platform currently unites 21 European States working jointly on the strategic and coordinated implementation and operation of C-ITS services across Europe. C-Roads forms the basis for the harmonised C-ITS deployment, roll-out, and operation in Europe, based on common communication profiles. With the intent to ensure the desired spillover effect, from the achievements and lessons

learned between the automotive industry and road operators, these communication profile specifications are made accessible to third parties.

MERIDIAN

The MERIDIAN project aims to enhance European transport by improving the reliability, efficiency, safety, and environmental sustainability of mobility services along key corridors. By advancing the digitalization of mobility systems, it focuses on multimodal services, accessible data, and digital corridor management, including the development of a "digital twin" for road infrastructure. This initiative supports the European Green Deal and the "Sustainable and Smart Mobility Strategy," addressing shortcomings in the ITS Directive's implementation. MERIDIAN improves traffic conditions, particularly for Central European freight transport, offering direct benefits to truck drivers and hauliers—such as better navigation and parking, increased safety, and reduced delays. Additionally, it tackles intermodal freight transport to ease road congestion and its associated negative impacts. Key measures include the expansion of multimodal data collection and ITS services to enhance interoperability, cost-efficiency, and harmonization across integrated corridors. Within the scope of WP3, MERIDIAN focuses on facilitating cooperative, connected, and automated mobility (CCAM) services, enabling the early recognition of traffic obstacles—such as construction sites—to improve safety and reduce hazards.

C-Roads Germany – Phase 3

Germany as member state has started to contribute to the C-Roads cooperation by the findings of the implementation and operation of eight different C-ITS services within the first project C-Roads Germany (CEF Action n. 2015-DE-TM-0431-S, 2016-2021) deployed at two pilot sites in Hessen and Niedersachsen. To address the open challenges related to the harmonisation of Day-1 and Day-1.5 services on motorways and in urban environments, the second project C-Roads Germany – Urban Nodes (CEF Action n. 2018-DE-TM-0037-S, 2019-2024) started to contribute the findings from the implementation and operation of three different (urban) pilot projects to the C-Roads platform. Since 2016, more than 236 R-ITS-S have been harmonised and implemented on German motorways and in German cities (Hamburg, Kassel, and Dresden) and the Autobahn GmbH confirmed a nationwide rollout of the C-ITS service Roadworks Warning. A total of approx. 1.500 roadworks warning trailers will be equipped and provided with a so-called Public Key Infrastructure (PKI). With the **C-Roads Germany – Phase 3** project, the deployment in the cities and connected motorways is to be rolled out further and new pilot cities are to be integrated into the German and European C-Roads activities. Specifically, there will be 6 pilot areas in which new services will be put into operation. These are located in Dresden, Frankfurt/Main, Hamburg, Hannover, Kaiserslautern, and Kassel. Specifications for deployment will be harmonised across these pilots and with the C-Roads platform so to ensure a coordinated and compliant C-ITS deployment in Germany and internationally. Harmonised evaluation methodologies aligned with the C-Roads platform will be also developed and tested.

X4ITS

Cross for ITS (X4ITS) unites public authorities, cities, public transport operators, rail supply industry, road administrations and traffic information service providers from East and Central Europe (AT, CZ, HR, HU, RO, SI). As a follow up of the previous CROCODILE phases, X4ITS will continue the work by maintaining achievements and opening new important fields of action. The EU-Member States are working together to improve cross-border traffic and transport through implementing harmonised

and synchronised ITS applications on the high-level road network in those areas as well as implementing C-ITS use cases, based on C-Roads specifications in urban areas linked to the high-level road network.

MATIS

MATIS is a program aiming at the acceleration of deployment of Smart Advanced ITS solutions for more Sustainable, Safer and Resilient Road transportation networks and services crossing a wide European region from the Mediterranean Sea to the Atlantic Ocean.

MATIS program contains 89 individual projects carried out by 39 public authorities, public and private road operators, covering 3 TEN-T corridors (Mediterranean, Atlantic, North-Sea Mediterranean) in 4 countries: France, Italy, Spain and Portugal.

By digitalizing data collection, data exchange, data processing and using artificial intelligence solutions, MATIS deploys a wide range of advanced and interoperable ITS solutions such as equipment, software and applications for traffic management plans, traffic information, communication to users, and operations efficiency, which will contribute significantly to improve the network safety and to reduce its CO2 emissions

SCALE

The SCALE project aims to scale up the deployment of mature Cooperative Intelligent Transport Systems (C-ITS) services and to advance the technical development and impact assessment of new C-ITS use cases across 10 representative Pilot and Operations Sites in Europe. By enabling real-world deployments in diverse traffic and mobility contexts, the project ensures practical, scalable solutions that support long-term adoption.

SCALE directly addresses the barriers that have hindered the industrialisation of the C-ITS ecosystem, such as fragmented technologies, uncertain investment models, and lack of harmonised operational frameworks. It promotes a structured approach to large-scale deployment, ensuring service continuity through hybrid communication models and fostering interoperability among infrastructure, vehicles, and digital platforms.

To guarantee replicability and impact, the project engages site leaders, research institutions, industrial players, and road authorities in a coordinated evaluation effort focused on four major global challenges: technological complexity, environmental footprint, road safety and public health, and socio-economic sustainability. These assessments will guide future C-ITS rollouts and inform policy and investment decisions.

