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**Draft Bill**

**of the Federal Government**

**Draft Bill to Amend the German Road Traffic Law and the Compulsory Insurance Law – Autonomous Driving Law**

**A. Problem and Objective**

The pace of developments in the field of automatic, autonomous, and connected driving remains high. In order to leverage the potential of these technologies and enable society to participate in them, further steps must be taken to introduce such systems into regular operation. Following the previous legal provisions of the Eighth Law to Amend the German Road Traffic Law for the operation of motor vehicles with largely or entirely self-driving systems, there is a need to go beyond the testing framework for self-driving vehicles that is already possible on public roads and to allow these vehicles to be operated regularly. Initially, self-driving vehicles must be able to be used in defined operational design domains. In the absence of international, harmonized provisions, such far-reaching technical developments require legislative regulations governing the operation of motor vehicles with a self-driving system as well as requirements for those parties involved in the process and the motor vehicle itself.

Indeed, vehicles belonging to the German Federal Armed Forces, the Federal police, the Federal State police, civil and disaster protection, the fire department, and emergency services use self-driving systems. However, these vehicles are subject to special operating conditions in their range of applications and have special equipment for which it must continue to be possible to issue operating permits under independent authority.

**B. Solution**

A suitable legal framework is intended to be created by expanding the existing road traffic regulations. Under current applicable law, autonomous motor vehicles may be operated on public roads if these vehicles and their respective operational design domains have been approved by the competent authorities.

To date, no adequate legal framework for vehicles with a self-driving system has been enacted at the European level. Regulation (EU) 2018/858 of the European Parliament and the Council of May 30, 2018 on approval and market inspection of motor vehicles and motor vehicle trailers, as well as of systems, components, and independent technological units for these vehicles, amending Regulations (EU) 715/2007 and (EU) 595/2009 and repealing Directive 2007/46/EC, always requires the presence of a person capable of driving the vehicle, and, thus, there is a requirement that the vehicle remain full controllable by a human driver in accordance with the application design domain and technical specifications of such vehicles. In contrast, a self-driving system is characterized by the fact that it does not provide for a human driver of the vehicle. In order to support the innovative endeavor to develop self-driving technology, suitable conditions must be established allowing for the regular operation of these vehicles for the moment until harmonization under EU law can be achieved through the national legal framework. A different approval path will continue to apply to enable vehicles belonging to the German Federal Armed Forces, the Federal police, civil protection, and the Federal State police, to fulfill their official tasks.

**C. Alternatives**

None, as there are no international rules governing the use of self-driving vehicles at present. Waiting any longer to pass such legislation would jeopardize the leading position of the Federal Republic of Germany in the development of automated, self-driving, and connected vehicles and fail to fully take advantage of the existing potential in this area. Without this regulation, Germany would miss an essential opportunity to increase traffic safety, reduce environmental emissions, and strengthen the country’s reputation for innovation, business, and the promotion of social inclusion.

**D. Budgetary expenditures without compliance costs**

Budget expenditures without compliance costs are currently not incurred as a result of the amendment itself. They would first be incurred as a result of the legal regulations to be issued under this proposed law. At present, it is anticipated that as of 2022, the federal government will incur annual personnel and material expenses under Government Budget Secs. 12 and 06 amounting to approximately EUR 1,200,000. The additional requirements must be covered by the financial budget allocations and staffing plans under the relevant government budget sections. The costs are intended to be offset by the projected additional revenue from the Federal Motor Transport Authority, which is expected to be approximately EUR 900,000 resulting from fee increases or from newly created fees. The cost of activities of the Federal Office for Information Security in the amount of approximately EUR 300,000 will also be taken into account when setting fees to be collected by the Federal Motor Transport Authority.

**E. Compliance costs**

The amendment itself will not result in compliance costs for citizens, the economy, or the administration. Any costs would be the result of statutory ordinances to be issued according to this law. According to the present state of knowledge, anticipated compliance costs are detailed below.

**E. 1 Compliance costs for citizens**

Based on the assumption that citizens will not be the owners of motor vehicles with self-driving systems in the defined operational design domains for the foreseeable future, citizens will not incur compliance costs.

**E.2 Compliance costs for the economy**

The compliance costs for the economy will be an annual total of approximately EUR 10,800,000 million and a one-time cost of approximately EUR 2,000,000 These result from the compliance costs for the various groups affected by the legislation and can be broken down as follows:

1. Compliance costs for the manufacturers of motor vehicles with self-driving systems in the amount of approximately EUR 300,000 annually. Based on the current state of knowledge, an estimate of the one-time compliance costs could not be determined.
2. Compliance costs for commercials owners of motor vehicles with self-driving systems in the amount of approximately EUR 10,500,000 annually and a one-time cost of approximately EUR 2,000,000.

**E.3 Administrative compliance costs**

The compliance costs for the administration will amount to a little over EUR 1,600,000 annually. These results from the compliance costs for the for the various groups affected by the legislation and can be broken down as follows:

1. Compliance costs for the Federal Government in the amount of approximately EUR 1,222,667 annually.

Compliance costs for the Federal States and municipalities in the amount of approximately EUR 400,000 annually.

**F. Additional Costs**

Manufacturers will incur annual costs of approximately EUR 500,000 to complete applications to obtain operating permits. Owners will incur annual costs of EUR 500,000 to complete applications to obtain test permits.

The precise sums will be designated in the legal regulation to be issued in conjunction with this law. To apply for a defined operational design domain, the owner of a motor vehicle with a self-driving system must obtain an approval that is valid for a defined operational design domain from the responsible authority under state law. As part of this process, the owner could incur “additional costs” in the form of fees. However, these could not be quantified because the regulations or the amount of the fees were not yet available at the time of this survey.

**Draft Bill of the Federal Government**

**Draft law to amend the German Road Traffic Law and the Compulsory Insurance Law – Autonomous Driving Law**

**of**

The Bundestag has passed the following law with the consent of the German Bundesrat:

**Article 1**

**Amendment of the German Road Traffic Law − StVG**

The German Road Traffic Law as published on March 5, 2003 (Federal Law Gazette I p. 310, 919), most recently amended by Article 3 of the Law of November 26, 2020 (Federal Law Gazette I p. 2575), is amended as follows:

**1.** Following Sec. 1c, the following Sec. 1d to 1l is amended as follows:

**Sec. 1d Motor Vehicles with Self-Driving Systems in Defined Operational Design Domains**

(1) A motor vehicle with self-driving systems within the meaning of this law refers to a motor vehicle that

1. can drive independently without a driver in a defined operational design domain and

2. has technological equipment pursuant to Sec. 1c, Paragraph 2.

(2) A defined operational design domain within the meaning of this law refers to the locally and spatially determined public roads on which a motor vehicle with self-driving systems may be operated under the preconditions pursuant to Sec. 1e, Paragraph 1.

(3) Technical supervision of a motor vehicle with self-driving systems within the meaning of this law refers to any natural person who can deactivate this motor vehicle during operation pursuant to Sec. 1e Paragraph 2 No. 8 and carry out driving maneuvers for this motor vehicle pursuant to Sec. 1e Paragraph 2 No. 4, and Paragraph 3.

(4) A minimum risk condition within the meaning of this law refers to a condition in which the motor vehicle with a self-driving system will, either independently, or upon application of technical supervision, move independently taking suitable account of the traffic situation to ensure the greatest possible traffic safety for other road users and third parties.

**Sec. 1e Operation of Motor Vehicles with Self-Driving Systems: Objections and Legal Challenges**

(1) The operation of a motor vehicle by means of a self-driving system is permitted, if

1. the motor vehicle meets the technical preconditions pursuant to Paragraph 2,
2. an operating permit pursuant to Paragraph 4 has been issued for the motor vehicle,
3. the motor vehicle is used in a defined operational design domain approved by a responsible authority under State Law, and
4. the motor vehicle is approved for participation in public road traffic pursuant to Sec. 1, Paragraph 1.

Operation of a motor vehicle pursuant to Sec. 1h and its registration in other respects pursuant to Sec. 1, Paragraph 1 remains unaffected by these provisions.

(2) Motor vehicles with self-driving systems must have technical equipment suited to

1. independently perform the driving activity in the respective defined operational design domain without the intervention of a driver or without the need for permanent monitoring of the journey by a technical supervisor,
2. independently comply with the traffic provisions to which motor vehicle operation is subject, and that has an accident avoidance system, that
	1. is designed to avoid and reduce damages,
	2. that, in the event of unavoidable alternative damage to various legal assets, considers the importance of the legal assets, with the protection of human life given the highest priority, and
	3. in the event of unavoidable alternative endangerment of human life, does not make any further assessment on the basis of personal characteristics,
3. independently places the motor vehicle in a minimum risk condition if continuing to drive would be possible only by violating traffic laws,
4. in the event of No. 3, independently contacts a technical supervisor and
	* 1. suggests possible driving maneuvers to continue driving and
		2. delivers data to assess the situation, such that the technical supervisor can decide whether to approve the suggested driving maneuvers,
5. to review a driving maneuver suggested by the technical supervisor and not to carry it out, but rather to independently put the motor vehicle in a minimum risk condition, if the driving maneuver could endanger people participating in traffic or non-participating people,
6. to notify the technical supervisor immediately of any impairment of its functionality,
7. to recognize its system limits and, when the system limits are reached, in the event of a technical disturbance that could impair self-driving system, or when the limits of the defined operational design domain are reached, will independently put the motor vehicle in a minimum risk condition, activate the warning light systems, and bring it to a stop in as safe a location as possible,
8. to be deactivated by the technical supervisor at any time and, in the event of a deactivation, to independently put the motor vehicle in the minimum risk condition,
9. to provide the technical supervisor with an approved alternative driving maneuver or deactivation, and signals about its own functional status optically, acoustically, or in another manner, with sufficient time remaining, and
10. to ensure a sufficiently secure wireless contact, especially to the technical supervisor, and to independently place the motor vehicle in a minimum risk condition if the secure wireless connection is broken or accessed in an unauthorized manner.

(3) To fulfill the requirements pursuant to Paragraph 2, Nos. 1 through 4, it is also sufficient in the event of other impairments that would cause the technical equipment to be unable to drive independently, if

1. the technical equipment is able to ensure that alternative driving maneuvers can be specified and carried out by the technical supervisor,

2. the alternative driving maneuvers pursuant to No. 1 can be carried out independently by the technical equipment, and

3. the technical equipment is able to prompt the technical supervisor to prescribe a driving maneuver optically, acoustically, or in another manner with sufficient time remaining.

