# European Connected and Autonomous Vehicle Alliance (ECAVA)

Terms of Reference

August 2025


European Commission
*August 2025*

**Summary**

The automotive industry is a core engine of European prosperity and an essential part of Europe's identity. The sector is undergoing a structural transformation of unprecedented speed and magnitude. To be globally competitive, the European automotive industry must urgently regain a leadership position in the transition towards software-enabled, AI-powered connected and autonomous vehicles.

**The European Connected and Autonomous Vehicle Alliance (ECAVA)** is a discussion and advisory forum that brings together key stakeholders from across the automotive value chain, including vehicle manufacturers (OEMs), suppliers, technology and tool providers, and smaller innovative tech companies and start-ups.

Over the next 36 months, ECAVA will focus on near-term actions to foster industry collaboration on EU cross-border innovation and the deployment of connected and autonomous vehicles. ECAVA will also formulate regulatory recommendations in support of these efforts. Furthermore, ECAVA will inform and provide guidance to the mid-term objectives of any Automotive-related or dedicated partnerships for the automotive sector, and their strategic innovation agendas.

ECAVA's technology focus is to oversee progress and provide strategic guidance for technological developments and cooperation between its automotive Stakeholders in both European and global markets across the following five pillars announced in the EU's Automotive Action Plan([1]):

(1) A modular **Software platform** for Software-Defined Vehicles;

(2) An in-**vehicle computing architecture** for Software-Defined Vehicles;

(3) Innovative **AI solutions for the Automotive industry**;

(4) A large-scale **distributed pilot facility**;

(5) A technology **roadmap and advisory group** for scaling up promising autonomous driving use cases with high societal and economic impact.

ECAVA's activities will be focusing on near-term EU-driven collaborations in software-defined vehicles (SDV), hardware computing architectures and automotive electronics, AI models, and the development, piloting and testing of autonomous driving. ECAVA will thus shape EU cooperations in all these areas, as well as in related standardisation activities.

This focus translates into four main tasks for ECAVA:

a. Foster collaboration across both technology focus areas and across industry and funding programmes,

b. Identify investment synergies by industry,

c. Provide comparative analyses on technological advances between Europe and other regions,

d. Provide recommendations on the EU regulatory framework for software-enabled, AI-powered connected and autonomous vehicles.

ECAVA will be a lean and outcome-oriented working structure, building on and accelerating any existing industry collaborations on Software-Defined Vehicles**,** Autonomous Hardware and Autonomous Driving at the EU-level**.** ECAVA will be governed by a Steering Committee, driven by the industrial priorities of the automotive sector. The European Commission will be part of the Steering Committee and will provide a supporting secretariat which will organise the operations of the Alliance, including thematic Working Groups, and an Alliance Forum.

([1]) Automotive Action Plan, COM (2025) 95 final

# 1. Subject Matter

The Alliance is entitled the European Connected and Autonomous Vehicle Alliance (**ECAVA**). ECAVA was announced in the Industrial Action Plan for the Automotive Sector[(1)] and will call on actors across the automotive value chain in the EU, with focus on the digital realm, including Original Equipment Manufacturers ("OEMs"), automotive suppliers, technology and tool providers ("suppliers"), start-ups, academia, research and technology organisations, as well as relevant industrial associations to join forces to maintain and boost European competitiveness in the sector.

The **overall objective** of ECAVA is to operate as a lean industry forum, overseeing progress ([2]) and providing strategic guidance for technological developments and cooperation between the automotive stakeholders in both European and global markets.

