

AUTONOMOUS VEHICLES AND IN-VEHICLE DATA IN THE CONTEXT OF MOTOR INSURANCE

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Abstract: *This paper provides an initial background for further research on how to achieve balance of providing in-vehicle data for the purposes of motor insurance of autonomous vehicles while protecting privacy of individuals at the level presumed by the European legislation. In order to do so, the paper firstly identifies legal challenges in the area of insurance with regard to intelligent technologies. Then the paper clarifies the rationale behind providing in-vehicle data to insurance companies. Next, in order to identify values and principles promoted by the EU with regard to intelligent technologies, the paper provides an overview and a brief summary of the relevant EU policy documents related to access to data, liability and insurance with regard to operation of autonomous vehicles. Lastly, the paper identifies related EU legislation that has a certain impact on provision of in-vehicle data to insurance companies.*

Keywords: *autonomous vehicle, artificial intelligence, data, driverless car, European Union, in-vehicle data, liability, motor insurance, non-personal data, privacy, personal data, self-driving car*

INTRODUCTION

Autonomous vehicles, self-driving or driverless cars are considered to be the future of the automotive industry. The European Union presumes that this technology will help “to make our mobility system safer, cleaner, more efficient and more user-friendly”.² However, in order to bring all these benefits, the technology needs to be considered trustworthy and, thus, transparent.³ The transparency of functioning should serve namely for fair allocating of liability by enabling investigation of accidents of driverless cars.

The question of transparency, however, raises a number of important questions. One of the crucial questions relates to access to so called in-vehicle data, i.e. data generated by a vehicle with regard to its operation. These data can have a various nature and to a certain degree the scope and amount of produced in-vehicle data will depend on a manufacturer (difference in used sensors and algorithms).

Insurance companies represent a stakeholder with an enormous interest in having access to such in-vehicle data. These data can be used for various kinds of analysis and for

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² Connected and automated mobility in Europe. In: *European Commission* [online]. 25. 9. 2019 [2020-01-22]. Available at: <<https://ec.europa.eu/digital-single-market/en/connected-and-automated-mobility-europe>>.

³ Transparency of intelligent systems comprising for instance traceability or explainability was identified as a key requirement for trustworthiness of the said system. See AI HLEG. Ethics Guidelines for Trustworthy AI. In: *European Commission* [online]. 8. 4. 2019 [2020-01-22]. Available at: <<https://ec.europa.eu/futurium/en/ai-alliance-consultation>>.

improvement of internal insurance models.⁴ However, there is a number of issues related to providing the data to insurance companies especially with regard to competing values (business interest of an insurance company versus right to privacy of users).

The aim of this article is provide an initial background for further research on how to achieve balance of providing in-vehicle data for the purposes of motor insurance of autonomous vehicles while protecting privacy of individuals at the level presumed by the European legislation. In order to do so, the paper firstly identifies legal challenges in the area of insurance with regard to intelligent technologies. Then the paper clarifies the rationale behind providing in-vehicle data to insurance companies. Next, in order to identify values and principles promoted by the EU with regard to intelligent technologies, the paper provides an overview and a brief summary of the relevant EU policy documents related to access to data, liability and insurance with regard to operation of autonomous vehicles. The policy documents are presented in the chronological order according to the date of their publication. Lastly, the paper identifies related EU legislation that has a certain impact on provision of in-vehicle data to insurance companies.

1. LEGAL CHALLENGES IN THE AREA OF INSURANCE WITH REGARD TO NEW TECHNOLOGIES INCLUDING AUTONOMOUS VEHICLES

1.1 Introductory Remarks on Insurance

Insurance can be in general defined as an arrangement in which “parties referred to as *insureds* pay *premiums* to an *insurer* in exchange for protection against possible future losses. The insurer is obligated to pay insureds an amount specified by an insurance policy if the insureds make claims for losses they suffer.”⁵ An insurance can be also arranged and premium paid by other person than an insured who will at the end benefit from the insurance.

Together with fault-based liability and strict liability, insurance law is sometimes considered to form three pillars of tort law, as it distinguishes situations in which a person is capable to exercise a certain standard of due care (fault-based liability) from situations in

⁴ For more information, see for instance BAECKE, P., BOCCA, L. The value of vehicle telematics data in insurance risk selection processes. *Decision Support Systems*. 2017, Vol. 98, pp. 69–79, [2020-01-22]. Available at: <<https://www.sciencedirect.com/science/article/pii/S0167923617300763>>; GUO, F., FANG, Y. Individual driver risk assessment using naturalistic driving data. *Accident Analysis & Prevention*. 2013, Vol. 61, pp. 3–9, [2020-01-22]. Available at: <<https://www.sciencedirect.com/science/article/abs/pii/S0001457512002382>>; BAUMANN, M. F., BRÄNDLE, C., COENEN, Ch., ZIMMER-MERKLE, S. Taking responsibility: A responsible research and innovation (RRI) perspective on insurance issues of semi-autonomous driving. *Transportation Research Part A: Policy and Practice*. 2019, Vol. 124, pp. 557–572, [2020-01-22]. Available at: <<https://www.sciencedirect.com.ezproxy.techlib.cz/science/article/pii/S0965856417310212>>; RYAN, C., MURPHY, E., MULLINS, M. Semi-autonomous Vehicle Risk Analysis: A Telematics Based Anomaly Detection Approach. *Risk Analysis*. 2019, Vol. 39, No. 5, pp. 1125–1140, [2020-01-22]. Available at: <<https://onlinelibrary-wiley-com.ezproxy.techlib.cz/doi/full/10.1111/risa.13217>>; or SHEEHAN, B., MURPHY, E., RYAN, C., MULLINS, M., LIU, H. Y. Semi-autonomous vehicle motor insurance: A Bayesian Network risk transfer approach. *Transportation Research Part C: Emerging Technologies*. 2017, Vol. 82, pp. 124–137, [2020-01-22]. Available at: <<https://www.sciencedirect.com.ezproxy.techlib.cz/science/article/pii/S0968090X17301687>>.

