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COMMUNICATION FROM THE COMMISSION

Guidance on vehicle data, accompanying Regulation 2023/2854 (Data Act)

(Text with EEA relevance)



欧洲联盟委员会

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委员会的来文

关于车辆数据的指南，随附法规2023/2854（数据法案）

（与 EEA 相关的文本）

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1. INTRODUCTION

1. Regulation 2023/2854 of 13 December 2023 on harmonised rules on fair access to and use of data (the ‘Data Act’)¹ aims to ensure a fair allocation of data value and to boost data availability. This will create the conditions for a thriving data economy and enable the development of innovative products, services, and business models. The Data Act is a horizontal piece of legislation, applying across all areas and sectors of the economy.
2. This guidance on vehicle data provides tailored advice to automotive stakeholders on how to implement Chapter II of the Data Act. It aims to explain the key obligations of the Data Act as they relate to vehicle data as defined in paragraph 19 of this guidance, focusing on the data that fall within the scope of Chapter II of the Data Act and on the applicable access rules.
3. The Commission conducted a comprehensive consultation while compiling this guidance document. It consulted numerous stakeholders representing the entire automotive value chain, while ensuring geographical and sectorial balance. The consultation involved workshops, questionnaires and stakeholder meetings. The Commission duly analysed and considered the extensive input received, and drew on it in preparing the guidance.
4. This document is intended solely as a guidance. It does not extend or modify the rights or obligations established under the Data Act.
5. This guidance only relates to the Data Act. It should therefore not be seen as interpretation, nor does it affect the application of:
 - sector-specific legislation such as Regulation (EU) 2018/858 (the ‘Type Approval Regulation’)², or Commission Regulation (EU) No 461/2010³ and the

¹ 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), OJ L, 2023/2854, 22.12.2023.

² Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC, OJ L 151, 14.6.2018, p. 1–218.

³ Commission Regulation (EU) No 461/2010 of 27 May 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector, OJ L 129, 28.5.2010, p. 52–57, as amended by Commission Regulation (EU) 2023/822 of 17 April 2023 on amending Regulation (EU) No 461/2010 as regards its period of application, OJ L 102I, 17.4.2023, p. 1–2.

关于车辆数据的指南，随附法规2023/2854（数据法案）

（与 EEA 相关的文本）

1. 介绍

1. 欧盟2023年12月13日颁布的第2023/2854号条例《数据公平获取与使用协调规则》（简称《数据法案》）¹旨在确保数据价值的公平分配，提升数据可用性。该法案将为蓬勃发展的数字经济创造有利条件，推动创新产品、服务及商业模式的开发。作为一项横向立法，《数据法案》适用于经济领域的所有行业和部门。
2. 本指南为汽车行业的利益相关者提供了关于如何实施《数据法案》第二章的定制化建议。其目的是解释《数据法案》的关键义务，这些义务与本指南第19段定义的车辆数据相关，重点关注《数据法案》第二章范围内的数据和适用的访问规则。
3. 欧盟委员会在编制本指南文件时开展了全面的咨询工作。委员会咨询了代表整个汽车价值链的众多利益相关方，同时确保地域和行业平衡。咨询工作包括研讨会、问卷调查和利益相关方会议。委员会对收到的大量意见进行了认真分析和考虑，并在编制指南时借鉴了这些意见。
4. 本文件仅作指导之用，不构成对《数据法案》所规定权利或义务的延伸或修改。
5. 本指南仅适用于《数据法案》，因此不应被视为对法案的解释，也不影响以下内容的适用：
 - 行业特定法规，例如法规（EU）2018/858（“型式批准法规”）²、欧盟委员会法规（EU）第461/2010号³和

¹ 2023年12月13日欧洲议会和理事会关于统一数据公平获取和使用规则的第2023/2854号¹法令（欧盟），修订第2017/2394号条例（欧盟）和第2020/1828号指令（欧盟）（数据法案），OJ L, 2023/2854, 22.12.2023。

² 2018年5月30日欧洲议会和理事会关于批准和监管机动车及其拖车、以及用于此类车辆的系统、部件和单独技术单元的法规（EU）2018/858，修订法规（EC）第715/2007号和（EC）第595/2009号，并废止指令2007/46/EC，OJ L 151, 14.6.2018, p. 1–218。

³ 欧盟委员会2010年5月27日第461/2010号条例（欧盟），关于将《欧洲联盟运行条约》第101条第3款适用于机动车领域纵向协议及协同行为的实施，载于《欧盟官方公报》L 129号，28.5.2010，第52–57页，经欧盟委员会2023/822号条例修订。

¹⁷ 2023年4月关于修订第461/2010号条例（欧盟）的适用期限，见《欧盟官方公报》L 102I号，17.4.2023，第1-2页。

accompanying guidelines⁴, particularly where such legislation applies to access to vehicle data (e.g. on-board diagnostics (OBD) information or vehicle emissions data);

- other relevant legislation, such as Regulation (EU) 2016/679 (the ‘General Data Protection Regulation’, cf. Recital 7 and Article 1(5) of the Data Act)⁵, or Directive (EU) 2023/2413 (the ‘Renewable Energy Directive’)⁶ and the accompanying Commission notice on battery-related data sharing⁷.
6. This guidance only concerns the automotive sector. This includes original equipment manufacturers (OEMs), suppliers, aftermarket service providers and insurance providers. Its content cannot therefore be automatically extrapolated to other industries or to the public sector.
 7. This guidance does not supersede or override other guidance documents on the Data Act published by the Commission. Rather, this guidance is complementary to those documents and should be read in conjunction with them.
 8. The binding interpretation of EU legislation is the exclusive competence of the Court of Justice of the European Union. Therefore, the Commission’s interpretation of the Data Act as regards its application to vehicle data does not have any bearing on the interpretation which may be given by the Court of Justice of the European Union.
 9. The views expressed in this guidance do not have any bearing on the position that the Commission might take before the Court of Justice of the European Union.

2. DATA FALLING WITHIN THE SCOPE OF CHAPTER II OF THE DATA ACT

10. Chapter II of the Data Act sets out the data access and use rights of users of connected products and related services.

