

POSITION PAPER

# Access to in-vehicle data

For a sector-specific regulation that boosts innovation and protects consumer choice



# Contents

Executive summary .....	2
Which aspects in the data ecosystem are currently at stake? .....	4
Why a sector-specific regulation needs to complement the Data Act? .....	7
What should be the key elements of a sector-specific regulation? .....	10
How can Governance rules ensure a fair automotive data market? .....	15
Conclusion .....	18

# Executive summary

**Access to in-vehicle data requires regulatory guidance. The Data Act provides a horizontal framework, but a complementing sector-specific regulation is needed to remove existing roadblocks in the deployment of innovative services and to foster investments in the utilisation of in-vehicle data and resources.**

About 44 million vehicles in the EU, EFTA, and UK are already connected to vehicle manufacturers' servers, allowing them to provide an increasing number of value-added services. Although, theoretically, 50% of such vehicles can be also accessed by third parties, in reality, the offer of services from third parties and SMEs is still very limited. Representing automotive suppliers in the EU, CLEPA believes this lack of progress is caused by missing transparency on available data, the lack of a common set of data, and the complex processes for the user consent management.

In parallel, vehicle manufacturers are increasingly introducing Application Programming Interfaces (API) in their infotainment systems, providing an environment to run applications which can make use of in-vehicle data directly in the vehicle. CLEPA expects that about 100 million vehicles globally will be equipped with such APIs already by 2025. In the mid-term, CLEPA foresees that the utilisation of data directly in the vehicle will be as relevant as the use outside of the vehicle.

The automotive sector is in the advent of making use of in-vehicle data and CLEPA appreciates the Commissions' proposal of a horizontal regulation on harmonised rules on fair access to and use of data (Data Act) published on 23 February 2022. With the user at the centre and obligations on data holders to make data available upon user request, CLEPA sees the Data Act as a relevant regulation to deploy the wider European Strategy for Data, but also notes that current obstacles regarding the deployment of data-based services in the automotive sector are not fully covered.

Since the Data Act explicitly leaves room for sector-specific regulations, CLEPA strongly supports a sector-specific regulation on the access to in-vehicle data and resources to allow a fast development and deployment of innovative services by a wide group of market players.



Such a regulation should complement the Data Act to make it effective and applicable by providing:

- ✂ Transparency on available data by vehicle identification number, including metadata and formats;
- ✂ The definition of a pre-set standardised minimum dataset;
- ✂ Sector-specific definitions on data, product, and data holder;
- ✂ Granting access to vehicle resources like display, audio, API environments, and embedded software routines;
- ✂ Provision of a common automotive API to ensure data flow from the sensor to the service as already in development by COVESA and AUTOSAR<sup>1</sup>;
- ✂ A governance body or structured forum to set a framework to assign respective roles, rights, authorisation, and liabilities, as well as processes for the provision of user consent and API releases and the regular revision of the standardised minimum dataset.

In the automotive sector, access to data does not only impact the deployment of services but also the access to an existing service and maintenance market worth €240 billion in 2022. A strong competition between vehicle manufacturers and the independent aftermarket has guaranteed a fair level playing field in the past, leaving consumers with free choice on where to obtain a vehicle service. Any privileged position of competing players regarding data access will limit consumers' choice.

Therefore, CLEPA welcomes the intention of the Commission to introduce a sector-specific legislative proposal latest by Q2 2023, as a revision of the type-approval regulation, in order to ensure final adoption under the current parliamentary term.

