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Regulation of Civil Liability for Incidents Related to Intelligent Connected Driving in the European Union

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VILNIAUS UNIVERSITETAS

Olga Shevchenko

Civilinės atsakomybės už incidentus, susijusius su automatizuotų transporto priemonių valdymu Europos Sąjungoje, reglamentavimas

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Regulation of Civil Liability for Incidents Related to Intelligent Connected Driving in the European Union

Contents

List of Abbreviations

AI – Artificial Intelligence

AIVC – System Automated Intelligent Vehicle Control System

AV – Autonomous Vehicles

CAD – Connected and Automated Driving

CAVs – Connected Autonomous Vehicles

CCAD – Cooperative Connected and Automated Driving

CJEU – Court of Justice of the European Union

CVs – Conventional Vehicles

DDT – Dynamic Driving Task

EEA – European Economic Area

EU – European Union

GPSD – General Product Safety Directive

ICS – Intelligent Connected System

ICT – Information and Communication Technology

ICV.p – Intelligent Connected Vehicle as a product

ICV.v – Intelligent Connected Vehicle as a vehicle

ICVs – Intelligent Connected Vehicles

ITS – Intelligent Transport Systems

LiDAR – Light Detection and Ranging

LoT – Liability of Thing

MaaS – Mobility-as-a-Service

MID – Motor Insurance Directive

MSs – Member States

MTPL – Motor Third Party Liability

OBE – onboard equipment

ODD – Operational Design Domain

P.C.S. – Perte de Chance de Survie (from French: Loss of chance to survive)

PL – Product Liability

PLD – Product Liability Directive

RSUs – Road Side Units

RTA – Road Traffic Accidents

SAE – The Society of Automotive Engineers

TCC – Traffic Control Centre

V2I – Vehicle-to-Infrastructure

V2V – Vehicle-to-Vehicle

V2X – Vehicle-to-Technologies

Introduction

At present, both the society and law-making bodies are faced with a number of challenges caused by the rapid technological development. While slow headway is an inevitable process, adjustments to the conventional auxiliaries such as laws in society are necessary. Connected and Automated Driving (CAD)[1] is expected to become a regular phenomenon in traffic. To boost the CAD and to ensure safe operation of the Intelligent Connected Vehicles (ICVs)[2] on public roads, i.e., to ensure that ICVs do not expose other road users to a safety risk or danger, industry and legislators, in tight collaboration, should take the necessary steps towards tackling foreseeable technical and legal complexities. While the principal task for the industry is to address the projected technical complexities of ICVs through highly focused and coordinated efforts, the legislators should commit to clarifying essential new legal concepts and revealing potential legal inconsistencies in view of technological advancement. Given the lack of a common approach to regulating ICV civil liability, the legal issues remain crucial. Until a common approach to ICV civil liability in the European Union is developed, the use of ICVs other than for testing purposes should be restricted.

Although ICVs should serve to boost the road safety in the European Union (EU), having regard to the current technical[3] and statistical data[4], it is legitimately questionable and little feasible that the placement of ICVs in the general EU traffic would completely eliminate road traffic accidents (RTAs). While the use of ICVs domestically does not change the need to establish an approach to the domestic ICV civil liability regulation, the use of ICVs throughout the EU requires a common approach to the ICV civil liability regulation in the EU. Once the ICVs get placed into the free circulation in the EU, arguably, the growth in cross-border RTAs involving ICVs is expected. The frequent interaction between vehicles in the host Member State (MS) leads to an increase in cross-border accidents. Accordingly, victims of cross-border accidents involving ICVs will face the necessity to file a compensation claim. As a common EU approach to ICV civil liability has not yet been developed, and therefore cross-border victims may be left undercompensated or without compensation[5] even if his or her member state's regulation of ICV civil liability is already in place. This undoubtedly leads to the priority need to develop a common

[1] *Connected and Automated Driving* (CAD) refers to connected and autonomous vehicles (also referred to as *self-driving vehicles*) that can operate independently, i.e., without human intervention. The European Commission, in tight collaboration with the MSs, commits towards accomplishing the EU's vision for connected and automated mobility in a Digital Single Market.

[2] *Intelligent Connected Vehicles* (ICVs), also referred to as *Autonomous Vehicles* (AVs), *Connected Autonomous Vehicles* (CAVs) or *self-driving vehicles*, should be viewed as the vehicles that can operate independently, i.e., without human intervention. The Society of Automotive Engineers (SAE) provides a taxonomy with detailed definitions of six levels of driving automation, i.e., from no-driving automation (Level 0) to full driving automation (Level 5). In Level 0, or 'no driving automation' conditions, the driver is required to constantly maintain control of the vehicle. In a Level 5, or 'full driving automation' environment, stable and unconditional performance, i.e., independently from the *Operational Design Domain* (ODD), is achieved by an automatic control system of the entire *Dynamic Driving Task* (DDT) and DDT rollback without any expectation that the user will respond to the request to intervene. In the Communication on the road to automated mobility: An EU strategy for mobility of the future (COM(2018) 283 final), the European Commission refers to the levels of driving automation introduced by *SAE International*.

[3] Section 2 of this study refers to certain technical data that reflect the current level of ICV-related technological advancement.

[4] Section 2 of this study refers to the statistical data that demonstrate a number of ICV-related incidents.

[5] Expert Group on Liability and New Technologies – New Technologies Formation. Liability for Artificial Intelligence and Other Emerging Technologies. *Publication Office of the European Union: Brussels*, 2019, pp. 1–65. (p. 19).

approach to civil liability for ICV in the EU. In order to develop a common approach to the regulation of civil liability for ICVs, EU legislators and national lawmakers must work closely together. Pursuant to the *Ethics of Connected and Automated Vehicles*[6], both the EU and national law-making bodies already started to focus on promoting a fair and effective mechanism of attribution of legal liability for accidents involving ICVs and create just and effective legal rules for granting a smooth compensation mechanism to victims of the accidents involving ICVs.

Given the retroactive legal analysis, the proper regulation of the liability for RTAs in the EU has been one of the leading goals put within the agenda of the EU empowered institutions for decades. Although, starting from 1972,[7] the laws aimed further to enhance the protection system of cross-border RTAs victims, i.e., the laws aimed at minimising the negative impact on the victims, have been developing, the victims do still experience divergent complexities and obstacles towards exercising the right to compensation in relation to the RTAs caused by the conventional vehicles (CVs). The legal problems faced by victims of CVs do not appear to be a new legal issue at the EU level, while the regulation of accidents involving ICVs is only in its infancy. However, when establishing the ICVs civil liability regulation at the European Union level, to avoid comparable obstacles and complexities already faced by the victims of RTAs involving CVs, it is inevitable to reveal the principal causes that provide disadvantageous impact on the victims. Therefore, analysis of both regulations of RTAs involving CVs and ICVs is inevitable for the purposes of this study. Given the already introduced ICVs large-scale testing in the EU[8], in the conditions of a mixed traffic flow, i.e., traffic including CVs and ICVs, the case-scenario of RTA involving at least one ICV and CV or non-motorised road user, is reasonably feasible. Without proper ICVs civil liability regulation at the European Union level, i.e., explicit attribution of legal culpability, among other things, defined the actors bearing civil liability in all foreseeable circumstances, and set a compensation mechanism, victims of RTAs involving ICV can become subject to under-compensation or less favourable treatment compared to the guarantees set out in the Motor Insurance Directive (MID)[9].

While understanding the current ICV-related legal challenges in the EU, it is significant to discern two categories of victims who/that are required to be optimally protected[10], i.e., (1) the

[6] Independent Expert Group on the Ethics of Connected and Automated Vehicles (CAVs). Ethics of Connected and Automated Vehicles. Luxembourg: *Publication Office of the European Union* (2020). ISBN 978-92-76-17867-5.

[7] On April 24 1972, the Council of the European Communities introduced the first directive on the approximation of the laws of the MSs relating to insurance against civil liability in respect of the use of motor vehicles, and to the enforcement of the obligation to insure against such liability, the so-called *First Motor Insurance Directive* (MID).

[8] At present, 29 European countries are committed to developing large-scale ICV-related trials on European roadways in the form of cross-border corridors. From September 2017, MSs are committed to boost a smooth environment for testing and deploying 5G technology for the purposes of mobility 4.0 in the European Union.

[9] 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. OJ L 263.

[10] Since 1997, when the European Commission adopted a proposal for a directive aimed at improving the system of compensation for the victims of the cross-border RTAs, both the European law-making bodies and legislators at the domestic level have been committed to providing a satisfactory level of protection for road traffic victims. In the same vein, the Product Liability (PL) policy at the European Union level aims at eliminating the negative impact on the ultimate consumer by shifting the financial consequences from the consumer-victim to a manufacturer-subject responsible for the defective product. The EU-wide PL policy refers to the European consumer policy in a broader

consumer-victims[11] who endured the damage caused in connection with the use of the ICVs to which they are owners, users, or lawful possessors, and (2) other motorised persons, i.e., drivers, owners or lawful possessors of the CVs or ICVs, or non-motorised individuals, i.e., passengers, pedestrians, cyclists, other non-motorised road users and the owners of any damaged property[12], as well as the victims of RTAs who suffered the damage caused by ICVs. For this reason, given the decades of development of the protection system for RTAs victims and consumer-victims of defective products in the EU, to avoid any potential discriminatory effect between compulsory Motor Third-Party Liability (MTPL), Product Liability (PL) and ICV civil liability, the legal approach to the ICV civil liability regulation should be formed having regard to the already existing set of liability rules and compensation mechanisms which is currently in place at the European Union level.

Given the fact that the operation of ICVs is more complex and sophisticated than driving a CV in regular traffic, it must be argued that a wider range of additional safety tasks, interconnections between different agents and allocation of liabilities should apply to the regulation of accidents involving ICVs. Thus, the current MTPL regulation in the EU does not provide coverage for all legal issues that may arise from the use of ICVs. Accordingly, this study suggests the establishment of a Synergic ICV civil liability regulation, which should be seen as a symbiosis of PL and MTPL regulation at the EU level, including the necessary adjustments in a view of the complexity and specificity of ICVs. This study analyses the feasibility and pertinence of the Synergic ICV civil liability regulation approach through the prism of its congruity with the legal perspectives of both the European Union and the member states (MSs). Synergic ICV civil liability regulation should be aimed at fulfilling the current legal gaps given the rapid advancement of technologies in the EU. To obstruct exposing the interested parties to the risk of diminishing the optimal level of protection of road traffic victims and consumer-victims in the EU from both foreseeable and materialised harmful consequences, this study focuses on the achievability of the Synergic ICV civil liability at the European Union level. The MTPL regulation established at the European Union level aims to approximate the laws of the MSs relating to insurance against civil liability regarding the use of a motor vehicle. However, it does not harmonise the rules related to civil liability *per se* at the European Union level. On the contrary, the Synergic ICV civil liability regulation approach is urged through the prism of a uniform set of rules related to civil liability in a narrow subject-matter, which aims to obstruct potential discriminatory, less favourable impacts on cross-border victims depending on which state(s) the accident occurred in.

The aim of this study is to address the principal legal issue as to whether it is feasible to adopt a uniform approach to the ICV civil liability regulation at the European Union level; and, if so, whether the Synergic ICV civil liability regulation approach can be deemed sustainable compared to the amendment of the Product Liability Directive (PLD)[13] and MID.

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sense, which purports to protect consumers from risks that they are unable to combat alone as individuals. Section 1 of this study provides analysis of the EU's vision towards both road traffic victims and consumer-victims.

[11] This study addresses consumer-victims exclusively in connection with ICV incidents that have or assumedly have an active or passive impact in RTA-related matters.

[12] In this study, the owners of the damaged property are referred to as victims in solo accidents, i.e., including only one CV or ICV that caused property damage.

[13] Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the MSs concerning liability for defective products. OJ L 210.

The research object of this study should be seen as the feasibility and potential for the realisation of a uniform approach to the ICV civil liability regulation in relation to accidents in the European Union.

To achieve the aim of this study, six major subject-related tasks shall be pursued:

1. To scrutinise both compulsory MTPL and PL guarantees and requirements set out at the European Union level, including the analysis of the Court of Justice of the European Union (CJEU) case law,[14] as a baseline and regulatory foundation to facilitate the Synergic ICV civil liability regulation approach.
2. To scrutinise the interrelation between the MTPL and PL guarantees at both the European Union and national levels.
3. To reveal the principal causes that provide disadvantageous impact on MTPL, and PL victims given the existing regulation in the EU.
4. To identify the obligations of different agents involved in ICVs deployment, and therefore to determine the distribution of responsibilities between the actors in question.
5. To analyse the national standpoints of the MSs on ICV civil liability theories.
6. To disclose both the weaknesses and the robustness of different ICV civil liability regimes and to demonstrate their potential impact on both the victims of ICVs and the ICV-involved agents.

Having regard to an immense number of unsolved legal issues in connection with the ICVs in the EU, it should be stated that this study does not purport at analysing an exhaustive block of legal requirements and safety measurements, other than ICV civil liability directly related issues. Accordingly, the legal requirements aimed at preventing deliberate or involuntary misuse of ICV, revision of traffic rules to promote the safety of ICVs, the collection and processing of various combinations of static and dynamic data concerning ICVs, development of transparency strategies in respect of data collection, bilateral agreements for crossing the external border of the EU with ICVs, effects of ICVs technologies on safety and crashes, as well as effects on traffic congestion and other, are beyond the scope of this research.

The current status of the research in the field of the legal regulation of ICVs deployment can be illustrated at two levels, i.e., (1) its current status at the EU level, and (2) in the Republic of Lithuania:

LEVELS OF THE RESEARCH	STATUS OF THE RESEARCH INCLUDING THE MAJOR SUBJECT-RELATED CONTRIBUTIONS

[14] Analysis of the Case Law of the Court of Justice of the European Union (CJEU) aims to refine the EU's standpoint on the protection system for both road traffic victims and consumer-victims.

European Union	⇢	Among the scientific contributions, in *Automated Vehicles and the Rethinking of Mobility and Cities*,[15] the authors discuss the forecasts of the completion of ICVs market penetration. At the same time, in *The European Road to Autonomous Vehicles*,[16] Francesco Paolo Patti thoroughly analyses the feasibility to adapt private law paradigms towards the emerging digital technologies. This author questions the adequacy of the currently existing EU legal instruments vis-à-vis the apportionment of liability in ICV-related cases involving different subject-related agents. In *Fundamental and Special Questions for Autonomous Vehicles*,[17] Tom M. Gasser raises specific concerns in the legal context related to the ICV regulation in Germany and stresses the importance of a precise definition of 'automated control quality' in order to achieve the necessary legal certainty. In *A common EU approach to liability rules and insurance for connected and autonomous vehicles*,[18] Tatjana Evas meticulously examines four policy options, i.e., Option 1: PLD as a policy vis-à-vis the ICVs; Option 2: PLD+MID invoking significant alterations at the national level of the MSs; Option 3: EU framework favouring automotive manufacturers; and Option 4: EU framework favouring RTA victims, in relation to the ICV deployment at the European Union level. In *Liability and Risk Management in Robotics*,[19] Erica Palmerini and Andrea Bertolini scrutinise the adequacy of the PLD to provide for sufficient incentives, and therefore, to ensure sustainability in the product liability policy versus the emerging digital technologies. In the same vein, in *Liability Issues in Advanced Robotics: An Introduction for European in-House Counsels*,[20] Corrado Druetta thoroughly analyses defences to PL action, by focusing on the state-of-the-art defence in connection with the emerging digital technologies. In *Automated Vehicles and Third-Party Liability: A European Perspective*,[21] Michael Chatzipanagiotis and George Leloudas examine ICV's software as a product addressing potential and foreseeable hindrances in the distribution of responsibilities and the subsequent legal culpabilities between the automotive manufacturer and the victim in question. In *Mind the gaps: Assuring the safety of autonomous*

[15] Adriano Alessandrini, Andrea Campagna, Paolo Delle Site, Francesco Filippi, Luca Persia. Automated Vehicles and the Rethinking of Mobility and Cities. *Transportation Research Procedia* 5 (2015), pp. 145–160.

[16] Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125–162.

[17] Tom M. Gasser. Fundamental and Special Questions for Autonomous Vehicles. In Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner (Eds.) *Autonomous Driving: Technical, Legal and Social Aspects* 2016 Berlin, Heidelberg: Springer, pp. 523–551.

[18] Tatjana Evas. A common EU approach to liability rules and insurance for connected and autonomous vehicles. *European Parliamentary Research Service (EPRS)*, (2018), PE 615.635, pp. 1–194.

[19] Erica Palmerini, Andrea Bertolini. Liability and Risk Management in Robotics. In Reiner Schulze, Dirk Staudenmayer (Eds.) *Digital Revolution: Challenges for Contract Law in Practice*. First Edition (2016), pp. 225–260.

[20] Corrado Druetta. Liability Issues in Advanced Robotics: An Introduction for European in-House Counsels. *International In-House Counsel Journal* (2017), Vol. 11, No. 41, pp. 1–12.