ECAVA will act as a discussion and advisory forum that brings together the key European automotive stakeholders for stimulating their cooperation, overseeing progress in the sector, and providing further strategic guidance for cross-border innovation and deployment **of connected and autonomous vehicles.**

ECAVA will focus on near-term EU-driven collaborations in software-defined vehicles (SDV), hardware computing architectures and automotive electronics, AI models, and the development, piloting and testing of autonomous driving, as well as standardisation. ECAVA will also inform and provide guidance to the mid-term to longer-term objectives in the transition to software-enabled, AI-powered connected and autonomous vehicles and the relevant strategic innovation agendas. Key deliverables include technology roadmaps and recommendations addressing regulatory and investment challenges facing the industry in this transition. For example, ECAVA will facilitate the development of sections related to software-enabled, AI-powered connected and autonomous vehicles in Strategic Research and Innovation Agendas (SRIA) for automotive in the next MFF (2028-2034). In a supporting role, Member States and the Commission will facilitate dialogue and promote efforts for joint collaboration.

This cooperation is needed for the European automotive industry to overcome existing cooperation barriers among the relevant actors while complying with EU competition rules to achieve a critical mass of European automotive stakeholders shaping the development of next generation of vehicles. The cooperation will enhance and foster synergies across existing and future EU initiatives. ECAVA will in fact replace existing fora on the Digital Vehicle, notably the SDV Sherpa Governance Group, as well as on Automotive Hardware and Autonomous

([2]) In this matter, ECAVA may draw from findings of the CCAM Technology Observatory, to be established in Q2 2026.

Driving, while building on formal structures in partnerships such as CCAM, 2Zero, or the Chips Joint Undertaking. In addition, a close alignment with automotive open-source software ecosystems and initiatives will be promoted.

ECAVA will encompass 4 different types of member categories:

- **Alliance Members:** Industrial actors with voting rights.
- **Alliance Participants:** Industrial actors with non-voting rights.
- **Observers**: Observers to the governance bodies of the Alliance, including Member States, EU and public bodies.
- **International Participants**: Industrial actors with an interest to participate in the Alliance's international exchanges.

Membership eligibility across these categories is specified in Annex III of these Terms of Reference.

# 2. Technology Focus

ECAVA's activities will be centered on EU-driven collaborations in software-defined vehicles (SDV), hardware computing architectures and automotive electronics, AI models, and the development, piloting and testing of autonomous driving, as well as their standardization.

As stated in the Automotive Action plan, several focus areas are identified, subject to confirmation or modification by industry through the ECAVA steering committee:

**1) The rise of the software-defined vehicle:**

Promote and facilitate discussion and collaborations toward EU-wide, open platforms on Software-Defined Vehicles based on state-of-the art open-source software buildings blocks, as well as interfaces, standards, and tools.

**2) The emergence of new computing architectures**

Encourage and facilitate discussion and collaborations toward European future-proof computing platforms for autonomous vehicles integrating advanced processors, including AI chips, while ensuring that software-defined vehicles remain scalable and easily upgradable. In order to ensure synergies with other initiatives, members may consider a joint Working Group with the Automotive

Working Group of the Alliance on Processors and Semiconductor technologies ([3]).

**3) The role of the AI revolution in reshaping the Automotive Industry**

Encourage and facilitate collaborations towards the development of sector-specific generative AI models, algorithms and solutions for autonomous driving, optimising operation of connected vehicles in the transport and charging infrastructure, and effective battery management or AI-driven predictive maintenance.

**4) Distributed pilot facilities allowing efficient cross-company collaboration.**

Facilitate exchanges and collaborations in setting up distributed pilot facilities for Software-Defined Vehicles and AI engineering and as a testbed for innovation in application layers. Activities should ensure strong alignment with the actions on large-scale cross border testbeds and regulatory sandboxes for autonomous vehicles in the Automotive Action Plan.

**5) Mastering the transition towards autonomous driving**

Promote and facilitate collaborations towards delivering an ambitious technology roadmap for the development of shared Autonomous Driving System (ADS) components (software and hardware), and scaling **up the most promising use cases** for autonomous driving, including: **passenger cars**, covering level 3 and 4 solutions; **transport of goods**, with a specific focus on level 4 solutions; **and public transportation**, with a specific focus on level 4 solutions, including robotaxis, autonomous shuttles and on-demand services ([4]).