(4) If the technical preconditions pursuant to Paragraph 2 and the declaration of the manufacturer pursuant to Sec. 1f, Paragraph 3, No. 4 are present, the Federal Motor Transport Authority will issue an operating permit for a motor vehicle with a self-driving system when the manufacturer submits an application.

(5) Objections and legal challenges against the revocation of an operating permit for a motor vehicle with a self-driving system do not have a delaying effect.

(6) Objections and legal challenges against the revocation of an approval for a defined operational design domain do not have a delaying effect.

**Section 1f Duties of Participants when Operating Motor Vehicles with Self-Driving Systems**

(1) The owner of a motor vehicle with a self-driving system is obligated to maintain the roadworthiness and environmental appropriateness of the motor vehicle and shall take the necessary measures to do so. They shall especially

1. ensure that regular maintenance of the systems necessary for self-driving functions is performed,

2. take measures to ensure compliance with other traffic provisions not related to driving, and

3. fulfill the activities of technical supervision.

(2) The technical supervision over a motor vehicle with self-driving systems is mandatory.

1. to approve the motor vehicle for an alternative driving maneuver pursuant to Sec. 1e, Paragraph 2, No. 4 and Paragraph 3 as soon as it has displayed an optical, acoustic, or other type of signal through the vehicle system and the data provided by the driving system has facilitated an assessment of the situation,

2. to deactivate the self-driving system immediately as soon as the optical, acoustic, or other type of signal is displayed by the driving system,

3. to evaluate signals from the technical equipment for their functional status and introduce any necessary measures for traffic safety and

4. immediately initiate contact with the occupants of the motor vehicle and introduce measures necessary for traffic safety if the motor vehicle is placed in the minimum risk condition.

(3) The manufacturer of a motor vehicle with a self-driving system must

1. document to the Federal Motor Transport Authority and the responsible authorities during the course of the entire development and operating period of the motor vehicle that the electronic and electric architecture of the motor vehicle and the electronic and electric architecture in connection with the motor vehicle is secure against outside interventions,

2. perform a risk assessment for the motor vehicle and to document to the Federal Motor Transport Authority and the responsible authorities how the risk assessment was performed and that critical elements of the motor vehicle are protected against risks that were found to exist within the scope of the risk assessment,

3. document a sufficiently secure wireless connection for autonomous driving,

4. for every motor vehicle, to perform a system description, create an operating manual, and make a binding declaration to the Federal Motor Transportation Authority that the motor vehicle fulfills the preconditions pursuant to Sec. 1e, Paragraph 2, and in connection with

Paragraph 3.5 to offer training for the people participating in the operation of the motor vehicle, which focuses particularly on technical functionality in view of driving systems and defines the task performance of technical supervision, and

6. if the motor vehicle or its electronic or electrical architecture is tampered with, especially in the event of unauthorized access to the wireless connection of the motor vehicle, to immediately notify the Federal Motor Transport Authority and the responsible authorities under State Law and to initiate the necessary mitigation measures.

**Sec. 1g Data Processing**

(1) The owner of a motor vehicle with a self-driving system is obligated to store the following data when the motor vehicle is operated:

1. Vehicle identification number

2. Position data

3. Number and times of use, as well as activation and deactivation of the self-driving system,

4. Number and times of approval of alternative driving maneuvers,

5. System monitoring data, including data about the software version,

6. Environmental and weather conditions,

7. Networking parameters, such as transmission latency and available bandwidth,

8. Name of the activated and deactivated passive and active safety systems, data about the condition of these safety systems and the event that triggered the safety system,

9. Longitudinal and lateral vehicle acceleration,

10. Speed,

11. Status of the lighting equipment,

12. Power supply of the motor vehicle with a self-driving system,

13. External orders and information sent to the motor vehicle.

The owner is obligated to send the data under Clause 1 above to the Federal Motor Transport Authority and the responsible authorities under State Law upon request, if it is necessary

1. for the Federal Motor Transport Authority to fulfill its activities under Paragraphs 4 and 5 and

2. for the authorities under State Law to fulfill their activities under Paragraph 6.

(2) The data pursuant to Paragraph 1 shall be stored for the following occasions:

1. in the event of an intervention by the technical supervisor,

2. in the event of conflict scenarios, especially accidents and fast accident scenarios,

3. in the event of unplanned lane changes or deviations,

4. in the event of malfunctions in the operating process.

(3) The manufacturer must inform the owner in precise, clear, and understandable language about privacy settings and data that is processed during operation of the motor vehicle in self-driving system. The respective software of the motor vehicle must enable the owner to adjust these settings.

(4) The Federal Motor Transport Authority is entitled to collect, store, and use the following data from the owner, inasmuch as this is necessary in monitoring the safe operation of motor vehicles with self-driving systems:

1. Data pursuant to paragraph 1 and

2. The first and last name of the person used as technical supervisor and documentation of their specialized qualification.

If the owner uses its employees pursuant to Sec. 26 of the Federal Data Protection Law as technical supervisors, Sec. 26 of the Federal Data Protection Law applies. The Federal Motor Transport Authority shall delete the data immediately as soon as it is no longer necessary for the purpose pursuant to Clause 1, but no later than after the expiration of three years after operation of the respective motor vehicle has ceased.

(5) The Federal Motor Vehicle Authority is entitled to make the data collected from the owner pursuant to Paragraph 4, No. 1, inasmuch as it is not in a personalized form, available to the following entities for transportation-related public benefit, especially for the purpose of scientific research in the field of digitalization, automation, and networking, and for purposes of accident research on road traffic:

1. Colleges and universities,

2. Research entities that are not part of universities,

3. Federal, Federal State, and municipal authorities with research, development, transportation planning, or city planning activities.

The entities named in Clause 1 may use the data only for the purposes stated in Clause 1. Paragraph 4 Clause 2 applies accordingly. General transmission rules remain unaffected.

(6) The authorities responsible for the approval of defined operational design domains under State Law are entitled to collect, store, and use the following data from the owner, inasmuch as this is necessary for assessing and monitoring whether the defined operational design domain is suitable for the operation of a motor vehicle with a self-driving system, especially for validation and monitoring if the preconditions for the respective approval are present and if the associated rules are being followed:

1. Data pursuant to Paragraph 1 and

2. The first and last name of the person used as technical supervisor and documentation of their specialized qualification.

The authorities responsible for approval of defined operational design domains under State Law shall delete the data immediately once it is no longer necessary for its purpose pursuant to Clause 1, but no later than after the expiration of three years after operation of the respective motor vehicle has ceased.

**Section 1h Subsequent Activation of Automated and Self-Driving Systems**

(1) If an automated or self-driving system that is not described in international provisions that fall within the scope of this law is installed in a motor vehicle, the issuance of an approval for the operation of this motor vehicle according to the relevant approval provisions under omission of the automated or self-driving system is permitted only if deactivation of the automated or self-driving system prevents this driving system from exerting any influence on the approved systems.

(2) The activation of an automated or self-driving system within the meaning of Paragraph 1 in an approved motor vehicle for the operation of these systems in public road traffic within the scope of this law may occur only on the basis of a special approval issued by the Federal Motor Transport Authority. This approval may be issued only if the driving system is suitable for approval pursuant to Sec. 1a Paragraph 3 Sec. 1e, Paragraph 2, or other relevant approval provisions. The Federal Motor Transport Authority will publish the technical requirements to be taken into consideration.

**Section 1i Subsequent Activation of Automated and Self-Driving Systems**

(1) Motor vehicles that serve to test the level of automation for the development of automated or self-driving systems may be operated on public roads only if

1. a test permit pursuant to Paragraph 2 has been issued for the motor vehicle by the Federal Motor Transport Authority,

2. the motor vehicle is approved pursuant to Sec. 1 Paragraph 1,

3. the motor vehicle will be exclusively operated for testing and

4. the motor vehicle will be permanently monitored during operation as follows:

a) for automated driving systems, the monitoring will be performed by a reliable driver in connection with technical developments for motor vehicle traffic,

b) for self-driving systems, the monitoring will be performed by reliable a technical supervisor on site with regard to technical developments for motor vehicle traffic.

(2) A test permit pursuant to Paragraph 1, No. 1 will be issued by the Federal Motor Transport Authority when the owner submits an application. The Federal Motor Transport Authority can add ancillary provisions to the test permit to ensure the safe operation of the motor vehicle at any time. The highest authority of the Federal State in question has jurisdiction over ancillary provisions that limit the operation to a certain operational design domain.

(3) The Federal Motor Transport Authority will involve the Federal Office for Information Security on issues of information security in the creation, implementation, development, and evaluation of technical requirements.