⁵ SHAVELL, S. *Economic Analysis of Accident Law*. Harvard University Press, 2007, p. 192.

which it is not technically possible (strict liability).⁶ Insurance as a third pillar is typically complementary to the regime of strict liability as the cases covered by strict liability are characteristic with an increased level of danger that cannot be efficiently prevented even if due care is exercised. However, insurance is offered also for cases of fault-based liability.

In the EU, there are *different approaches to the relationship between insurance and liability*.⁷ For instance, in the UK, tort law is only subsidiary as insurance plays a key role in payment of compensation. Due to a very high number of insured persons, insurers in fact take over their role in litigation processes and settling cases.⁸ In Austria, there are discussion about potential partial replacement of tort law by insurance.⁹ In Germany, the relationship between liability and insurance is governed by the principle of irrelevancy – “tort and insurance are separate legal spheres in the sense that the existence of insurance is irrelevant to the determination of liability – liability comes first and must be established without regard to the availability of an insurance cover”.¹⁰ In Sweden, there is a trend to prioritize insurance law over the tort law and suppress its preventive function in favour of compensating loss.¹¹

Depending on an insurer, insurance can be either public or private. Moreover, insurance can be also either compulsory or optional. Most of the private insurance contracts are optional. However, there are certain insurance contracts that are compulsory.

Public compulsory insurance covers relationships in which an insurer is a public body and insurance is covered from a state budget; typically, one can mention statutory social security. Private compulsory insurance can be defined as a duty to enter into an insurance contract with a private insurance company. Compulsory insurance is typically set out for the cases of liability insurance (or third-party insurance), i. e. insurance protecting an insured against claims of third parties that suffered loss and could claim this loss from the insured. However, not all types of liability insurance are compulsory and a person can enter into such a contract voluntarily. With regard to the new technologies including artificial intelligence, smart homes or blockchain, liability insurance is sometimes considered as a possible solution of the problem of a fair distribution of liability.

Private optional insurance contracts are typically entered into between a private insurance company on one side and a natural or legal person on the other side. The insured party buys insurance in order to protect herself from unforeseen loss or from claims by other parties. Depending on who will receive the compensation, there are two types of insurance:

⁶ TICHÝ, L., HRÁDEK, J. *Deliktní právo*. Praha: Nakladatelství C. H. Beck, 2017, p. 27.

⁷ WAGNER, G. (ed.). *Tort Law and Liability Insurance*. Mörlenbach: Springer-Verlag/Wien, 2005.

⁸ *Ibid.*, p. 47.

⁹ *Ibid.*, p. 10.

¹⁰ *Ibid.*, p. 87.

¹¹ *Ibid.*, p. 148–149. Especially the following paragraph is interesting: “A parliamentary government committee (Personskadekommittén) proposed in a report in 2002 that the Swedish legal prohibition on the State to bring recourse actions against tortfeasors, liable according to tort law, and for which the State has borne expenses through the social insurance system, should remain, without any exceptions, even in the case of those who have caused the injury intentionally.”

- a) first-party insurance – a “[t]ype of insurance policy under which an insured (the first party) is paid by his or her insurer (the second party) in the event of an accident, injury, or loss whether caused by itself or someone else (the third party).”¹²
- b) third-party insurance – a “[l]iability insurance purchased by an insured (the first party) from an insurer (the second party) for protection against the claims of another (the third) party. The first party is responsible for its own damages or losses whether caused by itself or the third party.”¹³

There are various types of private insurance contracts including insurance of persons (life and disability, pension insurance, etc.), property insurance, business insurance, liability insurance (incl. product liability insurance), legal expenses insurance, etc. With regard to the new technologies, a new type of insurance called “cyber insurance” is relevant in particular. It can be characterized as follows:

“Cyber-insurance is an insurance product used to protect businesses and individual users from Internet-based risks, and more generally from risks relating to information technology infrastructure and activities. Risks of this nature are typically excluded from traditional commercial general liability policies or at least are not specifically defined in traditional insurance products. Coverage provided by cyber-insurance policies may include first-party coverage against losses such as data destruction, extortion, theft, hacking, and denial of service attacks; liability coverage indemnifying companies for losses to others caused, for example, by errors and omissions, failure to safeguard data, or defamation; and other benefits including regular security-audit, post-incident public relations and investigative expenses, and criminal reward funds.”¹⁴

Cyber insurance is offered for instance in Austria and Germany (Cyber-Versicherung), Czech Republic (pojištění kybernetických rizik), Denmark (cyberforsikring), Finland (kybervakuutus), France (cyber-assurance), Italy (assicurazione cyber risk), Poland (ubezpieczenie cybernetyczne), or United Kingdom.

1.2 Legal Challenges in the Area of Insurance Related to New Technologies

With regard to new technologies, both general as well as specific legal challenges can be identified in the area of insurance. Firstly, it is necessary to keep in mind that the primary purpose of insurance is to provide compensation of damages either to an insured (first party insurance) or to a victim (third-party insurance). At the same time, insurance protects the insured from not being able to fulfil their obligations to compensate damages to others (typically professional liability). However, existence of insurance is in general deemed to **negatively affect the standard of care** as the insured do not have to pay for incidental damage directly. This effect is usually referred to as “moral hazard” and may “lead to the ‘adverse selection’ of insurer” as well as “to the breakdown of insurance pool” as an

¹² First-party insurance. In: *BusinessDictionary* [online]. [2020-01-22]. Available at: <<http://www.businessdictionary.com/definition/first-party-insurance.html>>.

¹³ Third-party insurance. In: *BusinessDictionary* [online]. [2020-01-22]. Available at: <<http://www.businessdictionary.com/definition/third-party-insurance.html>>.