[21] Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109–200.

	systems from an engineering, ethical, and legal perspective,[22] the authors thoroughly analyse the gaps in the distribution of responsibilities and liability between the agents involved. Finally, in *The social dilemma of autonomous vehicles*,[23] *Social and behavioural questions associated with Automated Vehicles: A Literature Review*,[24] and *The autonomous car—a blessing or a curse for the future of low carbon mobility? An exploration of likely vs. desirable outcomes*,[25] the authors examine, among other things, the societal and ethical concerns which are directly related to the assignment of responsibilities and the apportionment of the subsequent legal culpability among the agents in question.
Republic of Lithuania	At the level of doctoral research, legal issues vis-à-vis the regulation of ICVs deployment and the legal perspective concerning the theories of liability applicable to the incidents involving ICV-as-a-product and ICV-as-a-vehicle have not been discussed in the Republic of Lithuania. However, at the level of a master thesis, in 2016, *Whether Operation of Means of Transport Controlled by Artificial Intelligence Is Permissible?*[26] was introduced; whereby Mantas Bernotas analyses the feasibility of using autonomous transport, among other things, ICVs and the need to limit the liability of the manufacturer concerning the autonomous transport technology. In 2019, another master thesis, i.e., *The legal issues of autonomous vehicles regulation in the European Union and Lithuania*,[27] was defended by Mantas Narkevičius; whereby he scrutinises the impacts of the PLD in relation to the potential incidents involving ICV as a product, the effect of the MID in the context of CCAD in the EU and the feasibility of using ICVs in Lithuania in view of the existing national legal instruments. In the master thesis *Does autonomous car operation violate Road Traffic Laws and the Code of Administrative Offenses on the roads of the Republic of Lithuania*?,[28] Justas Petrulevičius examines the concept of ICV as a vehicle and whether the existing Lithuanian legal instruments are adapted to permit the use of ICVs on the public roads. Given the general scientific contribution, very few scientific articles addressing the ICV-related legal issues have been published. In *Autonomous Vehicles – Today's Legal Challenges for*

[22] Simon Burton, Ibrahim Habli, Tom Lawton, John McDermid, Phillip Morgan, Zoe Porter. Mind the gaps: Assuring the safety of autonomous systems from an engineering, ethical, and legal perspective. *Artificial Intelligence* (2020), Vol. 279, 103201.

[23] Jean-François Bonnefon, Azim Shariff, Iyad Rahwan. The social dilemma of autonomous vehicles. *Science AAAS* (2016), Vol. 352, Issue 6293, pp. 1573–1576.

[24] Clemence Cavoli, Brian Phillips, Tom Cohen, Peter Jones. *Social and behavioural questions associated with Automated Vehicles: A Literature Review*. (2017) London: Department for Transport, pp. 1–124.

[25] Nikolas Thomopoulos, Moshe Givoni. The autonomous car—a blessing or a curse for the future of low carbon mobility? An exploration of likely vs. desirable outcomes. *European Journal of Futures Research* (2015), Vol. 3:14, pp. 1–14.

[26] Mantas Bernotas. Ar dirbtinio intelekto valdomų transporto priemonių eksploatacija yra leistina? (2016), Magistro baigiamasis darbas. Vytauto Didžiojo universitetas. https://hdl.handle.net/20.500.12259/125860.

[27] Mantas Narkevičius. Autonomiškai funkcionuojančių automobilių reglamentavimo Europos Sąjungoje ir Lietuvoje probleminiai aspektai. (2019) Magistro baigiamasis darbas. Vilnius: Vilniaus universitetas. elaba:69380351.

[28] Justas Petrulevičius. Ar autonominių automobilių eksploatavimas Lietuvos Respublikos keliuose nepažeidžia Kelių eismo taisyklių ir Administracinių nusižengimų kodekso nuostatų? (2019) Magistro baigiamasis darbas. Vytauto Didžiojo universitetas. https://hdl.handle.net/20.500.12259/79162.

Tomorrow,[29] Vilius Mitkevičius thoroughly analyses (1) the concept of an autonomous vehicle; (2) the admissibility of using autonomous vehicles in Lithuania; (3) the need to adopt a legal act at the domestic level addressing ICV-related legal issues; and the (4) primordial legal elements, i.e., road traffic rules and driver's license, conditions determining the liability, insurance terms and conditions, data privacy, prerequisites for the road infrastructure and requirements for the maintenance and repair of autonomous vehicles, for the purposes of ICV-related legal regulation in Lithuania. In *Whether an Intoxicated Person Has the Right to Use an Autonomous Vehicle?*,[30] Karolis Kubilevičius examines the right of a person to use the ICV under the influence of alcohol having regard to the existing legal instruments and the duty of care. Although there is no jurisprudence yet concerning the ICVs in the Republic of Lithuania, there is vivid case-law available regarding the CVs, which the author relies on whenever necessary, in the course of this research.

Despite the considerable number of scientific researches and projects related to the legal complexities of ICV regulation in the EU, it should be accentuated that the present research study is the only one to analyse the feasibility, proportionality and pertinence of a uniform Synergic ICV civil liability regulation approach in relation to accidents at the European Union level, through the prism of research on achievability to guarantee a smooth compensation mechanism for victims in the national systems of the MSs, while obstructing potential, but foreseeable future complexities in approximating the laws of MSs in connection with the ICV civil liability regulation. Contrariwise, the overwhelming majority of studies[31] mainly focus on research at the European Union level, without revealing the standpoints on civil liability and legal practice of the MSs at the national level, i.e., separately MTPL and PL, or interrelation between MTPL and PL, which deprives such studies of the potential to disclose both foreseeable and concealed obstacles to a smooth compensation mechanism for victims in the national systems of the MSs and to prevent potential future complexities in approximating the laws of the MSs in connection with the ICV

[29] Vilius Mitkevičius. Autonominiai automobiliai – šiandienos teisiniai iššūkiai rytojui. Vilnius: Vilniaus universitetas: *Mokslo darbai „Teisė“,* T.101 (2016) ISSN 2424-6050, pp. 126–144.

[30] Karolis Kubilevičius. Ar neblaivus asmuo turi teisę valdyti autonominį automobilį? *Vytauto Didžiojo Universitetas: Teisės apžvalga*. 2018, Nr. 1(17), pp. 85–112.

[31] Kadner Graziano, Thomas Michael. *Cross-border traffic accidents in the EU – the potential impact of driverless cars*. (Mandate from:) European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs. Brussels: European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs (2016), pp. 1–64; Anastas Punev. Autonomous Vehicles: The Need for a Separate European Legal Framework. *European View* 2020, Vol. 19, No. 1, pp. 95–102; Maurice Schellekens. Self-driving cars and the chilling effect of liability law. *Computer Law & Security Review* (2015), Vol. 31, Issue 4, pp. 506–517; Tiago Sérgio Cabral. Liability and artificial intelligence in the EU: Assessing the adequacy of the current Product Liability Directive. *Maastricht Journal of European and Comparative Law* 2020, Vol. 27, No. 5, pp. 615–635; Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125–162; Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109–200; and others.

civil liability regulation. In contrast, other research studies[32] dwell exclusively on domestic legal prospects related to MTPL, PL and ICV civil liability regulation, which precludes the potential of such studies to designate a uniform regulatory approach to ICV civil liability at the European Union level. Against this background, the novelty and originality of the analysis provided in the framework of this study should be deemed indubitable.

Six principal **research methods** shall be applied to accomplish the tasks of this research, and, therefore, to achieve the aim of this study. The *systemic analysis method* will be widely applied through the prism of a classified assessment of the legal instruments related to MTPL and PL, established at both the European Union and national levels. The above outlined method is intended to assist in scrutinising both the weaknesses and the sustainability of the legal instruments associated with MTPL and PL in the EU with the objective to reveal the anticipated risks for the Synergic ICV civil liability regulation approach with a cross-border element at the European Union level. The *comparative method* aims to collate both the MTPL-related statutory provisions and the jurisprudence of the MSs to disclose the emerging convergence, on the one hand, and the principal divergence in liability regimes on the other hand. By applying the comparative method, the final result makes it feasible to conclude whether it is achievable, at this juncture, to reach the complete uniformity of the ICVs civil liability regulation at the European Union level and to prevent any potential discriminatory impact on the victims of ICV-related incidents. The *linguistic method* was applied in this study through analysis of the currently available translations of MID in the MSs reflecting certain divergences. By using the linguistic method, it was possible to reflect the perception of the MSs regarding the already existing legal concepts and those that are under development. The *historical method* was used in this study through analysis of the MTPL and PL development at both the national and the European Union levels. With the use of the historical method, it became possible to reflect the evolution of the domestic approaches to civil liability and the compensation mechanism. The *method of doctrinal research* was extensively used at all stages of the study through the prism of analysing the currently existing doctrine and scientific proposals at both the national and the European Union levels. The *descriptive method* was occasionally used to acknowledge the CJEU judgments and the case-law of the national courts, and to disclose the ICV-related technical data.

The table below reflects the **structure of this study** in correlation to the principal tasks of this research:

[32] Reka Pusztahelyi. Liability for Intelligent Robots from the Viewpoint of the Strict Liability Rule of the Hungarian Civil Code. *Acta Universitatis Sapientiae: Legal Studies* (2019), Vol. 8, No. 2, pp. 213–230; Ken Oliphant. Liability for Road Accidents Caused by Driverless Cars. *Singapore Comparative Law Review (SCLR)* 2019, pp. 190–197; Jonas Radlmayr, Klaus Bengler. Literaturanalyse und Methodenauswahl zur Gestaltung von Systemen zum hochautomatisierten Fahren. *Forschungsvereinigung Automobiltechnik e.V. (FAT)* 2015, pp. 1–53; Tim Hey. *Die außervertragliche Haftung des Herstellers autonomer Fahrzeuge bei Unfällen im Straßenverkehr*. Gabler, Betriebswirt.-Vlg (2018), pp. 1–278; Tobias Hammel. *Haftung und Versicherung bei Personenkraftwagen mit Fahrerassistenzsystemen*. VVW-Verlag Versicherungs (2016), pp. 1–558; Taivo Liivak. Tort Liability for Damage Caused by Self-driving Vehicles under Estonian Law. *Dissertationes Juridicae Universitatis Tartuensis* 80, University of Tartu Press: 2020, pp. 1–206; Zsolt Szalay, Tamás Tettamanti, Domokos Esztergár-Kiss, István Varga, Cesare Bartolini. Development of a Test Track for Driverless Cars: Vehicle Design, Track Configuration, and Liability Considerations. *Periodica Polytechnica Transportation Engineering* (2018), Vol. 46, Issue 1, pp. 29–35; and others.

SECTION 1	
PL regulation (European Union level)	Demonstrates the development of the protection system for consumer-victims in the EU and reveals the major complexities faced by the plaintiffs in relation to defective products.
MTPL regulation (European Union level)	Scrutinises compulsory MTPL guarantees and requirements set out at the European Union level (in regular traffic flow conditions), including analysis of the CJEU judgments, as a baseline and regulatory foundation to facilitate the Synergic ICV civil liability regulation approach.
MTPL regulation (national level)	Reveals the principal causes which contribute disadvantageous impact on cross-border victims in order to obstruct comparable hindrances and complexities already faced by RTAs victims and to tackle anticipated risks towards smooth realisation of the Synergic ICV civil liability regulation in the conditions of mixed traffic flow.
SECTION 2	
Options on ICV regulation (European Union level)	Scrutinises the options to regulating ICV civil liability at the European Union level.
Regulatory concepts (ICV)	Exercises current availability of technical data, i.e., aims to clarify whether it is possible to identify the obligations of different agents involved in ICVs explicitly, and, therefore, to determine the distribution of responsibilities between the concerned actors.
Models on ICV regulation (national level)	Discloses the principal standpoints of the MSs in relation to ICV civil liability theories.
The realisation of the Synergic ICV civil liability regulation approach	Assists in concluding whether the Synergic ICV civil liability regulation approach with the cross-border element at the European Union level can be viewed as satisfactory and achievable.

Main Statements to be Defended

1. Approaches to the regulation of ICV civil liability set out at the national level of the Member States should be reformed and subsequently uniformed at the European Union level. However, ICV civil liability regimes should differ depending on the level of ICV automation.

2. The symbiosis of the manufacturer's strict liability and the ICV strict liability (through the ICV insurer), i.e., the Synergic ICVs civil liability regime, may prove to be a more sustainable solution for a liability regime at the European Union level.

3. It is essential to accurately define the existence of an ICV as a 'product' and an ICV as a 'vehicle' since the implication of one or the other entails rather different legal relationship along with the subsequent responsibilities and legal culpabilities between the CAD-involved agents and the parties involved in an ICV incident.

4. While the harmonisation of the compensation system for the purposes of CAD can be considered as an essential point in the regulation of ICV civil liability, approximation of the amount of compensation for non-pecuniary damage is not possible at the current stage of the economic stances among the MSs.

1. MOTOR THIRD PARTY LIABILITY (MTPL): REGULATORY FOUNDATION

1.1. Approach to Liability Regulation in the EU: Product Liability and Motor Third-party Liability

1.1.1. Product liability regulation in the European Union

The legal settlement of the defective product would not be feasible without a product liability law which illuminates the negative impact on the ultimate consumer by shifting the financial consequences from the consumer-victim to the manufacturer-subject responsible for the defective product. The concept 'consumer', despite having developed autonomous significance within the legal field of the consumer protection, is defined in a rather divergent manner among the EU directives and at the domestic level.[33] Whilst the vast majority of the directives define a 'consumer' as a natural person who is acting on his or her behalf without seeking trade, business or professional purposes; other directives distinguish some kind of economic activity.[34] The PLD constitutes an exception by designating the products that are used purely for private use or consumption.[35] However, in *Société Moteurs Leroy Somer*,[36] the CJEU concluded that PLD by its scope does not preclude MSs from settling domestic product liability cases where a consumer pursues compensation for damage to an item or property intended for professional use, as long as such a plaintiff proves the defect, the damage and the causal link between the defect and the damage.

When determining liability for a defective product, the *product information* should be considered an essential concept. The product information, in a broader sense, should be viewed as a number of *warnings* and *instructions* addressed to an ultimate consumer/user of a product.[37] Commonly, both warnings and instructions are considered as precise data with respect of the usage of a specific product including step-by-step guidelines of how to avoid particular risks and what to undertake in the event the risks materialise. Assuming that (1) the product information was reasonable and explicit, and that (2) an ultimate user of a product accepted the product information, in the event of a consumer's negligence, the liability of the producer should be waived.[38] Generally, warnings are understood as a complex of acts that should not be undertaken, whereas instructions are considered a block of the active physical steps that the consumer should take in preventing the

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[33] Rafał Mańko. The notion of 'consumer' in EU law of 6th May 2013. Library of the European Parliament. 130477REV1, pp. 1–2, (p. 1).

[34] With the reference to *Johann Gruber v Bay Wa AG*, Judgment of the Court (Second Chamber) of 20 January 2005, in case No. C – 464/01, ECR 2005 I-00439; Article 6 (Consumer contracts) of the Regulation (EC) No. 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I). OJ L 177; Article 17 (Jurisdiction over consumer contracts) of the Regulation (EU) No. 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Brussels I Recast), OJ L 351; and others.

[35] Recital (9), Article 9 (1) (2) of Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the MSs concerning liability for defective products. OJ L 210.

[36] *Société Moteurs Leroy Somer v Société Dalkia France, Société Ace Europe*. Judgment of the Court (First Chamber) of 4 June 2009, Case No. C – 258/08, ECLI:EU:C:2009:351.

[37] Thomas Verheyen, "Modern Theories of Product Warnings and European Product Liability Law" (2019) 15(3) Utrecht Law Review pp. 44–56. DOI: https://doi.org/10.36633/ulr.541. (pp.44–45).

[38] Cassazione Civile, sez. III, 15 marzo 2007, n. 6007. In English: Court of Cassation (Civil). Judgment from March 15th, 2007 – 6007. Given the optimal product information provided to the public, such as precautions concerning the possibility of an allergic reaction and further guidelines for self-testing before using the product, the producer's liability has been waived.

harmful outcome. The warnings themselves should contain the data which affect the behaviour of the ultimate consumer, among other things, urge to act in a specific manner or to restrain from (a specific) action; whereas pure guidance created by the producer does not instantly constitute an exemption from liability. Accordingly, there is a burden of proof on the part of the manufacturer to explicitly demonstrate that the product information was designed in an unsurpassed manner. In *Boston Scientific*,[39] the CJEU minimised the complexity of the burden of proof without removing its scope from the PLD. It was held that a product constitutes a part of the production series or group in case of a potential defect, which may be regarded as defective in general without a necessity to allocate the defect of the separate goods.