**Section 1j Regulation Authorization**

(1) The Federal Ministry of Transport and Digital Infrastructure is empowered, with the consent of the German Bundesrat, to rule on details of the registration and operation of motor vehicles with self-driving systems on public roads through legal regulations pursuant to Secs. 1d through 1i concerning

1. the technical requirements and the procedure for issuing an operating permit pursuant to Sec. 1e Paragraphs 2 through 4 by the Federal Motor Transport Authority, including

a) the technical requirements to be met by the manufacturer regarding the construction, the characteristics, and the technical equipment of the motor vehicle, the requirements concerning data storage, security of the information technology used and the functional safety of the motor vehicle to be met by the manufacturer, the requirements to be met by the manufacturer concerning the declaration pursuant to Sec. 1f Paragraph 3 No. 4 and the documentation obligations to be met by the manufacturer.

b) Requirements for the testing and validation of the motor vehicle by the Federal Motor Transport Authority,

c) Requirements for the operation of the motor vehicle,

d) Requirements for the assessment of the motor vehicle by the Federal Motor Vehicle Authority and

b) the market surveillance, including rules about participation of other authorities in the evaluation of the information technology security of motor vehicles and vehicle components and the regulation of duties to cooperate for manufacturers and owners of motor vehicles with self-driving systems,

2. the suitability of operational design domains and the procedure for the evaluation and approval of defined operational design domains by the responsible authorities under State Law,

3. Special characteristics of the registration procedure, including the identification of the motor vehicle and vehicle components to identify its mode of operation and to ensure traffic safety,

4. Requirements of and obligations for manufacturers, owners, and the technical supervisor to ensure traffic safety and safe operation, including

a) Requirements for approval of driving maneuvers and for deactivation of a motor vehicle by the technical supervisor pursuant to Sec. 1f, Paragraph 2, Nos. 1 and 2,

b) technical and organizational requirements for the owner and

c) Requirements concerning the technical qualification and reliability of the persons participating in the operation of a motor vehicle with self-driving systems, including the necessary documentation,

5. the technical details of the storage of the data that is created through the operation of the motor vehicle by means of the self-driving system pursuant to Sec. 1g, Paragraph 1, especially regarding the exact time of data storage, the parameters of the data categories, and the data formats,

6. the procedure for issuing an approval in the event of the subsequent activation of automated and self-driving systems pursuant to Sec. 1h, including technical requirements for issuing such an operating permit,

7. the requirements and the procedure for issuing a test permit pursuant to Sec. 1i, Paragraph 2 by the Federal Motor Transport Authority, including additional duties of the owner, exceptions from requirements under this law for test purposes and the authorization of the Federal Motor Transport Authority to collect, store, and use data that is necessary for the creation of a database for the assessment of safety in road traffic and the technical progress and for evidence-based development of the regulation of the level of automation of automated or self-driving systems,

8. Deviations from the provisions of Secs. 1d to 1i in reference to motor vehicles of the German Federal Armed Forces, the Federal Police, the State Police, civil and disaster protection, the fire department, and the emergency services,

(2) The Federal Ministry of Transport and Digital Infrastructure is empowered, without the consent of the German Bundesrat, to regulate exceptions from these through legal regulations issued on the basis of Paragraph 1 for the purpose of testing new self-driving systems. It is empowered to transfer this power to the Federal Motor Transport Authority through legal regulations without the consent of the German Bundesrat.

**Sec. 1k Vehicles Belonging to the German Federal Armed Forces, the Federal Police, the Federal State Police, Civil and Disaster Protection, the Fire Department, and Emergency Services**

(1) For motor vehicles with Self-Driving Systems Pursuant to Sec. 1d Paragraph 1 that are intended for military, police, civil and disaster protection, fire-fighting, and emergency services purposes, the Federal Ministry of Defense may name departments of the German Federal Armed Forces, the Federal Ministry of the Interior, of Construction, and Homeland Services in its division and the responsible departments under State Law in their divisions that perform the tasks of the Federal Motor Transport Authority in its place for their respective divisions.

(2) Motor vehicles with self-driving systems that are used in the German Federal Armed Forces, the Federal police, the Federal State police, in civil and disaster protection, in the fire department or in emergency services may deviate from the technical rules, from regulations regarding the determination of operational design domains, and from operational provisions, as well as from the regulations issued in accordance with Sec. 1j Paragraph 1, if the motor vehicle is used to perform official tasks, is built or equipped for these purposes, and if it is ensured that the motor vehicle will be used with due regard for public safety. In the process, technical preconditions, regulations about determining operational design domains and operating provisions shall be applied analogously, inasmuch as this is possible for the military purpose, police purpose, the purpose of civil or disaster protection, the purpose of fire-fighting, or the purpose of the emergency services; deviations shall be limited to the degree absolutely necessary.

**Section 11 Evaluation**

The Federal Ministry of Transport and digital infrastructure will evaluate the application of the regulations of this law from ...[insert: date of issue and reference of this law] after the end of 2023, especially with regard to effects on the development of self-driving systems, compatibility with data privacy provisions and findings obtained on the basis of test permits in meaning of

Sec. 1i Paragraph 2 on a scientific basis in a non-personalized form and will inform the German Bundestag of the results of the evaluation. If necessary, the Federal Ministry of Transport and Digital Infrastructure will conduct the evaluation once again from a time to be determined by it to 2030.

**2.** In Sec. 8 No. 1, the words “unless this is a motor vehicle with a self-driving system in the meaning of Sec. 1d Paragraph 1 and 2, that is being operated autonomously” will be added after the words “if the accident is caused by a motor vehicle that can drive on a flat track with a speed no higher than 20 kilometers an hour.”

**3.** In Sec. 12 Paragraph 1 Clause 1 Nos. 1 and 2, the words “or during operation of a self-driving system pursuant to Sec. 1e” will be added after the words “due to the use of a largely or entirely self-driving system pursuant to Sec. 1a” in both instances.

**4.** In Sec. 19 No. 1 Clause 3, the words “unless this is a motor vehicle with a self-driving system in the meaning of Sec. 1d Paragraphs 1 and 2, that is being operated autonomously” will be added after the words “Clauses 1 and 2 do not apply if the accident is caused by a trailer that was connected with a motor vehicle that can drive on a flat track with a speed no higher than 20 kilometers an hour at the time of the accident.”

**5.** In Sec. 24 Paragraph 1 Clause 1, the words “provision of a legal regulation issued on the basis of Sec. 6 Paragraph 1 of Sec. 6e Paragraph 1 or of Sec. 6g Paragraph 4, or on the basis of an order issued on the basis of such a legal regulation” will be replaced by the words “legal regulation pursuant to Sec. 1j Paragraph 1 Nos. 1, 2, 4, 5 or 6, Sec. 6 Paragraph 1 Sec. 6e, Paragraph 1, or Sec. 6g Paragraph 4 or an enforceable order on the basis of such a legal regulation.”

**Article 2**

**Amending the Compulsory Insurance Law**

To Sec. 1 of the Compulsory Insurance Law of April 5, 1965 (Federal Law Gazette I p. 213), which was most recently amended by Article 1 of the Regulation from February 6, 2017 (Federal Law Gazette I, p. 147), the following sentence is added:

“The owner of a motor vehicle with a self-driving system in the meaning of Sec. 1d of the German Road Traffic Law is obligated to conclude and maintain mandatory liability insurance pursuant to clause 1, also for a person of technical supervision.”

**Article 3**

**Entry into force**

The law enters into force the day after it is announced. **Justification**

**A. General information**

**I. Background**

 The use of automated and self-driving vehicles, meaning those without a driver and that are connected, on public roads will be form essential part of future mobility. Vehicles with automated and self-driving systems will not only increase traffic safety and efficiency, but they will also achieve positive environmental effects (by reducing emissions and the amount of land needed for pavement), especially as a result of new mobility concepts and solutions. Technological progress will also affect the daily life of companies and provide a new economic impetus.

The overwhelming majority of all traffic accidents in Germany are the result of human error. Despite the fact that the vehicles on the road are generally roadworthy, serious accidents continue to occur, and the victims are often poorly protected road users, such as pedestrians or cyclists. In addition, demographic change means that older people increasingly use vehicles on public roads in order to stay mobile. They are often faced with challenges when using the various modes of transportation, such as, for example, finding suitable local public transportation options (low-floor vehicles and access to necessary stops). Vehicles with a self-driving system make it easier for people with limited mobility to gain access to social functions.

Motor vehicles with a self-driving system can also increase traffic safety since they are equipped with more responsive technology. In addition, they enable new mobility concepts that, in addition to offering conventional transport solutions (for example, on scheduled public transport), also offer individualized options for picking up people from their front door and taking them to their desired destination. Last but not least, this can strengthen social inclusion, because the use of driverless vehicles helps people with restricted mobility to participate in social life on the same terms as all other citizens. This is particularly true in rural regions with weak transportation infrastructure.

The federal government has recognized the potential of automated and connected driving systems, and, in September 2015, it sought to stimulate the development of this technology in Germany by establishing and implementing the “Strategy for Automated and Connected Driving Systems: Remaining the Lead Provider, Becoming the Market Leader, and Embarking on the Era of Regular Operation.” As a result of the implementation of this strategy, it has become possible to significantly promote research and, thanks to the establishment of various digital test stands, to create opportunities to test vehicles and infrastructure under real conditions in different scenarios.

 The aim of the federal government is to create the framework conditions for the introduction and regular operation of automated, connected, and now self-driving systems. This, among other things, requires the articulation of clear legal requirements for operation and the users of automated, self-driving, and connected vehicles in the interests of ensuring legal certainty.

Testing motor vehicles with automated and self-driving systems in public road traffic therefore remains possible even today. Notwithstanding the provisions of the Road Traffic Licensing Regulation, motor vehicles with automated or self-driving systems could be tested at any time so long as they were accompanied by a person who was prepared to intervene, thereby satisfying the provisions of ensuring road traffic safety. To test automated and self-driving systems, it was previously necessary to obtain individual or multiple (exceptional) approvals at the level of the affected Federal States. To now establish clear, uniform preconditions for testing new technologies at the federal level, new provisions will be created and the Federal Motor Transport Authority will be established as the central, responsible permitting authority. Results from prior and forthcoming tests of this technology, which will also be obtained within the scope of the research funding of the Federal Government (See: https://www.bmvi.de/DE/Themen/Digitales/AVF-Forschungsprogramm/Ueberblick/avf-ueberblick.html), will promote the future development and implementation of the technology.

Provisions for the standard operation of self-driving systems were already created with the effective date of the Eighth Law Amending the German Road Traffic Law (Eighth Law Amending the German Road Traffic Law [Federal Law Gazette I p. 1648] on June 21, 2017. This change in the law was among the first rules in the world covering the use of motor vehicles with largely or entirely self-driving systems in the meaning of the law.

Continuing with these initiatives, this current law now serves to create legal certainty for the use of self-driving; that is, driverless systems in road traffic in accordance with Level 4 of the categorization of the SAE (earlier” Society of Automotive Engineers – see also: https://www.sae.org/standards/content/j3016\_201806/) and the current classification of the ongoing Automation of The Round Table “Self-Driving Systems” (see also: https://www.bmvi.de/DE/Themen/Digitales/Automatisiertes-und-vernetztes-Fahren/automatisiertes-und-vernetztes-fahren.html). This does not concern fully self-driving motor vehicles of Level 5 according to the international classification (SAE level; SAE International – see also: Coalition Agreement between CDU, CSU and SPD 19th legislative period, available at: https://www.bundesregierung.de/breg-de/themen/koalitionsvertrag-zwischen-cdu-csu-und-spd-195906). SAE Level 5 means completely autonomous cars, in which the dynamic activity of driving is accomplished under every type of road and environmental conditions that a human driver would encounter, without a human driver performing them. Regulations that concern autonomous driving in suitable operational design domains correspond to SAE Level 4.