2.1. Connected product

11. A ‘connected product’ is ‘an item that obtains, generates or collects data concerning its use or environment and that is able to communicate product data via an electronic communications service, physical connection or on-device access, and whose primary function is not the storing, processing or transmission of data on behalf of any party other than the user’ (Article 2(5)).

⁴ Commission notice – Supplementary guidelines on vertical restraints in agreements for the sale and repair of motor vehicles and for the distribution of spare parts for motor vehicles, OJ C 138, 28.5.2010, p. 16–27, as amended by Amendments to the Commission Notice – Supplementary guidelines on vertical restraints in agreements for the sale and repair of motor vehicles and for the distribution of spare parts for motor vehicles, 2023/C 133 I/01, OJ C 133I, 17.4.2023, p. 1–6.

⁵ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4.5.2016, p. 1–88.

⁶ Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, OJ L, 2023/2413, 31.10.2023.

⁷ Commission notice on the application of requirements for battery-related data sharing under the revised Renewable Energy Directive, C/2025/4104, OJ C, C/2025/4104, 25.7.2025.

相关指导方针⁴，特别是当此类法规适用于车辆数据访问时（例如车载诊断（OBD）信息或车辆排放数据）；

- 其他相关法规，例如欧盟法规2016/679（“通用数据保护条例”，参见数据法案第7条和第1(5)条）⁵，或欧盟指令2023/2413（“可再生能源指令”）⁶和关于电池相关数据共享的欧盟委员会通知⁷。

6. 本指南仅适用于汽车行业，涵盖原始设备制造商（OEM）、供应商、售后服务中心及保险公司。因此，其内容无法直接套用于其他行业或公共部门。
7. 本指南并不取代或凌驾于欧盟委员会发布的其他《数据法案》指导文件之上，而是作为补充性文件，应与上述文件一并阅读。
8. 欧盟立法的解释权专属欧盟法院。因此，欧盟委员会对《数据法案》中涉及车辆数据适用条款的解释，不会影响欧盟法院对此的解释。
9. 本指南所表达的观点与欧盟委员会在欧盟法院可能采取的立场无关。

2. 数据属于《数据法案》第II章的范围

10. 《数据法》第二章规定了联网产品和相关服务的用户的数据访问和使用权。

2.1. 已连接的产品

11. “联网产品”是指“能够通过电子通信服务、物理连接或设备访问获取、生成或收集与其使用或环境相关数据，并且其主要功能不是代表除用户以外的任何一方存储、处理或传输数据的物品”（第2条第5款）。

⁴ 欧盟委员会公告——关于机动车销售、维修及零配件分销协议中纵向限制的补充指南（修订版），见《欧盟官方公报》C 138号，28.5.2010，第16-27页；另见《欧盟官方公报》C 133I号，17.4.2023，第1-6页，该版本由2023/C 133 I/01号文件修订。

⁵ 2016年4月27日欧洲议会和理事会关于自然人个人数据处理保护和此类数据自由流动的第2016/679号条例（欧盟），并废止第95/46/EC号指令（通用数据保护条例），OJ L 119,2016年4月5日，第1-88页。

⁶ 欧盟议会和理事会2023年10月18日第2023/2413号指令，修订了关于促进可再生能源的欧盟指令2018/2001、欧盟法规2018/1999和欧盟指令98/70/EC，并废止了欧盟理事会第2015/652号指令，OJ L, 2023/2413,31.10.2023。

⁷ 委员会关于修订后的《可再生能源指令》中电池相关数据共享要求实施的通告，C/2025/4104，OJ C, C/2025/4104，25.7.2025。

12. This guidance relates solely to vehicles that constitute ‘connected products’ within the meaning of Article 2(5). It is for the OEM or data holder, as the case may be, to assess whether a vehicle qualifies as a ‘connected product’.

2.2. Related service

13. A ‘related service’ is ‘a digital service, other than an electronic communications service, including software, which is connected with the product at the time of the purchase, rent or lease in such a way that its absence would prevent the connected product from performing one or more of its functions, or which is subsequently connected to the product by the manufacturer or a third party to add to, update or adapt the functions of the connected product’ (Article 2(6)).

14. This guidance relates solely to related services within the meaning of Article 2(6) that are connected with a vehicle as defined in paragraph 12 of this guidance (for the purposes of this guidance, this can be referred to as a ‘vehicle-related service’).

15. A vehicle-related service presupposes a bi-directional data exchange between the vehicle and the service provider, whether it be the OEM or a third party, that affects the vehicle’s operation or behaviour (cf. Recital 17). Services that do not affect the functioning of the vehicle cannot be considered related services. Examples of such services include a smartphone application that analyses and displays an electric vehicle’s charging history without transmitting commands to the vehicle, or pay-how-you-drive insurance services, which analyse vehicle data to create a driver behaviour profile.

16. Traditional aftermarket services such as auxiliary consulting, analytics and financial services, and regular repair and maintenance are generally not counted as a vehicle-related service, as they ‘do not have an impact on the operation of the connected product’ or ‘do not involve the transmitting of data or commands to the connected product by the service provider’ (cf. Recital 17). These services are not ‘explicitly linked to the operation of the connected product’s functions’. For example, ‘regular’ repair and maintenance, such as brake replacements or oil changes, are not considered related services if carried out manually and offline (i.e. they are not digital services). Moreover, these services do not necessarily ‘add to or adapt the functionality’ of the vehicle, nor involve the transmission of data or commands to the vehicle.