1 – <https://www.automotiveworld.com/news-releases/covesa-leading-automotive-sw-organizations-announce-collaboration-on-sdv-topics/>

# Which aspects in the data ecosystem are currently at stake?

**Digitalisation is transforming the automotive industry. Modern vehicles are generating data which can be used either directly in the vehicle or outside, but the speed of deployment of new services is far below the possibilities. However, a fair level playing field, competition, and the possibility of scalable cross-brand services, key drivers for innovation and rapid deployment of the European data strategy towards improved mobility are now at risk.**

✂ **Market impact:** Connectivity of modern vehicles is a reality and progress of digitalisation within the automotive sector has increased exponentially, with an estimated 177 million vehicles connected in the EU car park by 2030<sup>2</sup>. Modern vehicles today are generating up to 25 gigabytes of data every hour, and even more are expected in autonomous cars. Machine-generated data are relevant for all kind of new services to make mobility more efficient, safer, cleaner, or more comfortable. Assuming users would be willing to pay an average €10 per month and per vehicle, the market volume in 2040 for subscription services ensuring connectivity and some basic value-add services would represent approximately €34 billion. Such data will also have an impact on the access to an existing repair- and maintenance market of €240 billion for parts and labour at workshop level.

✂ **Competition:** Vehicle manufacturers strictly deploy the Extended Vehicle Concept foreseeing by technical design that all data generated by vehicles will be exclusively sent to servers under their control. Any third parties interested in utilising such data therefore depend on commercial agreements with vehicle manufacturers, who might offer competing services.

✂ **Deployment of services:** Thus, sharing of in-vehicle generated data is vital for the development of new mobility services, such as fleet management solutions, traffic flow steering, concierge services, pay-as-you-drive insurance, emergency assistance, fuel consumption monitoring, or remote vehicle diagnostics for technical roadside assistance, just to name a few of already planned services. For the fast deployment of such data-based services, CLEPA finds it essential that all interested market participants, including SMEs, can make use of in-vehicle generated data (see page 7) and find a competitive environment and a fair level playing field. Currently, there is nei-



ther transparency on accessible or available data by individual vehicle, nor a big overlap of common data supported by all vehicles to allow scalable cross-brand services. This leaves third-party service providers with very limited room to offer multi-brand scalable solutions for services, and CLEPA sees this as a major roadblock for a European Data Economy in the mobility sector.

**🔗 Regulatory efficiency:** Embedded in the European Data Strategy, the Commission published on 23 February 2022 a proposal for a regulation on harmonised rules on fair access to and use of data (Data Act). CLEPA welcomes the Data Act as horizontal regulation providing general guidance on principles for the sharing of data and giving – at least for SMEs – an indication on costs involved, by limiting them to the cost of making data available.

With the user in the centre, the Data Act puts obligations on data holders to make data available to third parties. Although this reflects the situation in the automotive sector with vehicle manufacturers as data holders, CLEPA sees the Data Act alone as not effective for the use of in-vehicle generated data by third parties, because it does not cover certain key sector-specific aspects that are relevant for fair competition and does not eliminate the roadblocks to a fast deployment of services.

CLEPA appreciates the intention of the Commission to provide a proposal of a sector specific regulation by latest Q2 2023, although the scope as described in the various policy options<sup>3</sup> is quite open. CLEPA favours Policy Option 3 as it best ensures a level playing field and gives clear guidance for a fast deployment of services and enforcement in the automotive sector.

<sup>3</sup> – “Call for evidence for an impact assessment” [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13180-Access-to-vehicle-data-functions-and-resources\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13180-Access-to-vehicle-data-functions-and-resources_en)

# Why a sector-specific regulation needs to complement the Data Act?

**The European Data Strategy aims for a single market for data where data can flow within the EU and across sectors. With the Data Act as published in February 2022, the Commission intends to make more data available by facilitating data sharing and setting rules on who can access what data for which purpose. CLEPA welcomes these initiatives but believes that a complementing regulation is necessary to remove roadblocks and to effectively implement the Data Act to the automotive sector.**

About 44 million vehicles in the EU, EFTA, and UK are already connected and vehicle manufacturers have started actively offering brand-specific services to users while scalable third-party applications are still not emerging. CLEPA has investigated the reasons to understand if the Data Act proposal will change that development.