In addition, ECAVA will cover two transversal areas:

**a) Identify regulatory barriers and enablers for the transition towards software-enabled AI-powered connected and autonomous vehicles**

Reviewing existing or discussing future relevant EU regulations related to ECAVA and formulating recommendations to identify barriers and boundary conditions for technological development while increasing the innovation and deployment attractiveness of the EU compared to other global regions.

**b) Standardisation across the digital vehicle stack**

([3]) Alliance on Processors and Semiconductor Technologies

([4]) In this matter, ECAVA may align with the action in the Automotive Action Plan on establishing cross-border testbeds and regulatory sandboxes to facilitate the testing of autonomous vehicles for both passenger and freight transport.

Discussing and planning standardisation actions in all areas covered by the ECAVA activities.

**Link to other initiatives**

A key objective of the ECAVA is provide advice on how to **bring innovations into full-scale industrial use,** while ensuring it is accessible to innovative SMEs. This requires a coherent strategy from pre-competitive research and innovation to industrial-grade piloting and deployment, bridging the gap from the lab to the market.

Notable instruments under Horizon Europe include the Chips Joint Undertaking (Chips JU), the Connected, Cooperative and Automated Mobility (CCAM) partnership, the Toward Zero Emission Road Transport (2Zero) partnership, the AI, Data and Robotics (ADRA) partnership, and a prospective collaboration platform under the Digital Europe Programme.

With a longer-term view, ECAVA's outputs should guide potential Strategic Research and Innovation Agendas (SRIA) for future partnerships for the period 2028 to 2035.

Related instruments in this context include the ongoing technical work of Member States to identify possible Important Projects of Common European Interest (IPCEIs) candidates for Clean, Connected and Autonomous Vehicles for and Artificial Intelligence.

# 3. Tasks

ECAVA will operate as a lean industry forum, overseeing progress and providing strategic guidance for technological developments and cooperation in both European and global markets.

ECAVA will complement other forms of research, commercial and policy cooperation, consultation and exchange in the field, among different constellations of actors. The EU market is among the most open in the world, and the tasks of ECAVA shall in no way affect access to the EU market, whether through sales or establishment, or to EU or national funding, which remain governed by EU law (including programme conditions, State Aid rules, international trade commitments, etc.) and national law where applicable.

The specific tasks of the Alliance shall be:

a) **Foster collaboration both across the aforementioned technology focus areas** by defining strategic objectives, targets, technology

roadmaps, and standardization needs, and across **industry structures** such as collaboration agreements, platforms, MoUs and formal structures, including open-source communities; and for coordination between R&I programmes on EU, national or regional level.

b) **Identify investment synergies** by industry for joint development and deployment of the next generation of digital automotive technologies that support European competitiveness.

c) **Provide comparative analyses** on technological advances between Europe and other regions to address the main gaps the EU is facing in terms of digital technologies and standardisation for connected and autonomous vehicles.

d) **Formulate recommendations** to the EU regulatory framework for the automotive industry to identify barriers or boundary conditions for technological development towards software-enabled, AI-powered connected and autonomous vehicles.

Across these tasks, the Commission will take into consideration the recommendations of the Alliance for strategically targeting its funding programmes, for eventual adaptation of regulation, supporting the improvement of digital infrastructure, for coordinating its work across the Commission and the Member States, and for prioritising its support for the Automotive Sector.

# 4. Steering Committee

The Steering Committee will be set up acting as the main body steering all ECAVA activities. It will be made up of a balanced group of high-level representatives from Alliance members (e.g., CTOs, VPs, or other high-level representatives from Member Organisations). Members of the Steering Committee are appointed by the European Commission on the basis of Member Organisations' proposals. Each Steering Committee member is nominated for a duration of 2 years.

The European Commission will invite a representative group of Member State representatives to participate in the first Steering Committee.

The mandate of the Steering Committee will be proposed by the European Commission and will be discussed and agreed at the first meeting of the Steering Committee. This includes the frequency and mode of operations of its meetings (in principle, two to three times per year). Steering Committee members, ECAVA Working Group chairs or the European Commission can call for extraordinary Steering Committee meetings, upon proper justification.