17. Vehicle-related services in the automotive sector may include:

- remote vehicle control services that activate or perform vehicle functions (e.g. remote door locking/unlocking, starting/stopping the engine, pre-conditioning cockpit temperatures, managing electric vehicle charging);
- ‘non-regular’ repair and maintenance that involve a bi-directional data exchange between the vehicle and the service provider, and that add to or adapt the vehicle’s functionality. An example of such service includes a service predicting maintenance needs based on individual driver behaviour data, which displays maintenance alerts and suggestions on the vehicle dashboard;

12. 本指南仅适用于符合第2条第5款定义的“联网产品”车辆。应由原始设备制造商（OEM）或数据持有者（视情况而定）评估车辆是否符合“联网产品”的认定标准。

2.2. 相关服务

13. “相关服务”是指“除电子通信服务以外的数字服务，包括软件，其在购买、租用或租赁时与产品连接，其缺失将导致连接的产品无法执行其一个或多个功能，或其随后由制造商或第三方连接到产品以增加、更新或调整连接产品的功能”（第2条第6款）。

14. 本指南仅适用于与本指南第12段定义的车辆有关的、符合第2(6)条含义的相关服务（在本指南中，这可称为“车辆相关服务”）。

15. 车辆相关服务需要车辆与服务提供商（无论是原始设备制造商还是第三方）之间进行双向数据交互，且这种交互会影响车辆的运行或行为（参见第17段）。那些不影响车辆正常运作的服务则不属于相关服务范畴。这类服务的典型例子包括：无需向车辆发送指令即可分析并显示电动汽车充电记录的手机应用程序，以及通过分析车辆数据来建立驾驶行为档案的“按驾驶习惯付费”保险服务。

16. 售后领域的辅助性咨询服务、数据分析与金融服务、常规维修保养等服务，通常不被视为车联网相关服务。根据第17条说明，这类服务“不会影响联网产品的运行”，且“服务提供商不会向联网产品发送数据或指令”，因此与联网产品的功能运作“没有直接关联”。例如，像更换刹车片或换机油这类“常规”维修保养，如果采用人工线下操作（即不属于数字化服务），则不被视为相关服务。此外，这类服务既不“增强或调整车辆功能”，也不涉及向车辆传输数据或指令。

17. 汽车行业中的车辆相关服务可能包括：

- 远程车辆控制服务，可激活或执行车辆功能（例如远程门锁/解锁、启动/停止发动机、驾驶舱温度预调节、电动汽车充电管理）；
- 非定期的维修与保养服务，涉及车辆与服务商之间的双向数据交互，可增强或调整车辆功能。例如，基于驾驶员行为数据预测保养需求的服务，会在车辆仪表盘上显示保养提醒和建议；

- cloud-based services that store driver preferences related to seat and mirror position, infotainment, driving mode, temperature etc., and automatically apply them to the vehicle;
- dynamic route optimization services that use vehicle data (e.g. battery or fuel level; tire pressure) to suggest routes, charging stations or gas stations via the vehicle dashboard.

2.3. Definition of data in scope of Chapter II of the Data Act

18. The data in scope of Chapter II of the Data Act comprise product data (Article 2(15)) and related service data (Article 2(16)), including the relevant metadata necessary to interpret and use those data (cf. Articles 2(17), 3(1), 4(1) and 5(1)).
19. This guidance relates to vehicle data, which solely for the purposes of the guidance should be understood as product data generated by the use of a vehicle (cf. paragraph 12 of this guidance), and vehicle-related service data (cf. paragraph 14 of this guidance).
20. The Data Act grants users and third parties chosen by the user the right to access and use vehicle data. It does not contain rules regarding access rights to vehicle functions or resources⁸. Hence, rules regarding access rights to vehicle functions or resources are not part of this guidance.
21. In line with the explanations provided in Recital 15, data holders should grant access only to ‘raw’ and ‘pre-processed’ data, including the accompanying metadata necessary to interpret and use the data. By contrast, ‘information inferred or derived from such data’ should be considered out of scope of the Data Act.
22. The purpose of the Data Act is to make data accessible to users and third parties. Therefore, all data generated by the use a vehicle or during the provision of a vehicle-related service should be in principle considered in scope of the Data Act, unless they are ‘information inferred or derived’ from raw and pre-processed vehicle data within the meaning of the Data Act.
23. Due to the variety of possible technical implementations and the potential for future developments, the following sections and examples are intended to be illustrative and non-exhaustive.

2.3.1. Raw data

24. Raw data are data which are not substantially modified. They are also known as source or primary data. They refer to data points that are automatically generated without any further form of data processing (Recital 15). This includes data resulting directly from user action (controls, screens, buttons etc.) or data automatically generated by, for instance, vehicle sensors.

2.3.2. Pre-processed data

⁸ Vehicle resources should be understood as the technical infrastructure of the vehicle (both hardware and software), used to process data (computing resources, such as electronic control units and actuators/sensors), to access data, to communicate data off-board or to interact with the driver (communication resources such as the dashboard or the human-machine interface).

- 云端服务可存储驾驶员关于座椅与后视镜位置、车载娱乐系统、驾驶模式、温度等的偏好设置，并自动同步至车辆；
- 动态路线优化服务，通过车辆仪表盘实时获取电池电量、燃油量、胎压等数据，智能推荐最佳路线、充电站或加油站。

2.3. 《数据法》第二章范围内的数据定义

18. 《数据法案》第二章涵盖的产品数据（第2条第15款）及相关服务数据（第2条第16款），包括用于解释和使用这些数据的必要元数据（参见第2条第17款、第3条第1款、第4条第1款和第5条第1款）。
19. 本指南涉及车辆数据，仅为本指南的目的，应将车辆数据理解为车辆使用产生的产品数据（参见本指南第12段），以及车辆相关服务数据（参见本指南第14段）。
20. 《数据法案》授予用户和用户选择的第三方访问和使用车辆数据的权利。它不包含有关访问车辆功能或资源的规则⁸。因此，有关访问车辆功能或资源的规则不是本指南的一部分。
21. 根据第15条的说明，数据持有者仅提供原始数据和预处理数据的访问权限，包括用于解释和使用数据的必要元数据。相比之下，从这些数据中推断或得出的信息应被视为超出《数据法》的适用范围。
22. 《数据法案》旨在确保数据对用户及第三方开放。因此，原则上所有涉及车辆使用或提供车辆相关服务所产生的数据均应纳入该法案适用范围，除非这些数据属于《数据法案》定义的‘从原始及预处理车辆数据中推导或获取的信息’。
23. 由于可能的技术实现的多样性以及未来发展的潜力，以下章节和示例旨在说明而非穷尽。