The Data Act defines in Article 2 vehicle manufacturers as data holders since they control the technical design. In parallel, vehicle manufacturers act as providers of services while competing service providers depend on data from the data holders. According to Article 5.1, a user or a party acting on behalf of a user can request that all data accessible to a data holder be made available to a third party. CLEPA appreciates this approach but is concerned about the practical deployment within the automotive sector. The Data Act does not touch upon automotive-specific technical aspects, competitive situation, or roadblocks, such as:

- ✂ Accessible data in connected vehicles are not transparent to any other party than the vehicle manufacturer as data holder. That leaves third-party service providers and users in a situation where they depend on information from competitors regarding accessible data. In practice, users cannot make use of the rights given to them by the Data Act.
- ✂ Each connected vehicle today delivers a different set of data points. The absence of a larger overlap of data points supported by many vehicles, where technology allows, is one of the main obstacles for the deployment of services, as services limited to a particular brand are of limited value compared to cross-brand services. CLEPA strongly supports the idea of a pre-set standardised minimum dataset as proposed by Policy Options 2 and 3 of the Commission's impact assessment to ensure a fast deployment of cross-brand services.
- ✂ The Data Act as a horizontal regulation is intentionally very unspecific with the definition of the data in scope. In a vehicle, however, a vast amount of data is generated while driving and kept temporarily or for longer at various locations. CLEPA believes that further clarification in the defi-



nitions is needed, stating that it only includes vehicle manufacturer data which are either stored in the product for later retrieval or transferred out of the product in real-time.

- ✂ In modern software-defined vehicles, an increasing number of functions and products depend on data that has gone through a complete process of (1) extraction, (2) aggregation, and (3) refinement, or on data which is the subject of copyright protection, or any other form of intellectual property rights. The protection against unauthorised use as provided in Article 11 of the Data Act is not sufficient to avoid reverse engineering and to secure trade secrets and intellectual property rights. Such details will need to be regulated in a sector-specific regulation reflecting the technical aspects of the vehicle design.
- ✂ The use of in-vehicle data will foster the development of new innovative services but will also impact competition and access to the existing repair- and service market for parts and labour at workshop level. Vehicle manufacturers, as data holders, are in a privileged position regarding data access, their role will need to be defined beyond what is foreseen by the Data Act. Fair competition and free choice for consumers on vehicle maintenance and repair requires a complementing regulation also covering processes on how to obtain licenses for data on FRAND principles, and the requirement that data must be provided in digitally processable format, must be interpretable for the use of all parties in the same manner and include context and a time stamp.
- ✂ In-vehicle data can be used outside or inside the vehicle. The use inside the vehicle requires access to in-vehicle app platforms or access to the display and audio resources, independent from the individual use by the vehicle manufacturer as data holder. The Data Act is not covering such basic requirements for the effective use of data by all parties. A complementing regulation is therefore needed to provide guidance on processes through which third parties can validate and test their applications and services while complying with the cybersecurity processes of the data holder or their appointed platform provider.

- ✂ The Data Act specifically mentions that, if the data recipient is an SME, compensation should not exceed the costs directly related to making the data available. While guidance on fair, reasonable, and non-discriminatory fees is welcome, CLEPA highly recommends that, with respect to the competitive situation for the automotive sector, equal treatment of all parties gets applied.
- ✂ The sharing and use of personal data will always require the consent of the data subject. In practice, consent management for the use of in-vehicle data has proven to be a serious roadblock. The Data Act cannot get effectively deployed to the automotive sector without further guidance on the consent management, in particular with regards to response time and required workflows.
- ✂ The Data Act provides broad terminology to define categories of actors but does not directly differentiate vehicle manufacturers from equipment manufacturers. Furthermore, the market surveillance regulation for automobiles CLEPA is advocating for regulation for data produced by vehicle manufacturers (e.g. ISO 20077/20078) rather than guidance on the data produced by third-party equipment manufacturers, aftermarket services, or mobility services.