The motor vehicle can operate without a driver and place itself in the minimum risk condition if necessary, if it reaches its system limits. It is always possible to deactivate or, if implemented in the respective development, to approve situationally necessary exceptional driving maneuvers for the motor vehicle with a self-driving system through external access (such as from a control center), with the technical supervisor responsible for this intervention.

This law about self-driving vehicles offers opportunities for use in various mobility areas. Different applications in public transportation within municipalities are possible. Here, a variety of public transportation needs could be met with a mix of smaller and larger vehicles. In municipalities, there are also opportunities to use such vehicles for official business and supply trips. Other possible application areas include use cases in logistics. For example, the distribution of mail or documents between different locations can be made simpler and more efficient with driverless motor vehicles. In addition, company shuttles that transport employees and trips between medical supply centers and retirement homes and nursing homes would be possible using such vehicles.

Indeed, vehicles belonging to the German Federal Armed Forces, the Federal police, the Federal State police, civil and disaster protection, the fire department, and emergency services already now use self-driving systems. However, because of their wide range of use in carrying out their official functions, these services often require specific deviations from the broader regulations.

Facilitating the operation of motor vehicles with self-driving systems in defined operational design domains is the next step in introducing self-driving, automated, and connected vehicles in regular operation on public roads.

**II. Legislative Competence of the Federal Government**

The competing legislative competence of the Federal Government follows for the regulations about administrative legal procedures from Article 74 Paragraph 1 No. 1 (Legal Procedures) and otherwise from Article 74 Paragraph 1 No. 22 (Road Traffic) in connection with Article 72 Paragraph 2 of the Basic Law (GG).

To preserve legal and economic unity in the national interest, it is necessary for both the registration and the use of motor vehicles with self-driving systems and the determination of rights and obligations of the persons participating in the operation of these vehicles fall under the rubric of federal legal regulations. Road traffic concerns areas of life that go beyond the boundaries of a Federal State and should therefore be regulated at the federal level.

**III. Compatibility with the Laws of the European Union and International Treaties**

The draft law is compatible with the law of the European Union and international treaties concluded with the Federal Republic of Germany and is also in compliance with international regulations, including, in particular, the Vienna Convention on Road Traffic (1968, Federal Law Gazette 1977 II, pp. 809, 811). It also results from the recommendations announced in September 2018 to amend regulatory law by the respective working group, "Global Forum for Road Traffic Safety" WP.1 of the United Nations Economic Commission for Europe (UNECE). Therefore, self-driving motor vehicles are permitted on public roads only if they are equipped with at least one deactivation option that can be enabled by a person either inside or only outside the vehicle (regardless of spatial distance; e.g., by a technical supervisor). The recommendations were published in the Transport Gazette (Transport Gazette 24/2018 of December 31, 2018, pp. 866–870).

Furthermore, the European type approval regulations do not conflict. The previously applicable Directive 2007/46/EC (Framework Directive) and Regulation (EU) 2018/858, which has been binding since September 1, 2020 and which has replaced the Framework Directive, form a harmonized legal framework for type approval and bringing motor vehicles, systems, components, and independent technical units for these vehicles to the market of the European Union. The key point of the type-approval regulations are the technical requirements for motor vehicles, which are largely specified in Annex IV of the Framework Directive and Annex II of the Regulation (EU) 2018/858. However, these do not specify any requirements for self-driving vehicles. In particular, the scope and technical specifications of Regulation (EU) 2018/858 (the seat of the driver, steering systems, protection for the driver in the event of an accident, field of vision, etc.) always require a person to be driving the vehicle and thus for the vehicle to always be controlled by a human driver ("to be driven"). In contrast, a self-driving system is characterized by the fact that it does not provide for a human driver of the vehicle. In this regard, it would be illustrative to cite the examples of the so-called “people movers” or “goods movers.” Depending on the final level of driving automation that is developed, these concepts should therefore be viewed as being something quite different from a motor vehicle in the meaning of Regulation (EU) 2018/858 (i.e., they are closer to robots). Therefore, here we have a non-harmonized area for the time being that is governed by a national legal structure and national approvals that are issued for limited periods of validity in Germany.

If, depending on the developed level of automation, it can be established that the self-driving or automated vehicle is close to a conventional motor vehicle and thus can predominantly be understood as a type approval under applicable law, such as, for example, if self-driving systems were to be installed as an alternative to the conventional driving system, then the national-type approval for vehicles produced in low volumes in accordance with Art. 42, 43 Regulation (EU) 2018/858 may allow deviations from the harmonized technical requirements, provided that alternative technical requirements are specified at the national level. The present law includes such alternative requirements, so that this authorization option is also available. In addition, the validity of this authorization is also limited to German national territory.

If a type approval that is valid for the entire EU is requested, Art. 39 Regulation (EU) 2018/858 allows for an exception to the type approval for new technologies or new concepts, which must be authorized by the European Commission. The precondition for securing this exemption type approval, however, is incompatibility with one or more of the technical legal acts of Annex II. As was already explained above, self-driving vehicles are not described by those legal acts, so that depending on the stage of development a partial incompatibility may no longer be under consideration. Rather, we may be dealing with a totally different technology where it cannot be determined that the European Commission has the authority to assess it.

As soon as sufficient requirements are enacted for type approval and the operation of automated and self-driving vehicles at the level of the European Union, adjustments to the current law and this Regulation will be made as required.

Directive 2006/42/EC of the European Parliament and the Council from May 17, 2006 about machines and regarding changing Directive 95/16/EC (Machinery Directive) are not applicable for motor vehicles with self-driving systems, as these are means of transport. Pursuant to Article 1 Paragraph 2 Letter e of the Machinery Directive, various means of transport are excluded from its scope. To define such means of transport, the Machinery Directive refers to, among other things, the scope of the harmonized approval framework for motor vehicles of classes M, N, and O, for agricultural and forestry vehicles, and for two-, three-, and four-wheeled vehicles. In addition, certain vehicles for athletic competitions are exempt from the scope of the Machinery Directive. The intention of the European legislature that all motor vehicles that are used to transport people or goods and that are fundamentally operated by people should not be covered by the scope of the Machinery Directive can be seen in this determination.

As soon as there are sufficient rules for type approval and regarding the operation of self-driving and autonomous motor vehicles at the level of the European Union, adjustments to the current law will be made as necessary.

**IV. Budget Expenditures without Compliance Costs**

Budget expenditures without compliance costs do not occur due to the amendment itself. They would first occur due to the legal regulations to be issued pursuant to this act. At present, it is predicted that as of 2022, the Federal Government will incur annual personnel and administrative expenditures in the amount of approximately EUR 1,200,000 under Secs. 12 and 06. This additional cost should be offset for financially and respectively in the sections under discussion. The expenditures stand in contrast to intended fee income of the Federal Motor Transport Authority, which is likely to amount to approximately EUR 900,000, arising from fee increases and newly created fees. When setting fees collected by the Federal Motor Transport Authority, the activities of the Federal Office for Information Security in the presumed amount of approximately EUR 300,000 will also be considered.

**V. Compliance Costs**

The amendment itself will not result in compliance costs for citizens, the economy, or the administration. Such costs will occur only as a result of regulations issued in conjunction with this act.

According to the present state of knowledge, anticipated compliance costs are detailed below.

**1. Compliance Costs for the Economy**

The compliance costs for the economy are predicted to be total approximately EUR 10,800,000 million, with a one-time cost of approximately EUR 2,000,000. These represent the compliance costs for the various groups covered by the law and are composed as follows:

a) Compliance costs for the manufacturers of motor vehicles with self-driving systems in the amount of approximately EUR 300,000 annually. Under the present state of knowledge, a one-time compliance cost could not be determined for manufacturers.

Compliance costs for commercial owners of motor vehicles with self-driving systems will be in the amount of approximately EUR 10,500,000 annually, with an approximately EUR 2,000,000 one-time fee.

In the meaning of the Federal Government’s “one in, one out” rule, the increased cost will be offset by other planned regulation.

In total, the manufacturers of motor vehicles with self-driving systems will incur compliance costs in the amount of approximately EUR 300,000 in personnel costs for obligations connected with obtaining operating permits. The compliance costs for individuals cannot be quantified at this time, nor could a one-time compliance cost could not be determined for manufacturers. For commercial owners of motor vehicles with self-driving systems and for applicants for defined operational design domains, the annual compliance costs will be approximately EUR 7,000,000 for personnel costs and approximately EUR 3,500,000 for material costs. One-time personnel costs in the amount of approximately EUR1,300,000 and one-time material costs in the amount of approximately EUR 700,000 will be incurred. In all, new informational obligations with bureaucratic costs in the amount of approximately EUR 4,500,000 annually will result. These are included in the compliance costs.

**2. Compliance Costs for the Administration**

The compliance costs for the Administration are predicted to be approximately EUR 1,600,000 annually. These result from compliance costs for the various groups covered by the law and are detailed as follows:

Compliance costs for the Federal Government in the amount of approximately EUR 1,200,000 annually.

1. Compliance costs for the Federal States and municipalities in the amount of approximately EUR 400,000 annually.

The individual groups covered by the law are discussed below.

a) Compliance Costs for the Federal Government

The Federal Motor Transport Authority (KBA) will incur annual compliance costs of approximately EUR 900,000 for personnel costs. The Federal Office for Information Security will incur annual compliance costs of approximately EUR 300,000.

b) Compliance costs for the Federal States (including municipalities)

For the responsible authorities of the Federal States, annual personnel expenses in the amount of approximately EUR 400,000 will be generated for the obligations in connection with the approval of operational design domains and in connection with permits for motor vehicles with self-driving systems. The compliance costs for individual obligations cannot be quantified. It is anticipated that one-time compliance costs that cannot be quantified in advance will also be incurred.