¹⁴ Cyber insurance. In: *Wikipedia* [online]. Available at: <https://en.wikipedia.org/wiki/Cyber_insurance>.

insurer would attract more high-risk individuals.¹⁵ With regard to the new technologies, insurance (especially if set out as compulsory) could also negatively affect behaviour of their developers and users as they could perceive the insurance as an ultimate protection of themselves.

Compulsory insurance scheme has been proposed as one of the solutions of addressing civil liability for autonomous robots and systems.¹⁶ In some countries, insurance is already replacing tort law and this might give an impression that **insurance companies should bear all the risk** related to complexity, opacity, unpredictability, and vulnerability. In this situation, one must distinguish between cases of when insured persons can exercise redress rights and when they cannot. In cases of existing possibility of redress, insurance cannot be considered as a last instance since an insurance company has also right of redress against a tortfeasor and shall protect own interests in individual cases. In case of absence of reliable liability rules and an attempt to compensate the legal challenge to set up these rules simply by compulsory insurance, one needs to keep in mind that such practice would only shift all the risks and obstacles to insurance companies without leaving them an option to protect their rights. Therefore, insurance companies most probably would not be willing to offer any insurance schemes related to new technologies. Then the risks related to complexity, opacity, unpredictability, and vulnerability could be shifted to insurance companies only by means of setting up a legal obligation for insurance companies to offer insurance covering these risks. Otherwise, insurance companies are to decide whether they come up with a special insurance model or not. At the same time, there may or may be not an obligation of developers, operators or users to take up this insurance which would result in different conditions of legal relationships. This situation is closely related to complexity.

Complex systems imply that a number of subjects cooperates on design and operation of these systems. Therefore, **multiplicity of actors** is also one of the challenges related to insurance. In case a damage occurs as a consequence of operation of complex systems, depending on the specificities of the case either one of the subjects would be held liable or more subjects would be held liable. Depending on the technology, each of the subjects might be insured by a compulsory insurance (motor vehicles), by a voluntary insurance or might not be insured at all. Moreover, depending on application of redress rights, mix of various insurance contracts (including various combinations of first-party insurance and third-party insurance) or their absence could also be found on multiple levels. Complexity of a system of potentially liable persons is hereby reflected in the complexity of mutual legal relationships. This state, however, may lead to high administrative costs both on the side of insurance companies and potential defendants, lengthy proceedings of insurance claims, and unpredictability of a final result for involved parties. As a result, some victims might not get compensated at all.

¹⁵ BILLAH, M. M. *Effects of Insurance on Maritime Liability Law. A Legal and Economic Analysis*. Cham: Springer, 2014. See p. 47.

¹⁶ European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)). In: *European Parliament* [online]. 16. 2. 2017 [2020-01-22]. Available at: <http://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html>. See point 59.

Another, closely related challenge is posed by a situation in which damage is caused by **collision of two technologies with different insurance regimes** – one of them being insured with a compulsory insurance and the other one is not insured at all. In this case the damage would most probably be covered from the compulsory insurance. This would, however, result in unjust discrimination of one technology over another. For instance, a recent incident when a Tesla car in an autonomous regime supposedly hit and “killed” another autonomous robot Promobot which could not be considered primarily as a motor vehicle for transportation of persons shall probably lead to discrimination of the operator of Tesla due his/her compulsory insurance, although the owner of Promobot also increased the risk of the collision. In this case the Tesla’s operator will probably also suffer from a more expensive premium in the future.

Given the special nature of the new technologies, **investigation of insurance claims can become burdensome**. This is not only due to potential multiplicity of actors, but also due to the need of employing specialists and time needed to analyse huge amounts of data. Especially identification of potential frauds or intentional wrongdoing resulting in a system malfunction can prove difficult.

As identified above, in the EU Member States the compulsory insurance scheme is set out especially for transportation (civil liability for the use of motor vehicles, aviation-specific liability and liability of carriers of passengers by sea) and professional liability.

However, it is questionable up to which degree the current schemes cover also situations when autonomous systems are involved (autonomous vehicles, or for instance expert systems used by professionals). With regard to autonomous vehicles, the compulsory insurance would compensate damages caused to a victim but an insurance company could have **redress rights against an operator simply because of using advanced autonomous functions** of a vehicle if operation of such vehicles is not approved by law or is contrary to law. For instance, in the Czech Republic it is not yet possible to lawfully operate autonomous vehicles despite there has been attempts to change the law.

With regard to optional insurance, the main challenge is that **no insurance will be offered** for certain risks or for certain products. In this case developers, operators and users will have to face all the risks and be prepared to compensate possible damages on their own. In this case four possible strategies can be used by these subjects: risk avoidance, risk control, risk retention or risk transfer.

Risk avoidance would mean that the above mentioned subjects would refrain from developing and using of the new technologies. However, this could result in slow innovation and, consequently, would negatively impact the EU economy.

Risk control lies in taking up various precautionary measures. This approach positively affects the standard of care. However, this approach can be taken only on the condition that there are precautionary measures that can be set up. For instance, common users of intelligent technologies such as Alexa or Google Home can set up certain cybersecurity measures but might be unable to prevent a case when proper voice recognition fails and a child orders expensive items over the Internet on behalf of her parents.

Risk retention means that the above mentioned subjects would take up the risk and in case of damage they would compensate the victim by themselves. However, this might result in a situation when a supposed tortfeasor would not be able to cover the damages

and the victim would go uncompensated. Moreover, uninsured professional subjects could easily go bankrupt.

Risk transfer is usually done through insurance contracts. However, if no insurance would exist, potentially liable subjects could also attempt to limit their liability and transfer it to claimants by contractual provisions. This would be especially evident in contracts of adhesion and in situations in which one of the parties is clearly in a weaker position to negotiate.