2.3.1. 原始数据

24. 原始数据指未经实质性修改的数据，也称为源数据或原始数据。这类数据指无需任何数据处理即可自动生成的数据点（第15条）。其包含用户操作（如控制装置、屏幕、按钮等）直接产生的数据，或由车辆传感器等设备自动生成的数据。

2.3.2. 预处理数据

⁸ 车辆资源应理解为车辆的技术基础设施（包括硬件和软件），用于处理数据（计算资源，如电子控制单元和执行器/传感器）、访问数据、离线通信数据或与驾驶员交互（通信资源，如仪表盘或人机界面）。

25. Pre-processed data are data points that have undergone processing ‘for the purpose of making them understandable and useable prior to subsequent processing and analysis’ (Recital 15). They include ‘data collected from a single sensor or a connected group of sensors for the purpose of making the collected data comprehensible for wider use-cases by determining a physical quantity or quality or the change in a physical quantity, such as temperature, pressure, flow rate, audio, pH value, liquid level, position, acceleration or speed’. The Data Act thus applies a *functional* understanding of data processing (the *function* being to make the data understandable and usable). Factors such as the complexity of processing or the need to protect investments into such processing do not play a role in the definition of pre-processed data.
26. A common feature of pre-processed data is that they describe and characterize the vehicle operation or status. Pre-processed data are not ‘new’ information; the nature of the underlying data remains unchanged. In other words, the data, even if normalised, reformatted, filtered, calibrated, converted, aggregated, resampled, corrected, or otherwise measured, calculated or processed, still reflect real-world events or conditions as captured by vehicle sensors or systems (e.g. temperature, speed, acceleration, position). The content or meaning of the source data is unchanged and has merely been prepared or refined for future use.

2.3.3. Inferred or derived data

27. ‘Information inferred or derived’ from raw and pre-processed data, on the other hand, is excluded from the scope of the Data Act. Inferred or derived data are ‘the outcome of additional investments into assigning values or insights from the data, in particular by means of proprietary, complex algorithms, including those that are a part of proprietary software’ (Recital 15).
28. The notion of ‘inferred or derived data’ goes well beyond a merely technical consideration. As shown in Recital 15 (‘information inferred or derived’ from raw or pre-processed data) and already explained above (in paragraph 26 of this guidance), the *nature of information* represented in a data point is the decisive distinguishing feature. Data ‘determining a physical quantity or quality or the change in a physical quantity’ of the connected product should be considered within the scope of the Data Act. By contrast, data representing entirely ‘new’ information, created by the data holder making additional investments to assign value or insights to existing raw and pre-processed data, are not in scope.
29. As shown in Recital 15 (‘in particular by means of proprietary, complex algorithms’) and in accordance with the objective of the Data Act to protect data innovations by data holders, ‘inferred or derived data’ must be the outcome of a processing involving a certain complexity or ingenuity. Therefore, performing basic mathematical operations such as addition, subtraction, multiplication, division or calculating an average does not cause a data point to be out of scope, even if the processing leads to additional insights going beyond the source data’s meaning or content (e.g. using the pre-processed data points ‘fuel flow rate in litres/hour’ and ‘vehicle speed in km/h’ to calculate the current or average fuel consumption).

25. 预处理数据是指经过处理以使其在后续处理和分析之前变得可理解且可用的数据点（引述15）。它们包括“从单个传感器或一组连接的传感器收集的数据，其目的是通过确定物理量或质量或物理量的变化（如温度、压力、流量、音频、pH值、液位、位置、加速度或速度）来使收集的数据适用于更广泛的使用场景”。因此，《数据法案》对数据处理采用了 *功能性* 理解（*功能* 是使数据变得可理解且可用）。处理的复杂性或保护此类处理投资的需要等因素在预处理数据的定义中并不起作用。
26. 预处理数据的共同特征在于其能够描述和表征车辆的运行状态或工作状况。这类数据并非“新”信息，其底层数据的本质特征始终未变。换句话说，即便经过标准化、格式转换、过滤、校准、转换、聚合、重采样、修正等各类处理，这些数据依然真实反映了车辆传感器或系统（如温度、速度、加速度、位置等）所捕捉到的实际事件或工况。原始数据的内容或意义并未改变，只是经过整理优化以便后续使用。

2.3.3. 推断或衍生数据

27. 另一方面，从原始数据和预处理数据中推导或提取的信息不在《数据法案》的适用范围之内。所谓推导或提取数据，是指通过额外投入，特别是借助专有复杂算法（包括专有软件中的算法）从数据中赋予价值或获取洞见而产生的结果（引言15）。
28. “推导或衍生数据”的概念远不止是技术层面的考量。正如引言第15条（“从原始或预处理数据中推导或衍生的信息”）所述，以及本指南第26段已阐明的，数据点所承载 *信息的本质* 才是决定性特征。根据《数据法案》规定，应当将“确定关联产品物理量、质量或物理量变化”的数据纳入适用范围。相比之下，数据持有者通过追加投资为现有原始或预处理数据赋予价值或洞察而创造的全新信息，则不在法案适用范围内。
29. 如第15条所述（“特别是通过专有、复杂的算法”），并根据《数据法案》保护数据持有者数据创新的目标，“推断或衍生数据”必须是涉及一定复杂性或巧妙性的处理结果。因此，执行加法、减法、乘法、除法或计算平均值等基本数学运算不会导致数据点超出范围，即使该处理产生了超出源数据意义或内容的额外见解（例如使用预处理的数据点“燃油流量（升/小时）”和“车辆速度（km/h）”来计算当前或平均燃油消耗）。

