May 2025

Position paper

Connected vehicle data sharing

KEY RECOMMENDATIONS

1. Support the implementation of the Data Act, and evaluate its effects on the market before introducing new requirements
2. Simplify the regulatory framework for vehicle data sharing to align it with the Data Act by appointing a unit to streamline and coordinate initiatives on data
3. Federalise data access points and create a unified European Data Space to facilitate efficient data sharing
4. Bolster cooperation between market actors to optimise data usage through clear use cases and promote standardisation to boost interoperability
5. Set up a dialogue on relevant data policies and international challenges relating to third-country data laws
6. Promote the establishment of an industry-led framework for the availability of data for AI and General-Purpose Artificial Intelligence (GPAI)
7. Ensure that data-sharing initiatives benefit stakeholders in Europe and brings innovation and new business models to the European Data Economy

DATA SHARING AT THE HEART OF THE INDUSTRY'S DIGITAL REVOLUTION

The European automobile industry is currently undergoing a significant digital transformation, driven by the development of software-enabled, connected, and autonomous vehicles, and an increased integration in the digital economy at large. This shift is crucial for maintaining global competitiveness and involves adopting agile methodologies and leveraging technologies like artificial intelligence.

A key aspect of this transformation is vehicle data sharing, as connected cars generate vast amounts of information about their usage and environment. The integration of data sharing into the automotive ecosystem drives innovation in areas like autonomous driving and electrification, making effective data management pivotal for securing a competitive edge.

Vehicle manufacturers have compelling incentives to share vehicle data, as it drives customer engagement, enhances safety and sustainability, and fosters innovation while securing a competitive edge for their business. Data sharing is especially important for commercial vehicle owners, as it is essential for them to make informed decisions regarding their productivity and reduce the total cost of ownership of their vehicle.

For consumers, data sharing personalises driving experiences, offers insights into driving habits, and provides access to competitive services, increasing satisfaction and brand loyalty. Businesses gain from data sharing through stronger partnerships, informed research and development, and new revenue streams from value-added services. It also supports predictive maintenance, which reduces costs and downtime, while traffic and emissions data contribute to road safety and eco-friendly initiatives.

Sharing data also contributes to societal goals such as furthering the digital integration of the transport system in the economy, boosting road safety, reducing fuel consumption, and streamlining traffic management and parking and aids policymaking by providing insights to optimise urban mobility.

Ultimately, effective use of shared data differentiates manufacturers from their competitors as it is a key enabler for innovation, it strengthens their market position and aligns their operations with their customers' expectations. In this evolving landscape, data-sharing strategies represent a cornerstone of success for the automotive industry.

A PROACTIVE APPROACH TO DATA SHARING

Vehicle manufacturers have responded by implementing robust data-sharing models with clear terms and conditions, ensuring transparency for consumers about the data they share and with whom, and to establish fair and secure availability of data to third parties, while adhering strictly to privacy and data protection regulations. These models maintain vehicle safety and cybersecurity, ensuring that trust remains a cornerstone of innovation in the industry.

A key illustration of this effort, the Extended Vehicle (ExVe) concept, established through international ISO standards since 2015 with the collaboration of vehicle manufacturers, suppliers, and independent operators, provides a comprehensive framework for sharing vehicle data and functions.

This framework ensures safety for people, goods and road environments, robust security including cybersecurity and data protection, and the preservation of privacy. It addresses responsibility and liability concerns by defining the perimeters and commitments of each stakeholder, ensuring compliance with and maintaining approved specifications throughout the vehicle's lifecycle.

It provides manufacturers with terminology, principles, and rules[i]; defines families of access interfaces[ii] and a process for service providers to engage and request data[iii]. Soon, it will include a standard for metadata to describe data structures[iv].

Based on the families of access interface now defined in the ExVe standard, a number of alliances like the Connected Vehicle Systems Alliance (COVESA)[v], and standards like FMS and rFMS[vi], or TiGR[vii] have emerged, to define data formats and technical specifications of interfaces that facilitate data access in practice for a variety of use cases for different buses, coaches, and heavy-duty trucks.

These standards balance stakeholders' needs, thus fostering market fluidity and promoting a fair, non-discriminatory, and competitive environment. As a result, a thriving ecosystem has developed, which includes a comprehensive offer of vehicle data-sharing platforms provided by manufacturers, but also independent providers. It enables secure sharing of vehicle data and functions, aiding repair and maintenance providers with standardised remote diagnostics[viii], while supporting multimedia apps and innovation to boost competition.

SUPPORTING THE DIGITAL TRANSITION

The automobile industry has risen to the challenge of vehicle data sharing by developing comprehensive systems that ensure secure, transparent, and efficient data sharing, fostering innovation and collaboration across the market.