Alternatively to no insurance, **insurance contracts with high premiums or disadvantageous conditions** would prevent market developments.

With regard to the optional insurance scheme, the ideal situation would be existence of affordable solutions and promotion of taking up on these offers by relevant subjects.

2. ACCESS OF INSURANCE COMPANIES TO IN-VEHICLE DATA

Insurance companies have various strategies on how to manage the problem of moral hazard. For instance, they can only offer partial coverage, include deductibles (a specified amount of money that the insured must pay before an insurance company will pay a claim, i.e. sharing the cost of damages between an insured and an insurer), or differentiate premium rates based on claim history, loss experience, and other factors such as size of operation or condition of equipment used.¹⁷ The same strategies can be used also with regard to new technologies.

However, in order to ensure that the insurance market will function properly, insurance companies need access to data related to occurrence of damage. Otherwise, they will not be able to provide tailored solutions and in such case insurance companies would decide either to set a high price for such insurance to cover own potential losses, or not offer insurance at all. Access to data is usually secured by statutory and contractual obligations that oblige the insured to provide all available information related to the incident. However, an insured person herself then needs to have access to all relevant data.

Securing access to data for insurance companies is a prerequisite of efficient functioning of the whole insurance system. Without providing insurance companies with the necessary data, these companies will not be able to calculate risks and set up their business models as well as to fulfil other legal obligations set out both on EU as well as national levels to secure safe and reliable operation of their business. Securing such access could be connected to the obligation of “documentation by design” suggested as a solution with regard to other problems related to liability for new technologies. There are three positive effects of this solution: Firstly, this solution would prevent or at least mitigate some problems related to negative impact of insurance on the standard of care. Secondly, it would lower administrative costs with processing insurance claims. Thirdly, it would support insurance companies in offering optional insurance schemes. However, at this moment it cannot be clearly resolved in which manner the data should be made available, whether through a market or legislative intervention.

¹⁷ BILLAH, M. M. *Effects of Insurance on Maritime Liability Law. A Legal and Economic Analysis*. p. 48.

3. EU POLICY DOCUMENTS ON DATA ACCESS, LIABILITY AND INSURANCE

Over the last couple of years, the European Parliament and the European Commission published a number of documents that aim to identify crucial problems related to artificial intelligence (AI) and autonomous systems in general as well as specialized documents that focus primarily on driverless cars, connected and autonomous mobility as well as intelligent transportation systems. These documents partially deal with questions of data processing and some of them also with questions of liability and insurance.

The importance of data in the digital economy was recognized in 2014 when the European Commission published a communication *“Towards a thriving data-driven economy”*.¹⁸ The communication refers to the standard ISO/IEC 2382-1 for the definition of data as “a reinterpretable representation of information in a formalized manner, suitable for communication, interpretation or processing”.¹⁹ Data analysis is presumed to improve results, processes and decisions and to enable us to better predict future events. The document also introduces the term “data driven innovation” and calls for “availability of good quality, reliable and interoperable datasets and enabling infrastructure”.²⁰

In 2015, the European Economic and Social Committee published an opinion reacting on the Commission’s communication.²¹ The EESC stressed out that the communication does not propose solutions regarding data ownership or intellectual property issues.

In 2016, the European Commission published a specialised communication titled *“A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility”*.²² Among others, this strategic document highlighted the importance of data that are “used to develop a layer of innovative services and applications, which are made available over a layer of networks”.²³ Section 3.2 of the document argues that “protection of personal data and privacy is a determining factor for the successful deployment of cooperative, connected and automated vehicles. Users must have the assurance that personal data are not a commodity, and know they can effectively control how and for what purposes their data are being used”.²⁴ It calls for publishing a specific guidelines on data protection with regard to cooperative intelligent transport systems (C-ITS).

¹⁸ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions. *Towards a thriving data-driven economy*. COM(2014) 442 final. In: *European Commission* [online]. 2. 7. 2014 [2020-01-22]. Available at: <<https://ec.europa.eu/transparency/regdoc/rep/1/2014/EN/1-2014-442-EN-F1-1.Pdf>>.

¹⁹ *Ibid.*, p. 4.

²⁰ *Ibid.*, p. 5.

²¹ NIETYKSZA, A. Opinion of the European Economic and Social Committee on the ‘Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — Towards a thriving data-driven economy’ (COM(2014) 442 final). (2015/C 242/11). In: *EUR-Lex* [online]. 23. 7. 2015 [2020-01-22]. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2015.242.01.0061.01.ENG&toc=OJ:C:2015:242:TOC>.

²² EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions. *A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility*. COM/2016/0766 final. In: *European Commission* [online]. 30. 11. 2016 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A766%3AFIN>>.

²³ *Ibid.*

²⁴ *Ibid.*

On 10 January 2017, the European Commission published a communication titled “*Building a European Data Economy*”²⁵ together with the “*Staff working document on the free flow of data and emerging issues of the European data economy*”.²⁶ The communication focuses on how to secure free flow of data including non-personal data, which is for instance data generated by machines.²⁷ Legal or administrative restrictions on location of data are identified as the main obstacle. The communication also mentions a problem with the factual control over machine-generated data and, thus their “ownership”. In the document, the Commission defines future objectives regarding data access – “improve access to anonymous machine-generated data”, “facilitate and incentivise the sharing of such data”, “protect investments and assets”, “avoid disclosure of confidential data”, and “minimise lock-in effects”.²⁸ Introducing a so called “data producers right” is considered as one of the options on how to ensure legal certainty with regard to access to data. The Commission also points out potential problems with liability resulting from erroneous function of sensors and data processing and informs about an ongoing evaluation of Product Liability Directive.²⁹ In chapter 5, the Commission identifies additional issues that need to be addressed – data portability, interoperability and technical standards. The accompanying staff working document elaborates on the issues related to data economy in a greater detail and explicitly mentions the issue of data from connected and autonomous cars. It refers to C-ITS Platform Final report³⁰ that identified five principles for providing access to in-vehicle data, namely consent of a data subject, “fair and undistorted competition”, “data privacy and data protection”, “tamper-proof access and liability”, and “data economy”.³¹

The first general document adopted by the European Parliament devoted to problems of autonomous systems was the resolution of 16 February 2017 on *Civil Law Rules*

²⁵ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions. *Building a European Data Economy*. COM(2017) 9 final. In: *European Commission* [online]. 10. 1. 2017 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2017:9:FIN>>.