Built on the strength of a broad, multidisciplinary European consortium, SCALE will deliver a comprehensive toolkit including validated use cases, technical guidelines, deployment strategies, and impact assessment methodologies. It will also facilitate dialogue among stakeholders to align incentives and promote market-ready solutions. In strong synergy with the C-Roads Platform, the project reinforces Europe's strategic position in smart and connected mobility.

C-Roads Austria 3

The C-Roads Austria 3 project is continuing the implementation of C-ITS services in Austria. All implementations are based on the harmonised C-Roads communication profiles, which are jointly developed by the European C-Roads Platform. It is the overall aim of C-Roads Austria 3 to identify

specifically difficult situations and obstacles in both inter-urban as well urban areas and mitigate these situations via the implementation and deployment of C-ITS services. C-Roads Austria 3 will focus on the continued implementation and further development of C-ITS on the extent of the Austrian motorway network, provided by ASFINAG, as well as on extending implementation of urban C-ITS use cases towards the City of Klagenfurt and adding additional use cases for the City of Graz. C-Roads Austria 3 aims to achieve positive impacts by increasing efficiency in (urban) mobility and by increasing in safety due to the increasing coverage of C-ITS services on motorways and in urban areas. Additionally, a reduction of negative environmental impacts by digitalisation of the mobility system, as well as a support of decarbonisation by the increase of efficiency shall be achieved.

History of relationship

While European harmonisation activities in the area of C-ITS have been co-funded through C-ITS project (study with pilots) activities from 2016 onwards, this logic has changed mid of 2024. Since September 2024, C-ITS deployment activities (works) and European C-ITS harmonisation (study), are co-funded separately.

But more than ever there is the need for close collaboration between

i) Corridor Project driven C-ITS deployment activities, which are based on harmonised specifications with the general aim to ensure interoperability all across Europe, and
ii) C-Roads Platform driven harmonisation efforts that constantly work on the further development of C-ITS deployment specifications.

The close link between deployments and specification work ensures reflection of deployment-needs in the specification work and therefore improves the usefulness of C-Roads Platform results.

Overall Objectives of the Memorandum of Understanding

The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects have the overall goal to strengthen the global leadership of Europe with regard to C-ITS deployment and C-ITS service operation, towards the fulfilment of several European strategic objectives such as Vision Zero, Sustainability and Efficiency.

The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects have a reciprocal interest in avoiding duplication of strategic, technical, or organisational work and will all benefit from adopting a complementary approach for European-wide C-ITS deployment.

The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects have noted the necessity of structuring and strengthening their relationship and fostering a closer co-operation.

Specific Objectives and Activities

1. C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects commit themselves to use C-Roads specifications for their (pilot) deployment activities.
2. Vice versa, the European C-Roads Platform will integrate feedback provided by partners of C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects in their

specification work. This includes improvements for existing specifications as well as inputs for new specification work.

3. Successful C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects will work together with the European C-Roads Platform on a C-ITS Deployment Strategy to ensure the sustainability of C-ITS Operation in Europe.
4. The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects will exchange information with regard to planned and undertaken C-ITS deployments, e.g. on use-cases.
5. The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects will work together on setting up a "Cross-testing and validation" plan for cross-tests that will be open as well for 3rd parties like OEMs.
6. The European C-Roads Platform will continuously work on a "Evaluation and assessment methodology for C-ITS and ITS", which forms a basis for evaluation work undertaken within European Corridor Projects. European Corridor Projects will provide feedback on that methodology and forward evaluation results to the European C-Roads Platform for assessing the overall European benefit of (C-)ITS deployments.
7. The European C-Roads Platform and C-ITS (pilot) deployment and roll-out activities undertaken within European Corridor Projects shall make their best efforts on promoting C-ITS related issues.

Administration of the Memorandum of Understanding

With regard to the specific objectives and activities, following procedures are set up:

Ad 2.: Specific Collaboration Groups for Urban C-ITS, Rail C-ITS, and Blue-Light C-ITS are set up by the C-Roads Platform. These groups can be used for providing feedback on existing specifications as well as inputs for new specification work.

Ad 3.: The European C-Roads Platform will setup a new working group (Operations and C-ITS Deployment strategy) for the establishment of a permanent operation of C-ITS. This group addresses operational aspects of C-ITS ecosystems. This group shall be used by European Corridor Projects for providing feedback on the upcoming operational framework and its practicality and robustness.

Ad 4.: The C-Roads Platform introduced C-Roads Platform Secretariat members in all C-Roads Platform member countries that work as intermediate between deployment activities and European harmonisation activities. They will work as direct contact point between C-Roads Platform Working Groups and Corridor driven deployment initiatives collecting feedback and forwarding it to the respective C-Roads Platform Working Group.

Ad 5.: The European C-Roads Platform has setup a specific task-force for "Cross-testing and validation". That task-force collects interests on performing and/or participating in cross-testing-activities to demonstrate European C-ITS interoperability. Partners of C-ITS (pilot) deployment activities undertaken within European Corridor Projects might make use of that task-force to plan and execute C-ITS related cross-tests.

Ad 6.: C-Roads Working Group 3 on "Evaluation and Assessment" invites all evaluation experts of European Corridor Projects to exchange their expertise with regard to C-ITS and ITS evaluation and assessment. Here, the European added value of C-ITS and ITS deployments will be analysed based on the inputs from Corridor initiatives.

We, the undersigned have read and agree with this Memorandum.

Martin Böhm representing C-Roads

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Date: 20/05/25

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Date: 20.5.2025

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