30. The Data Act seeks to enable users and third parties to access and use (co-)generated data to develop innovative products and services on an equal footing with the data holder. Therefore, while innovative processing by data holders to gain additional values or insights from raw or pre-processed data is protected from disclosure, the underlying data serving as an input for such processing generally remain in scope, unless such data are in themselves inferred or derived data in the sense of the Data Act.
31. The combination of data from multiple sources such as sensors can better illustrate this reasoning. According to Recital 15, ‘information derived by means of sensor fusion, which infers or derives data from multiple sensors’ should be considered out of scope of the Data Act. This does not, however, mean that any combination of different data points would as such be sufficient to make the resulting data out of scope. That is confirmed by Recital 15, according to which under certain circumstances, data that are ‘combined with other data’ are considered in scope. Instead, in order to be excluded from the scope, the processing of data from multiple sources must lead to *entirely new insights* going beyond basic mathematical operations in relation to the source data (e.g. object detection systems that process data from multiple sources to analyse the vehicle’s surrounding). By contrast, data which are the outcome of a combination of data *without gaining any new meaningful insights going beyond the nature of information represented in the source data* should be considered in scope. Examples of such data include adding global navigation satellite system (GNSS)-based location data as a tag to other vehicle data to produce location-referenced data, timestamping a data point, or map matching GNSS-based sensor data to produce a more accurate geo-location.
32. Predictions of future events, values or conditions are usually considered out of scope as they typically provide ‘new’ information that goes beyond the description and characterisation of the current vehicle operation or status (cf. paragraph 26 of this guidance). A ‘prediction’ implies a certain degree of uncertainty (e.g. vehicle trajectory predictions). This is in contrast to events, values or conditions which, despite being in the future, are certain or do not require any complex interpretation going beyond basic mathematical operations. Examples of these include the pre-fixed date/period of next service, and current parameters or values extrapolated into the future using basic mathematical operations like linear equations. Where the predicted event, value or condition relates to data that would be considered inside the scope of the Data Act without this predictive element, data holders need to make accessible an alternative, albeit less accurate, data point if such data point is pre-processed data within the meaning of the Data Act and if it is readily available to them. For instance, a virtual fuel level sensor might use a complex machine learning model to predict a future fuel level based on driving style, trip history, and other factors. However, if alternative data about the fuel level without a predictive element are readily available to the data holder, e.g. via a less accurate physical fuel level sensor signal, these data need to be made accessible.

2.3.4. Examples of data in and out of scope

33. Against this background, examples of raw data within the meaning of the Data Act may include:

30. 《数据法案》旨在保障用户及第三方能够平等获取并使用（共同）生成的数据，与数据持有者享有同等权利开发创新产品和服务。因此，虽然数据持有者通过创新性处理从原始或预处理数据中获取附加价值或洞见的行为受到保密保护，但作为此类处理基础的数据通常仍受保护——除非这些数据本身属于《数据法案》定义的推导数据或派生数据。
31. 通过整合传感器等多源数据可以更直观地说明这一逻辑。根据第15项说明，“通过传感器融合技术从多个传感器推导或获取的信息”应被视为超出《数据法案》的适用范围。但这并不意味着任何不同数据点的组合都能使最终数据脱离适用范围。第15项说明明确指出，在特定情况下，“与其他数据结合”的数据仍属于适用范围。要使数据被排除在适用范围之外，必须实现 *对多源数据的处理能产生超越原始数据基础数学运算的全新洞见*（例如：通过整合多源数据分析车辆周边环境的物体检测系统）。反之，若数据组合 *仅产生与原始数据信息性质无关的新见解*，则仍应视为适用范围内的数据。这类数据的示例包括：将基于全球导航卫星系统（GNSS）的位置数据作为标签添加到其他车辆数据中以生成位置相关数据、为数据点添加时间戳，或通过地图匹配 GNSS 传感器数据来生成更精确的地理定位。
32. 对于未来事件、数值或条件的预测通常被视为超出适用范围，因为这类预测通常提供超出当前车辆运行或状态描述范畴的“新”信息（参见本指南第 26 段）。“预测”本身带有不确定性（例如车辆轨迹预测），这与那些虽然属于未来但确定无疑或无需复杂数学运算的事件、数值或条件形成鲜明对比。典型例子包括预设的下次保养日期/周期，以及通过线性方程等基础数学运算对未来进行外推的当前参数或数值。当预测的事件、数值或条件涉及的数据若无预测元素则属于《数据法案》适用范围时，数据持有者需提供替代性数据点（即使准确性较低），前提是数据点属于《数据法案》定义的预处理数据且易于获取。例如，虚拟油量传感器可能采用复杂的机器学习模型，根据驾驶习惯、行程记录等信息预测未来油量。但若数据持有者能便捷获取非预测类的油量数据（例如通过精度较低的物理油量传感器信号），则需开放这些数据访问权限。

2.3.4. 范围内外的数据示例

33. 在此背景下，根据《数据法案》定义的原始数据示例可能包括：

- a. sensor signals (e.g. wheel speed; tyre pressure from tyre pressure monitoring system valve; brake pressure; yaw rate; position signals of windows, throttle or other vehicle components; oxygen sensor readings; mass airflow; steering wheel angle; engine revolutions per minute);
- b. raw image or point cloud data directly from cameras and LiDAR sensors;
- c. sound waves captured by microphones;
- d. radar signal data before application of object detection or tracking algorithms;
- e. raw controller area network (CAN) bus messages;
- f. data directly resulting from manual commands (e.g. wiper: on/off; air conditioning usage) or from simple triggering (e.g. key: on/off; handbrake: on/off);
- g. vehicle component status (e.g. vehicle, door, window, hood: locked/unlocked) etc.