The market for vehicle data has flourished, as evidenced by the rise of data marketplaces offering innovative solutions to an expanding ecosystem of players. To further accelerate this growth, the European Union established a comprehensive regulatory framework for data sharing, with the Data Act[ix] at its core. It empowers consumers with control over their data and ensures a fair system for third-party access, further accelerating data-driven services and the growth of the European Data Economy.

With this framework firmly in place, ensuring the success of this transition requires a focused and coherent approach, building on existing regulations through supportive initiatives. Following the Commission's recent adoption of the Industrial Action Plan for the European automotive sector[x], which highlights its commitment to supporting the industry's digital transition, it is crucial to determine the key enablers to a successful transition.

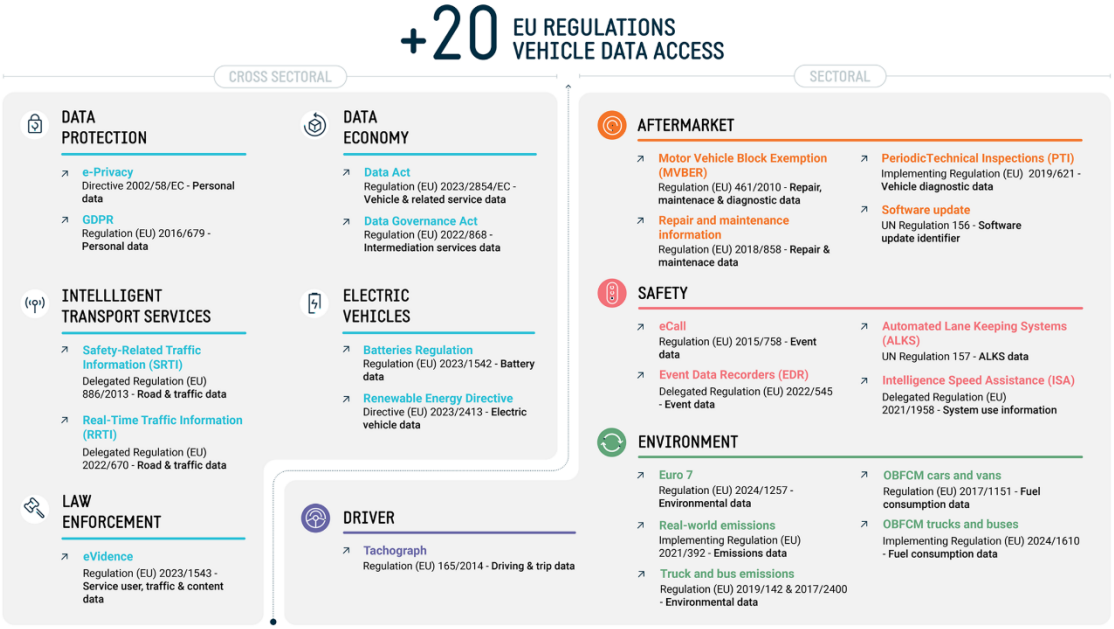
To this end, we have developed a set of key recommendations aimed at leveraging the current legal framework, fostering regulatory coherence, and supporting the industry in

achieving compliance. These measures can further improve delivery of data to the market while avoiding redundant complexities, support the industry's transition and enable the full potential of Europe's data economy.

FROM REVOLUTION TO PROSPERITY

RATIONALISING THE LEGAL FRAMEWORK

There are over 20 existing EU regulations governing the sharing of data from connected vehicles, ranging from general laws like the GDPR and the Data Act to vehicle-specific, type-approval rules ensuring safety, environmental compliance, and market authorisation. These laws, along with the Intelligent Transport Systems (ITS) framework[xi], impose stringent requirements on manufacturers to share vehicle data with vehicle users, stakeholders, and public authorities to enhance safety, efficiency, sustainability, and fair competition. Strong data protection measures prevent misuse, balancing accessibility with security.



Central to this framework is the Data Act – a flagship, all-encompassing piece of data legislation that will apply from September 2025. It stands as a broad spectrum, one-stop-shop regulation covering all connected products, including vehicles. The new rules – in addition to the GDPR – guarantee businesses and consumers have complete authority over the data shared by their connected products such as vehicles – as well as control over who can access it with no exceptions, under fair and non-discriminatory conditions.

While this legal framework is exhaustive and far-reaching, it is also complex and increasingly burdensome. Adoption of these laws was not always well-coordinated, leading to overlapping or contradicting requirements and diverging definitions, and disrupting the whole industry.

This hinders the ability for stakeholders to make the most of this data and undermines manufacturer's competitiveness by adding more administrative burdens, leading to inefficiencies and higher compliance costs.