# 5. Working Groups

The Steering Committee Members of ECAVA may establish Working Groups of the Alliance, working on specific **industrial priority topics of the automotive industry** that will be operating under a lean governance. Proposals for such Working Groups may also be provided by the European Commission or participating Member States.

Prior to the initial Steering Committee meeting, existing governance fora should convene to explore their continuation and evolution under ECAVA, in particular:

Potential candidates for such Working Groups include:

a) *Software-Defined Vehicles*: The transformation of the existing SDV Sherpa Governance Group, with a prospective future advisory focus and increased ambition to assess developments in EU-wide, open software building blocks, as well as interfaces, standards and tools,
b) *Automotive electronics*: Successions to ongoing discussions within the Chips JU and the Semiconductor alliance on future-proof computing platforms that are adaptable, flexible, energy-efficient, and capable of real-time performance, while integrating more advanced processors, including AI chips.
c) *Autonomous driving*: Building on R&I discussions under the CCAM European Partnership and the work of the SDV groups, this Working Group will take a broader, outcome-oriented scope for the development and integration of shared Autonomous Driving System (ADS) components (AI, software and hardware).

Further topics for consideration to be addressed separately or across technology Working Groups include:

- AI models and respective data and infrastructure needs for model training, inference or fine-tuning;
- Standardisation across the digital vehicle stack;
- Recommendations to the EU regulatory framework for software-enabled, AI-powered connected and autonomous vehicles.

Member and Participant Organisations will be invited to join Working Groups if they coordinate efforts across technology focus areas specified in Section 2 (“Technology focus”) and wish to constructively contribute to the tasks of a Working Group. Each organisation wishing to participate in a Working Group will designate its representatives.

Each Working Group shall propose a Chair from Member Organisations, and Vice Chair(s) from either Member Organisations or Participant Organisations. The

European Commission will appoint Chairs and Vice Chair(s) based on Member Organisations' proposals.

Observers and their representatives may be permitted by the Chair, with the agreement of the Commission, to take part in the discussions of the group and provide expertise.

Each Working Group will adopt its own expression of interest and rules of procedure, including voting rules for members, if necessary. Observers will have no voting rights.

The Commission reserves the right to act as an observer in all Working Groups of the Alliance. Member States representatives are invited to participate in the work of the Alliance in relevant Working Groups as observers. Working Groups with common interests will run back-to-back to ensure light-touch and streamlined meetings.

# 6. Alliance forum

ECAVA and the European Commission will organise at most once per year and act as a facilitator of an Alliance Forum. The Forum can be convened at the initiative of the Steering Committee or by the European Commission.

The Alliance forum is aimed at broadening the perspective, making the links with all relevant actors, including globally, for example in open-source communities, and including the views of a wide range of stakeholders. It will be an inclusive, transparent and open platform to ensure communication and exchanges between the Alliance Members and Participants, the European Commission and Member States, and eventually international stakeholders with an interest in the fields of work of the Alliance. International participation in the Alliance Forum is subject to clauses 5 (a-e) of Annex III ("Membership Eligibility Criteria").

# 7. Rules of Procedure

The mandates and the general rules of procedure of all the bodies of ECAVA, i.e., the Steering Committee, the Working Groups and the Alliance Forum, will be proposed by the European Commission. They will be discussed and agreed by the Steering Committee at its first meeting. The specific rules of procedure of the Alliance Working Groups will be adopted at the first meeting of each Working Group by a **simple majority of its members.**

# 8. Protection of personal data

The European Commission DG CONNECT will publish on the Register a privacy statement providing information about the processing and the protection of personal data. The European Commission is committed to protect personal data and to respect privacy. The European Commission collects and further processes personal data pursuant to Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data.

# **Annex I:** Background

The European car industry is a vital sector of our economy, providing 13 million jobs and contributing 7% of the EU's GDP.