34. Examples of pre-processed data⁹ within the meaning of the Data Act may include:

- a. temperatures measured or calculated within or outside the vehicle (in °C¹⁰, e.g. oil, coolant, engine, battery cells, catalyst, outside air etc.);
- b. vehicle speed (in km/h or mph);
- c. vehicle acceleration;
- d. liquid levels (in litres and as a percentage, e.g. fuel, oil, diesel exhaust fluid, brake fluid, windshield wiper fluid);
- e. flow rates (e.g. fuel);
- f. GNSS-based data such as (corrected) location;
- g. odometer value;
- h. fuel/energy consumption (in litres/100km or miles/gallon or kWh/100km), unless predicted within the meaning of paragraph 32 of this guidance;
- i. trip summaries (e.g. time of day when vehicle is driven; average distance travelled);
- j. battery level (in volt and as a percentage);
- k. normalised tyre pressure at reference temperature (in psi, bar or kPa);
- l. brake-pad wear (as a percentage), unless predicted within the meaning of paragraph 32 of this guidance;
- m. time of or distance to next service, unless predicted within the meaning of paragraph 32 of this guidance;
- n. state or condition of a vehicle system or component obtained from the processing of raw data (e.g. engine status, i.e. engine running: on/off; stop/start system status: active/inactive; battery charging status: in progress/finished/in failure mode and as a percentage, regardless of whether the vehicle is plugged in; activation status of

⁹ Depending on the individual vehicle architecture, some of these data points may rather be classified as raw than pre-processed data.

¹⁰ The units mentioned in this section are meant to be indicative and not exhaustive. The obligation to make a data point available also applies if the data holder chooses to use another unit.

- a. 传感器信号（例如车轮转速；轮胎压力监测系统阀门的胎压；制动压力；偏航角速率；车窗、油门或其他车辆部件的位置信号；氧传感器读数；空气质量流量；方向盘角度；发动机转速）；
 - b. 直接从摄像头和激光雷达传感器获取的原始图像或点云数据；
 - c. 由麦克风捕捉到的声音波；
 - d. 应用目标检测或跟踪算法前的雷达信号数据；
 - e. 原始控制器局域网（CAN）总线消息；
 - f. 直接由手动操作（如雨刷开关、空调使用）或简单触发（如按键开关、手刹开关）产生的数据；
 - g. 车辆部件状态（如车辆、车门、车窗、引擎盖：锁定/解锁）等。
34. 《数据法案》⁹ 所指的预处理数据的实例包括：
- a. 车内或车外测量或计算的温度（以°C为单位¹⁰，例如机油、冷却液、发动机、蓄电池单元、催化剂、外部空气等）；
 - b. 车辆速度（以km/h或mph为单位）；
 - c. 车辆加速；
 - d. 液位（以升为单位，或以百分比表示，例如燃油、机油、柴油废气液、制动液、挡风玻璃雨刮液）；
 - e. 流量（如燃料）；
 - f. 基于 GNSS 的数据，例如（修正后的）位置；
 - g. 里程表数值；
 - h. 燃料/能源消耗（以升/100公里或英里/加仑或千瓦时/100公里表示），除非本指南第 32 段规定了预测值；
 - i. 行车记录（例如：车辆行驶时段；平均行驶里程）；
 - j. 电池电量（以伏特为单位，以百分比表示）；
 - k. 参考温度下的标准轮胎压力（单位：psi、bar或kPa）；
 - l. 制动片磨损（百分比），除非本指南第 32 段规定的情形；
 - m. 下次服务的时间或距离，除非根据本指南第 32 段的含义进行预测；
 - n. 通过处理原始数据获得的车辆系统或部件的状态或条件（例如发动机状态：运行/关闭；停止/启动系统状态：激活/非激活；电池充电状态：进行中/完成/故障模式，以百分比表示，无论车辆是否插电；激活状态）

⁹ 根据车辆架构的不同，其中部分数据点可能属于原始数据而非预处理数据。

¹⁰ 本节提及的单位仅为示例，并非穷尽。即使数据持有者选择使用其他单位，仍需提供相应数据点。

automatic light/wiper, anti-lock braking system, or air-bag; information indicating malfunctions of vehicle hardware, e.g. fault codes or malfunction indicator lamps);

- o. data used as parameters in further processing or calculations, even if they originate from an action taken by the user (e.g. user-set target temperature used as parameter by climate control system to regulate heating/cooling; manually selected gear used by transmission control unit to manage engine torque; activation of sport mode, leading to the parameter 'sport mode active' being used in multiple control logics) etc.

35. Examples of inferred or derived data within the meaning of the Data Act may include¹¹:

- a. data generated by dynamic rerouting and optimal route planning algorithms;
- b. advanced driver-assistance systems data other than (activation) status data (e.g. object detection and classification, trajectory predictions, risk assessment, emergency braking, driving assistance commands such as lane keeping assist, adaptive cruise control or excessive speeding alerts);
- c. data resulting from engine control algorithms that optimize fuel efficiency, emissions, and performance;
- d. driver analysis systems data such as driving or eco-scores;
- e. analysis of crash severity etc.

3. ACCESS TO VEHICLE DATA (ARTICLES 3, 4 AND 5)

36. The right of users to access and use product and related services data, including for the purpose of sharing it with third parties of their choice, is the core feature of Chapter II of the Data Act. Data holders can grant user access to data either directly in accordance with Article 3(1) or indirectly in accordance with Article 4(1).

37. Article 3(1) does not create an obligation to grant the user direct access to product data (i.e. data designed to be retrievable) and related services data in all situations, but rather only 'where relevant and technically feasible'. This wording is meant to give the vehicle manufacturers discretion whether to design a connected product in a way that provides the user with 'uncontrolled' data access (i.e. without any intervention by any other party) or access with additional controls in accordance with Article 4(1).

38. Where users cannot access data from the vehicle directly in conformity with Article 3(1), data holders must grant indirect access to readily available data to the user in accordance with Article 4(1). Moreover, regardless of whether data access is granted to the user directly or indirectly, data holders must make accessible readily available data at the user's request to a third party in accordance with Article 5(1). 'Readily available data' means 'product data and related service data that a data holder lawfully obtains or can lawfully obtain from the connected product or related service, without disproportionate effort going beyond a simple operation' (Article 2(17)).

39. In the automotive context, an important example of readily available data includes data generated by a connected vehicle, which are sent to a backend server of the OEM,

¹¹ This list has no bearing on obligations to make available data according to sector-specific legislation, cf. paragraph 5.