²⁶ EUROPEAN COMMISSION. Commission Staff working document on the free flow of data and emerging issues of the European data economy. Accompanying the document Communication Building a European data economy. SWD(2017) 2 final. In: *European Commission* [online]. 10. 1. 2017 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017SC0002>>.

²⁷ The communication defines machine-generated data as data that “is created without the direct intervention of a human by computer processes, applications or services, or by sensors processing information received from equipment, software or machinery, whether virtual or real. Machine-generated data can be personal or non-personal in nature.” See EUROPEAN COMMISSION. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions. Building a European Data Economy*. COM(2017) 9 final, section 3.1.

²⁸ *Ibid.*, section 3.5.

²⁹ Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products. In: *EUR-Lex* [online]. [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A31985L0374>>.

³⁰ C-ITS PLATFORM. Final report. In: *European Commission* [online]. 2016 [2020-01-22]. Available at: <<https://ec.europa.eu/transport/sites/transport/files/themes/its/doc/c-its-platform-final-report-january-2016.pdf>>.

³¹ For detailed explanation of the principles see *ibid.*, pp. 11–12.

on Robotics.³² The document does not focus purely on autonomous vehicles and devotes only limited attention to them. In general, the document points out that in connection with operation of autonomous systems there may arise new privacy concerns. Data as such, their exchange and analysis are a key factor in acquiring autonomy and a prerequisite for a real time data flow is “interoperability between systems, devices and cloud services”.³³ Moreover, the document suggests to equip advanced systems with “black boxes” that would record data related to operation and serve later for possible clarifications and explanation of decision logic involved. The need of data protection and security is highlighted as well together with the necessity to ensure free flow of data. The resolution specifically mentions autonomous means of transport in points 24 – 30 and distinguishes between autonomous vehicles and drones (or unmanned aerial vehicles – UAVS). Point 27 identifies areas which shall be impacted by autonomous vehicles: “civil responsibility (liability and insurance), road safety, all topics related to environment (e.g. energy efficiency, use of renewable technologies and energy sources), issues related to data (e.g. access to data, protection of data, privacy and sharing of data), issues related to ICT infrastructure (e.g. high density of efficient and reliable communication) and employment (e.g. creation and losses of jobs, training of heavy goods vehicles drivers for the use of automated vehicles)”. In the section related to liability, the resolution suggests as a possible solution to allocating liability introducing “an obligatory insurance scheme [...] unlike the insurance system for road traffic, where the insurance covers human acts and failures, an insurance system for robotics should take into account all potential responsibilities in the chain”.³⁴ Moreover, the resolution suggests to supplement such insurance with a fund that would provide compensation of damage in case no insurance exists and “calls on the insurance industry to develop new products and types of offers that are in line with the advances in robotics”.³⁵ A joint insurance scheme for manufacturers, programmers, owners and users is proposed as well. The Annex to the resolution also deals with processing of data. With regard to interoperability, the document states that “[a]ccess to the source code, input data, and construction details should be available when needed, to investigate accidents and damage caused by smart robots, as well as in order to ensure their continued operation, availability, reliability, safety and security”.³⁶ With regard to privacy, however, the document states that “[t]he right to privacy must always be respected. A robotics engineer should ensure that private information is kept secure and only used appropriately. Moreover, a robotics engineer should guarantee that individuals are not personally identifiable, aside from exceptional circumstances and then only with clear, unambiguous informed consent [...] Designers will comply with any requests that any related data be destroyed, and removed from any datasets”.³⁷ Unfortunately, the document does not deal with the

³² European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).

³³ *Ibid.*, point 9.

³⁴ *Ibid.*, point 57.

³⁵ *Ibid.*, point 58.

³⁶ *Ibid.*, Annex to the resolution, Recommendations as to the content of the proposal requested.

³⁷ *Ibid.*, Annex to the resolution, Code of Ethical conduct for robotics engineers.

potential conflict between the right to privacy and the right to access data for the purposes of investigating accidents.

On 18 May 2017, the European Commission published a specialised report on “*Access to In-Vehicle Data and Resources*”.³⁸ The report identifies existence of different legal issues and namely problems in the competition law and states that “[t]he model of access to in-vehicle data should ideally mitigate the concentration of power with one group of market participants to prevent the situation where, before competition law can be effectively applied, the market has already been distorted to the detriment of consumers”.³⁹

On 31 August 2017, the European Economic and Social Committee published its opinion on “*Artificial intelligence — The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society*”.⁴⁰ In this document, the EESC highlights the importance of data availability for the development of machine learning and defines parameters for training data for AI: the “data should be accurate and of good quality, diverse, sufficiently detailed and unbiased”.⁴¹ The EESC also raises privacy concerns and concerns about influencing decisions of individuals based on the collected personal data.