**VI. Additional Costs**

For applications for operating permits to the Federal Motor Transport Authority, manufacturers will likely incur costs in the amount of EUR 500,000 annually. For applications for test permits, owners will likely incur costs in the amount of approximately EUR 500,000 annually. The calculations will be made in the legal regulations to be issued concurrent to this law. To apply for a defined operational design domain, the owner of a motor vehicle with a self-driving system in a defined operational design domain must obtain approval from the responsible authorities under State Law. This could cause the owner to incur additional costs in the form of fees. However, these costs cannot be quantified, as the regulations and thus the amount of the fees are not available at the time of this survey. Effects on the price level, especially on the consumer price level, should not be expected from this law.

**VII. Equality Policy Issues**

The regulations will not affect equality policies. The law does not offer any basis for hidden disadvantages, participation deficits, or fortifying traditional roles.

**VIII. Sustainability**

The management rules and indicators of national sustainability strategy were tested. The Autonomous Driving Law promotes the use of driverless vehicle systems. Through the continued development of assistant systems ranging from automated to self-driving systems and their use, traffic safety and efficiency increase, while emissions due to mobility decrease and other positive environmental effects (such as reducing land use) are expected. In addition, the mobility of society will be improved and Germany’s position as a powerhouse of the economy and innovation will be strengthened. Autonomous driving will particularly make a significant contribution to maintaining and improving mobility in sparsely populated, rural areas. Through adding to or replacing regular service in public transportation, a contribution to creating equal living conditions between cities and rural areas will also be made.

**IX. Evaluation**

This law to amend the German Road Traffic Law and the Compulsory Insurance Law – Autonomous Driving Law is also a harbinger of future forms of mobility that are beginning to be introduced into regular operation. In view of continued development in this area and amendments to international provisions, the regulations created by this law are intended to be evaluated after the end of 2023. For details, please refer to the justification regarding Sec. 1l (new).

**B. Regarding the Individual Provisions:**

**I. Regarding Article 1**

**Amendment of the German Road Traffic Law − StVG**

**Regarding No. 1: Sec. 1d, Sec. 1e, Sec. 1f, Sec. 1g, Sec. 1h, Sec. 1i, Sec. 1j, Sec. 1k, and Sec. 1l StVG (new)**

**Section 1d StVG (new)**

The newly introduced Sec. 1d StVG initially contains a definition of terms.

In Paragraph 1, the term of motor vehicles with self-driving systems is defined. In the process, the SAE level and the classifications of the Federal Highway Research Institute are used as references. The reference to Sec. 1e Paragraph 2 StVG (new) clarifies that motor vehicles with self-driving systems must fulfill certain technical preconditions. These technical preconditions are intended to be specified through regulations pursuant to Sec. 1j StVG (new). The “people-mover” was used as an example of motor vehicles with self-driving systems. These are autonomous shuttle buses that have been tested several times as an addition to public transportation (ÖPNV) within the scope of research funding. This definition would also include common motor vehicles with equivalent additional equipment. In addition to transporting people, transporting goods is also facilitated by motor vehicles with self-driving systems.

In Paragraph 2, the term of defined operational design domains is defined. It is clarified that the regulations for the operation of motor vehicles with self-driving systems fundamentally only applies for areas that are dedicated to road traffic and are in fact publicly accessible. A defined operational design domain in the meaning of this provision is an abstract term only. How specific a defined operational design domain would look in an individual case is not determined by the provision. It is only stated that operational design domains can be defined on public roads. The intention is fundamentally to facilitate many new operational design domains. In the process, local circumstances must always be observed. The definition of an operational design domain is first made by the owner, then this operational design domain set by the owner must be approved by the responsible authorities under State Law, as Sec. 1e Paragraph 1 No. 3 StVG (new) determines. For this, it is necessary for an application to be made to the responsible authorities under State Law. The corresponding regulatory provisions will be made elsewhere. The reference to Sec. 1e Paragraph 1 StVG (new) especially refers to these regulatory provisions. It is possible that a motor vehicle with a self-driving system could be operated in multiple defined operational design domains.

Paragraph 3 defines the term technical supervisor. In contrast to standard motor vehicles and those with self-driving systems up to SAE Level 3, motor vehicles with self-driving systems within the meaning of this law no longer have a person driving the vehicle while the self-driving system is in operation. The possibility of a person controlling the motor vehicle is therefore entirely absent. To be compatible with existing international provisions, however, it was necessary to introduce a responsible person who can perform the deactivation or approval of driving maneuvers of the motor vehicle with a self-driving system from the outside in individual cases in accordance with the regulations of Sec. 1e Paragraph 2 Clause 1 No. 8, and Paragraph 3. This function is assumed by the newly introduced technical supervisor. It is also clarified that only a natural person can assume this role. An institution, particularly, cannot be entrusted with this task, as its internal organization could potentially impede the performance of the duties of the technical supervisor. Indeed, the technical supervisor is not intended to constantly monitor the motor vehicle with a self-driving system. However, the supervisor must be prepared at any time to deactivate or approve driving maneuvers, inasmuch as this is necessary in an individual case upon receipt of a request from the vehicle. As a matter of basic principle, it should not be ruled out that the technical supervisor is responsible for the operation of several motor vehicles with self-driving systems, as long as it is ensured that the corresponding duties will be performed in individual cases. The duties of the technical supervisor are regulated in Sec. 1f Paragraph 2 StVG (new).

The minimum risk condition is defined in Paragraph 4. This describes a condition that reflects the greatest possible road traffic safety. The motor vehicle must react appropriately, such that in view of the prevailing traffic situation and depending on the severity of the disturbance or the proximity to system limits, a maneuver such as emergency braking would not be introduced, but rather, the next possible option for stopping would be taken. The severity of the disturbance therefore determines the behavior of the motor vehicle to this extent.

**Section 1e StVG (new)**

Sec. 1e Paragraph 1 StVG (new) regulates the admissibility of driverless, that is, autonomous operation of a motor vehicle with a self-driving system on public roads when four essential, cumulative requirements are met. Accordingly, the motor vehicle must have the technical equipment listed in Paragraph 2 to be able to autonomously complete the driving task. Equipment that satisfies the requirements is also a precondition for an operating permit for a motor vehicle with a self-driving system to be issued. This operating permit constitutes the technical approval of a motor vehicle with a self-driving system. Its presence is another required feature for permitted operation. In addition, the approval for the defined operational design domain in which the motor vehicle under consideration may be operated without a driver must have been issued. Finally, the motor vehicle must be approved pursuant to Sec. 1 Paragraph 1 StVG.

In Paragraph 2 Clause 1, the technical equipment of a motor vehicle with a self-driving system and its necessary performance capability are enumerated. This describes the essential functional characteristics that a motor vehicle with a self-driving system must fulfill to take over driving.

The motor vehicle with a self-driving system must be able to independently perform the driving activity within the respective defined operational design domain pursuant to No. 1. That means that it must be able to handle the route and all associated conditions and events, such as weather and operating times, within the scope of public road traffic within the defined operational design domain, without begin dependent on intervention from the technical supervisor.

The self-driving system that is used must be able to meet the traffic provisions for driving during autonomous control of the vehicle. Within the meaning of No. 2, this means that the motor vehicle with a self-driving system must only fulfill the traffic provisions that are directed toward control of a vehicle during the activated self-driving, that is, during use within the defined operational design domain. Vehicle control, that is, “driving” a vehicle,” means both the entirety of the technical components of a vehicle that are necessary to drive, including longitudinal and transverse guidance, as well as or the longitudinal and transverse guidance of a vehicle in itself.

To this extent, the obligations to comply with traffic provisions correspond to the obligations that also apply to the operation of largely and entirely self-driving vehicles pursuant to Sec. 1a Paragraph 2 Clause 1 No. 2 StVG.

Inasmuch as motor vehicles with self-driving systems are technically not able to meet the traffic provisions for driving in certain areas, especially because of their high level of complexity, communication, or interaction with other traffic participants, or a machine implementation is generally not accessible, this does not exclude the possibility of using self-driving systems, but rather only limits the admissible operational design domain. This means that the use of motor vehicles with self-driving systems is also permissible if they are able to meet the traffic provisions directed at the vehicle driver within a defined operational design domain. If they cannot meet these provisions in some domains, these domains cannot come under consideration as operational design domains. Therefore, in individual cases, areas with ungated railroad crossings or adjacent field and forest roads, for example, could be ruled out as operational design domains. The selection of suitable operational design domains should be made in consideration of the existing traffic regulations, and any change in traffic regulations during operation should always be taken into account.

At the present time, it is not apparent that motor vehicles with self-driving systems are also capable of monitoring or ensuring compliance with behavioral obligations inside or outside the vehicle, such as the obligation to wear a seat belt in accordance with Sec. 21a of the Road Traffic Regulation (StVO).

For this reason, compliance with the obligations arising from other traffic provisions that do not relate to vehicle control remains with the respective human driver in accordance with Sec. 1f, Paragraph 1 StVG (new), and the owner of a motor vehicle with a self-driving system must take precautions to ensure compliance with these obligations.

For this purpose, pursuant to No. 2, second half-sentence, the technical equipment of the motor vehicle shall have a system of accident avoidance which is designed to avoid damage and to reduce damage, which, in the case of unavoidable alternative damage to different legal interests, takes into account the importance of the legal interests and gives the highest priority to the protection of human life, and which, in the case of an unavoidable alternative risk to human life, does not provide for any further weighting on the basis of personal characteristics. This is intended to take account of the key finding of the Ethics Committee for Automated and Connected Driving that, particularly in dilemma decision-making situations, appropriate behavior should be taken into account, insofar as this is possible within the scope of dynamic vehicle guidance processes that can be programmed in advance.

Inasmuch as such dilemma decision-making situations can be considered in the law, they must be consistent with constitutional requirements.

These primarily result from the guarantee of human dignity of Article 1 Paragraph 1 of the Basic Law (GG) and the right to life and physical integrity pursuant to Article 2 Paragraph 2 Clause 1 GG. In contrast to abstract, general regulations, a dedicated regulation of individual cases of difficult situations cannot be implemented. Such an evaluation cannot be made conclusively and will continue to contain omissions to this extent. For this reason, an evaluation of dilemma situations made in advance will also doubtlessly remain incomplete. An abstract, general regulation therefore appears more appropriate in determining framework conditions for programming parameters.

In weighing the legal interests, the aspects addressed by the Ethics Commission must be considered.

Accordingly, in the event of unavoidable alternative damage to various legal interests, the importance of the legal assets must be taken into account, with the highest priority given to protection human life (Recommendation No. 7 of the BMVI Ethics Commission). In the event of unavoidable alternative endangerment to human life, no weight may be given to personal characteristics, such as age, gender, physical or mental constitution.