To be eligible for compensation, pursuant to Article 4 of the PLD, the claimant required to explicitly demonstrate the damage, the defect, and the *causal nexus*. The defect *per se* should be considered in a broader sense; whereas, by definition, a defect is an error in something or in the way it has been made that means that the product is not complete, absolute and ideal. Thus, the defect in (A) the manufacturing state (a manufacturing defect), (B) the physical design (a design defect), (C) the instructions (product information), and (D) warnings (product information) should be distinguished for the purposes of the current product liability policy:

A. Invalid manufacturing state, or the so-called manufacturing defect.
A product is considered to have the invalid manufacturing state or a so-called manufacturing defect when it differs from the intended design regardless of whether the manufacturer has taken all inevitable steps towards the production of an optimum product, whether or not explicit care has taken place.
B. Flawed physical design, or the so-called design defect.
A product is considered to have a flawed physical design or a so-called design defect when it has structural imperfections and when the foreseeable risks of damage caused by the product could be either avoided or minimised by the creation of an alternative design; whereas deliberate or unreasonable omission of such an alternative design constitutes an unsafe product.
C. Faulty instructions, or the so-called defect in the product information.
Instructions as such (as part of the product information) are considered faulty when the foreseeable risks of damage caused by the product could be either avoided or minimised by the creation of adequate, accurate, complete, reasonable and precise instructions; whereas either deliberate or unreasonable omission of such instructions constitutes hazardous nature of the product.
D. Inadequate, incomplete, inaccurate warnings, or the so-called defect in the product information.
Warnings as such (as part of the product information) are considered inadequate, incomplete, inaccurate or defective when the foreseeable risks of damage caused by the product could be either avoided or minimised by the creation of optimal and explicit warnings which provide a certain positive effect on the consumer's behaviour. In contrast, either deliberate or unreasonable omission of such warnings constitutes hazardous nature of the product.

Liability for a defective product can arise in the condition that the one was put into circulation. In accordance with CJEU interpretation in *Declan O'Byrne,*[40] a product is put into circulation when it is removed from the manufacturing process on behalf of the producer and enters a marketing process in its shape and form ready to be offered to the consumers for private use or consumption. A more optimal or superior product, either established by the same manufacturer or not, does not demonstrate any defectiveness of the earlier product.[41] Although the PLD explicitly

[39] *Boston Scientific Medizintechnik GmbH v AOK Sachsen-Anhalt – Die Gesundheitskasse and Betriebskrankenkasse RWE*. Judgment of the Court (Fourth Chamber) of 5 March 2015, Joined Cases No. C – 503/13 and C – 504/13, ECLI:EU:C:2015:148.

[40] *Declan O'Byrne v Sanofi Pasteur MSD Ltd and Sanofi Pasteur SA*. Judgment of the Court (First Chamber) of 9 February 2006, Case No. C – 127/04, ECR 2006 I-01313.

[41] Article 6 of Council Directive 85/374/EEC <…>.

indicates a consumer expectations test,[42] it, however, is not manifestly linked to a subjective stance of an ultimate consumer; whereby the defectiveness of a product under the PLD is determined on the grounds of reasonable and legitimate expectations instead of purely subjective expectations of a consumer.[43] The concept of an 'expectation' by definition means a strong belief that something will happen because it is likely to happen; thus, the subjective nature of an expectation itself puts a pure hypothetical obligation on a producer to secure the consumer's subjective expectations. The subjective nature of the expectations themselves, however, does not allow to provide with the uniform definition of a consumer expectations test at the European Union level.[44] The consumer expectations test may be considered a step committed by the EU law-making institutions purporting to redirect their commitment to the ancient maxim *actori incumbit probation*, or – so-called – that the burden of proof lies with the plaintiff.[45] In *Commission v United Kingdom*,[46] the CJEU strengthened the fundamental stance of the EU-wide product liability policy, i.e., the protection system of the consumers against the defectiveness of the product through the prism of a strict product liability path; although a consumer-victim does not oblige to prove that the manufacturer was at fault, under the principle of a fair apportionment of risk between the consumer-victim and the manufacturer-subject to liability, the manufacturer has to explicitly prove that the scientific and technical knowledge available at the time when the product was put into circulation was not such as to enable the defectiveness to be detected (so-called Development Risk Clause[47] or Development Risk Defence[48]).[49]

In Sweden, it is the judge who is determining the *causal nexus*, particularly, in technically complicated and complex files; thus, under certain circumstances the burden of proof could be overturned. In the same vein, in Finland, by pursuing the principle of the free assessment of evidence, the judge is able to consider the complexity of the file so that to reduce the burden of proof in certain occasions. France and Belgium have established legal grounds to prove the defectiveness of the product either by hard evidence or by probability. Portugal and Austria have introduced a presumption of fault in case of a breach of a contractual obligation. In such a way, the burden of proof lies within the producer. Netherlands, Ireland, Denmark and Spain could consider fault-based liability and therefore shift the burden of proof from the consumer to the producer if the consumer has proven the defectiveness of the product. Given the extent of the

[42] *Ibid*.

[43] Commission staff working document. Evaluation of Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the MSs concerning liability for defective products of 7th May 2018, Brussels, SWD (2018) 157 final, p. 56.

[44] Commission of the European Communities. Report from the Commission to the Council, the European Parliament and the European Economic and Social Committee. Third report on the application of Council Directive on the approximation of laws, regulations and administrative provisions of the MSs concerning liability for defective products (85/374/EEC of 25 July 1985, amended by Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999) of 14th of September 2006, Brussels, COM (2006) 496 final, para. 2, p. 10.

[45] Thomas Verheyen, "Modern Theories of Product Warnings and European Product Liability Law" (2019) 15(3) Utrecht Law Review pp. 44–56. DOI: https://doi.org/10.36633/ulr.541 (p. 52).

[46] *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland*. Judgment of the Court (Fifth Chamber) of 29 May 1997, Case No. C – 300/95, ECR 1997 I-02649.

[47] France, Luxembourg, Spain, Italy, Finland and Hungary adopted the exemption, the so-called Development Risk Clause under Article 15(1) (b) of the PLD.

[48] Duncan Fairgrieve, Geraint Howells, Peter Møgelvang-Hansen, Gert Straetmans, Dimitri Verhoeven, Piotr Machnikowski, André Janssen and Reiner Schulze. *Product Liability Directive*. In Piotr Machnikowski (ed.) "European Product Liability. An Analysis of the State of the Art in the Era of New Technologies". EGTL European Group on Tort Law: Intersentia, pp. 1–705. ISBN 978-1-78068-398-0.

[49] Recital (7), Article 7 (e) of Council Directive 85/374/EEC <…>.

divergence in the rules on the burden of proof among the MSs, the feasibility in approximating the burden of proof *per se*, in order to reach a stable and beneficial effect for the consumer-victim, remains relatively low. Albeit, pursuant to the above analysis on the Reports, the use of presumptions is viewed as a beneficial tool in the law passing the burden of proof on the person who is duly informed about the insights so that he or she would prove to the court why a particular product should be treated as defective.

The concept of a 'defect' should not be considered less complex in comparison to the burden of proof; whereby, in the Evaluation, the issue has been raised as to whether the concept of a 'defect' corresponds to the purpose of PLD, particularly, in the light of emerging digital technologies, such as software, Internet of Things (IoT), and autonomous systems. Purporting to give an explicit definition of a 'defect', it is, therefore, inevitable to scrutinize the concept of the 'product' for the purposes of the PLD. In the epoch of intensive technological progress, the distinction between 'service' and 'product' is becoming obscure, thus creating a hybrid between services and products;[50] whereby MSs regulate the liability against defective immaterial assets or services in a rather divergent manner; e.g., Lithuania[51] and Greece[52] have ensured the regulation provided by PLD against liability for defects in services. Moreover, services purchased in connection with the products can be regarded as one unit in Italy,[53] Malta, and the Netherlands.[54] Since immaterial assets or services, such as software, are usually integrated into the product, PLD would designate liability against the defective software, even if the software itself may not be regarded as a product at a first glance. Contrary to the EU tackle, in the United States, back in 1991, in *Winter v G. P. Putnam's Sons*,[55] the California Court of Appeals constituted that software should be regarded as a product.[56] In a broadly similar manner, certain software is considered a product under the French jurisdiction.[57] Even so, PLD purports to ensure the consistent level of consumer protection at the European Union level; however, the existing divergences in regulation among the MSs establish rather different levels of consumer protection. Although the PLD requires a consumer to prove the defect, under sufficient circumstances, a claimant may be relieved from such an obligation. In the recent request for a preliminary ruling in the case *KRONE*, the issue was raised as to whether a physical copy of a daily newspaper including an inaccurate health tip, which, when followed, caused harm to health, should be considered a defect for the purposes of PLD. The representatives of the Austrian judicial system have emphasised that, although the plaintiff based her claim on the grounds of fault-based liability, the plea to examine the strict liability model under the PLD should be satisfied.

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[50] Tiago Sergio Cabral. "Liability and artificial intelligence in the EU: Assessing the adequacy of the current Product Liability Directive". *Maastricht Journal of European and Comparative Law* 2020, Vol. 27(5), pp. 615–635.

[51] C4. "Atsakomybė už žalą, atsiradusią dėl netinkamos kokybės produktų ar paslaugų". Civilinis kodeksas. *Valstybės žinios*, 2000-09-06, Nr. 74-2262. In English: Civil Code.

[52] Υπουργική Απόφαση 5338/17.1.2018 – Κωδικοποίηση του ν. 2251/1994 (Α΄ 191). From Greek: "Ministerial Decision 5338/17.1.2018. Codification of Law 2251/1994 (Government Gazette A' 191) "Consumer Protection".

[53] Giovanni Comandé, "Product Liability in Italy" in Piotr Machnikowski (ed.) "European Product Liability. An Analysis of the State of the Art in the Era of New Technologies". EGTL European Group on Tort Law: Intersentia, pp. 276 – 308. ISBN 978-1-78068-398-0. (p. 284).

[54] Commission staff working document. Evaluation of Council Directive 85/374/EEC <…>, p. 51.

[55] *Wilhelm Winter, Cynthia Zheng v G.P. Putnam's Sons.* United States Court of Appeals, (9th Circuit). 938 F.2d 1033 (1991).

[56] John Mclntosh, "Software Product Liability" of 30th July 1993. Retrieved online from: https://www.academia.edu/9510340/Software_Product_Liability, pp. 1–5. (p. 2).

[57] Article L5311-1. Code de la santé publique. Modifié par LOI n°2020–1525 du 7 décembre 2020 – art. 29. In English: Public Health Code.

The strict liability path has been repeatedly interpreted in favour of consumer-victims, thereby shifting the burden of proof from the consumer to the producer.[58] In the epoch of rapid technological growth, the *strict liability* approach may ease the enhancement of a consumer protection system through the application of the principle of *favor laesi* concerning an ultimate consumer who is alleged to have suffered the damage. Until now, the principle of (limited) *favor laesi*, however, applies strictly within the frames of PLD precluding the consumer-victim from relying, concerning products covered by PLD, on a system of liability more favourable than that provided by PLD as confirmed by CJEU in *Sánchez*.[59] The PLD precludes MSs from adopting or maintaining more extensive victim-favourable provisions other than those provided by the PLD (the maximum harmonisation approach).[60] In *Commission v French Republic*[61] and *Commission v Hellenic Republic*,[62] the CJEU has repeatedly confirmed the EU standpoint that the MSs are precluded from adopting more stringent consumer-favourable provisions (e.g., the non-optional EUR 500 threshold has been abolished) in order to avoid differences in levels of consumer protection.

ICV as a 'product'[63] in the single market, and therefore a 'defect' of ICV as a potential cause of RTA, are manifestly linked to the EU product liability regime. Having regard to the analysis provided above, there are several product liability questions that may constitute potential legal complexities with respect to the regulation of civil liability for ICVs. Among these PL-related issues, the following shall be analysed in this study for the purposes of ICV civil liability regulation: (1) private consumption, (2) product information, (3) hardware and software defect, (4) symbiosis of product and services, (5) the principle of *favor laesi* with reference to the burden of proof, (6) the involvement of the new agents other than the producer in the manufacturing process, and (7) identification of the place of litigation.

1.1.2. Motor third party liability (MTPL) regulation in the European Union

The foreseeability and certainty in determining the law governing every cross-border RTA are inevitable since the coherence of legal provisions has not yet been achieved at the European Union level. Whereas the European Union assumes no obligation to ensure the uniformity of domestic law for determining liability in RTAs or any other event giving rise to liability, neither the Rome I Regulation (Rome I)[64] nor the Rome II Regulation (Rome II)[65] purport to consolidate the laws on civil liability. Thus, a foreign visitor intending to travel to another member state is a subject to the provisions of the national law in the event of RTA. Sub-sections 1.1.2 to 1.1.3

[58] Sylvie Gallage-Alwis, "Product Liability Cases in Civil Law Countries: A Pro-Plaintiff Approach." *Defense Counsel Journal*, Vol. 87, No. 2, April 2020, pp. 1–20. (p.16).
[59] *María Victoria González Sánchez v Medicina Asturiana SA*. Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 183/00, ECR 2002 I-03901.
[60] Goldberg Richard S., Miller C. J. *Product Liability* (2nd edition). Oxford University Press, 2004, p. 971.
[61] *Commission of the European Communities v French Republic*. Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 52/00, ECR 2002 I-03827.
[62] *Commission of the European Communities v Hellenic Republic.* Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 154/00, ECR 2002 I-03879.
[63] Andrea Bertolini. Robots as Products: The Case for a Realistic Analysis of Robotic Applications and Liability Rules. *Law, Innovation and Technologies* (2013), Vol. 5, Issue 2, pp. 214–247. (pp. 229–230).
[64] Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I). OJ L 177.
[65] Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II). OJ L 199.

provide analysis of the existing legal instruments and regulatory concepts for the regulation of cross-border RTAs in the context of the regular traffic flow in the European Union. The legal instruments designated for the regulation of cross-border RTAs, including conventional vehicles, is viewed as a foundational base for the purposes of the Synergic ICV civil liability regulation approach in the European Union for the purposes of this study; here, analysis of the existing legal uncertainties should be viewed as an integral part of the research towards assessing the feasibility and acceptability of the Synergic ICV civil liability regulation approach purporting to obscure the potential discriminatory effect on the victims involved in the mixed[66] RTAs.

By today itself, Rome II, MID and the Hague Convention on the Law Applicable to Traffic Accidents (The Hague Convention)[67] are viewed as the legal instruments designated to govern cross-border RTAs in the European Union. Rome II designates a rigid circuit for the law governing non-contractual civil claims in cross-border circumstances. Recital (11) denotes the concept of non-contractual matters in a rather precise manner, whereas tort, delict, and quasi-delict, including strict liability, are covered. On the other hand, the MID is binding on all MSs, without the right of exemption, including the European Economic Area (EEA) states, in accordance with the Agreement[68] on the EEA, and it has been subsequently amended to incorporate the MID. The main objective of the MID provides for a social policy aimed at minimising the negative impact on road traffic victims.[69] The Hague Convention applies in the case of RTAs involving contracting states, and it is assumed that it provides for meticulous regulation in determining the governing law. In the face of prolonged uncertainty between the Hague Convention and Rome II, there is a choice of the law governing the RTAs for those states that have signed the Hague Convention. Although certain fundamental parallels can be identified in the indicated legal instruments, the realisation of the principles set out in their scope are distinct, and thus, these principles impact the overall regulation of cross-border RTAs.

Cross-border MTPL regulation in the European Union		
Instrument	**Principle**	**Application**
Rome II	*lex loci damni*	Rome II is consistent with the Brussels I Recast = nexus of balance and framed flexibility of rules.

[66] Mixed RTA should be considered as an RTA involving conventional vehicle(s) and at least one (allegedly liable) ICV.

[67] The Hague Convention on the Law Applicable to Traffic Accidents of 4 May 1971, 3-VI-1975.

[68] On 2 May 1992, in Oporto, the Foreign Ministers of the 12 MSs of the European Communities and those of the seven MSs of the European Free Trade Association (EFTA) signed the Agreement on the European Economic Area (EEA). The Agreement entered into force on 1 January 1994. OJEC 03.01.1994, No L1. (s.l.).

[69] *Commission of the European Communities v Italian Republic*. Judgment of the Court (Grand Chamber) of 28 April 2009, Case No. C – 518/06, ECR I-3491., *paras* 52,75 and 82.

		Article 28 denotes a choice of whether to apply Rome II or the Hague Convention (in the event that the parties have signed the Convention).[70] Recitals (15 to 18) and Article 4(1) enact a law suitable for the place of direct damage, regardless of the place where the harmful event results in damages and the place where the indirect or consequential damages occur (*lex loci damni*). An exemption: the same habitual residence of both the tortfeasor and the victim of the RTA (Article 4(2)). *Ex post*[71] agreement as an escape clause.[72] Victim-favourable rule: Recital (33) and Article 4(3) demonstrate the applicability of the third state law concerning non-pecuniary damage (manifest link with the third state is required).
MID	*favor laesi*	Equal treatment should be guaranteed to the injured party regardless of his or her habitual residence. MID does not purport to harmonise liability regimes as was confirmed in several CJEU judgments, such as *Santos*,[73] *Farrell*,[74] and *Candolin*[75]; albeit, the EU law indirectly affects domestic civil liability provisions to the degree that such provisions may divest the EU law of its efficiency and scope. The liability of the alleged tortfeasor will depend on the provisions of the national civil law, as was ruled in several cases, such as *Lavrador*, [76]*Bernáldez*,[77] and *Ferreira*.[78] Reduction in compensation was assessed in the following CJEU judgments: *Almeida*,[79] *Drozdovs*.[80] The special victim is defined under Article 12.[81] The compensation mechanism was shown to function as follows: Claims Representatives;[82] three months procedure;[83] litigations in the state of

[70] The current (at the time of writing this thesis) contracting parties to the Hague Convention (the list below includes the European Union MSs only): Austria, Belgium, Croatia, Czech Republic, France, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Slovakia, Slovenia, Spain.