The resolution *Civil Law Rules on Robotics* was based on the report by Mady Delvaux.⁴² The report was later examined within the process of European value added assessment resulting in the document titled “*A common EU approach to liability rules and insurance for connected and autonomous vehicles*”⁴³ that was published in February 2018. This document identifies gaps in the existing EU laws and new risks related to operation and use of autonomous vehicles.⁴⁴ It illustrates in detail the legal ambiguity of existing liability rules and among others suggests adjusting rules of evidence by introducing legislation on compulsory event data recorders. Section “3.3 Procedure and standards for establishing liability” states that the existing rules on providing evidence by an injured party are too burdensome due to the technical complexity of the technology. Because of that “there are strong arguments from the industry and insurance companies to introduce tracing technology (TT) that may

³⁸ MCCARTHY, M. et al. *Access to In-vehicle Data and Resources. Final Report*. In: *European Commission* [online]. 18. 5. 2017 [2020-01-22]. Available at: <<https://ec.europa.eu/transport/sites/transport/files/2017-05-access-to-in-vehicle-data-and-resources.pdf>>.

³⁹ *Ibid.*, p. 8.

⁴⁰ MULLER, C. *Opinion of the European Economic and Social Committee on ‘Artificial intelligence — The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society’*. (own-initiative opinion). (2017/C 288/01). In: *EUR-Lex* [online]. 31. 8. 2017 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016IE5369>>.

⁴¹ *Ibid.*, point 3.5.

⁴² DELVAUX, M. *Report with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))*. In: *European Parliament* [online]. 27. 1. 2017 [2020-01-22]. Available at: <https://www.europarl.europa.eu/doceo/document/A-8-2017-0005_EN.html>.

⁴³ EVAS, T. *A common EU approach to liability rules and insurance for connected and autonomous vehicles*. In: *European Parliament* [online]. 2018 [2020-01-22]. Available at: <[https://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU\(2018\)615635_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU(2018)615635_EN.pdf)>.

⁴⁴ These risks are namely “risks relating to the failure of operating software enabling an AV to function, risks relating to network failures, risks related to hacking and cybercrime, and risks/external factors relating to programming choices”. See EVAS, T. *A common EU approach to liability rules and insurance for connected and autonomous vehicles*, p. 5.

help to establish the reasons for accidents and thus assign liability”.⁴⁵ The document also states that “[a]s it stands now, it is up to each Member State to determine whether AVs’ tracing data can be used as evidence for establishing liability. Furthermore, issues relating to AV-TT data collection, usage and storage need to be carefully assessed under the GDPR, to establish whether the current EU framework is sufficient for AV-TT technologies”.⁴⁶ The Annex I. to the document deals with issues related to sharing data in section 4.3. On one hand, the document identifies logging data and data about driver’s behaviour as helpful in determining the cause of an accident, on the other hand it highlights limitations on processing personal data set out by the General Data Protection Regulation (GDPR).⁴⁷ Data processed by the tracing technology will often relate to an identifiable of an identified person and will, therefore, be considered as personal data. Identification can be done also for instance with help of combining certain data. Regarding the position of insurance companies, the document states that “[t]hird parties, such as insurers using the TT-data to inter alia calculate insurance premiums, are also controllers”.⁴⁸ As to the scope of processed personal data, according to the document the “tracing technology must be aimed at processing as little personal data as possible and privacy settings should avoid collection and processing of personal data by default as much as possible”.⁴⁹ The section on sharing data concludes that in case tracing technology would be deployed, drivers would have to use it and put themselves in an increased risk (e. g. hacking etc.) and at the same time they would have no certainty that data from this technology could be used in all EU Member States to establish liability. A problem is also seen in exporting EU citizens’ personal data to third countries.

On 23 February 2018, the European Parliament published a report on cooperative intelligent transport systems⁵⁰ and on 13 March 2018 adopted a resolution titled “*European strategy on Cooperative Intelligent Transport Systems*”.⁵¹ In points 24 – 26 the resolution deals with the questions of privacy and data protection. The point 24 stresses out that personal data related to operation of C-ITS should be used only for the purpose of C-ITS operation and not for other purposes. “C-ITS service providers must offer easily accessible information and clear terms and conditions to drivers, enabling them to give their freely informed consent, in accordance with the provisions and restrictions laid down in the GDPR”.⁵² The point 25 warns against “driving walls”, which would mean that users could

⁴⁵ EVAS, T. *A common EU approach to liability rules and insurance for connected and autonomous vehicles*, p. 27.

⁴⁶ *Ibid.*, p. 27.

⁴⁷ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance). In: *EUR-Lex* [online]. 4. 5. 2016 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/eli/reg/2016/679/oj>>.

⁴⁸ EVAS, T. *A common EU approach to liability rules and insurance for connected and autonomous vehicles*, p. 88.

⁴⁹ *Ibid.*, p. 89.

⁵⁰ UJHELYI, I. Report on a European strategy on Cooperative Intelligent Transport Systems (2017/2067(INI)). In: *European Parliament* [online]. 23. 2. 2018 [2020-01-22]. Available at: <https://www.europarl.europa.eu/doceo/document/A-8-2018-0036_EN.html>.

⁵¹ European Parliament resolution of 13 March 2018 on a European strategy on Cooperative Intelligent Transport Systems (2017/2067(INI)). In: *European Parliament* [online]. 13. 3. 2018 [2020-01-22]. Available at: <https://www.europarl.europa.eu/doceo/document/TA-8-2018-0063_EN.html>.

⁵² *Ibid.*, point 24.

not drive their own smart car if they refused to give consent; [and] calls for an ‘offline mode’ option to be made available in smart cars, which would enable the user to turn off transfers of personal data to other devices without hampering their ability to drive the car”.⁵³ The point 26 promotes utilization of anonymization techniques. In the point 41, the resolution “calls on the Commission to publish a legislative proposal on access to in-vehicle data and resources” and defines parameters and conditions of this proposal: “this proposal should enable the entire automotive value chain and end users to benefit from digitalisation and guarantee a level playing field and maximum security with regard to storage of in-vehicle data and access thereto for all third-parties, which should be fair, timely and unrestricted in order to protect consumer rights, promote innovation and ensure fair, non-discriminatory competition on this market in line with the principle of technological neutrality”.⁵⁴

On 25 April 2018, the European Commission published a communication titled “*Artificial Intelligence for Europe*”⁵⁵ together with a staff working document titled “*Liability for emerging digital technologies*”.⁵⁶ In the communication, the Commission proclaims its goal to make more data available including privately-held data and support sharing of data while maintaining the high level of personal data protection set out in the GDPR. The staff working document defines the term “autonomous cars” and provides a brief overview of existing EU legislation and mentions the existing mandatory motor insurance. The document also identifies some of the challenges related to determining liability.