The industry is confronted with several challenges in its digital transformation. The car of the future will be a supercomputer on wheels, with artificial intelligence and electrification pushing innovations.

EU automotive companies are among the leading R&D spenders in Europe. However, Europe has a dependency on several of the crucial elements of the car of the future: AI, software, advanced chips and battery technologies.

Recent geopolitical developments have added more uncertainty and complexity. AI chips and advanced components are subject to a varying degree of export control measures. Whilst having accumulated some important delays, the race towards the vehicle of the future is still very much open. With decisive action, Europe can still be in the forefront considering its solid manufacturing and engineering assets.

President von der Leyen launched in January 2025 the Strategic Dialogue on the Future of the Automotive Industry. Subsequently, the Commission has presented an Action Plan for the Automotive Industry. The action plan presents a gear-shift to help industry lead in the transition towards AI-powered, connected and autonomous vehicles.

The Action Plan announced a dedicated European Connected and Autonomous Vehicle Alliance (ECAVA) bringing together Europe's automotive stakeholders to shape the development of next-generation vehicles and help develop the shared software and digital hardware needed to bring this technology to life. This effort will build upon the Vehicle of the Future Initiative under the Chips Joint Undertaking as well as other Horizon Europe partnerships like CCAM and 2ZERO.

# **Annex II:** Competition Rules

Without prejudice to necessary precautions in relation to Union security interests (including security of information, of supply and of IP and knowhow), conflict of interest and reciprocity, the Alliance shall maintain as open as possible relations and lines of communication in digital vehicle technologies with other industry collaboration fora and associations, both in Europe and at international level.

While performing these tasks, the Alliance and its signatories shall comply fully with EU law and relevant Member State laws, including in the field of EU and

national competition law. In this regard, signatories of the Alliance shall adhere to **competition compliance**, as referenced in **Annex II** to the Alliance Declaration.

# **Annex III:** Membership Eligibility Criteria

The investment planning synergies being leveraged in the framework of the Alliance shall be without prejudice to the legal framework of EU's funding instruments. In order to achieve the objective of the Alliance in a manner that is not detrimental to EU interests and ensures technological sovereignty and competitiveness, the following membership eligibility criteria shall apply:

1. **Member Organisations (Voting rights)** of the Alliance: ECAVA is designed for **legal entities** ("Member Organisations"), headquartered in the Union and not subject to control by a non-EU country or a non-EU country's entity ([5]) including, e.g., commercial entities such as OEMs, automotive suppliers, automotive tool providers, start-ups. Membership will not be open to individuals appointed in a personal capacity.

2. **Participant Organisations (Non-voting rights)**: Legal entities headquartered in the Union and not subject to control from a third country such as universities, research centres, RTOs, civil society, transport authorities, independent non-profit associations and Automotive industry associations who coordinate technical activities on behalf of their industrial members specified in Section 2 ("Technology focus"), or industrial companies headquartered in the Union but subject to control from a third country ([6]) are eligible to become **Participant Organisations** to the Alliance.

3. **Other industrial organisations** may be invited to participate in the international Alliance Forum.

4. An organisation's membership/participant status in the Alliance will be **conditional on the signature of the Alliance's Declaration**.

5. Member Organisations (and where relevant their constituting parties or members) shall have a legal representative established in the Union and registered in the EU transparency register ([6]).

([5]) Acting directly or by way of measures addressed to a non-EU country or a non-EU country's entity.

([6]) EU Transparency Register: https://transparency-register.europa.eu/index_en

6. A legal entity may become a Member Organisation or Participant Organisation only if it does not contravene the security and/or public policy interests of the Union (including cybersecurity) and can participate in a way that is of practical utility to the Alliance. For that purpose, it shall provide assurances that it complies with the following criteria (in the form a detailed report attached to the binding Declaration):

a) Security of sensitive information: access by a third country, acting either directly or by way of measures addressed to a third-country entity, to sensitive information is prevented, in particular by ensuring that the employees or other persons representing the entity have national security clearance issued by a Member State, where required by law,

b) Security of supply: control over the legal entity from a third country, acting either directly or by way of measures addressed to a third country entity, does not undermine the legal entity's freedom to use its infrastructure, software, services, facilities, assets, resources, intellectual property or knowhow needed for the purposes of the Alliance, or that undermines its capabilities and standards necessary for the Alliance.

