



“Technical Roadmap” and “Operational Mechanisms”

**Under the “Cooperation Working Arrangement – CWA” between
EGVIAfor2Zero, the European Commission (DG RTD) and REGIONE PIEMONTE
signed on 12 December 2025 in Bruxelles.**

Context

The purpose of this CWA is to establish a strategic cooperation on “Towards zero emission road transport” aimed at maximising synergies between the Parties and specifically between the N/R Funds managed by the Regione Piemonte and the 2ZERO Work Programmes. This is in the interest of aligning regional objectives, R&I priorities, R&I topics and resources to contribute to the objectives of 2ZERO as well as to the implementation of the SRIA and complementarities identified by the Parties.

The automotive industry is a core engine of European prosperity and an essential part of Europe’s identity. European manufacturers have been global leaders since the invention of the automobile, producing iconic brands that set high benchmarks in innovation and excellence. Today, the sector accounts for €1 trillion in GDP, a third of private research and development investment in the EU and it provides direct and indirect employment to 13 million Europeans.

Currently, the sector is undergoing a structural transformation of unprecedented speed and magnitude. The shift to clean mobility is accelerating. In 2024, already one out of five cars sold globally was electric. At the same time, the rapid integration of digital technologies, such as AI, software, sensing and communication devices, together with the increasing importance of digital services and connectivity, are shaking up the sector. It is imperative that the European automotive industry not only navigates, but also shapes the transition to zero-emission, connected and increasingly automated vehicles.¹

Challenge

Road transport represents around one quarter of the EU’s total greenhouse gas emissions. To reach Europe’s ambition to become climate neutral by 2050, transport emissions need to be reduced by 90% by that date. Zero-emission vehicles already account for a significant share of global sales and eventually will be the dominant market segment. A strong home market, supported by adequate infrastructure across all territories, is a crucial enabler for this. And to ensure continued commercial success, it is also critical that European OEMs, which are already strongly investing in zero-emission technologies, regain technology and product leadership in zero-emission vehicles.

The 2ZERO partnership² set an ambitious research programme to accelerate the development of zero tailpipe emission road transport in Europe via a system approach. It developed a common vision and deliver a multi-stakeholders roadmap for a climate-neutral and clean road transport system. This will improve air quality, the mobility safety of people and of goods, hence ensure future European leadership in innovation, production and services.

The European Commission intends to underpin the synergy’s mechanisms envisaged in the ERDF and in the N/R Fund that enable interested Regions/MS to build synergies and complementarities with Horizon Europe and to establish operational cooperation by realising synergies and maximising leverage and impact in the use of public funding³. To this end, the Parties agreed on establishing a cooperation framework with the aim of supporting existing and future European roadmaps at regional

¹ Industrial Action Plan for the European automotive sector, COM(2025) 95 final.

² <https://www.2zeroemission.eu/>



level.

Purpose and Scope

The purpose of the present note is to lay out the strategic areas of cooperation in the implementation of the jointly signed Cooperation Working Arrangement in order to establish and maximise synergies between the parties. In particular, this note presents the Common Technical Roadmap ("Common TR") that identifies the Areas of Cooperation and the expected impacts of the cooperation, the Operational Mechanisms ("OMs") that identifies funding instruments for the foreseen Partners Calls ("PCs"), and the communication and dissemination modalities.

Areas of Cooperation

The areas included under the CWA and its **Common Technical Roadmap** have been identified as the ones directly linked to the mobility development paths and application areas under the current smart specialization strategy of Piemonte⁴:

a. Technology and components for alternative propulsion:

- Development of EV and FCEV solutions (components, sensors, modules, systems, architectures for different vehicles and applications);
- Components and systems for energy management, storage systems;
- Development and integration of alternative fuel components and systems;
- Eco-design methodologies (LCA materials, manufacturing with LCA criteria, recovery and recycling).

b. Development of EV based mobility infrastructure:

- Development and use of advanced manufacturing for the production and recovery of battery systems;
- Development of EV based mobility infrastructure and Battery Management Systems (smart charging, wireless charging, vehicle to grid integration, battery swap);
- Development of storage systems for electric, hybrid and fuel cells (high-density energy and power cells, integrated battery pack, battery management);
- Development of infrastructure for hydrogen vehicles (H2 production, storage, distribution, refuelling).

c. Technologies for connectivity and data and infrastructure management (smart and connected transport):

- Development of solutions (HW, SW and sensors), integration with V2X communication infrastructure, safety optimisation and in-vehicle comfort. Connectivity Infrastructure and Devices (Low Power Wide Area Network and 5G) and V2V and V2X communication (infrastructure communication, on-board and road-side units): technology capable of enabling real-time and secure onsite exchange, computing and processing of large amounts of data acquired from IoT networks (Computing Continuum);

³ Annex IV – Synergies with other Union Programmes to the HE Regulation <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0695>

⁴ The Regional Smart Specialization Strategy (3S) of Piemonte can be subject to revision, integration and updates in line with S3 governance. [La Strategia di Specializzazione Intelligente \(S3\) 2021-2027 | Regione Piemonte](#)