On the same day, the European Commission also published a number of documents related to data economy. The communication “*Towards a common European data space*”⁵⁷ introduced so called “data package”, i.e. a number of documents aimed at creating a common European data space. The introduced measures are “a proposal for a review of the Directive on the re-use of public sector information (PSI Directive); an update of the Recommendation on access to and preservation of scientific information; and guidance on sharing private sector data”.⁵⁸

⁵³ *Ibid.*, point 25.

⁵⁴ *Ibid.*, point 41.

⁵⁵ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Artificial Intelligence for Europe. COM(2018) 237 final. In: *European Commission* [online]. 25. 4. 2018 [2020-01-22]. Available at: <<https://ec.europa.eu/digital-single-market/en/news/communication-artificial-intelligence-europe>>.

⁵⁶ EUROPEAN COMMISSION. Staff Working Document on liability for emerging digital technologies accompanying the document Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions “Artificial Intelligence for Europe”. SWD(2018) 137 final. In: *European Commission* [online]. 25. 4. 2018 [2020-01-22]. Available at: <<https://ec.europa.eu/digital-single-market/en/news/european-commission-staff-working-document-liability-emerging-digital-technologies>>.

⁵⁷ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards a common European data space. COM(2018) 232 final. In: *European Commission* [online]. 25. 4. 2018 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52018DC0232>>.

⁵⁸ *Ibid.*, section 1.

On 15 May 2018, the European Commission published a communication titled “*Completing a trusted Digital Single Market for all*”.⁵⁹ With regard to data and artificial intelligence, the communication stressed out the importance of “machine readability and common data formats”.⁶⁰

On 17 May 2018, the European Commission issued a communication titled “*On the road to automated mobility: An EU strategy for mobility of the future*”.⁶¹ Within this document the Commission proposes to equip autonomous vehicles with data recorders that can provide information about who was a driver. The Commission also reacts to the call of the Parliament to come up with a legislation on access to in-vehicle data and resources and refers to the existing EU legislation on access to vehicle repair and maintenance information⁶² that has been recently updated to include maintenance performed via wireless networks.⁶³ Moreover, it refers to a proposal of a new regulation on free flow of non-personal data adopted later on in 2018.⁶⁴ The Commission also expresses its concern over “extended vehicle data platform servers” as not sufficient for ensuring fair competition on the market.

On 5 December 2018, the European Parliament published a report on autonomous driving⁶⁵ and on 15 January 2019 adopted a resolution titled “*Autonomous driving in European Transport*”.⁶⁶ In this resolution, the Parliament suggests as a possible solution to existing legislative shortcomings “setting up of a no-fault insurance framework for dam-

⁵⁹ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Completing a trusted Digital Single Market for all. COM(2018) 320 final. In: *European Commission* [online]. 15. 5. 2018 [2020-01-22]. Available at: <<https://ec.europa.eu/digital-single-market/en/news/completing-trusted-digital-single-market-all>>.

⁶⁰ *Ibid.*, p. 9.

⁶¹ EUROPEAN COMMISSION. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions. On the road to automated mobility: An EU strategy for mobility of the future. COM(2018) 283 final. In: *European Commission* [online]. 17. 5. 2018 [2020-01-22]. Available at: <https://ec.europa.eu/transport/sites/transport/files/3rd-mobility-pack/com20180283_en.pdf>.

⁶² Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information (Text with EEA relevance). In: *EUR-Lex* [online]. 29. 6. 2007 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32007R0715>>.

⁶³ Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (Text with EEA relevance.). In: *EUR-Lex* [online]. 14. 6. 2018 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R0858>>.

⁶⁴ Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the European Union (Text with EEA relevance.). In: *EUR-Lex* [online]. 28. 11. 2018 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32018R1807>>.

⁶⁵ VAN DE CAMP, W. Report on autonomous driving in European transport (2018/2089(INI)). In: *European Parliament* [online]. 5. 12. 2018 [2020-01-22]. Available at: <https://www.europarl.europa.eu/doceo/document/A-8-2018-0425_EN.html>.

⁶⁶ European Parliament resolution of 15 January 2019 on autonomous driving in European transport (2018/2089(INI)). In: *European Parliament* [online]. 15. 1. 2019 [2020-01-22]. Available at: <https://www.europarl.europa.eu/doceo/document/TA-8-2019-0005_EN.html>.

age resulting from autonomous vehicles”.⁶⁷ At the same time the resolution warns against negative impacts of autonomous vehicles on insurance sector.⁶⁸ Regarding the data, the Parliament calls upon the Commission to present a strategy on access to in-vehicle data and “[a]ffirms the need to explore legislative actions to ensure fair, secure, real-time and technology-neutral access to in-vehicle data for some third party entities; takes the view that such access should enable end users and third parties to benefit from digitalisation and promote a level playing field and security with regard to storage of in-vehicle data”.⁶⁹ The Parliament also highlights the need to solve issues related to intellectual property rights with regard to machine creation of codes and data. The Parliament requires a regulatory action that would ensure “the same data quality and availability across Member States”.⁷⁰ Other issues that need to be addressed are legal certainty about categories of processed data (which data are open data and which are confidential data), ensuring access of users to personal and in-vehicle data, and ensuring utilization of non-personal and anonymised data for further innovations.⁷¹ In point 30, the Parliament stresses out the importance of event data recorders that would facilitate investigation of potential accidents of autonomous vehicles. The resolution also underlines the importance of ensuring “fair market access to in-vehicle data”⁷² that plays an important role in ensuring the safety of these cars.