Therefore, CLEPA strongly supports complementing the Data Act with an automotive-specific regulation focusing on the competitive situation ensuring a level playing field for new emerging applications and services but also considering the existing repair- and maintenance market.

## Social benefits of in-vehicle data:



### Traffic flow improvement

Advising on safest route, avoiding traffic jams



### Vehicle monitoring

Reporting on maintenance and efficiency



### Emergency assistance

Automatically calling emergency services in case of accident



### Automatic payment

Speeding up processes in parking or tolls



### Travel comfort

Personalising services and entertainment for passengers

# What should be the key elements of a sector-specific regulation?

**Third parties depend on data available in the vehicle or at the web interface. CLEPA asks for transparency on technically accessible data points by individual vehicle, guidance on processes for consent management and the validation of applications which can be operated on the vehicle's application programming interface (API), guidance on cost for data, and the definition of a pre-set standardised minimum dataset to allow cross-brand services.**

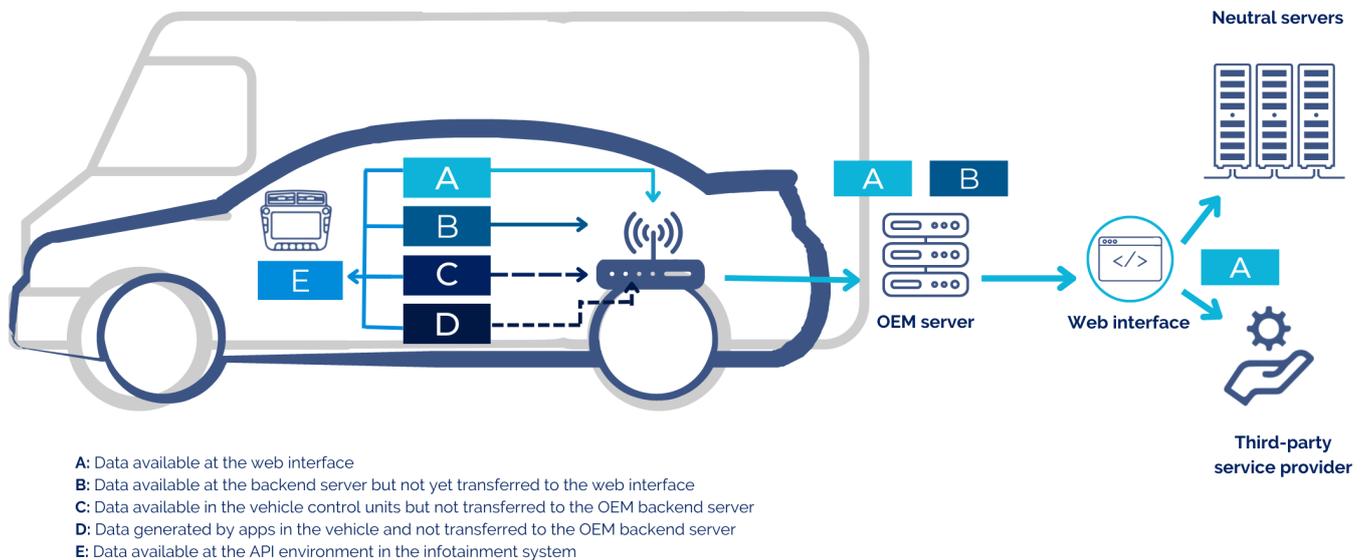
In modern vehicles sold to European consumers, data originating from these vehicles are kept in many different locations. Data might stem from sensors, get generated in applications, and others might be already enriched by value-add services. Such data can be "raw" data from sensors which requires additional information to make them usable, temporary data which gets constantly overwritten, or data protected by IP rights.