- Intelligent and cooperative transport systems, and advanced traffic management and optimisation models (such as data analysis and fusion, connectivity, secure infrastructure and networks, simulation, real time data processing);
 - Solutions for the optimal management of existing infrastructure (roads, parking), equipment (electric recharging points) and means of transport (public vehicles, bicycles, cars in car sharing/pooling).
- d. Managing and optimising demand for sustainable, safe, intermodal, shared and alternative mobility:**
- Advanced systems for acquisition, processing, visualisation and sharing of data/information to, between and from users, including on-board means;
 - Infomobility solutions and journey planning tools that can make the choice of travel more sustainable and can foster the development of the mobility as a service paradigm (dynamic pricing, customisation of supply, integration of mobility services, including e-mobility services in real time);
 - Solutions for safe and secure transaction management and recording.
- e. Design and implementation of new mobility systems and solutions for people and goods:**
- Development and integration of systems for analysis, detection, traffic solutions, smart cities, emission detection with applications based on connectivity systems (e.g. 5G);
 - Use of solutions and technologies for micro-mobility (vehicles, infrastructure, software). Long-distance smart freight delivery and logistics solutions for peripheral urban areas;
 - Design and implementation of transport systems and mobility solutions for people, alternative, inclusive and accessible;
 - Development and implementation of innovative solutions (technologies, materials, means) and processes capable of reducing the environmental impact of freight traffic and ensuring market-oriented service levels (lower traffic and delivery times, last mile);
 - Fleet management applications for passenger and freight transport.

Operational Mechanisms ("OMs"): Funding instruments and Partners Calls ("PCs")

In order to contribute to the shared objectives and topic of the 2ZERO partnership and to provide financial support to projects under the identified Areas of Cooperation, Regione Piemonte can align the here below identified **funding instruments** under the CWA:

- **Priority I - OS 1 "Develop and strengthen research and innovation capacities and the introduction of advanced technologies", under the ERDF Regional Programme 2021-2027⁵**

⁵ Bando SWIch - Sostegno alle attività RSI e alla valorizzazione economica dell'innovazione:
<https://www.regione.piemonte.it/web/temi/fondi-progetti-europei/fondo-europeo-sviluppo-regionale-fesr/swich-sostegno-alle-attivita-rsi-alla-valorizzazione-economica-dellinnovazione>



- Action I.1i.1 “Support for R&D& I activities and the economic enhancement of innovation”;⁶
- Action Ii.2 “Support to knowledge-intensive innovative start-ups and research spin-offs”;
- Action I.1i.4 “Support to the supply and demand of technology transfer services and innovation services”.

Partners Calls (“PCs”) launched by the Regione Piemonte with a specific “**2ZERO flag**” are expected to ensure technical alignment with the relevant 2ZERO funded projects and priorities by including specific “priority/awards” for proposals that area in line with 2ZERO SRIA and past or ongoing Work Programme topics.

As a first action, in September 2025, Regione Piemonte will be launching a “Partner Call” with a specific “2ZERO flag” under the SWIch funding instrument. Additional calls for proposals are expected to be launched on a yearly basis.

To this end, the SRIA and 2ZERO Work Programmes and any other relevant technical input that are publicly available is intended to will be made available to the Regione Piemonte for uptake under the PCs, as defined in the Operational Mechanisms (“OMs”) for communication and dissemination.

Expected Impact

The cooperation between Regione Piemonte and 2ZERO is expected to maximize impact under the following areas:

- Increased awareness and involvement of Regione Piemonte actors/stakeholders in EU funding opportunities and in particular to the 2ZERO partnership activities and network
- Deeper understanding of the EU framework for R&I and deep knowledge sharing on 2ZERO objectives and results, with higher visibility of EU funding opportunities at local level.
- Increased number of complementing stakeholders, competences, and capabilities (in particular local SMEs and start-ups) from Piemonte Region funded projects that are contributing to 2ZERO objectives and results.
- Increased skills and competencies in the Piemonte Region relevant to support the transition towards Zero emission mobility.
- A more streamlined and aligned funding environment that can better support implementation of EU partnership priorities and objectives for the future automotive challenges.

Communication and dissemination.

Regular meetings (online as a standard) between representatives of 2ZERO and Regione Piemonte are expected every 6 months, starting in Q2 2025, and are expected to ensure the necessary strategic support to co-design and implement the synergies mechanisms and ensure the successful implementation.

The European Commission services in charge of the CWA will provide access to information, activities and meetings relevant to the implementation of the foreseen activities, in line with its regular operational activities.

Regione Piemonte will promote a wide dissemination of CWA and related activities at local level, by highlighting the links to the relevant 2ZERO partnership main documents and projects in the

⁶ Bando SWIch - Sostegno alle attività RSI e alla valorizzazione economica dell'innovazione:

<https://www.regione.piemonte.it/web/temi/fondi-progetti-europei/fondo-europeo-sviluppo-regionale-fesr/swich-sostegno-alle-attivita-rsi-alla-valorizzazione-economica-dellinnovazione>



Piemonte portal in a dedicated webpage, and by promoting specific communication activities at regional level on the “2ZERO flagged” Partner Calls for potential applicants.

2ZERO is expected as well to highlight the CWA and the activities in a dedicated webpage.

A standard simplified annual report will be prepared by Regione Piemonte and is expected to indicate:

- number of national/regional projects funded per technical areas,
 - number of stakeholders involved,
 - national/regional funding allocated to calls/funding schemes and to projects per technical areas,
- overall funding leverage achieved or foreseen.