[71] *Ex post* agreement should be considered as 'actual'.

[72] The parties may enter into an agreement after the event giving rise to the damage, insofar making it feasible to apply the provision to RTAs.

[73] *Manuel Carvalho Ferreira Santos v Companhia Europeia de Seguros SA*. Judgment of the Court (Second Chamber) of 17 March 2011, Case No. C – 484/09, ECR 2011 I-01821.

[74] *Elaine Farrell v Alan Whitty, Minister for the Environment, Ireland, Attorney General and Motor Insurers Bureau of Ireland (MIBI)*. Judgment of the Court (First Chamber) of 19 April 2007, Case No. C – 356/05, ECR 2007 I-03067.

[75] *Katja Candolin, Jari-Antero Viljaniemi and Veli-Matti Paananen v Vahinkovakuutusosakeyhtiö Pohjola and Jarno Ruokoranta*. Judgment of the Court (First Chamber) of 30 June 2005, Case No. C – 537/03, ECR 2005 I-05745.

[76] *José Maria Ambrósio Lavrador, Maria Cândida Olival Ferreira Bonifácio v Companhia de Seguros Fidelidade Mundial SA*. Judgment of the Court (Third Chamber) of 9 June 2011, Case No. C – 409/09, ECR 2011 I-04955.

[77] *Criminal proceedings against Rafael Ruiz Bernáldez*. Judgment of the Court (Fifth Chamber) of 28 March 1996, Case No. C – 129/94, ECR 1996 I-01829.

[78] *Vitor Manuel Mendes Ferreira and Maria Clara Delgado Correia Ferreira v Companhia de Seguros Mundial Confiança SA*. Judgment of the Court (Fifth Chamber) of 14 September 2000, Case No. C – 348/98, ECR 2000 I-06711.

[79] *Vítor Hugo Marques Almeida v Companhia de Seguros Fidelidade-Mundial SA and Others.* Judgment of the Court (Grand Chamber) of 23 October 2012, Case No. C – 300/10, ECR – general.

[80] *Vitālijs Drozdovs v Baltikums AAS*. Judgment of the Court (Second Chamber) of 24 October 2013, Case No. C – 277/12, ECLI:EU:C:2013:685.

[81] The special category of victims includes: (1) all passengers, other than the driver, for damage arising out of the use of a vehicle; (2) family members of the policyholder, the driver or any other person who is liable under the national civil law in the event of an accident, regardless of their relationship; (3) non-motorised road users, such as pedestrians, cyclists and other non-motorised road users, who, as a result of an accident involving a motor vehicle, are entitled to compensation in accordance with the domestic civil law.

[82] Claims Representatives are so required to negotiate the terms and conditions of settlement on behalf of the injured party within three months.

[83] Articles 20–22. Directive 2009/103/EC <…>.

		claimant's habitual residence assessed in the judgment of *Spedition Welter GmbH*.[84] Realisation of the *favor laesi* principle is presented in: Recital (26) and Article 14(2).[85]
Hague Convention	*lex loci delicti commissi*	The Convention invokes the law of the state in which the accident occurred, regardless of where the damage was caused (*lex loci delicti commissi*), excluding the use of *renvoi*[86] (in this particular case, redirecting to another law). Uncertainty in the application of the *lex loci delicti commissi* principle is as follows: whereas the beginning of the accident starts in State A and ends in State B (border-corridor situations).[87] Rigid threshold and exemptions[88]: Articles 4–6, the driver, the owner of the vehicle, or any other persons with the exclusive right to claim compensation for damage.[89] Article 3 (the general rule). Article 4 (exceptions to the general rule), i.e., compensation for damaged personal items. In the event of damage to items outside the vehicle, in principle, the national law of the accident site shall apply. In the case of indirect (consequential) damages, i.e., survivors[90] claim after the death of a family member, as a rule, the principle of *lex loci delicti commissi* shall apply, and not the law of the state in which the deceased and his or her family members domicile.

An exemption from the general rule of *lex loci damni* should be seen as a shield towards the qualification of the contracting state to settle the case in accordance with the domestic law; whereby, the state of the common domicile is viewed to has the best competence in determining the rights and obligations of the litigants.[91] However, the rule of the same habitual residence should not be considered absolute, and insofar it is possible to invoke the national law that favours the victim. In 2009, the County Court of the Republic of Lithuania upheld the decision of the District Court[92] determining the law governing cross-border RTA. While the tortfeasor and the victim had their habitual residence in the Republic of Lithuania, the domestic law of Lithuania had to apply

[84] *Spedition Welter GmbH v Avanssur SA*. Judgment of the Court (Second Chamber) of 10 October 2013, Case No. C – 306/12, ECR C-2013-650. The place of filing the claim must not be related to the place of business of the Claims Representative. The CJEU confirmed that not only substantive provisions of the law but also the domestic procedural provisions should be interpreted in the light of the MID in all cases where it is reasonable.

[85] All MSs must ensure that insurance coverage throughout the European Union complies with the legal requirements of the member state in which the vehicle is normally stationed if such a coverage is higher (an opportunity to invoke a higher insurance coverage than that provided by the principle of *lex loci delicti*).

[86] Marija Krvavac. "The Hague Convention on the Law Applicable to Traffic Accidents and Rome II Regulation." *Collection of Papers: Faculty of Law, Nis* (2018) Vol. 79, pp. 141–156. (p. 143).

[87] Nagy, Csongor István (2010) *The Rome II Regulation and Traffic Accidents: Uniform Conflict Rules with Some Room for Forum Shopping – How So?* Journal of Private International Law 93–108 (April 2010). DOI: 10.1080/17536235.2010.11424374 (p. 98).

[88] Directorate General for Internal Policies "Policy Department C: Citizens' Rights and Constitutional Affairs. Choice of Law for Cross Border Road Traffic Accidents," Brussels, 2012 PE 462.292. pp. 1–23. (pp. 15–16).

[89] The provision invokes scenarios in which (1) a single motor vehicle was involved in RTA (e.g., a collision against a material object other than a vehicle), or (2) RTA involving two or more vehicles in case all are normally based in the same state.

[90] The persons eligible for compensation are usually the spouse, including the common-law spouse, children, grandchildren, parents, grandparents, brothers and sisters of the deceased person; however, the above-indicated list may vary with regard to the domestic law of the MSs.

[91] Symeon C. Symeonides. "Rome II and Tort Conflicts: A Missed Opportunity." *The American Journal of Comparative Law* (2008) Vol. 56, Issue 1, pp. 173 –222. (p. 198, pp. 200–203).

[92] Panevėžio apygardos teismo nutartis 2009 m. kovo 13 d. byloje Nr. 1A-124-350/2009. In English: District Court of Panevėžys. Judgment from March 13th, 2009 – 1A-124-350/2009.

regardless of where the RTA occurred (Poland). In accordance with the Law on the compulsory motor third party liability insurance,[93] the compensation for non-pecuniary damage that the family members of the deceased victim were entitled to receive was EUR 500. At the same time, in accordance with the national law of Poland, the amount of insurance coverage for personal injury claim had already reached EUR 5 million per accident. In accordance with Article 11(3) of the Law on Compulsory Motor Third-party Liability Insurance, "[…] *a third party is entitled to receive compensation, which is established within this legal act or the one established in state road traffic collision has taken place if such amount is higher* [...]." Since the domestic law in Poland provided for a higher amount of compensation for intangible damage, the principle *lex loci damni* was applied regardless of the exemption provided for in Article 4(2) of Rome II. The national law had its definitive effect deciding upon the law governing cross-border RTAs. Back in 1971, in the case *Boys v Chaplin*,[94] it was affirmed that the law of the United Kingdom is applicable when two drivers who are involved in RTA in a state other than the United Kingdom are residents of England. In the same vein, whereas the insurance coverage in the UK was higher than the insurance coverage in Malta (the place of tort), the law of the United Kingdom applied without further revision. Besides, the domicile of the insurance companies is irrelevant for deciding on the law governing RTA. While the law governing the RTA was at stake, in 2010, in *Jacobs v Motor Insurers' Bureau*,[95] the High Court affirmed that the only habitual residence of the motorists is sufficient for the case, thus leaving the domicile of the insurer aside and refusing to apply the Rome II escape clause.

Rome II does not designate the rate of coverage, nor does it frame any standards of quantum payable for the damage. However, as a general rule, Rome II designates victim-favourable provisions; whereas Recital (33) demonstrates the applicability of the third state law concerning non-pecuniary damage. Intangible damage is directly related to the psychological state of the victim (including the heirs) and include various subtypes, e.g., pain and suffering, or loss of amenity. In addition to non-pecuniary damage, the injured party is eligible to claim compensation for personal injury (the physical state), also known as bodily injury, which can be converted into monetary equivalence. The vast majority of MSs have adopted a scale which seeks to establish an accurate quantum of compensation for both pecuniary and non-pecuniary damage.[96] However, since the Recital by its nature is not binding for MSs, such a provision should be seen instead as a recommendation. Continental lawyers usually claim for application of either *lex loci delicti commissi* or *lex loci damni* based on the principle *favor laesi*.[97]

Particular attention should be paid to a claim filed by the family members of the deceased who suffered pecuniary or non-pecuniary damage in a country other than the place of the RTA. Such a family action implicates the interpretation of 'damage' and the distinction between the 'damage' and the 'indirect consequences', or the so-called 'consequential harm' caused by the harmful event. Losses claimed by the dependants following the death of a road traffic victim, as a

[93] Lietuvos Respublikos Transporto priemonių valdytojų civilinės atsakomybės privalomojo draudimo įstatymas. Official Gazette *Valstybės žinios*, 2007, Nr. 63. Translated from Lithuanian: Law on Compulsory Civil Liability Insurance of Motor Vehicle Operators of the Republic of Lithuania. Official Gazette *Valstybės žinios*, 2007, No. 63.
[94] *Boys v Chaplin* (1971) AC 356, (1969) 3 WLR 322, (1969) 2 All ER 1085.
[95] *Jacobs v Motor Insurers' Bureau* (2010) EWHC 231 (QB).
[96] Niguel Santolino, Jean-Philippe Boucher (2009) *Modelling the disability severity score in motor insurance claims: an application to the Spanish case*. Research Institute of Applied Economics 2009. Working Papers 2009/02, pp. 1-25,. (p. 5).
[97] Symeon C. Symeonides. "Choice of Law in Cross-Border Torts: Why Plaintiffs Win and Should". *Hastings Law Journal* 337 (2009), Vol. 61, Issue 2, pp. 337-411, p. 402.

rule, will be eventual in the state of their habitual residence. However, indirect consequences may be insufficient to replace the principle of *lex loci delicti commissi.* In *Lazar v Allianz SpA*,[98] the CJEU designated that the scope of the 'damage' implicates the ability to claim compensation in the form of the deceased's inheritance or consequential damage, which are inarguably related to the cause of action. While Rome II reflects the general principle of *lex loci damni*, it allows for a relatively broad interpretation of losses.

Whereas Rome II provides for the option to select the national law that will govern the cross-border RTA, as well as purports to keep an objective balance between the parties to a cross-border RTA, the MID aims to facilitate the European integration, as well as the freedom of movement, and to further enhance the protection system for road traffic victims, although it delegates the MSs autonomy to determine the extent of the liability coverage.[99] The CJEU had in mind the interaction between the various legal instruments at the European Union level, while also ensuring the protection of road traffic victims in accordance with the principle of *favor laesi* in its judgments, i.e., *Viegas*,[100] *Churchill Insurance*,[101] and joined cases *ERGO Insurance SE and Gjensidige Baltic AAS*.[102]

Although the scope of application of Rome II and the Hague Convention is rather similar in determining the law governing RTA, the precise interpretation should be given to non-contractual obligations. According to the Hague Convention Explanatory Report,[103] each state is likely to use its domestic law when interpreting whether the issue relates to civil liability or the one is non-contractual by its nature. Contemporaneously, the definitions given in Rome II are unilateral and autonomously integrated, which makes it unnecessary to invoke the provisions of the domestic law to determine civil liability and non-contractual issues. It remains unclear to what extent MSs can define both civil liability and non-contractual issues in one way or another, which may nevertheless create new diversities in the laws governing compensation.

Rome II applies at a broader scope, thereby creating a flexible conflict-of-law set of rules,[104] in comparison to the Hague Convention, which is bound to be cast in narrower and more explicitly defined terms. Rome II reveals differences in the residence of the allegedly involved

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[98] *Florin Lazar, représenté légalement par Luigi Erculeo v Allianz SpA.* Judgment of the Court (Fourth Chamber) of 10 December 2015, Case No. C – 350/14, ECR 2015-802.

[99] Vadim Mantrov. "Clarifying the Concept of Victim in the Motor Vehicle Drivers' Liability Insurance: The ECJ's Judgement in Case C-442/10". *European Journal of Risk Regulation* (2012) Vol. 3, No. 2, pp. 257-260, (p. 257, p.260).

[100] *Daniel Fernando Messejana Viegas v Companhia de Seguros Zurich SA, Mitsubishi Motors de Portugal SA*. Judgment of the Court (First Chamber) of 24 July 2003, Case No. C – 166/02, ECR 2003 I-07871. The CJEU held that the MID precludes MSs from establishing different types of civil liability in respect of RTAs in which the maximum compensation amount is lower than the one set out in the MID (Risk Assessment case).

[101] *Churchill Insurance Company Limited v Benjamin Wilkinson and Tracy Evans v Equity Claims Limited*. Judgment of the Court (Fourth Chamber) of 1 December 2011, Case No. C – 442/10, ECR 1-12639. The domestic law, contrary to the MID, must be automatically omitted. The CJEU seized the provision under the principle of *favor laesi*.

[102] *ERGO Insurance SE v If P&C Insurance AS and Gjensidige Baltic AAS v PZU Lietuva UAB DK*. Judgment of the Court (Fourth Chamber) of 21 January 2016, joined cases No. C – 359/14 and C – 475/14, ECLI:EU:C:2016:40. Here, the CJEU judgment reflects a more profound view at a conflict of law in the motor insurance sector. The CJEU turned its attention to the determination of tort or quasi-delict in order to rule on conflict of law; whereby, the Court also pointed at the need for national courts to determine tort or quasi-delict relations before deciding on the law governing the case.

[103] Explanatory Report on the 1971 Hague Traffic accidents Convention, *HCC Publications*, 1970.

[104] Peter Hay. "Contemporary Approaches to Non-Contractual Obligations in Private International Law (Conflict of Laws) and the European European UnionEuropean Union's 'Rome II' Regulation." *Forum iuris communis Europae* 4-2007, pp. I-137–I-196, (p. I-138, p. I-148).

parties, while the Hague Convention sets forth that the place where the license plate was registered is significant. Given the sheer scope established in the Hague Convention, unsurprisingly, an accurate determination of RTA is applied pursuant to Article 1. RTA should be considered more broadly as accidental damage to one or more subjects, either on public roads, or on private premises, provided that access (to the place of tort) is permitted. The Hague Convention, contrary to the overwhelming majority of Road Traffic Regulations, designates the involvement of any vehicle, whether motorised or not, on whatever ground, regardless of public or private premises.

As a general rule, the CJEU is not empowered to interpret international agreements. Whereas, in the event that the European Union becomes a contracting party to an international agreement, such an agreement will be granted the binding status.[105] In the event that the European Union is not a contracting party to an international agreement, but all MSs have become signatories to such an agreement, it may be granted the binding status.[106] For this reason, the Hague Convention cannot be considered a mandatory legal instrument at the European Union level when neither the European Union is a contracting party to the Convention, nor all MSs are signatories to the Convention. In accordance with Article 351(2) of the Treaty on the Functioning of the European Union (TFEU),[107] MSs must take into account all provisions of international agreements that are contrary to the European Union law and take the necessary action towards the dismissing of all incompatibilities. The aforementioned provision was interpreted by the CJEU in *TNT*,[108] where the Court referred both to Brussels I, which was repealed by Brussels I Recast, and to the Convention on the Contract for the International Carriage of Goods by Road (CMR).[109] In the light of Article 71 of Brussels I (Article 71 of the Brussels I Recast), which is somewhat comparable to Article 28 of Rome II, in the event that the Convention fills up the gaps in Brussels I, the former should apply. However, the Convention cannot challenge the scope, objectives and core principles set out in Brussels I. It is unclear whether the *TNT* case can be viewed as an interpretation that may also cover RTA civil liability, or whether the CJEU interpretation is limited to only a narrow subject matter.

The application of the different legal instruments (e.g., Rome II and the Hague Convention) can generate divergent outcomes for the RTAs victims suggesting the opportunity for forum shopping[110] (e.g., divergence in civil liability rules and compensation systems based on either *lex loci damni commissi* or *lex loci damni*); whereby the application of the same civil liability regime

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[105] *The Air Transport Association of America, American Airlines Inc., Continental Airlines Inc., United Airlines Inc. v The Secretary of State for Energy and Climate Change.* Judgment of the Court (Grand Chamber) of 21 December 2011, Case No. C – 366/10, ECR 2011 I-13755, *paras* 49–50.