In December 2019, the European Commission published a report titled “*Liability for Artificial Intelligence and other emerging digital technologies*”.⁷³ With regard to data, the report stresses out the need to evaluate options of access of insurance companies to various kinds of data.

3. EU LEGISLATIVE DOCUMENTS

Given the complexity of functioning of autonomous vehicles, there is a quite broad scope of existing applicable EU legislation. This legislation partially influences how and to what degree the in-vehicle data is processed and, potentially, what kinds of data could be provided to insurance companies.

In general, the relevant regulatory documents are Product Liability Directive,⁷⁴ Motor Insurance Directive,⁷⁵ Directive on framework for the deployment of

⁶⁷ Ibid., point 42.

⁶⁸ Ibid., point 70.

⁶⁹ Ibid., point 8.

⁷⁰ Ibid., point 15.

⁷¹ Ibid., points 16-18.

⁷² Ibid., point 64.

⁷³ EXPERT GROUP ON LIABILITY FOR NEW TECHNOLOGIES. *Liability for Artificial Intelligence and other emerging digital technologies*. In: *European Commission* [online]. 2019 [2020-01-22]. Available at: <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=36608>>.

⁷⁴ Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products.

⁷⁵ Directive 2009/103/EC of the European Parliament and of the Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability (Text with EEA relevance). In: *EUR-Lex* [online]. 7. 10. 2009 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009L0103>>.

Intelligent Transport Systems,⁷⁶ or Regulation on vertical agreements in motor vehicle sector.⁷⁷

However, a special instrument has already been adopted. On 17 May 2018, the European Commission published a proposal for a regulation regarding a general safety related to use of motor vehicles⁷⁸ together with the impact assessment of the proposed regulation.⁷⁹ The regulation was adopted on 27 November 2019 and shall be directly applicable in all Member States in its entirety as of 6 July 2022.⁸⁰ This regulation introduces event data recorders. An event data recorder is defined as “a system with the only purpose of recording and storing critical crash-related parameters and information shortly before, during and immediately after a collision”.⁸¹ Art. 6 states that a motor vehicle should be equipped with this system. Moreover, the regulation specifies in Art. 6(4) and Art. 6(5) requirements on these systems, namely what data should be recorded (“the vehicle’s speed, braking, position and tilt of the vehicle on the road, the state and rate of activation of all its safety systems, 112-based eCall in-vehicle system, brake activation and relevant input parameters of the on-board active safety and accident avoidance systems”), how the system records and stores the data and what data the system should not store (“the last four digits of the vehicle indicator section of the vehicle identification number or any other information

⁷⁶ Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport. In: *EUR-Lex* [online]. 6. 8. 2010 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1580220726528&uri=CELEX:32010L0040>>.

⁷⁷ Commission Regulation (EU) No 461/2010 of 27 May 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector (Text with EEA relevance). In: *EUR-Lex* [online]. 28. 5. 2010 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1580220854391&uri=CELEX:32010R0461>>.

⁷⁸ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/... and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009. COM/2018/286 final - 2018/0145 (COD). In: *EUR-Lex* [online]. 17. 5. 2018 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:52018PC0286>>.

⁷⁹ Commission Staff Working Document. Impact Assessment Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/... and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009. SWD(2018) 190 final. In: *EUR-Lex* [online]. 17. 5. 2018 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2018:0190:FIN:EN:PDF>>.

⁸⁰ Regulation (EU) 2019/2144 of the European Parliament and of the Council of 27 November 2019 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 of the European Parliament and of the Council and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 of the European Parliament and of the Council and Commission Regulations (EC) No 631/2009, (EU) No 406/2010, (EU) No 672/2010, (EU) No 1003/2010, (EU) No 1005/2010, (EU) No 1008/2010, (EU) No 1009/2010, (EU) No 19/2011, (EU) No 109/2011, (EU) No 458/2011, (EU) No 65/2012, (EU) No 130/2012, (EU) No 347/2012, (EU) No 351/2012, (EU) No 1230/2012 and (EU) 2015/166 (Text with EEA relevance). In: *EUR-Lex* [online]. 27. 11. 2019 [2020-01-22]. Available at: <<https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32019R2144>>.

⁸¹ *Ibid.*, Art. 3(13).

which could allow the individual vehicle itself, its owner or holder, to be identified”). Art. 11 defines “specific requirements relating to automated vehicles and fully automated vehicles”. Autonomous cars should be equipped with the following systems: “systems to replace the driver’s control of the vehicle, including signalling, steering, accelerating and braking; systems to provide the vehicle with real-time information on the state of the vehicle and the surrounding area; driver availability monitoring systems; event data recorders for automated vehicles; harmonised format for the exchange of data for instance for multi brand vehicle platooning; and systems to provide safety information to other road users”. Specifications of these systems will be provided in implementing acts.

CONCLUSION

The European Union places a great focus on a strong digital economy that will be supported by a fair legal framework securing protection of consumers and ensuring competitiveness on the internal market. With regard to the autonomous vehicles, the EU is aware of the problem of access to in-vehicle data in order to ensure proper maintenance and to investigate potential accidents and failures in operation. Expert groups and policy makers came up with general guidelines and principles on access to in-vehicle data. Moreover, the legislation introduced a new obligation to install event data recorders in cars. However, the question of finding a proper balance between protection of privacy and protection of legitimate interests of insurance companies has not been fully solved. The EU is aware of the fact that an insurance market could be distorted by various measures regulating access to in-vehicle data. Therefore, a deeper study is needed as to the position of insurance companies and whether they should have specific regulation given the fact that they fulfil a specific function in compensating damage for others and in a sense stabilize the society. The future research should also focus on providing guidelines as to which data (including namely behaviour data) could be communicated to insurance companies.