Pursuant to No. 3, the technical equipment must be able to independently place the motor vehicle in a risk-minimizing state if continuing to drive would only be possible by violating traffic laws.

In order to allow a journey to continue in the case of No. 3, the technical equipment referred to in No. 4 shall independently propose possible alternative maneuvers to the technical supervisor and provide appropriate data to assess the situation, so that the technical supervisor can decide whether to approve the proposed maneuver.

No. 5 clarifies that the technical equipment may not simply carry out every driving maneuver suggested by the technical supervisor, if it would endanger people participating in traffic or uninvolved persons. This regulation is also intended to comply with the requirements of No. 2. In these cases, the technical equipment must place the motor vehicle in the minimum risk condition.

No. 6 serves to ensure its own functionality. Accordingly, the technical equipment must be able to indicate any impairment of its functionality so that the technical supervisor can react accordingly.

The motor vehicles must recognize their system limits in accordance with Paragraph 2 Sentence 1 No. 7 and, when they are reached, or in the event of a technical malfunction, must independently return to the minimum risk condition. The term of “system limits” is not defined in more detail. The formulation is deliberately kept technologically open, since it is likely that there will be motor vehicles with self-driving systems at different levels of ability and that it would be impossible to define a uniform system limit. Ultimately, it also depends on the operational design domains in which they will be used. The system limit is the limit of the motor vehicle with a self-driving system’s performance ability, which may vary depending on the manufacturer.

No. 8 stipulates that the motor vehicle with a self-driving system can be deactivated at any time by the technical supervisor and that the motor vehicle will automatically switch to the minimum risk condition.

With reference to the applicable provisions of the Vienna Convention on Road Traffic of November 8, 1968 (Vienna Convention), it is necessary that the self-driving system of the motor vehicle can at least be deactivated. In standard vehicles, a driver ensures that the motor vehicle can be stopped in the event of an emergency. For motor vehicles that perform the driving function with a self-driving system within their respective operational design domain, operation is permitted as long as the possibility to deactivate the vehicle is present. The Resolution of the Global Forum on Road Safety (WP.1) of the United Nations Economic Commission for Europe (UNECE — Resolution of the Global Forum on Road Safety [WP.1 ] of the United Nations Economic Commission for Europe of September 20, 2018, and explanation of its application in the scope of the German road traffic law, Traffic Gazette 24/2018, pp. 866–870, Traffic Gazette 24/2018, pp. 866–870) addresses this with reference to the SAE classification for more capable self-driving systems of Levels 4 and 5. Autonomous driving, i.e. driving without a driver, is therefore compatible with both the Vienna Convention and the Geneva Convention on Road Traffic of September 19, 1949 (Geneva Convention), insofar as this term refers to a self-driving system of a higher level, corresponding to SAE Levels 4 and 5, in which deactivation is performed by a person inside or even exclusively outside the vehicle (irrespective of the physical distance; e.g. by the technical supervisor). On the other hand, in addition to the deactivation option, the other requirements recommended in the resolution for the driving system and for the users of the driving system must be complied with.

The regulation in No. 8 is also intended to comply with the rules of the Vienna Convention.

No. 9 requires the technical equipment to indicate the need to approve an alternative driving maneuver or to deactivate the vehicle and to display signals about its functional status to the technical supervisor with enough time in advance with optical, acoustic, or other signals. This is necessary for the technical supervisor to fulfill their duties pursuant to Sec. 1f Paragraph 2.

Finally, No. 10 stipulates that the technical equipment must have a sufficiently secure wireless connection. Sufficiently means that in the event the wireless connection is lost, the motor vehicle with a self-driving system must continue to have a connection, such as to the technical supervisor. If a wireless connection is no longer available to the extent that safe execution of the self-driving system is possible, or if unauthorized access to these connections occurs, the motor vehicle is set to the minimum risk condition for safety reasons.

Paragraph 3 stipulates how operation can continue in the event of other impairments. Motor vehicles with self-driving systems contribute to increasing traffic safety. Consistent compliance with road traffic provisions may not necessarily conform with everyday situations that were previously resolved within the scope of cooperative action between road users. If, for example, there is an obstacle on one lane of a two-lane road with a dividing line or a prohibition against passing, the traffic behind it will gradually drive past the obstacle. Traditionally, people behave cooperatively with other road users and show consideration for them in coping with the situation on the basis of existing road traffic regulations, in particular Sec. 6 StVO. The person driving the vehicle behind the obstacle would, for example, make sure that no oncoming traffic was preventing the vehicle from driving around the obstacle and would watch out for possible other road users.

Motor vehicles with self-driving systems completely obey traffic laws in autonomous operation and therefore decrease the number of accidents, which are largely caused by human error.

In the case described above, it can be assumed that the technology of autonomous driving will not initially be able to fully resolve all issues by intelligently grasping the situation and behaving cooperatively with other road users, in particular by presumably violating road traffic regulations. Paragraph 3 therefore stipulates that, in the event of any other impairment of the driving task that the motor vehicle with a self-driving system cannot cope with independently, the motor vehicle must propose at least one or more alternative driving maneuvers, which are to be evaluated by the technical supervisor in accordance with the situation and, if necessary, approved. When possible, the technical supervisor should also specify alternative driving maneuvers. The motor vehicle then independently conducts the maneuver.

Other impairments are likely to arise in situations for which there are no specific requirements for the self-driving system and in which the vehicle is already at a safe standstill, but due to special circumstances in the individual case, it cannot make a decision on the permissibility of a particular driving maneuver. The vehicle can perform the maneuver independently again once it has been approved by the technical supervisor. Possible examples might include running a red light when the light is permanently red due to a traffic light malfunction, or continuing to the nearest stop bay at low speed to reach another minimum risk condition in order to let passengers off (instead of stopping on the shoulder) after the technical supervisor has approved these maneuvers.

However, it does not cover faults in the dynamic vehicle control system that occur and must be resolved within a short period of time, as the vehicle has to cope with these independently in all driving situations within the defined operational design domain.

According to Paragraph 4, the Federal Motor Transport Authority tests whether the motor vehicle with a self-driving system fulfills the requirements of the relevant regulations of UNECE. Because such regulations are currently being developed for self-driving and autonomous vehicles by UNECE, they cannot yet be reviewed by the responsible authorities. In some cases, these gaps will be closed at a national level by new rules issued through regulations. To avoid impeding the impetus toward self-driving, autonomous, and connected vehicles, the manufacturer's declaration pursuant to Sec. 1f, Paragraph 3 will suffice in this respect for transitional periods when certain technical requirements cannot yet be reviewed.

In view of societal acceptance of autonomous forms of mobility, it is also necessary to include such a declaration in the operation manual or the operating instructions. The users of such vehicles are thereby given trustworthy evidence about the safety of these new forms of mobility.

The declaration to the Federal Motor Transport Authority is made within the scope of the application for an operating permit for a motor vehicle with a self-driving system. If the requirements for the permit to be issued are present, the operating permit will be issued as described above.

Paragraphs 5 and 6 stipulate that the delaying effect of objections and legal challenges pursuant to Sec. 80 Paragraph 2 Clause 1 No. 3 of the Administrative Court Code (VwGO) against the revocation of an operating permit and against the revocation of a permit for a specified operational design domain is not applicable. Due to the high value given to the protection of life and limb in traffic safety, such remedies should not have a delaying effect. This means, for example, that vehicles that are unsafe for road use will no longer be allowed to participate on public roads with a valid operating permit or approval for a defined operational design domain.

**Section 1f StVG (new)**

The newly added Sec. 1f StVG regulates the fundamental behavior of the owner, technical supervisor, and the manufacturer of a motor vehicle with a self-driving system. This is intended to be specified through regulations pursuant to Sec. 1j StVG (new).

Paragraph 1 concerns the duties of the owner. The owner of a motor vehicle with a self-driving system is generally obligated to maintain the roadworthiness and environmental appropriateness of the motor vehicle and shall take the necessary measures to do so. For this purpose, the owner must first apply for the approval of the defined operational design domain and the registration of the motor vehicle for road traffic. The owner must also ensure that regular maintenance of the systems necessary for the self-driving system. They must also ensure the necessary approval of driving maneuvers pursuant to Sec. 1e Paragraph 2 No. 4, and Paragraph 3 and deactivation of the motor vehicle with a self-driving system pursuant to Sec. 1e Paragraph 2 Clause 1 No. 8. To do so, they must fulfill the tasks of the technical supervisor pursuant to Sec. 1f Paragraph 1 No. 3 StVG (new). However, it is possible for the owner to entrust another person with this activity. If the owner delegates the activities of technical supervisor that they must fulfill pursuant to Sec. 1f Paragraph 1 No. 3 StVG (new), they must generally bear the liability on behalf of the person entrusted with the task.

Beyond this, the owner of a motor vehicle with a self-driving system is subject to increased duties of care in the absence of a person driving the vehicle. They must ensure that the other traffic provisions not already addressed to the driving of the vehicle in accordance with Sec. 1e Paragraph 2 No. 2 StVG (new) are complied with. The addressees of other traffic provisions that do not concern active vehicle control are generally natural persons who use motor vehicles. These other traffic provisions include, among others, the regulations on tires (Sec. 2 Paragraph 3a Sentence 1 StVO), on securing vehicles against unauthorized use or other traffic violations (Sec. 14 Paragraph 2 StVO), on securing broken-down vehicles (Sec. 15 StVO), on passenger transport (Sec. 21 StVO), on seat belts (Sec. 21a StVO) or on cargo (Sec. 22 StVO). The obligation to take precautions to ensure that other traffic provisions are observed results from the fact that during operation of the motor vehicle with a self-driving system, no responsible person that could monitor compliance with other traffic provisions remains in the motor vehicle. Accordingly, it must be ensured – as far as possible – that traffic provisions that do not concern active control of the vehicle are also complied with. The precautions that the owner of a motor vehicle with a self-driving system takes to comply with other traffic provisions, whether by transferring the duties to the passengers, the technical supervisor, a third party or their own control is left up to the owner.