[106] *International Fruit Company NV and others v Produktschap voor Groenten en Fruit*. Judgment of the Court of 12 December 1972, Joined cases No. 21 – 24/72, 1972, p. 01219. *The Queen, on the application of International Association of Independent Tanker Owners (Intertanko) and Others v Secretary of State for Transport*. Judgment of the Court (Grand Chamber) of 3 June 2008, Case No. C – 308/06, ECR 2008 I-04057.

[107] Treaty on the Functioning of the European Union of 26 October 2012. OJ C 326.

[108] *TNT Express Nederland BV v AXA Versicherung AG*. Judgment of the Court (Grand Chamber) of 4 May 2010, Case No. C – 533/08, ECR I-04107.

[109] United Nations. Convention on the Contract for the International Carriage of Goods by Road (CMR) of 19 May 1956.

[110] Graziano Kadner, Michael Thomas. *Cross-border traffic accidents in the EU – the potential impact of driverless cars*. (Mandate from:) European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs. Brussels: European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs, 2016, pp. 1–64 (p. 29).

in relation to the victims of RTAs involving ICVs (given the absence of a separate legal instrument at the EU level) is likely to generate the same disadvantageous impact on the ultimate victims in the mixed or fully automated traffic flow. On the other hand, a separate legal tool in respect of the ICVs, which prevents the disadvantageous impact on the victims of RTAs involving ICVs (given the application of *favor laesi* principle in all cross-border cases as a rule), would generate the discriminatory impact with regard to the victims of RTAs involving conventional vehicles. For this reason, two theoretical options can be recalled, i.e., (1) avoiding disproportionate superiority of victims of RTAs involving ICVs, the 'minimum clause'[111] regulation on the basis of the existing *sui generis* instruments can be established reflecting the comparable guarantees available for the victims of RTAs in the regular traffic flow conditions; or (2) eliminating the disadvantageous impact on the victims of RTAs involving both ICVs and conventional vehicles, the issue can be tackled in complex, i.e., legal clarity through the uniform application of *favor laesi* principle in all cross-border RTAs cases as a rule. Therefore, Sub-sections 2.1. and 2.3. shall address the above outlined theoretical options in detail in order to examine the feasibility and acceptability of the Synergic ICV civil liability regulation approach purporting to obscure the potential discriminatory effect on the victims involved in mixed RTAs.

1.1.3. Regulatory concepts in law governing cross-border RTAs

1.1.3.1. Concept of a 'victim' or an 'injured party' in RTAs

The law governing cross-border RTAs is aimed at protecting the road traffic victims beforehand,[112] and not at sanctioning the tortfeasors as a primary task of regulation. The concept of a 'victim' or an 'injured party' signifies a core and principal element integrated to the regulation of cross-border RTAs in the European Union. A number of attempts to enhance the protection system of the victims of the cross-border RTAs are evidential from the initiatives introduced by the European Commission:

Protection system of RTAs victims		
Year	**Document**	**Areas of concern**
1997[113]	Proposal	First prototype corresponding to current protection system; *Claims representatives; *Identification of liable insurance undertaking.
2009[114]	Report	Evaluation of options for improving position of cross-border victims: *access to compensation; *time-bar; *compensation at the domestic level; *heads of claim at the domestic level;

[111] The 'minimum clause' regulation should be seen as a set of minimum rules at the EU level in a narrow area (also referred to as the minimum harmonisation approach).

[112] Michael Faure. Compulsory Liability Insurance: Economic Perspectives, pp. 319–341. (In *Compulsory Liability Insurance from a European Perspective*. Attila Fenyves, Christa Kissling, Stefan Perner, Daniel Rubin (Eds.). European Centre of Tort and Insurance Law, Institute for European Tort Law of the Austrian Academy of Sciences and the University of Graz. Vol. 35., Walter de Gruyter (2016), pp. 1–555, (p. 320, p. 335, p. 339).

[113] European Commission. Press release: *Motor vehicle insurance: the Commission proposes a Directive to deal with the problems of victims of car accidents abroad*. Brussels, 15 October 1997. IP/97/881.

[114] Internal Market, industry, Entrepreneurship and SMEs. Report on compensation of victims of cross-border road traffic accidents in the EU: comparison of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. Contract ETD/2007/IM/H2/116.

		*liability regimes at the national level; *discretion of the national courts.
2011[115]	Communication	Diversity of time-bar = obstacles for cross-border RTAs victims.
2012[116]	Press release	2% cross-border victims; *Fragility; *Affection; *Time-bar; *Procedural rules.

Given the analysed initiatives of the European Commission, the cross-border victims are viewed as a more fragile and affected category of victims due to the divergences in the statute of limitations[117] (or the time-bar), whereby the anticipation of a different time-bar generates negative consequences for cross-border victims (including the obstacle to effective access to justice),[118] the procedural rules for claiming compensation, liability regimes and heads of claims set out at the domestic[119] level. Here, it is possible to conclude that the EU policy initiatives are aimed at supporting cross-border victims and facilitating the compensation procedures. Although there is no legal provision on shared or joined liability set out at the European Union level, the EU law does not preclude MSs from adopting additional regulation(s) on the uncovered issues at the domestic level as long as an appropriate level of insurance coverage is guaranteed to the victims of RTAs. In *Santos*,[120] the CJEU ruled that, in the event of the RTA, where the civil liability cannot be attributed to neither driver, the shares of liability can be assigned to each driver according to the extent of the contribution of each of those vehicles to the occurrence of the RTA, or, in cases when the degree of contribution cannot be determined, in equal parts. The above judgment strengthens the position towards favourable compensation to the victims of the RTAs; whereby in the conditions of shared liability, both drivers are regarded as a partial victim, and, therefore, they become eligible to obtain partial compensation for the damage. The above CJEU judgment contemplates the attitude towards favouring the regulation which enables the drivers (in the conditions when the liability cannot be determined) to obtain the status of a partial victim, and therefore they become eligible to claim compensation for partial damage instead of the regulation

[115] Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. Strengthening Victims' Rights in the EU. Brussels of 18 May 2011. COM (2011) 274 final.

[116] European Commission. Press release *Have a safe trip: Commission consults on how to help victims of road accidents abroad*. Brussels, 19 July 2012. IP/12/807.

[117] Pursuant to Amendment 48 of the (European Parliament Report of 28 January 2019 on the proposal for a directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament and 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 ensure against such liability. COM(2018)0336 – C8-0211/2018 – 2018/0168(COD)), there is an initiative to set the four-year minimum required limitation period to claim the compensation in respect of damages caused by cross-border RTAs, which shall begin to run from the day on which the claimant became aware, or had reasonable grounds to become aware, of the extent of the injury, loss or damage. The uniform time-bar is viewed as beneficial for the cross-border victims, and therefore it excludes further analysis on the given issue for the purposes of this study.

[118] Raul Lafuente Sanchez. "Law Applicable to Cross Border Road Traffic Accidents: Negative Consequences resulting from the Absence of Harmonization of Limitation Periods and Possible Solutions." *Anuario Español de Derecho Internacional Privado* (2018), pp. 495–531 (p.508).

[119] Sub-section 1.2 provides analysis of civil liability regimes and compensation systems at the national level in detail.

[120] *Manuel Carvalho Ferreira Santos v Companhia Europeia de Seguros SA*. Judgment of the Court (Second Chamber) of 17 March 2011, Case No. C – 484/09, ECR 2011 I-01821.

which excludes the right to compensation for both drivers in the event when either the liability or its portion cannot be attributed to neither party.

Ensuring the high-level protection of the victims of the RTAs, the European Union law obliges the MSs to monitor the presence and the validity of the compulsory insurance coverage regardless of whether the owner of the motor vehicle is intended to operate it on the public roads or not. Therefore, in order to avoid the congestion of the compensation procedure on the part of the Compensation Fund, an insurance contract against the compulsory civil liability should be established regardless of whether the owner of the vehicle is willing to use the motor vehicle which is in his or her possession or not. In *Juliana*,[121] the CJEU ruled that the presence of the insurance coverage against civil liability relating to the use of a motor vehicle is mandatory if such a motor vehicle is registered in a member state and can be used on the regular basis, regardless of whether the owner or the keeper of such a motor vehicle is intending to use it on the public terrain or not. It is noteworthy that, in the conditions of the *force majeure*, the above rule was evidently disrespected by the insurance undertakings who suspended an overwhelming number of insurance policies[122] by orders of the policyholders in the period between March 20, 2020 and June 15, 2020 having regard to the initiated mandatory quarantine[123] and the (partial) closure of the boarders in the European Union.

In the relatively recent case, the CJEU provided interpretation on the concept of a 'third-party victim' following the request for the preliminary rulings initiated by the Court of Appeal of Évora (Portugal). In *Mendes*,[124] the vehicle belonging to the victim Mr Mendes was stolen; the owner noticed his vehicle being taken unlawfully, and therefore started to run after the vehicle immediately. Chasing the vehicle being stolen caused Mr Mendes being knocked down, and his feet were run over by his own vehicle; he was dragged over a distance of approximately eight meters. Following the incident, Mr Mendes suffered a severe personal injury, and therefore, referred to his insurance undertaking seeking reimbursement for the damage. Since, according to the Portuguese domestic law, the policyholder liable for the damage is excluded from the right to compensation, the claim for compensation was rejected. The CJEU pointed out that, since the MID does not apply *ratione temporis*, it is the First, Second and the Third MIDs that must be considered.[125] Furthermore, the CJEU designated that, in the earlier case of the Supreme Court of Portugal, in 2007,[126] it had already been affirmed that there is an obligation lying within the insurer to compensate for the damage to the victim in the event when the damage was caused deliberately,

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[121] *Fundo de Garantia Automóvel v Alina Antónia Destapado Pão Mole Juliana and Cristiana Micaela Caetano Juliana.* Judgment of the Court (Grand Chamber) of 4 September 2018, Case No. C – 80/17, ECR – general.

[122] Suspended insurance policies should be viewed as suspended contracts of insurance against civil liability relating to the use of a motor vehicle on behalf of commercial carriers who, apparently, were unable to continue pursuing commercial matters in the given conditions.

[123] The outbreak of COVID-19 caused by SARS-CoV-2 virus affected the normal functioning of MSs in the European Union, and, therefore, governments were forced to take exceptional measures and announce immense restrictions to contain the spread of COVID-19. On 15 June 2020, the European Commission launched the *Re-open EU* procedure aimed at smoothing the reopening of the European Union in terms of free movement and tourism in Europe, including guidelines on boundaries, accessible transport, public health and safety measures.

[124] *Luís Isidro Delgado Mendes v Crédito Agrícola Seguros – Companhia de Seguros de Ramos Reais, SA*. Judgment of the Court (Sixth Chamber) of 14 September 2017, Case No. C – 503/16, ECR – general.

[125] *Ibid*., para.31.

[126] *Ibid*., para.25.

and therefore the issue should be viewed in respect of the compatibility of the domestic Portuguese law and the MID. For this reason, the CJEU held that the MSs are precluded from restricting or limiting the right to the compensation of the victim (pedestrian) regardless of whether the claimant is the owner, the keeper, or the policyholder of the vehicle that caused the RTA, and regardless of the case circumstances that the victim was chasing the stolen vehicle and therefore exposed himself to a severe risk. Consequently, regardless of the status of a policyholder, the victim of RTA cannot be deprived of the right to compensation in the event that the insured vehicle was being operated by a person other than the policyholder.

The broad definition of an 'injured party' designated in the MID aimed at eliminating potential thresholds and limitations imposed by the domestic law with respect to the victim-test; whereby an injured person should be viewed as any person entitled to compensation in respect of any damage or injury caused by the vehicle.[127] The MID does not specify the type of the damage or injury (including pecuniary or non-pecuniary nature), nor does it narrow the area of causation, and, among other things, it does not specify the manner, conditions, circumstances or any other phenomenon that may potentially cause or impact the causation of the damage related to the use of a vehicle. The broad definition allows the victims of the RTAs to seek compensation in almost all cases related to the damage caused out of the use of a motor vehicle, and therefore evidentially facilitate and smoothen the access to the compensation procedure. It is noteworthy that, although both terms ('victim' and 'injured party') are presented in the text of the MID, the concept of an 'injured party' should be viewed in a broader scope, including both direct and indirect victims, i.e., family members of the deceased in RTA. According to the Report[128] on the proposal for a directive amending the MID, the amendment to the MID in part of the concept of a 'victim' purports to correct an oversight that occurred while merging all motor insurance directives in 2009;[129] albeit, the use of both terms simultaneously should not be viewed as a legal uncertainty or perceived as signifying some kind of lack of legal determination of the concept of a 'victim' *per se* having regard to the explicitly defined concept of an 'injured party'. Notwithstanding, the 'use of a vehicle' remains an essential element towards obtaining the compensation for the damage caused in RTA; whereby an immense number of debates and discussions have taken place with respect to the concept 'use of a vehicle', its application, and its pertinence at both the European Union and domestic levels.

1.1.3.2. Concepts of a 'vehicle' and 'use of a vehicle'

The CJEU judgment in *Vnuk*[130] remains the cornerstone while determining the concept of the 'use of a vehicle' for the purposes of the MID; albeit, the doctrine claims that the CJEU interpretation has unnecessarily extended the insurance cover to damages caused outside the

[127] Article 1. Directive 2009/103/EC <…>.
[128] European Parliament Report of 28 January 2019 on the proposal for a directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament and 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 ensure against such liability. COM(2018)0336 – C8-0211/2018 – 2018/0168(COD).
[129] *Ibid*., Justification "Amendment 1."
[130] *Damijan Vnuk v Zavarovalnica Triglav d.d*. Judgment of the Court (Third Chamber) of 4 September 2014, Case No. C – 162/13, ECR – general.

traffic, and thus created legal uncertainty.[131] Whereby the CJEU broadened the scope of a 'vehicle' and 'use of a vehicle', the MSs had to make certain efforts aimed at redressing the national legislation in conformity with the superior Union perspective. Following the *Vnuk* judgment, the CJEU strengthened its earlier decisive position upon the essential concepts of a 'vehicle' and 'use of a vehicle' in the *Rodrigues de Andrade*[132] and *Torreiro*[133] cases. For this reason, the European Commission has introduced the REFIT review (the so-called Inception Impact Assessment, or IIA)[134] and a further Proposal[135] aimed at revising the MID, thus ensuring the effectiveness of the compensation mechanism for the victims of the RTAs with or without the cross-border element, and thus solving the interpretative conflicts[136] that may now arise.

Although the European Union law eliminates any defences against the injured party in a view of the broadened definition of a victim *per se*, the concept of the 'use of a vehicle' previously remained available for thresholds and limitations. Pursuing the Union task aimed at enhancing the protection system of the victims of RTAs, with the interpretation given in *Vnuk*, *Rodrigues de Andrade* and *Torreiro*, the CJEU eliminated the distinction in determining the essential concepts in a broader and more profound manner:

'Use of a vehicle' for the purposes of the MID		
Cases	**Circumstances**	**CJEU standpoints**
Vnuk	Mr Vnuk was hit by the ladder attached to the agricultural tractor on the private land when the tractor was reversing to get parked in the barn.	The concept of the 'use of a vehicle' should be viewed as any use of a vehicle that is consistent with the normal function of that vehicle.
Torreiro	Mr Torreiro, at the time of the incident, was participating in night-time military exercises in a restricted area in Chinchilla (Spain). The vehicle at issue, i.e., an all-terrain military vehicle fitted with 'Anibal' wheels, in which the claimant was a passenger, overturned, causing him various injuries.	The MSs are precluded from excluding compensation for damage resulting from the use of a motor vehicle on roads or terrain that are not suitable for use by a motor vehicle.
Rodrigues de Andrade	At the time of the accident, the tractor was engine-on to drive the spray pump for herbicide inside a drum mounted in the back part of the vehicle. By virtue of a heavy rain, given the weight of the tractor and the vibrations caused by the running engine, the vehicle overturned and hit four employees to the ground.	Since the agricultural tractor was performing the operation directly related to the primary function of such a vehicle, the CJEU found that the interpretation in part of the tractor's static condition is irrelevant for the purposes of the case.

[131] Željka Primorac. "Normal Function of a Vehicle as a Means of Transport or a Machine for Carrying out Work in Motor Third Party Liability Insurance with Special Regard to the Latest Rulings of the Court of Justice of the European Union." *EU and Comparative Law Issues and Challenges* (2018), Series 2, No. 2, pp. 235–251 (p. 247).

[132] *Isabel Maria Pinheiro Vieira Rodrigues de Andrade, Fausto da Silva Rodrigues de Andrade v José Manuel Proença Salvador, Crédito Agrícola Seguros — Companhia de Seguros de Ramos Reais SA, Jorge Oliveira Pinto*. Judgment of the Court (Grand Chamber) of 28 November 2017, Case No. C – 514/16, ECR – general.

[133] *José Luís Núñez Torreiro v AIG Europe Limited, Sucursal en España and Unión Española de Entidades Aseguradoras y Reaseguradoras (Unespa)*. Judgment of the Court (Sixth Chamber) of 20 December 2017, Case No. C – 334/16, ECR – general.