Regulation must allow for entrepreneurial freedom and not try to regulate business models before they even come into being. Today, focus should be placed on supporting implementation, giving reliable guidance, and ensuring compliance with this legal framework, as the impact that the Data Act will have on industry and market is still uncertain. In that regard, ACEA welcomes the Industrial Action Plan's statement that the assessment of the effects of the Data Act would precede any further action, and the announcement of guidance on vehicle data to support the industry's efforts to implement and comply with this regulation.

Furthermore, as part of this assessment, efforts should be deployed to streamline and clarify the legal framework to better serve the industry and consumers. The Data Act should act as the keystone of the framework with which all data access requirements should align. Efforts should be made to repeal diverging rules and requirements and prevent the adoption of new ones. Legislation which is not intended to regulate vehicle data should not include data access requirements that are not in line with the Data Act, especially where they are likely to interfere with type-approval rules or disrupt the legislative acquis, or where their impact on the industry was not properly assessed.

To that end, we call on the Commission to:

- **support implementation and compliance** with the existing legal framework and **evaluate the effects of the Data Act on vehicle data sharing** before introducing additional legal requirements that will overlap and conflict with this framework;
- **simplify the regulatory framework** to reduce complexity and align existing regulations with the Data Act, to ensure coherence and legal certainty, reduce regulatory burden and build lasting trust in this framework;
- **ensure that any future legislation on data access aligns with the Data Act** by carefully assessing the benefits of additional requirements beyond the existing framework. Before adopting new rules, **evaluate the impact and acceptance** of existing requirements and **consider the implementation efforts** that new ones would require, particularly where they would involve changes to the product;
- **appoint a unit to coordinate the Commission's action in this field**, and **act as a reference point for future initiatives,** striving for coherence and avoiding redundancies.

This rational approach will foster innovation while ensuring security and privacy and maintain a fair competitive environment. It will also reduce the compliance burden and supporting the green and digital transformation that the automobile industry faces.

Furthermore, effective sharing of vehicle data on the market requires looking beyond merely regulating access through legislation. As the legal framework for data sharing has been established, efforts should now focus on leveraging it, by fostering industry-led initiatives that enhance data-sharing practices, promote collaboration, and encourage innovation.

ACCELERATING DATA-DRIVEN SERVICES AND INNOVATION

Access to data is essential for data-driven innovation and services, but the variety of data access points, like National Access Points (NAPs)[xii], or the Data for Road Safety initiative[xiii], lacks standardisation. The lack of transparency regarding available access points and their data offer makes it challenging for users to identify and access relevant data, even where their availability was mandated by law.

Innovators face hurdles such as varying contractual and technical requirements, and lengthy access processes, which are a significant source of legal uncertainty and a deterrent to business development. Data holders struggle with compliance across diverse obligation, depending on jurisdiction, user profile, and access points, making data provision through multiple access points costly and inefficient.

For their business to succeed, data users need clarity on data sources, formats and generation method, their transmission frequencies, and their suitability for defined use cases. Likewise, data holders must understand the intended use of the data requested to ensure it suits the user's needs or recommend alternatives.

Effective dialogue between data holders and users on suitable data for specific use cases is crucial yet rarely supported by current access points. This results in inefficiencies for service providers, and costly risks for data holders who may invest in making available data that fails to meet users' needs. The lack of standardised format, semantics, and descriptions further complicates data use, requiring further harmonisation efforts and risking quality degradation. To accelerate innovation and customer-focused solutions, the data-sharing landscape must evolve to better support these needs.

To that end, we make the following recommendations to the Commission:

- **Transform data access points into a decentralised, federated data ecosystem with interconnected data spaces:** Decentralising access points enables efficient data management with minimal redundancies, while federating them through data spaces ensures transparency and facilitates data sharing.
- **Develop a single European data space to provide European-wide data access and transparency:** A single European data space instance linking all mobility and automotive data spaces would enhance transparency and enable data exchange to drive innovation**.**
- **Support a cooperative and use case-based approach to optimise data usage and investment allocation:** Structured cooperation between data users and holders on clear use cases to align data supply with demand should be promoted and supported. This would ensure practical and customer-value-driven data sharing.
- **Promote standardisation efforts to enable interoperability and facilitate data usage:** Combining data from different sources is easier when data users use compatible data formats and structures (syntactic interoperability). Implementing semantic standards to share metadata, for example through common vocabularies and data models, supports better understanding and use of data.