Paragraph 2 concerns the duties of the technical supervisor. A distinction is made between duties relating to driving and duties other than driving. The primary duties of the technical supervisor concerning the driving of the vehicle are approving driving maneuvers pursuant to Sec. 1e, Paragraph 2, No. 4 and Paragraph 3 and the deactivation of the motor vehicle pursuant to Sec. 1e, Paragraph 2, Sentence 1, No. 8. If the motor vehicle with a self-driving system is in a situation that makes the driving task problematic and with which it is unable to cope independently, and if it proposes an alternative driving maneuver, the technical supervisor must evaluate and approve this driving maneuver. Their task also includes approving suggestions from the motor vehicle regarding driving maneuvers that would violate provisions that are applicable in the abstract in the specific situation. For example, this could concern entering the other lane to drive around a broken-down vehicle.

The technical supervisor is not obligated to constantly monitor the motor vehicle as it operates autonomously. Rather, it must perform record checks. They must use suitable equipment to recognize and thus become aware of occasions when they must deactivate the motor vehicle with a self-driving system or approve a driving maneuver. They must also be able to evaluate and react to signals from the self-driving system about its functionality. In this respect, the technical equipment in accordance with Sec.1e Paragraph 2 StVG (new) must ensure that the motor vehicle with a self-driving system signals to the technical supervisor in a suitable manner via an external communication system that they must take appropriate action.

The duties of the technical supervisor, other than those concerning the driving of the vehicle, are to contact the occupants of the motor vehicle when the motor vehicle has been placed in the minimum risk condition and to initiate the measures necessary for traffic safety. In the process, it is not determinative whether the technical supervisor has put the motor vehicle in the minimum risk condition or whether the motor vehicle did this independently. The passengers in the vehicle must immediately be informed of the situation and informed of what they should or can do. The initiation of the measures required for traffic safety includes, among other things, ensuring that the motor vehicle with a self-driving system does not constitute an obstacle to traffic. Particularly, warning lights should be activated and an emergency call should be made if necessary. If necessary, the technical supervisor will contact other road users involved or members of the authorities and organizations with safety tasks.

Paragraph 3 regulates the duties of the manufacturer of a motor vehicle with a self-driving system. In order to ensure the road safety of their motor vehicle, they must document that the electronic and electrical architecture of the motor vehicle and the electronic and electrical architecture connected to the motor vehicle are secured against outside interventions, carry out a risk assessment, and document that the wireless connections are sufficient over the entire development and operation period of the motor vehicle. They must bindingly declare compliance with the requirements described in Sec. 1e Paragraph 2 Clause 1 to the Federal Motor Transport Authority and in the operating manual of the respective vehicle. The system description of the motor vehicle must guarantee that the installed components and systems correspond to the statutory requirements. In addition to the technical rules to be determined more closely through legal regulations, compliance with which leads to the granting of an operating permit for a motor vehicle with a self-driving system, a manufacturer's declaration is required. The manufacturer must guarantee the legality of the installed technical equipment and parts, which represent an effective solution to previous specifications, for example, through further development, but are not yet available in a standardized and normalized form.

Furthermore, the manufacturer must offer training for the persons involved in the operation of their motor vehicle with a self-driving system which conveys the technical mode of operation, in particular with regard to the driving functions and the performance of the tasks of the technical supervisor. This is intended to ensure that the motor vehicle can be operated correctly.

Furthermore, within the scope of their general product monitoring obligation, the manufacturer must immediately notify the Federal Motor Transport Authority and the competent authority under State Law of any tampering detected in their motor vehicle and initiate any necessary measures, such as recalls.

**Section 1g StVG (new)**

Sec. 1g stipulates that data processing is to be carried out by the Federal Motor Transport Authority and the competent Federal State authorities and states how it should occur with regard to the motor vehicle with a self-driving system. This is accompanied especially by the owner’s obligation to store this data. In the process, the data privacy aspect must be brought into harmony with the challenges of safe operation of a new technology. To enable effective monitoring of roadworthiness and safety, a legal basis for data processing is required. The transfer and processing of data from self-driving and autonomous systems in motor vehicles to state agencies must be regulated. Then, if necessary, the authorities can take measures, such as withdrawal and revocation of their approvals to maintain traffic safety.

In order to verify compliance with the requirements relevant to the approval, it is necessary to authorize the bodies responsible for approving the operation of a motor vehicle with a self-driving system to collect and process data. Particularly in view of the initial phase of operation, the transfer and processing of data from self-driving and autonomous systems in motor vehicles must be regulated. In addition, however, it is also important to make the data usable in a non-personalized form for public benefit, namely, scientific research in the fields of digitalization, automation, and networking, as well as accident research in road traffic. In this field, the data that is recorded during the operation of motor vehicles with self-driving systems has great potential.

Pursuant to Paragraph 1, the owner is obligated to store the data detailed below:

1. Vehicle identification number

The specific identification of the motor vehicle to be reviewed is necessary to enable the responsible authorities to monitor the fulfillment of the technical and organizational requirements to which the vehicle and its operation are subject within the scope of issuing the operating permit and the approval of the specific operational design domain.

2. Position data

Knowledge of the geographical position of the vehicle in the event of a critical incident is necessary to verify compliance with technical and organizational requirements. This data is also necessary to identify the local circumstances in the specific operational design domain that lead to an increased likeliness of critical events.

3. Number and times of use, as well as activation and deactivation of the self-driving system

Knowledge of the times of use of the self-driving system is necessary to clearly delineate whether critical events occur during the period of autonomous operation.

4. Number and times of approval of alternative driving maneuvers

Knowledge of the number and time of alternative driving maneuvers is necessary to assess temporal clustering of alternative driving maneuvers. The performance and thus the operational safety of the motor vehicle can be monitored in this way.

5. System monitoring data, including data about the software version

The system monitoring data is necessary to assess the occurrence and causes of technical errors in the system for the purpose of evaluating system safety and system reliability.

6. Environmental and weather conditions

Knowledge of the environmental and weather conditions is necessary to identify external operating conditions that lead to an increased occurrence of critical incidents.

7. Connection parameters, such as transmission latency and available bandwidth,

Knowledge of the connection parameters is necessary to identify the operating conditions that lead to an increased occurrence of critical incidents.

8. Name of the activated and deactivated passive and active safety systems, data about the condition of these safety systems and the event that triggered the safety system,

Knowledge of safety systems that are activated and active during the drive and the technical circumstance that triggered the system is necessary to assess the safety and reliability of the system as a whole and of individual systems.

9. Longitudinal and lateral vehicle acceleration,

Knowledge of vehicle acceleration during critical events is necessary to be able to categorize the events and to assess the reaction caused by the system with regard to system safety.

10. Speed,

Knowledge of vehicle acceleration during critical events is necessary to be able to categorize the events and to assess the reaction caused by the system with regard to system safety.

11. Status of the lighting equipment,

Knowledge of the status of the lighting equipment is important in being able to assess the system safety.

12. Power supply of the motor vehicle with a self-driving system,

Knowledge of the power supply is necessary to be able to assess the safety and reliability of the system as a whole.

13. External orders and information sent to the motor vehicle.

Knowledge of the orders and information sent to the motor vehicle during the drive is important to be able to assess the safety and reliability of the system as a whole, especially against the background of possible illegal outside interventions.

To do justice to data minimization and data economy, the current final listing is limited to the specific instances listed in paragraph 2. The focus is on the investigation of cases in which the self-driving system reaches its limits and/or human intervention becomes necessary.

Pursuant to Paragraph 2, data shall be stored pursuant to Paragraph 1 for the following events:

1. In the event of interventions by the technical supervisor: to be able to assess interventions in the operating processes by the technical supervisor and assess their causal factors, interventions by the technical supervisor will be recorded and processed;
2. In the event of conflict scenarios: to be able to assess interactions between motor vehicles with self-driving systems and other traffic participants in conflict situations, data about these situations will be recorded and processed. For example, a conflict situation occurs when a dividing line must be crossed to pass by an obstacle. Primarily, conflicts are accidents and fast accident scenarios. To be able to assess safety and behavior in borderline areas and fast accident scenarios of motor vehicles with self-driving systems, data from these situations will be recorded and processed;
3. In the event of unplanned lane changes or deviations: to be able to assess the safety of motor vehicles with self-driving systems in the event of unforeseen obstacles, data from these situations will be recorded and processed;
4. In the event of disturbances in the operating processes: to be able to assess the reliability and safety of motor vehicles with self-driving systems, data will be recorded and evaluated in the event of disturbances in operating processes.

Paragraph 3 regulates requirements placed on the manufacturer with regard to clarification of opportunities to change settings about privacy and data processing during the operation of the motor vehicle with a self-driving system. They must be communicated to the owner by means of software precisely, clearly, and understandably. The technical and organizational settings must also enable the owner to make such changes to the settings in question. This respects the principle of “privacy by design.” The regulation is based on the understanding that the owner is the authorized party with regard to the data that is created during operation of the motor vehicle with a self-driving system, and that the manufacturer must facilitate the protection of data sovereignty both technically and organizationally. The Federal Government will review, inter alia, over the course of the evaluation described in Sec. 1l StVG, whether comprehensive regulations regarding mobility data should be processed, such as within the scope of a “mobility data law.”

Paragraphs 4 and 6 entitle the Federal Motor Transport Authority and the responsible authorities pursuant to State Law to collect, store, and use the data pursuant from Paragraph 1 from the owner within their respective task areas.

The duration of storage will be allowed for the entire operating period, as the traffic safety of the vehicle must be effectively controlled for the entirety of this period. Three years after the end of operation, all claims and procedures should be concluded; deletion is planned at this time in reference to general limitation periods. The predicted operating period in years cannot be anticipated due to the lack of experience. However, it is assumed that average duration will be shorter than for conventional vehicles.

Paragraph 5 adds to the authorization of the Federal Motor Transport Authority and ensures data access to non-personal data pursuant to Paragraph 1 for traffic-related public benefit, which falls within the scope of self-driving systems in any case. The vehicle identification number is not part of the data that is transmitted, because it would allow the owner of the vehicle to be identified. The technical data pursuant to Paragraph 1 does include a personal connection, as it relates to an identifiable natural person. The non-personal data can be sent by the Federal Motor Transport Authority to the entities named herein.