自动大灯/雨刷、防抱死制动系统或安全气囊；提示车辆硬件故障的信息，例如故障代码或故障指示灯）

- o. 作为后续处理或计算参数使用的数据，即使这些数据源自用户操作（例如：用户设定的目标温度被气候控制系统用作调节加热/冷却的参数；变速器控制单元手动选择的档位用于管理发动机扭矩；运动模式的激活导致参数‘运动模式激活’被多个控制逻辑使用等）。

35. 根据《数据法案》的定义，推断或衍生数据的示例可能包括¹¹：

- a. 由动态重路由和最优路径规划算法生成的数据；
- b. 高级驾驶辅助系统数据（除激活状态数据外，例如物体检测与分类、轨迹预测、风险评估、紧急制动、车道保持辅助、自适应巡航控制或超速警报等驾驶辅助指令）；
- c. 由优化燃油效率、排放和性能的发动机控制算法产生的数据；
- d. 驾驶分析系统数据，例如驾驶或环保评分；
- e. 事故严重程度分析等。

3. 访问车辆数据（第4和第5条）

36. 用户有权访问和使用产品及相关服务数据，包括与所选第三方共享数据，这是《数据法》第二章的核心内容。数据持有者可依据第3条第1款直接授予用户访问权限，或依据第4条第1款间接授予。

37. 《欧盟通用数据保护条例》第3条第1款并未规定必须在所有情况下向用户授予直接访问产品数据（即可检索数据）及相关服务数据的权利，而仅要求“在相关且技术可行的情况下”提供此类权限。该条款的措辞旨在赋予汽车制造商自主权：其可选择设计联网产品时，是让用户获得“不受控”的数据访问权限（即无需第三方介入），还是根据第4条第1款规定设置额外管控措施。

38. 根据《通用数据保护条例》第3条第1款规定，当用户无法直接访问车辆数据时，数据控制者必须依据第4条第1款向用户提供间接访问权限，使其能够获取现成可用的数据。此外，无论数据访问是直接还是间接授予用户，数据控制者都必须根据第5条第1款的要求，应用户请求向第三方开放现成可用数据。“现成可用数据”指“数据控制者合法获取或可合法获取的、无需超出简单操作范围的额外努力即可从联网产品或服务中获得的产品数据及相关服务数据”（第2条第17款）。

39. 在汽车领域，一个典型的现成数据案例是联网车辆产生的数据，这些数据会被发送至原始设备制造商（OEM）的后端服务器。

¹¹ 该清单与根据具体部门的立法提供数据的义务无关，参见第5段。

notably under the ‘extended vehicle’ concept. Such data will be readily available to the OEM.

40. OEMs may, for various reasons, choose to not retrieve or store certain data points on the backend although the vehicle architecture would technically allow for their transmission. Such reasons include limited transmission bandwidth, processing power or other restrictions imposed by the vehicle architecture, cost of data transmission, perceived lack of business use-case, etc. Such data could nevertheless fall within the scope of the Data Act, given that the notion of ‘readily available data’ includes data that a data holder does not obtain but ‘can lawfully obtain’. When OEMs assess whether obtaining a certain data point is possible ‘without disproportionate effort going beyond a simple operation’, factors they might consider include the technical complexity and cost of obtaining the data point.
41. The Data Act is technology-neutral and does not create strict conditions regarding the format or quality of data or how data holders must grant access to readily available vehicle data. Data holders are, in principle, free to decide on the means through which access is granted. This may include, for example, remote backend solutions, onboard access, or even the use of a data intermediation service. Data holders must comply with the access and use conditions contained in Articles 3–5, including the requirement to make available data ‘of the same quality as is available to the data holder’ (Articles 4(1) and 5(1)). If a chosen access method results in data that is, for instance, less accurate, complete, reliable, relevant or up-to-date (c.f. Recital 30) than what is available to the data holder through other means, it does not meet the quality obligation. In such cases, the data holder must grant access through the means that enables the user or third party to receive data of equivalent quality, unless a different arrangement is justified under the Data Act, other Union law, or national legislation adopted in accordance with Union law.
42. The requirement to make available data ‘of the same quality as is available to the data holder’ also entails a rule not to discriminate against the user or third parties such as independent repair shops or other independent service providers. This implies that data holders must not make these data accessible at a level of quality lower than that at which the data are made available to themselves, subsidiaries or authorised partners, dealers and repairers.
43. Moreover, Articles 3(1), 4(1) and 5(1) of the Data Act require that data be made ‘easily’ available to the user and third parties. This means access must be provided in a facilitated manner and without undue barriers, costs, or procedural hurdles.
44. Where data holders choose to make available data to the user via the dedicated OBD-II port inside the vehicle, the user cannot be required to purchase a specialised access tool at their own expense or possess advanced technical skills to retrieve the data. Therefore, data holders may choose to either provide the user with a suitable access tool without additional costs together with the purchased, rented or leased vehicle, or to make the data available via other access means such as a remote backend server. This paragraph has no bearing on sector-specific legislation, particularly Articles 61–66 and Annex X of the Type Approval Regulation.