- **Set up a structured forum for regulatory dialogue:** This forum should create a central point to facilitate discussions about relevant EU data policies and address international data challenges raised by third-country law through regular engagement between industry representatives, Commission bodies and member states.
- **Provide incentives to boost innovation and the emergence of new business models:** Today, compliance costs to provide continuous data availability act as a deterrent to the deployment of new business models. Reducing entrance barriers by providing incentives and support is crucial to drive the data economy. This will ensure a fair return on the investment deployed by the industry to comply with the Data Act.

These recommendations will improve data management and drive innovation across Europe, creating a more collaborative, mutually beneficial, and innovation-friendly ecosystem.

EMPOWERING AI THROUGH NEXT LEVEL DATA SHARING

While in recent years the focus of data availability and sharing was the enablement of data-driven business services and innovation, the increasing availability of artificial intelligence is shifting this focus to a new priority for Europe's competitiveness. Industry-specific Large Language General Purpose AI Models (GPAI) can become a crucial differentiating factor: while they can provide a competitive edge for Europe's AI providers against Big Tech companies from other regions and drive Europe's AI development and innovation, they can also serve to boost the European industry's competitiveness and innovation.

The decisive factor for the success of industry-specific GPAIs is data availability based on large-scale data sharing. Therefore, to secure the availability of the required data, a **reliable framework should be established** that enables the build-up of these models. That framework should be established by an **industry-led agreement** between data holders and data users, with the support of the European Commission, that will:

- protect **personal data and privacy,** notably by defining anonymisation requirements;
- ensure the **protection of intellectual property and trade secrets**, including by reference to model contract terms;
- provide **incentives to make data available**, as it is likely that data providers will not directly benefit from their data contribution;
- define **technical aspects** of data provision and agreement to use data spaces as technical enablers.

GPAIs should rely on industry-wide data that should fulfil the following requirements:

- **Domain-Specific Data**: Model should be trained on data specific to the industry.
- **Quantity of data**: A large amount of data is necessary to train the model. The more data, the better the model can recognise patterns and relationships.
- **Variety of data**: Vehicles provide a large variety of data, ranging from motor temperature to video or 3D environment data, which can be used to train GPAI for a multitude of new and innovative use cases.

- **Terminology**: Industry-specific terminology and semantics must be well-represented in the data.
- **Accuracy and precision**: A high accuracy and precision of the data is critical to ensure quality output from the GPAIs.

The success factor for the enablement of industry-specific GPAIs will lie more in the spirit of industry-wide cooperation and collaboration than the details of the agreement itself. Therefore, Europe should ensure that these industry-specific GPAIs and AI models are enabled by data spaces, and guided by openness and collaboration, rather than prescriptive ex ante regulation.

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[i] ISO 20077-1:2017: Extended vehicle (ExVe) methodology – General information
[ii] ISO 20077-2:2018: Extended vehicle (ExVe) methodology – Methodology for designing the extended vehicle; ISO 20078 series: Extended vehicle (ExVe) web services; ISO 23132:2020: Extended Vehicle (ExVe) time critical applications – General requirements, definitions and classification methodology of time-constrained situations related to Road and ExVe Safety (RExVeS)
[iii] ISO TS 20077-3:2024: Extended vehicle (ExVe) methodology – Upstream process to develop services
[iv] ISO TS 20077-4 (PROJECT) Extended vehicle (ExVe) methodology – Data Structure Description
[v] Connected Vehicle Systems Alliance (https://covesa.global/)
[vi] FMS (Fleet Management Systems) and rFMS (remote Fleet Management Systems) are open standards for a common interface for commercial vehicle data. They are coded under SAE J1939, an international standard providing the recommended practice for buses used for communication and diagnostics among vehicle components. Six major European manufacturers of HDVs developed it under the umbrella of ACEA
[vii] Telediagnostic for intelligent Garage in Real-time protocol
[viii] ISO 20080:2019: Information for remote diagnostic support – General requirements, definitions and use cases
[ix] Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act)
[x] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of Regions, Industrial Action Plan for the European automotive sector, COM(2025) 95 final, 5 March 2025 (Industrial Action Plan)
[xi] Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport Text with EEA relevance
[xii] Commission Delegate Regulation (EU) 2015/962 of 18 December 2014 supplementing Directive 2010/40/EU of the European Parliament and of the council with regard to the provision of EU-wide real-time traffic information services
[xiii] https://www.dataforroadsafety.eu/

ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.2 million Europeans work in the auto industry (directly and indirectly), accounting for 6.8% of all EU jobs
- 10.3% of EU manufacturing jobs – some 3.1 million – are in the automotive sector
- Motor vehicles are responsible for €383.7 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €106.7 billion for the European Union
- The turnover generated by the auto industry represents over 7.5% of the EU's GDP
- Investing €72.8 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 33% of the EU total

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ACEA
European Automobile
Manufacturers' Association
+32 2 732 55 50
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