CLEPA interprets that the Extended Vehicle Concept, as defined in ISO 20077 and already deployed for years, will remain the only method of access used by vehicle manufacturers in the future. This will leave vehicle manufacturers in a privileged position since the OEM server is the only point of contact for the exchange of data with a vehicle (see picture 1). Third-party service providers can either sign B2B agreement with each vehicle manufacturer, who may be also their competitors, or use data retrieved via neutral servers.

While vehicle manufacturers can make use of all data available at the OEM server (A) + (B), third parties depend on a selection of data available at the web interface (A) only. Other data, either available in electronic control units (C) or generated by applications in the vehicle (D) are not transferred out of the vehicle. Such data might be relevant for some third-party services but cannot be used since there is no transparency on their existence.

CLEPA recognises an increasing number of applications which are operated at the vehicles' API in the infotainment system using a selection of data (E) pre-defined by the vehicle manufacturer which might stem from (A), (B), (C), or (D). CLEPA expects that trend to gain momentum as vehicles will increasingly be equipped with API environments. This means that the use of data directly in the vehi-

# Extended Vehicle Concept



cle will get as relevant as the use of data outside the vehicle.

Therefore, the deployment of the Data Act to the automotive sector requires taking into consideration the special situation that vehicle manufacturers are controlling the technical design and act as competitors to third-party service providers, but also as competitors to the independent repair and service market.

Currently, only vehicle manufacturers have an overview on available data points and functions at the different locations in their vehicles, or on available embedded routines which can be activated remotely, and they fully control the consent management processes. Therefore, CLEPA strongly supports a sector-specific regulation as part of type-approval regulation 2018/858 and following Policy Option 3 as laid out in the impact assessment.



Complementing the Data Act and following the legislative logic already present for repair- and maintenance information (RMI), whereby diagnostic purposes must be made transparent and accessible to third parties, CLEPA believes that this should be extended to data points, functions, and embedded routines. **A sector-specific regulation must ensure:**

✂ **Transparency on data by vehicle identification number (VIN):** For each vehicle, there should be full transparency on all technically accessible data points and functions (A) and (B) available at the vehicle manufacturer's backend (OEM server), at the web interface, and at any other location in the vehicle (C), (D), and (E) from where such data can be made available. Such a list of data points including related functions, should be subject to regular updates consecutive to new features being added to the vehicle via software updates or new vehicle equipment. CLEPA has already identified 529 data points for currently planned use cases by third parties, which were submitted to the Commission's Motor Vehicle Working Group (MVWG). CLEPA considers this list to be a first summary of most relevant data points which should get extended with the introduction of further use cases.

✂ **Minimum dataset:** The definition of a pre-set standardised minimum dataset, as proposed by the Commission in the Policy Options 2 and 3 and introduced by ACEA in the MVWG. User consent provided, such data should always be made available to third parties if these data points are technically supported by the vehicle. Access should be made possible at the web interface and include binding attributes and formats for all vehicle manufacturers. Such a list of data points should also be subject to regular review by the Commission, and extended according to market needs and technological evolution.

✂ **Definition of data:** A sectoral legislation must consider the different roles and competitive situation, and provide a more differentiated definition of data, reflecting the complexity of the automotive sector. For automotive suppliers, it is important to receive data on the use of specific compo-

nents, e.g. on wear-and-tear, behaviour, or physical stress for the purpose of quality monitoring, development, and improvement of product design and safety. In case such data contains intellectual property rights or allows reverse engineering of components and functions, its access and use should be limited to the supplier of the component or function in question. Likewise, the recipient should be obliged to protect these trade secrets. In general, all data that has gone through a process of (1) extraction, (2) aggregation, and (3) refinement, or data which is the subject of copyright protection or any other form of intellectual property right, must be excluded from the scope of accessible data.

✂ **Data formats:** Data should be provided in a digitally processable format, be interpretable for the use by all parties in the same manner and include context and a time stamp.

✂ **Data not available at the web interface:** There should be a description of the process for third parties to retrieve information on available data points by VIN number and on how to receive access to additional data points not available at the web interface without the need for disclosure of the use case. In line with existing regulatory principles, this information should be "made available, in the form of machine readable and electronically processable datasets, in a database that is easily accessible to independent operators."