特别是在“扩展车辆”概念下，这些数据将可供原始设备制造商（OEM）轻松获取。

40. 原始设备制造商（OEM）出于多种原因，可能会选择不从后端获取或存储某些数据点，尽管车辆架构从技术上允许传输这些数据。这些原因包括传输带宽有限、处理能力不足、车辆架构施加的其他限制、数据传输成本过高、业务场景应用不足等。不过，这类数据仍可能属于《数据法案》的管辖范围，因为“随时可获取数据”的概念涵盖了数据持有者虽无法直接获取但“依法可获取”的数据。当OEM评估“无需付出超出常规操作的额外努力”即可获取特定数据点时，他们可能会考虑的技术复杂度和获取成本等因素。
41. 《数据法案》秉持技术中立原则，不对数据格式、质量或数据持有者获取车辆数据的方式设定严格限制。数据持有者原则上可自主选择访问方式，例如采用远程后台系统、车载访问或数据中介服务等。但需遵守第3至5条规定的访问与使用条件，特别是第4条第1款和第5条第1款要求“提供与数据持有者同等质量的数据”。若所选访问方式导致数据准确性、完整性、可靠性、相关性或时效性低于其他途径（参见第30段说明），即不符合质量义务要求。在此类情况下，数据持有者必须通过能确保用户或第三方获取同等质量数据的途径提供访问权限，除非《数据法案》、其他欧盟法律或根据欧盟法律制定的国家立法另有规定。
42. 要求提供“与数据持有者同等质量”的数据，还包含不得歧视用户或第三方（如独立维修店或其他独立服务商）的规定。这意味着数据持有者不得以低于其自身、子公司或授权合作伙伴、经销商及维修商所享有的数据质量标准来提供这些数据。
43. 此外，《数据法》第3条第1款、第4条第1款和第5条第1款规定，数据应“方便地”向用户和第三方提供。这意味着必须以便利的方式提供访问，且不得设置不当的障碍、费用或程序性障碍。
44. 当数据持有方选择通过车辆内置的专用 OBD -II接口向用户提供数据时，用户无需自费购买专业访问工具，也无需具备高深的技术水平即可获取数据。因此，数据持有方可选择两种方式：一是随购买、租赁或租用的车辆免费提供适配的访问工具；二是通过远程后端服务器等其他访问方式提供数据。本段内容与行业特定法规无关，特别是《型式批准法规》第61-66条及附件X的规定。

45. The Data Act only mandates making available data which are designed to be retrievable. This excludes, for example, data which are processed ‘on the edge’ (i.e. inside the vehicle) and cannot be accessed by any party, including OEMs, as they are immediately deleted after processing. Certain data points such as accelerometer data, vehicle speed, GNSS-based location or odometer value are essential for many aftermarket use-cases. Therefore, OEMs are encouraged to consider the importance of data points for independent aftermarket service providers when they decide whether to design such data points to be retrievable from the vehicle.

4. COST OF DATA ACCESS

46. Data holders who are obliged to make data available to a data recipient, particularly under Article 5, in business-to-business relations, are entitled to reasonable compensation in accordance with Article 9. This has no bearing on other Union law or national legislation adopted in accordance with Union law governing access to data in the automotive industry, including the technical information necessary for roadworthiness testing¹². Detailed guidance on how to calculate such compensation will be available in the upcoming Commission guidelines on the calculation of reasonable compensation pursuant to Article 9(5).

5. MISCELLANEOUS

47. The Commission encourages the competent authorities enforcing the Data Act to actively engage with other relevant authorities in the automotive sector, especially national competent authorities under the Type Approval Regulation and the General Data Protection Regulation, in accordance with Article 37(5)(g) of the Data Act, to ensure proper enforcement and smooth interplay between the Data Act and other relevant legislation. The Commission will strive for constructive dialogue with the competent authorities enforcing the Data Act and the other relevant authorities in the automotive sector to support their activities. In this context, the European Data Innovation Board can serve as a forum to promote consistency and mutual learning across sectors and EU Member States.

48. The Commission encourages all affected industry stakeholders to engage in dialogue to achieve balanced implementation, taking account of the legitimate interests of all relevant parties. This dialogue can address not only Data Act implementation but also other issues of relevance for the automotive ecosystem. The Commission is committed to facilitating such mutually beneficial dialogue.

49. The Commission encourages and facilitates the development and adoption of standards for access to data in the automotive industry, working effectively with relevant standardisation and data governance bodies to ensure interoperability, security and fair competition.

¹² Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and repealing Directive 2009/40/EC, OJ L 127, 29.4.2014, p. 51–128.

45. 《数据法案》仅要求提供可检索的数据。例如，那些在车辆内部进行处理且无法被任何一方（包括原始设备制造商）访问的数据就不在其保护范围内，因为这些数据在处理后会立即删除。加速度计数据、车速、基于 GNSS 的定位信息或里程表数值等关键数据点，对众多售后应用场景至关重要。因此，原始设备制造商在决定是否设计可从车辆中检索的数据点时，应当充分考虑这些数据对独立售后服务商的重要性。

4. 数据访问成本

46. 根据《欧盟通用数据保护条例》第5条规定，在企业间业务往来中负有向数据接收方提供数据义务的数据控制者，有权依据第9条获得合理补偿。该条款不影响其他欧盟法律或成员国依据欧盟法律制定的汽车工业数据访问相关法规，包括道路适航性测试所需的技术信息¹²。关于如何计算此类补偿的具体指引，将在即将发布的欧盟委员会《合理补偿计算指南》（依据第9条第5款）中详细说明。

5. 其他

47. 欧盟委员会鼓励负责实施《数据法案》的主管部门，根据该法案第37条第5款(g)项规定，积极与汽车行业的其他相关机构开展协作，特别是依据《型式批准法规》和《通用数据保护条例》设立的国家主管部门，以确保《数据法案》与其他相关法规的协调实施。委员会将致力于与负责执行《数据法案》的主管部门及汽车行业其他相关机构开展建设性对话，支持其工作推进。在此背景下，欧洲数据创新委员会可作为跨行业及欧盟成员国间促进政策协调与经验共享的交流平台。

48. 欧盟委员会鼓励所有受影响的行业利益相关方开展对话，以实现平衡实施，同时兼顾各方的正当利益。此类对话不仅涉及《数据法案》的实施，还涵盖汽车生态系统相关的其他议题。欧盟委员会致力于推动这种互利共赢的对话进程。

49. 欧盟委员会鼓励并推动汽车工业制定和采用数据访问标准，与相关标准化和数据治理机构有效合作，以确保互操作性、安全性和公平竞争。

¹² 2014年4月3日欧洲议会和理事会关于机动车及其挂车定期道路适用性测试的第2014/45/EU号指令，废止第2009/40/EC号指令，OJ L 127， 29.4.2014，第51-128页。

50. Given the novelty of the Data Act and the continuous developments in relevant technologies, this guidance should be reviewed after an appropriate period to assess its effectiveness in the automotive sector and identify any outstanding issues.

50. 鉴于《数据法案》的创新性以及相关技术的持续发展，应在适当期限后对该指南进行审查，以评估其在汽车行业的有效性，并确定任何悬而未决的问题。