[134] European Commission. Inception Impact Assessment. REFIT review of the Motor Insurance Directive of July 24, 2017. Q4 2017. Ref. Ares/2017/3714481.

[135] European Commission Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament and 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 ensure against such liability (2018) COM 336 final.

[136] Raul Lafuente Sanchez. "Liability for Damages Caused by an Uninsured Vehicle Parked on Private Land and Right of Subrogation by the Compensation Body against the Vehicle's Owner (Note on the ECJ Judgement of 4 September 2018, Case C-80/17, Juliana)." *Bitacora Millennium DIPr* (2019) Vol. 9, pp. 43–69 (p. 66).

Línea[137]	Mr Luis Salazar Rodes left his brand-new vehicle parked in the private garage on the premises of *Industrial Software Indusoft* (ISI). In the nighttime, the vehicle, which had already been standing still for over 24 hours, caught fire, thereby causing immense damage to the ISI property. The electrical circuit of the vehicle constituted the official cause of the incident.	The CJEU held that a parked vehicle in a private garage on the private premises which caught fire originating in the electrical circuit of that vehicle, thus causing damage to the property, even despite standing still for over 24 hours, should nevertheless be viewed as 'use of a vehicle' for the purposes of the MID.

Given the interpretations of the CJEU, the MSs had to commit towards dismissing the legal discrepancies and redressing the domestic legal provisions in line with the European Union perspective.[138]

A lack of a legal clarity, i.e., explicit determination of the concepts of a 'vehicle' and 'use of a vehicle' in the MID led to certain complexities in determining whether an accident falls within the scope of the MID or not. For this reason, the UK domestic courts, on several occasions, broadened the scope of the UK's restrictive interpretation[139] of the 'use of a vehicle' for the purposes of MTPL insurance coverage.[140] In *Gardner v Moore*,[141] the claimant brought a lawsuit against the driver of the vehicle who wilfully drove onto the pavement and hit him. Although it was a deliberate criminal offence, it was ruled that the circumstances of the case correspond to the scope of the 'use of a vehicle' for the purposes of the MTPL insurance coverage. In the same vein, in the Swedish jurisdiction, the Traffic Damage Act (1975:1410)[142] stipulates that the MTPL insurance coverage must apply in relation to the damage in motor vehicle traffic (*skada till följd av trafik*), or the so-called 'in traffic' (*i trafik*).[143] As a rule, a vehicle is regarded 'in traffic' when the vehicle is in motion, or when the engine power is running, i.e., during loading and unloading operations or warming up the engine in winter. In certain occasions, i.e., opening a vehicle's door, because of faulty parking or involuntary movement due to the weight of the vehicle, such a vehicle can be viewed 'in traffic' despite its complete static condition (with the engine switched off); albeit, it is required to demonstrate that the damage occurred in connection with a normal use of a

[137] *Línea Directa Aseguradora SA v Segurcaixa Sociedad Anónima de Seguros y Reaseguros*. Judgment of the Court (Second Chamber) of 20 June 2019, Case No. C – 100/18, ECR – general.

[138] The United Kingdom faced the necessity to amend the Road Traffic Act 1988, whereby Section 185 explicitly addresses a "vehicle operating on roads," along with the obligation to insure against the civil liability those vehicles which are operating on roads and in public areas. According to Section 34 of the Road Traffic Act 1988, any person who drives a mechanically propelled vehicle onto or upon any common terrain, moorland, footpath, or restricted byway without lawful authorisation should be viewed as a subject liable of an offence. In the same vein, in Ireland, the Road Traffic Act 1961 refers to the 'use of a vehicle' as "to drive a mechanically propelled vehicle in a public place;" whereby a 'public place' *per se* excludes private premises and closed terrain. In the Austrian jurisdiction, pursuant to Section 2 of the Motor Vehicle Act 1967, the scope of the 'use of a vehicle' was narrowed to "a motor vehicle intended for use on roads." According to Section 1 of the Road Traffic Regulations, the German legislator refers to the concept "in traffic;" whereby, 'in traffic' should be viewed as the "use of a vehicle" on public roads, and undedicated roads where the vehicles are used given the proper authorisation. However, the use of a vehicle in traffic (on public roads) is excluded from the scope of the 'use of a vehicle' for the purposes of the MID as long as public roads are unavailable or closed, i.e., because of ongoing construction work.

[139] James Marson, Katy Ferris, Alex Nicholson. Irreconcilable Differences? The Road Traffic Act and the European Motor Vehicle Insurance Directives. *The Journal of Business Law* (2017) 1, pp. 51–70 (p. 67).

[140] Berrymans Lace Mawer (BLM) Motor Group. Briefing Note: Vnuk v Zavarovalnica Triglav d.d. (2014) CJEU C-162/13 of April 2015. *Research Education Development Journal*. pp. 1–13 (p. 6).

[141] *Gardner v Moore*. HL 1984, (1984) AC 548.

[142] Trafikskadelag (1975:1410). In English: Traffic Damage Act.

[143] *Ibid*., § 8 Trafikskadeersättning. In English: Traffic Damage Compensation.

vehicle.[144] On the contrary, in the French jurisdiction, pursuant to *Loi n° 85-677* (the Badinter Law),[145] a vehicle need not necessarily be 'in traffic' at the time of the accident to be viewed as a participant in RTA (i.e., to be involved in RTA), and therefore it complies with the 'use of a vehicle' category for the purposes of the CJEU interpretation in *Vnuk*, *Rodrigues de Andrade*, and *Torreiro*. Sub-section 1.2.3 below provides detailed analysis on the 'involvement' of the vehicle in RTA under the civil liability regulation in the French jurisdiction.

Most of the legal inconsistencies occur due to peculiarities of the legal translation into the official languages of the MSs; whereby the French version of the MID can be taken as a vivid example.[146] Although the English version of the MID envisages the concept of the 'use of a vehicle', pursuant to Articles 7, 14 and 20, the French version of the MID provides with the notion '*la circulation de véhicules*' which stands for 'circulation of vehicles', or 'traffic'. Evidentially, the terms 'circulation' or 'in traffic' *per se* do not correspond to the scope of the MID after the CJEU interpretation brought in *Vnuk*. In the same vein, both Spanish and Italian editions designate '*la circulación de vehículos*' and '*dalla circolazione dei veicoli*'. Meanwhile, the Lithuanian edition[147] does not include at all the notion of the 'use of a vehicle' as such. Pursuant to Article 3 of the MID (Lithuanian edition) "*Kiekviena valstybė narė […] imasi visų tinkamų priemonių užtikrinti, kad būtų apdrausta transporto priemonių, kurių įprastinė buvimo vieta yra jos teritorijoje, valdytojų civilinė atsakomybė*;" which signifies that the MSs must take all appropriate measures to ensure that the vehicles normally based in its territory are covered against third-party liability. In *Torreiro*, the CJEU noticed certain incompatibilities of the Spanish domestic law with the MID; it was pointed out that the major legal discrepancies resulted from imprecise translation of the MID to the official language of the member state, among other things, "circulation of a vehicle" (the Spanish edition) instead of the declared 'use of a vehicle' (the English edition). Simultaneously, in the European Commission Staff Working Document Impact Assessment,[148] the

[144] In NJA 1958 s.39 (Supreme Court. New legal archive – 1958 s.39), the charges were dismissed against the intoxicated driver who, at the time of the accident, by trampling, drove a moped whose engine was unusable. It is noteworthy that the vehicle is viewed not in traffic when there is a reasonable presumption that such a vehicle is no longer at risk of causing a traffic damage, i.e., those vehicles that are out of use or undergoing repairs. In SkfVN 1958: 77 (Non-life Insurance Conditions Committee. Ruling 1958: 77), the vehicle came into motion due to a malfunction of a handbrake, and therefore was regarded to be in traffic. On the other hand, in NJA 1943 s.486 (Supreme Court. New legal archive – 1943 s.486), vehicle X was rolled by hand from the premises, and, while rolling, it collided with vehicle Y that was standing still in the workshop; the impact with vehicle X caused vehicle Y to run over a mechanic who died immediately due to the injuries not consistent with life. Here, it was held that the damage did not arise because of traffic, or the impact with vehicle X. On the contrary, in SkfVN 1947: 34 (Non-life Insurance Conditions Committee. Ruling 1947: 34), salt and road sand were spread from the truck, which was in motion, by using a shovel. During the spreading, the vehicle parked at the roadside was damaged. Here, the damage was viewed to have occurred in connection with the traffic.

[145] Loi n° 85-677 du 5 juillet 1985 tendant à l'amélioration de la situation des victimes d'accidents de la circulation et à l'accélération des procédures d'indemnisation. Version consolidée au 14 janvier 2010. In English: Law No. 85-677 of July 5 1985 aimed at improving the situation of victims of traffic accidents and accelerating compensation procedures.

[146] Olga Shevchenko. "Motor Third Party Liability after CJEU Interpretation of the Directive 103/2009/EC in Vnuk Judgment". *Mokslo darbai „Teisė"*, Vol. 111. Vilnius University Press (2019) pp. 130–144 (p. 135).

[147] A Lithuanian translation of the Motor Insurance Directive is available for free access in the official journal: Document L:2009:263:TOC. OJ L 263.

[148] European Commission Staff Working Document Impact Assessment accompanying the documents Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament

European Commission noticed the existing incompatibilities in the translation of the MID between the French and English editions; albeit, none of other discrepancies in translation were revealed in the course of the Impact Assessment.

The CJEU interpretation in *Vnuk* designated that the concept of a 'vehicle' should be explicitly distinguished from the concept of the 'use of a vehicle'. Analysing the European Union law and the legal provisions adopted at the national level, evidently, the MSs are narrowing certain essential concepts so that to facilitate the domestic judicial proceedings and to avoid the unnecessary burden of interpretation on the part of the national courts.[149] On the contrary, in the Croatian jurisdiction, the concepts of a 'vehicle' and the 'use of a vehicle' correspond to the CJEU interpretation in *Vnuk*, *Rodrigues de Andrade*, and *Torreiro*; whereby, according to Article 1068 of the Law on Obligations,[150] a 'motor vehicle' should be regarded as a vehicle that is intended to move on the surface of the ground, on or without rails, with the power of its own engine. A motor vehicle is considered in operation when it is used for the purpose for which it is intended, regardless of whether the engine used for its movement is switched on or not.[151] Therefore, in Croatia, certain classes of a motor vehicle with the primary purpose to perform certain works unrelated to transportation, i.e., cultivators, harvesters, agricultural tractors, forklifts and similar, are subject to the compulsory MTPL insurance cover.[152] In the French jurisdiction, the concepts of a 'vehicle' and the 'use of a vehicle' are generally broadened; whereby the French domestic jurisprudence mainly concerns the use of vehicles with the primary agricultural function or special equipment. In joint cases[153] n°00-11.233 and n°00-10.187, the Court of Cassation held that the Badinter Law applies to incidents involving an agricultural tractor with an attached hydraulic fork, which, due to unfortunate circumstances, caused a victim to suffer a personal injury. In the above judgment, the agricultural tractor with the primary function other than operation in traffic was justified for the purposes of the compulsory MTPL insurance cover; even though there was an attempt to dismiss the justification of the MTPL insurance cover on the basis that a motor vehicle is deemed as not involved in a traffic accident, when only an element of the utility equipment outside the

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. OJ SWD/2018/247 final.

[149] In the Danish jurisdiction, pursuant to Sections 1 and 2 of the Road Traffic Act (*Færdselsloven*), the 'use of a vehicle' should be viewed as the use of a motor vehicle 'on roads' or 'in traffic'; whereby, according to Section 2 (28) of the Road Traffic Act, a road should signify a street, a bike path, a sidewalk, a bridge, a tunnel, a crossing or similar, whether public or private. Therefore, although the Danish legislator addresses both the public and the private terrain, the concept of a 'road' or 'in traffic' precludes the 'use of a vehicle' for the agricultural or construction purposes in closed or restricted areas, i.e., farms or construction premises, for the purposes of the TPL insurance cover. In Belgium, according to the Road Traffic Code (*Code de la route*), the 'use of a vehicle' is deemed as the use of a vehicle on public roads; albeit, pursuant to Article 2 of the Road Traffic Code, the definition of a 'vehicle' extends to any means of transport by land, as well as any mobile agricultural or industrial equipment. Pursuant to Article 2 of the Italian Highway Code (*Codice della Strada*), the 'use of a vehicle' should be viewed as the use of a vehicle on roads, where a 'road' signifies a public area intended for the movement of pedestrians, vehicles, and animals.

[150] Zakon o obveznim odnosima. NN 35/05, 41/08, 125/11, 78/15, 29/18. In English: Law on Obligations.

[151] *Ibid*., Article 1068.

[152] Pursuant to Article 2(49) of the Road Traffic Safety Act (*Zakon o sigurnosti prometa na cestama*), electrically powered cycles with a maximum constant power below or 0.25 kW do not represent a motor vehicle for the purposes of the TPL insurance cover.

[153] Cour de Cassation. Chambre civile 2 du 6 juin 2002, joint les pourvois n°00-10.187 et 00-11.233. Publié au bulletin. In English: Court of Cassation. Judgment in joint cases from June 6th, 2002 – 00-10.187 and 00-11.233.

function of moving the agricultural device is involved. In n°99-15.732[154] and n°95-14.279[155] cases, it was held that Badinter Law is applicable to any RTA in the occurrence of which a ground motor vehicle intervened in any capacity. There were several attempts to expand the concept of a 'vehicle' over an already broadened definition set out by the French national courts. In n°96-12.242[156], the claimant was pursuing a compensation for a personal injury endured because of the impact with a small electric car operating in a children's merry-go-round. When attempting to get her 4-year-old son off a small electric car, the claimant was struck by analogous electric car. The Court of Cassation viewed a children's small electric car as a toy instead of a 'vehicle' for the purposes of the coverage ensured by the Badinter Law. In the same vein, in n°00-18.216[157], waiting for an assistant to a triathlon event, the claimant was injured when he fell from a gondola which was placed on the fork of a stationary forklift. Given the circumstances of the above case, the Court of Cassation held that an incident involving exceptionally an accessory to a motor vehicle should not be viewed as RTA for the purposes of the compulsory MTPL insurance cover.

Although in the wake of the judgment in *Vnuk* and IIA, the concept of the 'use of a vehicle' was broadened to esoteric mechanically propelled vehicles functioning on both the public and the private terrain, i.e., agricultural tractors, harvesters, cherry pickers, forklifts, electrically power assisted cycles (EPACs) and Segways, the Proposal and the Report on the proposal for a directive amending the MID allows derogation of certain types of esoteric vehicles from the scope of the 'vehicle'. According to Amendments (3a) and 57 of the Report, EPACs and Segways are less likely to expose other persons to risk of a significant damage to property or health, and therefore it would be disproportionate to include the above means of transport in the scope of the MID. The primary attention should be drawn to those vehicles that have the potential to cause either significant material damage or severe personal injury in a cross-border RTAs.[158] For this reason, the MSs should determine at the domestic level the appropriate level of protection of the potential victims from the vehicles other than those subject to the EU type-approval.[159] Pursuant to Amendment 23, the MID should apply exclusively to the vehicles covered by Regulation (EU) 2018/858,[160] Regulation (EU) No. 167/2013,[161] or Regulation (EU) No. 168/2013;[162] albeit, the MSs are permitted to include certain means of transport, i.e., esoteric vehicles, for the purposes of

[154] Cour de Cassation. Chambre civile 2 du 21 juin 2001, n° de pourvoi 99-15.732. Publié au bulletin. In English: Court of Cassation. Judgment from June 21st, 2001 – 99-15.732.
[155] Cour de Cassation. Chambre civile 2 du 19 février 1997, n° de pourvoi 95-14.279. Publié au bulletin. In English: Court of Cassation. Judgment from February 19th, 1997 – 95-14.279.
[156] Cour de Cassation. Chambre civile 2 du 4 mars 1998, n° de pourvoi 96-12.242. Publié au bulletin. In English: Court of Cassation. Judgment from March 4th, 1998 – 96-12.242.
[157] Cour de Cassation. Chambre civile 1 du 8 juillet 2003, n° de pourvoi 00-18.216. Publié au bulletin. In English: Court of Cassation. Judgment from July 8th, 2003 – 00-18.216.
[158] Report of 28 January 2019 on the proposal <…>. Amendment 3.
[159] *Ibid*., Amendment 4.
[160] Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC. OJ L 151.
[161] Regulation (EU) No. 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles. OJ L 60.
[162] Regulation (EU) No. 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles. OJ L 60.

the mandatory MTPL cover if there is a reasonable and foreseeable potential that those vehicles may cause significant damage.