✂ **Data available in the vehicle:** Existing vehicle interfaces, such as the on-board diagnostics (OBD) port for passenger and light commercial vehicles and the fleet management system (FMS) Standard Interface for heavy commercial vehicles are crucial for the fitting and use of aftermarket telematic devices. To ensure a level playing field, such interfaces need to be maintained and extended to meet future technology trends and data points at least until similar functionalities are accessible to third parties via the web interface or solutions as foreseen in Policy Option 3 by the Commission.



✂ **Access to vehicle resources:** The right to access vehicle resources must be accompanied by a description of the processes for third parties to get access to vehicle resources. Such processes should be subject to a set of harmonised rules which are managed as part of an overall governance process. Aspects to be addressed should include:

- ◇ Interaction with the driver through visual displays and/or audio devices (e.g. voice command).
- ◇ Access to vehicle manufacturer embedded software routines and functions to activate components and functions (e.g. the opening of doors or the trunk, or the activation of diagnostic routines).
- ◇ Procedures for development, testing, and validation of third-party software routines or applications which can be operated on the vehicle API environment.

✂ **User consent management:** Efficient and non-discriminating processes for the management of the user consent following the GDPR requirements are the basis for the transfer and use of personal data. Such processes allowing users to grant and withdraw their consent for personal data collection and processing, when applicable, should be designed according to the latest state-of-the-art user experience. A sector-specific regulation needs to provide guidance on response times and on which type of information is required at which part of the data stream.



# How can Governance rules ensure a fair automotive data market?

**The utilisation of in-vehicle data includes many dependent economic actors, some of them in direct competition with each other. Governance rules will be crucial to ensure safe and secure access to data and resources, and the best use of in-vehicle data by many service providers in a fair and discrimination free competitive environment.**

In practice, the data flow of all vehicles is routed via servers and web interfaces of vehicle manufacturers, as described in ISO 20077. The utilisation of such data depends on contractual agreements between dependent – and to some extent competing – business partners. Since vehicle manufacturers are in a privileged position, CLEPA sees the need for the roles and responsibilities of all actors to follow certain governance rules:

- ✂ **Liability:** Vehicle manufacturers should remain responsible for the safety and integrity of the vehicle for all data which are routed via their backend servers according to ISO 20077 and ISO 20078 as well as for all applications operated in the vehicle released according to vehicle manufacturers governance rules.
- ✂ **Evidence:** Liability should be assigned in accordance with the principles defined in the Product Liability Directive. Interactions between a service provider's application and the vehicle should be logged and stored, as supported by the integration points (e.g. app platforms) onboard and off-board the vehicle. Such technical logs should be used as means of liability assignment or security investigation in case of incidents and may only be used for such purposes.
- ✂ **Fees:** A sector-specific regulation should provide guidance on the cost for data, on testing and validation of applications, as well as on the integration into the vehicle API environment. CLEPA recommends that the cost for data should not exceed the cost for making such data available, and all other costs should cover the expenses of the vehicle manufacturer, including a reasonable and non-discriminatory profit margin.
- ✂ **Consent management:** The grantor of consent is typically the vehicle owner, the vehicle holder, and/or the vehicle user. The consent management mechanisms for the provision of data for services should not require disclosing information on the consent grantor to the vehicle manufacturer and provide timely responses according to state-of-the-art user experience.



⚙️ **Non-monitoring:** The routing of data via the vehicle manufacturer or any other party between the vehicle and the service provider must be organised in an unmonitored manner, without the need for a service provider to disclose data usage, business model, or customer/data subject information to any other competing party.