**Section 1h StVG (new)**

Especially in the area of comfort systems, control systems have already been developed and installed that can automatically control the vehicle, even without the technical supervisor, when corresponding infrastructure is present (e.g., dual-mode vehicle or automated valet parking). Inasmuch as the manufacturer has already installed such systems, but their application is not activated or is only intended for private lands, it should be possible for a standard type approval to be issued, notwithstanding such installed “sleeping” systems. This is justifiable if the systems have no effects on the approved systems in public road traffic within the scope of the StVG when in a deactivated and thus unusable condition. If, according to national or international requirements, this system is intended to be the subject of a type approval or operating permit for a motor vehicle at a later time and is intended to be operated in public road traffic, it should be possible to activate such installed but “sleeping” systems, such as through a software update. This has been facilitated by Sec. 1h StVG (new) and also requires a special approval by the Federal Motor Transport Authority for vehicles that are already on the roads.

**Section 1i StVG (new)**

To date, testing self-driving and autonomous motor vehicles is approved by the responsible Federal State authorities like any other content for testing pursuant to Sec. 19 Paragraph 6 in conjunction with Sec. 70 Paragraph 1 Nos. 1 and 2 Road Traffic Licensing Regulation (StVZO). The intention of the new provision is to regulate approvals specifically and only for motor vehicles with automated and self-driving systems in a uniform manner throughout Germany in order to create legal certainty for manufacturers and their agents, and thus to take sufficient account of the special features of these novel technologies.

In this context, it is appropriate to place higher requirements on technical supervisor and monitoring of the test vehicles, but, at the same time, to dispense with the approval of a defined operational design domain in order to allow a larger scope of action for these individual manufacturer vehicles (so-called prototypes) within the scope of their testing. Instead of a simple option to deactivate, there should also be the option to take over control. However, this cannot occur from a distance, but may only be present on site. The Federal Motor Transport Authority must approve the necessary requirements and the concepts of the manufacturer for testing. For reasons of practicality, such approval should then cover all the technologies to be tested in the vehicle, not just those relating to automation.

**Section 1j StVG (new)**

The newly introduced Sec. 1j StVG creates a basis for authorization to structure the existing provisions in more detail and with greater specificity. The changes to the provisions of the StVG are intended only to create the basic framework for the operation of motor vehicles with self-driving systems on a national level. To this extent, it is necessary to introduce new bases for authorization for issuing legal regulations in the StVG. To concentrate the provisions, the bases for authorization are introduced in connection with the other newly introduced Sec. 1d to 1l StVG, and not in Sec. 6 StVG.

In addition to the structure and the specifications of the technical provisions, the procedure for registering motor vehicles with self-driving systems for road traffic is intended to be regulated through legal regulation in Paragraph 1. Even in Sec. 1e Paragraph 1 Nos. 2 to 4 StVG (new), a generally applicable three-step procedure was introduced for this purpose, which is intended to be specified through legal regulations. In Paragraph 2 of Sec. 1j StVG, an exception is then allowed regarding the legal regulations issued pursuant to Paragraph 1 to regulate testing new self-driving systems more closely.

Paragraph 1 No. 1 discusses the technical requirements that a motor vehicle with a self-driving system must fulfill for the Federal Motor Transport Authority to issue an operating permit for this motor vehicle. At the same time, the regulatory provisions necessary for this purpose should be determined, as well as provisions with regard to the operation, assessment, and market surveillance of motor vehicles.

The following No. 2 refers to the determination of operational design domains in which motor vehicles with self-driving systems should be permitted to be operated. The subject of the corresponding procedure, which is to be defined in more detail, is the approval of the operational design domain by a responsible authority under State Law.

The procedure for registering motor vehicles with self-driving systems for road traffic is addressed in No. 3. Like conventional motor vehicles and their trailers that are to be put into operation on public roads, motor vehicles with self-driving systems must also be approved for traffic by the competent authority (registration authority) in accordance with Sec. 1 Paragraph 1 StVG. The regulation authorization is intended to consider special characteristics for motor vehicles with self-driving systems in the registration procedures.

No. 4 deals with the specification of the requirements and obligations for the manufacturer, the owner and the technical supervisor of a motor vehicle with a self-driving system.

No. 5 also regulates that more precise provisions about data storage can also be made in legal regulations. The data to be stored can be allocated to categories, such as the category of position data. How position data should be stored is not determined in a technical sense. For this reason, parameters, that is, characteristic features, are set regarding how data should be stored. In the example of position data, the system (“longitude and latitude determination”), the precision (5 decimal points), and the output format of the Global Positioning system are specified. The parameters of “system,” “precision,” and output format” were determined for this purpose. These parameters to be determined are different for different data categories. For that reason, they are all generally referred to as parameters here.

No. 6 provides the precondition for further regulation of procedures with respect to approval for the activation of self-driving and self-driving systems pursuant to Sec. 1h Paragraph 2 StVG, including technical requirements, and No. 7 with respect to test permits pursuant to Sec. 1i StVG.

Finally, No. 8 allows deviations from the provisions of Secs. 1d to 1i StVG with regard to motor vehicles of the German Federal Armed Forces, the Federal police, civil protection, and the Federal State police.

Paragraph 2 allows the Federal Ministry of Transport and Digital Infrastructure to issue exceptions to allow deviations from the statutory requirements. Technical requirements for modern vehicle control systems are particularly intended to be listed. This allows more free rein for tests, to make matters quicker and more flexible in order to keep up with the constant progress of technology.

**Section 1k StVG (new)**

Indeed, vehicles belonging to the German Federal Armed Forces, the Federal Police, the Federal State Police, civil and disaster protection, the fire department, and emergency services use self-driving systems. However, they are subject to special operating conditions in their spheres of use and have corresponding equipment for which it must continue to be possible to issue operating permits under independent authority. Their motor vehicles are specially developed and built or adjusted for their purposes and can be recognized as emergency vehicles from the outside. For this reason, deviations from the generally applicable regulations for motor vehicles with self-driving systems are necessary for the fulfillment of official tasks and for the maintenance of public safety, but the provisions are otherwise applied *mutatis mutandis*.

**Section 1l StVG (new)**

This amendment for the regulation of self-driving vehicles is also a preview of future forms of mobility that are only beginning to be introduced into regular operation. In view of continued development in this area and updates to international provisions, the regulations created by this law are intended to be evaluated after the end of 2023. In parallel, the aim is to accompany the implementation of the legal regulations by a commission with various stakeholders under the leadership of the Federal Ministry of Transport and Digital Infrastructure. There will be a special focus on effects on the development of self-driving systems, compatibility with data privacy provisions, and the findings obtained from test permits within the meaning of Sec. 1i Paragraph 2. For purposes of a sound evaluation, and with reference to the 2013 and 2019 resolutions of the Secretary of State's Bureaucracy Reduction Committee on the evaluation of new rules, if sufficient evidence is not available after the end of 2023 to allow for a meaningful evaluation of the provisions, a new evaluation will be conducted at a later date. Otherwise, there would be a risk that the findings from the introductory phase of self-driving vehicles would not be able to sufficiently contribute to developing the legal framework. To facilitate sufficient flexibility to this extent, it will be the task of the Federal Ministry of Transport and Digital Infrastructure to determine a suitable time for the evaluation ending in 2030.

**2. Section 8 StVG**

Motor vehicles with self-driving systems that are in autonomous operation do not have a driver. If these motor vehicles are also vehicles that can drive on a flat track at speeds no higher than 20 kilometers an hour, not only would there be no driver’s liability under current law, but also no owner's liability based on Sec. 8 No. 1 StVG. To remedy this situation, Sec. 8 No.1 StVG provides a reverse exception for such motor vehicles. This reverse exception relates to all motor vehicles that are addressed by this draft bill, which is to say, motor vehicles that perform the task of driving without a driver on public roads to be described in greater detail regarding location and spatial characteristics. Sec. 8 No. 1 StVG is otherwise unaffected.

**3. Section 12 StVG**

The addition of Sec. 12 StVG serves to protect the injured party in the event of an accident in connection with driverless operation of a motor vehicle with a self-driving system. The amendment of the provision that was already performed in the Eighth Law Amending the German Road Traffic Law is only amended concerning the scope of the operation of motor vehicles by means of self-driving systems pursuant to Sec. 1e StVG (new). A new increase in maximum liability was not advisable: The operation of a motor vehicle with a self-driving system pursuant to Sec. 1e StVG as such does not lead to higher damages than the operation of a motor vehicle with a largely or entirely self-driving system pursuant to Sec. 1a StVG.

**4. Section 19 StVG**

The considerations under 2 of Sec. 8 No. 1 StVG also apply in the case of Sec. 19 Paragraph 1, Clause 3 StVG for owners of trailers that are connected with motor vehicles with self-driving systems pursuant to Sec. 1d Paragraphs 1 and 2 in autonomous operation at the time of the accident.

**5. Section 24 StVG**

The addition in Sec. 24 Paragraph 1 Clause 1, StVG serves to list grounds for illegality in actions in violation of a provision of one of the regulations issued on the basis of Sec. 1j StVG. Because the basis of authorization for issuing legal regulations is established in Sec. 1j StVG and is not included in the catalog of Sec. 6 StVG, this addition in Sec. 24 StVG is necessary.

**II. Regarding Article 2**

**Amending the Compulsory Insurance Law**

Sec. 1d of the German Road Traffic Law envisions that the technical supervisor of a motor vehicle with a self-driving system is performed by the natural person who can deactivate this motor vehicle at any time during the operation of the motor vehicle pursuant to Sec. 1e Paragraph 2 No. 8 of the German Road Traffic Law and pursuant to Sec. 1e Paragraph No. 4 and Paragraph 3 of the German Road Traffic Law (person of technical supervision). The person performing technical supervision can act in breach of duty when performing technical supervision; if an action in breach of duty is culpable and causes damages, damage compensation claims could result in the event of an accident. For this reason, liability insurance must also be concluded for the person performing technical supervision.

**III. Regarding Article 3 (Entry into force)**

The provision determines the date the law comes into force.

Self-driving motor vehicles in the meaning of Sec. 1d Paragraph 1 in conjunction with Sec. 1e of the German Road Traffic Law (StVG) (new) have not yet been defined in the international provisions.

To promote the development of modern, self-driving mobility in Germany and to do justice to the increasing demand for such mobility solutions, the immediate entry into force of the statutory provisions is intended.