Pursuant to Amendment 7 of the Report, the MSs can limit non-traffic related MTPL insurance coverage in the event when there is no reasonable potential for the insurance cover, i.e., a farm tractor when its primary function, at the time of the accident, was not to serve as a means of transport, but to undergo certain tasks unrelated to a regular use of a vehicle. Consequently, pursuant to Amendment 22 of the Report, the concept of the 'use of a vehicle' should be viewed as "*any use of a vehicle in traffic that is consistent with the vehicle's function as a means of transport at the time of the accident, irrespective of the vehicle's characteristics and irrespective of whether it is stationary or in motion*." Although, in the Report, both the territorial scope and the type of the vehicles were narrowed contrary to the interpretation provided by the CJEU, the proposed definition, *in esse*, does not diminish the scope of the protection granted to the victims of the RTAs. The concept of the 'use of a vehicle' contains a presumption that a vehicle is an active or passive participant of the traffic, whereby there is a reasonable potential to cause damage to the potential victims, with or without the cross-border element. On the other hand, the use of a vehicle in the view of tasks performed for the purposes other than transportation or regular[163] understanding of the use of a vehicle should be regarded beyond the scope of the reasonable potential to cause damage to the regular road users. Having regard to the regular use of a vehicle or a reasonable potential of causing damage for road users should be viewed broader than solely 'in traffic'. Pursuant to the Report, the concept of the 'use of a vehicle' should be regarded as such including events when the vehicle was in traffic, at the time of the accident, however, it was not being used in accordance with its primary function or when the vehicle was being used in accordance with its primary function, but outside the traffic.[164] The use of a vehicle as a weapon to commit a violent offence or a terrorist act was observed in certain occasions in the last decade.[165] As a rule, the MSs provide for an aid for the victims of violent crimes or terrorist acts invoking the use of a vehicle on the basis of the legal instruments other than the MID; albeit, pursuant to the Report, the MSs should ensure the proper functioning of the Compensation Fund aimed at indemnifying the victims of RTAs, including the victims of the incidents where a motor vehicle was used as a weapon to commit a violent offence of a terrorist act.[166] It is noteworthy that, pursuant to the Report, the Compensation Fund should be precluded from reducing or rejecting the payment of compensation to the victim on the grounds that the injured party failed to establish that the liable party or the insurance undertaking on behalf of the liable party is unable or refuses to pay the indemnity. Until now, the Compensation Funds have required the injured party to justify the claim and explicitly demonstrate that the liable party or the insurer is unable or refuses to satisfy the demand of the compensation for the damage.

Having regard to the analysis provided above, (1) the lack of a legal determination, or (2) the ambiguous and uncertain legal determination of the fundamental regulatory concepts at the European Union level, and (3) the peculiarities of the legal translation (*sui generis* law) into the

[163] Any use of a vehicle in traffic that is consistent with the vehicle's function as a means of transport.
[164] Report of 28 January 2019 on the proposal <…>. Amendment 24.
[165] Nice, France: 14 July 2016. 86 people died and 458 were seriously injured; Berlin, Germany: 19 December 2016. 12 people died and 56 were seriously injured; London, UK: 03 June 2017. 11 people died.
[166] *Ibid*., Amendment 33.

official languages of the MSs constitute legal uncertainty and, therefore, create an obstacle to enhancing the protection system for cross-border RTAs victims. Analysis on the distinct legal practices established in the jurisdictions of the MSs (e.g., Sweden, UK, France) indicates the potential to jeopardise the status of cross-border RTAs victims. The legal uncertainty allowance in comprehension of the fundamental regulatory concepts is acceptable as long as it does not demolish the primary goal of the MTPL policy in the European Union, i.e., the protection of RTAs victims; whereby, the discriminatory impact on the cross-border RTAs victims *per se* is seen as an obstacle to the achievement of the main objective of the EU's MTPL policy, and thus, it requires uniform and certain definitions of the regulatory concepts at the European Union level. Given the ICVs circulation on the EU public roads, to obstruct a comparable discriminatory impact on the visiting-victims, it is required to explicitly determine the essential regulatory concepts beforehand and to prevent any inconsistencies in the comprehension of the above concepts, given any potential coincidences in the RTAs civil liability regulation of the conventional vehicles and ICVs.

On the other hand, certain proposals indicated within the Report, i.e., indemnification for the victims of incidents where a vehicle was used as a weapon to commit a violent offence or a terrorist act, constitute the precedent approach in the EU in the area of the MTPL regulation, and it can be viewed as beneficial in the wake of the potential vulnerability of ICVs and their potential to become the target of cybercrimes. Sub-sections 2.1. and 2.3. below shall address the above outlined issues in detail.

1.2. RTAs Civil Liability Regulation at the Domestic Level

The suggestions to harmonise the laws of the MSs relating to tort, delict, and quasi-delict matters have been presented by a number of scholars, and they may be detected in the EU policy[167] research studies (including arguments both for and against);[168] until now, the EU has been dealing with the delict issues in the cross-border (narrow) areas that directly affect the development of the single market, e.g., MTPL insurance.[169] The legal systems in respect of MTPL resulting from RTAs broadly vary among the MSs; whereby, although initially based on the Roman Law,[170] the comprehensive development of the legal systems pursued somewhat different courses. From the legal perspective of a cross-border road accident (as a tort), in the vast majority of cases, it will be

[167] Andrea Renda, Lorna Schrefler. Compensation of victims of cross-border road traffic accidents in the EU: Assessment of selected options. Centre for European Policy Studies, Brussels, IP/C/JURI/FWC/2006-171/LOT 1, PE 378.292.

[168] Christian von Bar, Eric Clive (Editors). Hans Schulte-Nölke (coordinator). Study Group on a European Civil Code and Research Group on EC Private Law (Acquis Group). *Principles, Definitions and Model Rules of European Private Law. Draft Common Frame of Reference (DCFR)* of 2009. European Law Publishers GmbH, Munich. ISBN 978-3-86653-098-0; Helmut Koziol. Harmonising Tort Law in the European Union: Advantages and Difficulties. *ELTE Law Journal* 2013/1, ISSN 2064 4965, pp. 73–88; Mauro Bussani, Marta Infantino. Harmonisation of Tort Law in Europe. *Encyclopedia of Law and Economics.* Springer Science & Business Media New York 2014. DOI 10.1007/978-1-4614-7883-6_530-1, pp. 1–16; Paula Giliker. Can 27(+) 'Wrongs' Make a Right? The European Tort Law Project: Some Sceptical Reflections. *King's Law Journal*, July 2009, 20(2), DOI: 10.1080/09615768.2009.11427733, pp. 257–279.

[169] Mauro Bussani, Gert Bruggemeier. "Tort Law in the European Union." *American Journal of Comparative Law*, Vol. 64, No. 4 (2016), pp. 1019–1023 (p. 1020).

[170] Except for the United Kingdom, Ireland, Romania, Malta, and Cyprus, which adhere to the common law system or base the statutory provisions on the common law principles.

the law of the state where the road accident occurred to handle the liability and compensation matters; whereby the difference in the civil liability and compensation systems among the MSs leads to a sufficiently divergent regulation on the liability and recoverable damages, which, in fact, constitute different levels of protection for cross-border RTAs victims. Among these, the criteria determining the liability and assessment of intangible damage are regarded as substantial.

It is, therefore, possible to differentiate the models of the RTAs civil liability adopted at the national level into three principal groups, specifically, (1) a model of fault-based liability regulation, (2) a model of 'strict-liability', or the 'no-fault liability' regulation, and (3) *Loi Badinter* or a model of RTAs civil liability regulation in the French jurisdiction. To assess the national standpoints on the civil liability regulation in connection with the 'use of a vehicle' and to examine the feasibility to approximate the compensation systems of the MSs, the analysis provided in Sub-sections 1.2.1 to 1.2.3 below should be viewed as an integral part of this study.

1.2.1. Fault-based liability model of regulation

Commonly, the assessment of liability takes its beginning from determining a 'fault' as a cornerstone of the tort law; whereby the concept of a 'fault' is either established by the governing (tort) law, or determined by the common law, which is divided into four basic types of fault, such as negligence (gross negligence), imprudent conduct, deliberate misconduct, and strict liability. Whereby (1) negligence is regarded as inadvertent conduct or a wrongful act resulting in damage; (2) imprudent conduct is considered a deliberate act (with a deliberate disregard for the safety of others) (e.g., running a red light); (3) deliberate misconduct is regarded as an intentional (i.e., deliberate) act committed knowingly of the high probability of harm to arise; whereas (4) strict liability is imposed without any fault or error being conducted. However, when it comes to a 'fault', the member state adopts its thresholds and criteria for determining the liability that may extensively vary from jurisdiction to jurisdiction. Among the jurisdictions that have adopted a model of fault-based liability regulation are the United Kingdom, Ireland, Cyprus, Malta, and Romania. Given a certain similarity in the legal position of the UK and Ireland, these first counties shall be assessed separately from Cyprus, Malta, and Romania:

(MSs)	Basis for liability	Special category of victims / *Force majeure*	Contributory negligence / Joint liability
UK	Statutory provisions		
	Sections 1–3A "Driving offences," Road Traffic Act 1988[171]		Law Reform (Contributory Negligence) Act 1945;[172] Duties under Road Traffic Act 1988

[171] Road Traffic Act 1988 (1988 Chapter 52).
[172] Law Reform (Contributory Negligence) Act 1945 of 15th June 1945 (8 & 9 Geo. 6.) Chapter 28.

	'Negligence basis': the injured party, therefore, needs to prove (1) the evidential duty of care that rests with the alleged tortfeasor, (2) violation of such duty of care (either by imprudent conduct or deliberate misconduct), (3) the damage, and (4) *causal nexus*. *Burden of proof lies within the injured party. *Defendant may rely on various 'good faith' defences. *'Cuparo test': rule of 'proximity'[173] or 'neighbourhood'.[174] * *res ipsa loquitur* principle.	*No defences under the *force majeure* clause are explicitly specified in statutory provisions. *There are no exceptions for any special category of victims, i.e., minors (civil responsibility), seniors, pedestrians, cyclists and other non-motorised road users.[175]	*Contributory negligence is recognised. *'Fault' should be regarded as negligence, breach of statutory duty, imprudent act or omission, which give rise to the defence of contributory negligence. *A deliberate act or omission (intentional tort) does not fall within the scope of the defence of contributory negligence. *Doctrine of the 'Agony of the moment' or 'Agony of collision'. *Blame may be shared by several parties involved in a road traffic accident; thus 'shared culpability' is recognised. Having regard to the extent of liability, different shares of culpability exist, e.g., 50:50; 90:10; 80:20; 70:30.
	Judicial practice		
	Scott v The London and St Katherine Docks Co;[176] *Donoghue v Stevenson*;[177] *Caparo Industries pIc v Dickman*; *Gorringe v Calderdale Metropolitan*	*Eagle v Garth Maynard Chambers*;[181] *Streeter v Hughes & Anor*.[182]	*Lane v Holloway*;[183] *Gardner v Moore and others*;[184] *Froom v Butcher*;[185] *Gerbrandt v*

[173] Robert Merkin, Maggie Hemsworth. Thomson Reuters (Professional) UK Limited (Sweet & Maxwell). *The Law of Motor Insurance: Second Edition*. (2015) CPI Group (UK) Ltd. ISBN: 978-0-414-04519-4, pp. 1–906, p. 247. The proximity may be regarded in terms of both time and space, whereas either the injured party was directly involved in a road accident, or else at the time of the collision (or right away after the road accident) the claimant suffered a grave fear that the person to whom he or she is manifestly connected will sustain injuries.

[174] The UK courts are referring to the rule of 'proximity' or 'neighbourhood' to constitute the duty of care and are expecting causal link between the substantial damage and the breach of the duty of care. See the 'Caparo test' in *Caparo Industries pIc v Dickman*. (1990) 2 AC 605 House of Lords.

[175] Although it was proposed in the Road Traffic (Compensation for accidents) Bill 1934 that the cyclists and pedestrians who lost their lives or were injured in a road accident with a motor vehicle should automatically be able to obtain compensation without the need to prove the driver's negligence, the Bill was stopped at the Reading Session by the House of Lords.

[176] *Scott v The London and St Katherine Docks Co* CEF 1865. (1865), 3 H and C 596. Where there is a substantial and robust presumption that the alleged tortfeasor committed negligence (under the *res ipsa loquitur* principle), the burden of proof will rest with the defendant to prove otherwise.

[177] *Donoghue v Stevenson*. (1932), AC 562 House of Lords. It was held that the producer must perform with the due care in order to avoid any harm caused by his product to an ultimate consumer.

[181] *Eagle v Garth Maynard Chambers*. (2003) EWCA Civ 1107. The court held that, although the driver's (defendant's) conduct was more causatively impactful, the casual attitude of the pedestrian (the minor claimant) is regarded as negligence, and thus a decrease in compensation by 40 per cent was considered reasonable.

[182] *Streeter v Hughes & Anor*. (2013), EWHC 2841 (QB). Cyclists are required to prove the fault on the part of the alleged tortfeasor and the *causal nexus* on the regular basis.

[183] *Lane v Holloway*. (1967), 3 WLR 1003 Court of Appeal. In the event of the deliberate misconduct, there are no reasonable grounds to invoke contributory negligence on the part of the claimant.

[184] *Gardner v Moore and others*. (1984), AC 548. In the event of the deliberate attack (offence), no contributory negligence can be invoked on the part of the claimant.

[185] *Froom v Butcher*. (1976), 1 QB 286. In the cases where the claimant was not wearing a seat belt, but the damage was equal to the harm as if the claimant had been wearing a seat belt, no contributory negligence can be constituted.

	BC;[178] *Nettleship v Weston*;[179] *Smith v Nottinghamshire Police*.[180]		*Deleeuw*;[186] *Lamoon v Fry*;[187] *Liddell v Middleton*;[188] *Sam v Atkins.*[189]
IRL	Statutory provisions		
	Sections 11 –19, 34 of the Civil Liability Act 1961[190]		
	'Tort of negligence' or 'Wrong': 'fault' equates to 'responsibility', 'blame' or 'error' that is regarded to be a negligent act or imprudent omission, which results in damage. * *res ipsaloquitur* principle.	*No defences under the *force majeure* clause are explicitly specified in the statutory provisions. *No exceptions for special any category of victims, i.e., minors (civil responsibility), seniors, pedestrians, cyclists and other non-motorised road users.	*Contributory negligence is recognised. *No degree of fault established = equal split of liability. *Joint and several liability is recognised. The court may assign an explicit degree of liability to each tortfeasor having regard to the justification by the probabilities of the case, e.g., 50:50; 90:10; 80:20; 70:30.
	Judicial practice		
	O'Sullivan v Dwyer;[191] *Carroll v Clare County Council*;[192] *Flynn v South Tipperary County Council*;[193] *Hanrahan v Merck Sharp and Dohme*.[194]		*Moran v Fogarty*;[195] *Michael Tevlin v Kevin McArdle and the MIBI*;[196] *Hussey v Twomey & Ors*;[197] *Lindsay v Finnerty and Others*.[198]

[178] *Gorringe v Calderdale Metropolitan Borough Council* HL 1 Apr 2004. (2004); UKHL 15. (2004); 1 WLR 1057. (2004); RTR 27. (2004); 2 All ER 326. Interrelation between the highway authority and *causal nexus* in RTA.
[179] *Nettleship v Weston*. (1971), 3 WLR 370 Court of Appeal. A learner driver is expected to meet the same standard of due care as that passed to an experienced driver.
[180] *Smith v Nottinghamshire Police* CA 23 Feb 2012. (2012); EWCA Civ 161. (2012); RTR 294. It was held that, despite the emergency to attend the scene of a possible assault, the driver on duty should prevent the risk of severe injury to other road users while in motion.
[186] *Gerbrandt v Deleeuw*. (1995), B.C.J. No. 1022. It was held that when a claimant is in danger and requires to find the best method to avoid such impending danger, there is no responsibility or negligence if he does not commit an action that is subsequently deemed the best option to evade the incident. Doctrine of the 'Agony of the moment'.
[187] *Lamoon v Fry*. CA 29 Apr 2004. (2004), EWCA Civ 591. Assessment criteria.
[188] *Liddell v Middleton*. CA 1996. (1996), PIQR P36. The UK court held that expert intervention in a road accident should be regarded more as an exception than a rule. Additionally, the Judge found the intervention of such forensic experts to be a pure increase in the litigation costs and an increase in the length of proceedings.
[189] *Sam v Atkins*. (2005), EWCA Civ 1452. It was held that the driver (defendant) was under no duty to evade the accident in the given circumstances where the claimant (a pedestrian) unexpectedly stepped out from between parked vehicles, whereby the defendant could not foresee or reasonably evade such an action.
[190] Civil Liability Act 1961 (No. 41 of 1961).
[191] *O'Sullivan v Dwyer*. (1971), IR 274. Assessment criteria.
[192] *Carroll v Clare County Council*. (1975), IR 221. Concept of 'fault'.
[193] *Flynn v South Tipperary County Council*. (2017), IEHC 434. Application of the balance of probabilities.
[194] *Hanrahan v Merck Sharp and Dohme*. (1988), I.L.R.M 629. Application of *res ipsa loquitur*.
[195] *Moran v Fogarty*. (2009), IESC 55. Contributory negligence on the part of the passenger (decrease in compensation by 35 per cent).
[196] *Michael Tevlin v Kevin McArdle and the Motor Insurers Bureau of Ireland*. (2014), IEHC 436. Contributory negligence (decrease in compensation by 45 per cent for not wearing a seat belt).
[197] *Hussey v Twomey & Ors*. (2009), IESC 1. Contributory negligence.
[198] *Lindsay v Finnerty and Others*. (2011), IEHC 403.