⚙️ **Governance body:** The market for data-based services is growing fast and is subject to constant changes. Therefore, CLEPA recommends establishing a new body or structured forum for monitoring the implementation of the regulation and the market evolution regarding access to in-vehicle data, functions, and resources. That body would consist of representatives from the vehicle manufacturers and the independent aftermarket, ENISA, independent neutral testing authorities and chaired by the European Commission. The governance body would make recommendations to the Commission on updating the legislation to technical progress and market evolutions, using implementing acts. A second Commission committee, called Motor Vehicle Connectivity Group (MVCG) and composed of the Commission and Member States could deal with cases on which the body/forum cannot conclude, that require escalation and arbitration. Subject to regular review are:

- ◇ The content of a pre-set standardised minimum dataset which should initially be defined in the sector-specific regulation. This review should also include vehicles in operation which have received a software update.
- ◇ Access to all technically available integration points<sup>4</sup>, e.g. application environments, including both on-board and smartphone-based projected mode solutions that are used by the OEM, its partner enterprises, or linked enterprises in the role of service providers in the course of provisioning of aftermarket services.
- ◇ Provided resources and development tools for validation and testing of third-party applica-

<sup>4</sup> — An integration point refers to a technical interface that is used to access data, functions, or resources. Integration points may refer to hardware integration or software integration.

tions for operation in the vehicle API environment, including proprietary ones, without infringing upon IP rights.

- ◇ A documentation of all the APIs, data, and resources that are available at the respective integration points along with the development guidelines and test processes that must be followed while developing a service for the respective integration point.
- ◇ Access to test environments for acceptance and integration testing (including cybersecurity) of independent apps.
- ◇ The deployment of services offered by vehicle manufacturers and third parties by regular public surveys.

## A sector-specific regulation on access to in-vehicle data should provide:



Transparency on available data



Granted access to vehicle resources



Definition of pre-set dataset



Provision of a common automotive API



Definitions on data, product and data holder



A reliant governance body

# Conclusion

CLEPA advocates for fair competition, a level playing field amongst market participants, and giving consumers access to services from a broad choice of providers, while maintaining safety, cybersecurity, and full compliance with the prevailing legislation on competition and the protection of personal data, such as user consent for data sharing.

CLEPA supports the Data Act as a robust horizontal framework with obligations for data holders and guidance for consumers and third parties, but CLEPA nevertheless sees a complementing sector-specific regulation as essential to effectively utilise data generated in vehicles. Consumers and service providers acting on their behalf need full transparency on available and accessible in-vehicle data, functions, and resources to fully execute their rights given by the Data Act.

The market for services utilising in-vehicle data is quickly emerging, and access to data will also affect the access to the existing repair and maintenance market. Therefore, CLEPA encourages the European regulator to provide, in addition to the Data Act, detailed regulatory guidance on access to in-vehicle data and resources as laid out in Policy Option 3 of the impact assessment. Clarity for all involved stakeholders is needed to ensure *ab initio* fair competition and to foster investments in new innovative services.

Without these principles in place, the developing digital market in automotive runs the risk of further distortion of competition in aftersales and on the market for new mobility services due to economic actors gaining or cementing a gatekeeping position in the market for such services. Conversely, fair competition will ensure increased choice for consumers and amplification of innovative services.

## A sector-specific regulation on access to in-vehicle data will foster:



development of new innovative services



fair competition



access to existing repair and service market

### Would like to know more? You can contact:

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CLEPA, the European Association of Automotive Suppliers, represents over 3,000 companies supplying state-of-the-art components and innovative technologies for safe, smart, and sustainable mobility.

CLEPA brings together over 120 global suppliers of car parts, systems, and modules and more than 20 national trade associations and European sector associations. CLEPA is the voice of the EU automotive supplier industry linking the sector to policy makers.

- The automotive sector accounts for **30% of R&D** in the EU, making it the number one investor.
- European automotive suppliers invest over **30 billion euros** yearly in research and development.
- Automotive suppliers register over **9,000 new patents** each year.
- Automotive suppliers in Europe generate **1.7 million** direct jobs.

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