c) Protection of IP: ownership of the intellectual property arising from, and the results of, its involvement in the Alliance, such as that attributable to investment activities deriving from synergies identified under the Alliance, will remain within the member during and after terminating its participation to the Alliance, is not subject to control or restriction from a third country, acting either directly or by way of measures addressed to a third-country entity, and

d) Compliance with EU data protection, trade secrets and IP protection legislation.

e) Practical utility to the Alliance: the entity shall describe its relevant existing or planned activities in the European Economic Area ([7]) of practical utility to the Alliance ([8]) in the fields set out in Section 2 (Technology focus) and Section 3 (Tasks). In achieving the objectives of Tasks (a – c), the Commission will attach particular weight to demonstrated capability to contribute experience in the highlighted technology focus areas (Section 2) in Europe.

These criteria will be assessed on a case-by-case basis by the Commission, including on classification between Alliance members and participants, on the basis of information provided by the applicant. Such assessment may result in a

([7]) EEA countries are understood to be part of the Union for the purpose of this Alliance

([8]) This can include, for instance, a demonstrable commitment to contribute to voluntarily sharing and developing know-how and open-source solutions, or collaborating in pre-competitive research, development and innovation, in the areas specified under Section 2 ("Technology focus")

refusal of the application of a given organisation or its participation rights restricted.

The entities which are not subject to control from a third country, acting either directly or by way of measures addressed to a third country entity, are normally presumed to respect criteria (b), (c) and (d) and in light of the gaps identified in the background to the Alliance's creation, may normally be considered to meet criterion (e) where they show their capability to contribute to tasks (a) – (e).

7. Paragraphs 5 and 6 shall also apply to subcontractors, constituting parties, shareholders of or members of Member Organisations, where these entities would be in a position to access information related to the Alliance.

8. Prior to the signature of the Alliance Declaration, Applicants shall provide all relevant information necessary for the assessment of fulfilment of the eligibility criteria to the European Commission. In the event of a change during the membership which might put into question the fulfilment of the eligibility criteria, the relevant legal entity shall inform the European Commission sufficiently in advance, which shall assess whether these eligibility criteria and conditions continue to be met and shall address the potential impact on the organisation's membership of the Alliance.

9. Before joining the Alliance, each candidate Member Organisation shall provide a written commitment that it has and will ensure in the future ([9]) to have, no conflict of interest ([10]) whatsoever with the Alliance's objectives or with specific objectives of the Working Groups.

10. Member or Participant Organisations who no longer act in accordance with the principles set forth in the Alliance Declaration, or are no longer capable of doing so, upon request of the Commission, shall no longer be invited to participate in any meetings of the Alliance and may be replaced in cases where members have taken Chair or Vice-Chair roles.

11. Without prejudice to membership, the Commission, for instance upon proposal of the Steering Committee, may restrict discussions related to certain essential strategic tasks affecting security interests of the Union, be it in Working Groups or Alliance Forum agenda points.

([9]) For the period of membership and two years after membership is terminated

([10]) This involves any actual, potential, and perceived conflict of interest.

# **Annex IV:** Voting methods

The Steering Committee and Working Groups may adopt opinions, recommendations or reports. When adopting opinions, recommendations or reports, they shall **strive** to do so by consensus. In the event of a vote, only companies specified in Annex III (1) will be eligible to vote. The outcome of the vote shall be decided by **qualified majority of Alliance members, requiring i) a simple majority of voting Automotive manufacturers (OEMs) and ii) a simple majority of voting Automotive suppliers.** Members who have voted against shall have the right to have a document summarising the reasons for their position annexed to the opinions, recommendations or reports.

<Catalogue number>