Having regard to the symbiosis of the statutory provisions and the judicial practice in the UK and Irish jurisdictions, a 'fault' is viewed as a derogation from a standard of conduct by a person who was found to be negligent as a result of such a derogation, whereby the degree of such negligence designates the extent of his or her derogation from the standard of conduct expected from a reasonable person in the given circumstances. The burden of proof consists of a balance of probabilities; where one version of events is regarded as more plausible to have occurred than not. There are some cases based on *res ipsa loquitur*, the so-called 'the affair speaks for itself' – the principle that the occurrence of certain types of incidents is sufficient to invoke fault or negligence. It is generally accepted that the *res ipsa loquitur* principle will apply when the vehicle is under the full control of the defendant and when the road accident would not have happened if the defendant in control of the vehicle had exercised reasonable care, prudence, and due diligence. The concept of contributory negligence applies to minors, seniors, pedestrians, cyclists and other non-motorised road users on the regular basis; thus, there is no specific statutory provision that would allow derogation from the general burden of proof for non-motorised users of the traffic within the jurisdictions of the United Kingdom and Ireland. On the other hand, either evidence or strong presumptions should be presented to the court to justify the contributory negligence plea, whereas purely subjective assumptions are unlikely to persuade a respectful court. Given the indicated judicial practice, in-court cross-examination prevails over forensic reports in both the UK and Irish jurisdictions; here, the issue in respect of substantiating a claim for compensation for cross-border party (either the claimant or the defendant) arises.

<table>
<tr><th rowspan="2">(MSs)</th><th colspan="3">Personal injury</th></tr>
<tr><th>Physical suffering / Disability</th><th>Psychological injury</th><th>Indirect victims</th></tr>
<tr><td colspan="4">The principle of restitutio in integrum applies</td></tr>
<tr><td rowspan="4">UK</td><td colspan="3">Statutory provisions</td></tr>
<tr><td colspan="3">Civil Liability Act 2018; Section 1-1A Fatal Accidents Act 1976[199]</td></tr>
<tr><td>Civil Liability Act 2018:
*designates a rate (tariff) for personal injury claim settlement;
*aims to ban whiplash[200] settlements without optimal medical evidence;
*Assessment of pre-accident health conditions;
*Medical diagnostic.</td><td>Psychological injury (as a legitimate part of a personal injury claim) may include depression, post-traumatic stress disorder (PTSD), or anxiety.
Evidences: medical report (with reference to physical injuries) or cognitive behavioural therapy (CBT) report (with reference to psychological injury) as a piece of admissible evidence.</td><td rowspan="2">*Maintenance costs of survivors;
*Psychological damage;
*Test (manifestly closed to the deceased).[201]</td></tr>
<tr><td>A. Medical treatment and care costs</td><td colspan="2">B. Pain, grief and suffering/loss of amenity *Guidelines for the Assessment of General Damages in Personal Injury Cases[202]</td></tr>
</table>

[199] Fatal Accidents Act 1976 (1976 Chapter 30) of 1st September 1976 (in force).

[200] *Whiplash injury* means an injury of soft tissue in the neck, back or shoulder; whereby such an injury may include a sprain, strain, tear, rupture, or some lesser damage of a muscle, tendon, or ligament in the neck, back, or shoulder, however, it cannot be connected to another injury. Section 1 *Whiplash Injury*, Civil Liability Act 2018. (2018 Chapter 29).

[201] A manifest connection is presumed with a spouse, a parent and a child. It is, however, permittable to launch a claim based on a relationship other than that preassembly manifest; whereby the claimant will have to prove the nature and reasonableness of his or her suffering.

[202] Judicial College. Guidelines for the Assessment of General Damages in Personal Injury Cases: Fifteenth Edition of 4th December 2019, pp. 1–112. ISBN: 978-0-198-85093-9.

	Separate Guidelines in Northern Ireland: The Judicial Studies Board for Northern Ireland. Guidelines for the Assessment of General Damages in Personal Injury Cases in Northern Ireland[203]		
	C. Losses under the strict assessment[204] *'Loss of opportunity' test[205]		
	Judicial practice		
	Baker v Willoughby;[206] *Jobling v Associated Dairies*;[207] *Maples Group Limited v Simmons and Simmons*;[208] *Wellesley Partners LLP v Withers LLP*.[209]		
IRL	Statutory provisions		
	Civil Liability Act 1961	Sections 47–51 of Civil Liability Act 1961	
	Personal injury compensation should be awarded having regard (1) the ordinary standards of life in the country where the claimant habitually resides, and (2) the claimant's income level; however, such a compensation should be proportionate within the scheme of awards achieved in other personal injury claims.	There is no explicit or uniform formula corresponding to the assessment of non-pecuniary damage; for this reason, the claimant should persuade the court that, under the given circumstances, the amount claimed is fair and reasonable.	*Maintenance costs of survivors; *Mental distress (solatium); *Test (manifestly close to the deceased).
	Evidences: medical and forensic reports. *Test of proportionality between moderate and serious injuries.	Non-pecuniary damage should be examined on an individual basis having regard to the social conditions in society and the foreseeable alterations in the nearest future.	
	No award of compensation based on indexed gross minimum wage.		
	Judicial practice		

[203] The Judicial Studies Board for Northern Ireland. Guidelines for the Assessment of General Damages in Personal Injury Cases in Northern Ireland (Fourth edition) of 4th March 2013, pp. 1–42 (regularly revised).

[204] Losses under rigorous assessment include future financial loss or the so-called loss of earnings (incomes); whereby such a compensation should be awarded net of tax, as there is a reasonable expectation that the claimant would have paid income tax if he or she had received income in circumstances where no accident had occurred. While the loss of income is strictly framed in the event of an employment contract, it becomes complex if the claimant was self-employed.

[205] Feasibility for the claimant to reach a certain level in his or her career.

[206] *Baker v Willoughby*. (1969); UKHL 8. (1970), AC 467. The claimant suffered a leg injury in a road accident with the defendant, thus it forced the claimant to take a lower-paying job; whereby he was later shot in the same leg by muggers, which resulted in the amputation of the leg. Although the amputation of the leg followed a separate incident with no connection to an earlier road accident, the House of Lords ruled that the defendant is liable for the claimant's pain and suffering along with the reduced earning capability regardless of the second incident.

[207] *Jobling v Associated Dairies*. (1982), AC 794. The House of Lords found the post-incident illness of the claimant unconnected with the incident.

[208] *Allied Maples v Simmons & Simmons*. (1995), 4 All ER 907 Court of Appeal. Assessment criteria.

[209] *Wellesley Partners LLP v Withers LLP*. (2015), EWCA Civ 114. Assessment criteria.

	Vernon v Colgan;[210] *Sinnott v Quinnsworth Limited*;[211] *Payne v Nugent*;[212] *Nolan v Wirenski*;[213] *McEneaney v Monaghan County Council*;[214] *Myles v McQuillan*;[215] *Yun v MIBI and Tao*.[216]	

Pursuant to *Heil v Rankin*,[217] the principle of *restitutio in integrum* requires an award of just compensation in order not to place the defendant in a worse position than it is reasonable. The test of reasonable balance and proportionality remains the cornerstone in determining the quantum of compensation in both jurisdictions; meticulous analysis should be carried in respect of proportionality between a moderate and a serious injury given the earlier domestic judicial practice. Although the assessment of non-pecuniary damage and a future loss of income is complex and consists of analysis of various evidence and probabilities, the overall result remains approximate. If a claimant's loss strictly depends on the hypothetical act of a third party, such a claimant should prove that the third party would act exactly in such a manner; whereas such a presumption should be real, substantial, and well-backgrounded. If such a hypothetical act by a third party is found to be substantial, such a claimant should demonstrate that his or her chance would not have been missed if it were not an act committed by the defendant.

	Statutory provisions		
	Articles 3, 51–55 of Civil Offences Act (CEP.148)[218]	Articles 9, 56 of Civil Offences Act (CEP.148)	Articles 11, 59 of Civil Offences Act (CEP.148)
CY	**'Fault':** fault-based grounds for liability; *Enforced against the owner of the vehicle; *The defendant bears the burden of proving that there is no negligence for which he or she is responsible.	*Person under the age of 12 is exempted from liability; *Compensation cannot be awarded to the injured person in the event of a *force majeure*, or an exclusive fault of a third party (given that due diligence was exercised by an/the alleged tortfeasor).	*Joint and several liability is recognised; *Contributory negligence is recognised (minors under the age of 12 are excluded from the scope of contributory negligence).
	Statutory provisions		
M	Articles 1031, 1032 of the Civil Code[219]	Articles 1029, 1035 of the Civil Code	Articles 1049–1051 of the Civil Code

[210] *Vernon v Colgan*. (2009), IEHC 86.
[211] *Sinnott v Quinnsworth Limited*. (1984), ILRN 523. The cap is set at 150,000.00 IP.
[212] *Payne v Nugent*. (2015), IECA 268. The amount of compensation was reduced by the Court of Appeal from EUR 65,000 to EUR 35,000.
[213] *Nolan v Wirenski*. (2016), IECA 56. The amount of compensation was reduced by the High Court from EUR 120,000 to EUR 65,000.
[214] *McEneaney v Monaghan County Council*. (2001), IEHC 14. The cap has been increased to EUR 300,000.
[215] *Myles v McQuillan*. (2007), IEHC 333. Compensation of EUR 125,000 for general damage; A total of EUR 502,700 was awarded.
[216] *Yun v MIBI and Tao*. (2009), IEHC 318. The cap has been increased to EUR 450,000.
[217] *Heil v Rankin*. CA 13 Jun 2000. (2000), EWCA Civ 187, (2001) QB 272, (2001) PIQR Q3, (2000) 2 WLR 1173. It is necessary to consider the circumstances due to which the claimant could resign earlier (Police Dog Handler), despite his state of health following the road accident.
[218] Ο περί Αστικών Αδικημάτων Νόμος (ΚΕΦ.148). In English: Civil Offences Act (CEP.148).
[219] Kodiċi ċivili (Kapitolu 16) 1870. (1874). In English: Civil Code (Chapter 16).

	'Fault': every person who, by his or her actions, does not exercise prudence, due diligence and due attention of a *bonus paterfamilias*, should be held at fault for the damage caused by a lack of prudence and due diligence.	Any damage caused as a result of *force majeure*, in the absence of the law to the contrary, shall be borne by the party to whose person or property such damage was caused; *If the damage was caused by a minor under 14 years of age or by a person with a mental impairment who was unable to understand his/her conduct and the causal nexus, such a person is regarded subject to liability waiver.	*Contributory negligence is recognised; *Joint and several liability; *If the extent of liability of each tortfeasor cannot be determined, the injured party may demand compensation for the damage from any responsible party.
	Judicial practice		
		Valenzia Brian Noe v Camilleri Joseph;[220] *Vella Govanni v Cilia Michael*.[221]	*Farrugia Peter Sive Pierre v ID-Direttur Tal-protezzjoni civili et*;[222] *Farrugia Antoinette pro et noe v Farrugia Nicholas*.[223]
RO	Statutory provisions		
	Law No. 132[224]	Article 12 Law No. 132; Articles 500–502 Civil Code[225]	Article 13 Law No. 132
	'Fault': the damage is recoverable if (1) the fault of the driver is proven, (2) the damage was caused by any device installed on the vehicle or detachment of the towed unit, (3) the damage was caused by leaking, spilling, fall of substances or any other materials or objects carried, (4) the damage was caused by doors being open without due care, (5) the damage was caused as a consequence of driving under the influence of drugs or alcohol.	Although the driver is at fault, compensation cannot be awarded to the injured person in the event of a *force majeure*, an exclusive fault of the injured party or an exclusive fault of a third party (except for the passenger opening the door); *Minors under the age of 14.	*Contributory negligence is recognised; *Case-by-case basis to establish the share of liability that rests with the claimant; * No degree of fault established = equal split of liability; *In the event of two road accident participants, the decrease in compensation by 50 per cent should be regarded reasonable; with the participation of three road accident participants, the decrease in compensation by 33 per cent is deemed reasonable and just.

Contrary to the approaches set out in the UK and Irish jurisdictions, there is statutory basis for liability exemption for minors in Cyprus, Malta, and Romania; albeit, the liability waiver does not concern pedestrians, cyclists, and other non-motorised road users.

[220] *Valenzia Brian Noe v Camilleri Joseph*, 1207/1985/1, Court of Appeal (Civil, Superior) of 27th June 2003. *Force majeure* is a fortuitous event in a way that cannot be avoided by the ordinary diligence of the *bonus pater familias*.
[221] *Vella Govanni v Cilia Michael*, 46/2002/1, Court of Appeal (Civil, Inferior) of 23rd June 2004. Burden of proof in case of a *force majeure*: *causal nexus* must be proven by the defendant.
[222] *Farrugia Peter Sive Pierre v ID-Direttur Tal-protezzjoni civili et*, 159/2004/1, Court of Appeal (Civil, Superior) of 18th July 2017. Contributory negligence of 25 per cent was assigned.
[223] *Farrugia Antoinette pro et noe v Farrugia Nicholas*, 67/2003/1, Court of Appeal (Civil, Superior) of 28th February 2014. Dismissed contributory negligence as a pleaded defence.
[224] Law No. 132 of May 31, 2017 on the compulsory insurance against civil liability for the damage to third parties caused by vehicle and tram accidents. *Official Journal* No. 431 of June 12, 2017 (Legea nr. 132/2017 – asigurarea obligatorie de răspundere civilă auto pentru prejudicii produse terţilor prin accidente de vehicule şi tramvaie).
[225] Codul Civil din 17 iulie 2009. Legea nr. 287/2009. In English: Civil Code. Law No. 287/2009.

<table>
<tr><td rowspan="4">CY</td><td colspan="3">Statutory provisions</td></tr>
<tr><td>Article 57 Civil Offences Act (CEP.148)</td><td>Article 57A Civil Offences Act (CEP.148)</td><td>Article 58 Civil Offences Act (CEP.148)</td></tr>
<tr><td>*‘Damage’ includes loss of life and personal injury.</td><td>(a) No compensation shall be received in accordance with any reduction in the life expectancy of the person who has been injured, but
(b) if the life of the person injured has been reduced by personal injury; determining the compensation for pain and suffering, any inconvenience caused or which may be caused by the fact that the life has been reduced must be considered.</td><td>*Maintenance costs of survivors;
*Test (manifestly closed to the deceased).</td></tr>
<tr><td colspan="3">Judicial practice</td></tr>
<tr><td></td><td>Mavropetri v Louca;[226] Papakokkinou and others v Kanther.[227]</td><td></td></tr>
<tr><td rowspan="5">M</td><td colspan="3">Statutory provisions</td></tr>
<tr><td>Article 1045 of the Civil Code</td><td>Article 1045(2) of the Civil Code</td><td>Article 1046 of the Civil Code</td></tr>
<tr><td>Compensation: (1) medical treatment; (2) financial disadvantage as a result of temporary or permanent incapacity for work and disability; (3) incurring additional costs from increased needs; (4) reduction in earning capacity; (5) personal care costs.</td><td>Exceptional compensation: in the event of deliberate misconduct, among other things, a criminal offence that is affecting the dignity of a victim, compensation may also include any moral or psychological harm caused to the claimant.
*Case-by-case basis;
*Developed case-law in Maltese jurisdiction.</td><td rowspan="2">*Maintenance costs of survivors;
*Test (manifestly close to the deceased).</td></tr>
<tr><td colspan="2">Lucrum cessans[228] must be explicitly proved by the claimant.</td></tr>
<tr><td colspan="3">Article 1046 of the Civil Code envisages that, in the event of the death or permanent total incapacity for work, the court may additionally award compensation for the moral or psychological harm to the injured person or the heirs of the deceased.</td></tr>
<tr><td colspan="3">Judicial practice</td></tr>
<tr><td colspan="3">Busuttil Linda et v Muscat Dr Josie et;[229] Borg Falzon Louis v Korporazzjoni Enemalta;[230] Caruana Alexander v Bonnici Daniel.[231]</td></tr>
<tr><td rowspan="3">RO</td><td colspan="3">Statutory provisions</td></tr>
<tr><td colspan="3">Articles 14, 22, 26 of Law No. 132</td></tr>
<tr><td colspan="3">Compensation for personal injury is to be established by an out-of-court settlement (either amicably, or by an alternative mechanism for dispute resolution), or by the court.</td></tr>
</table>

[226] *Mavropetri v Louca*. (1995), 1 CLR 66. Assessment criteria.
[227] *Papakokkinou and others v Kanther*. (1982), 1 CLR 65.
[228] *Lucrum cessans* – ‘loss of future income’.
[229] *Busuttil Linda et v Muscat Dr Josie et*, 2429/1998/1, Civil Court (First Hall) of 30th November 2010. *Busuttil Linda et v Muscat Dr Josie et*, 2429/1998/1, Court of Appeal (Civil, Superior) of 27th June 2014. The concept ‘actual loss’ referred to in Article 1045 should not be regarded to include only pecuniary damage and therefore should cover non-pecuniary damage having regard to moral and psychological harm.
[230] *Borg Falzon Louis v Korporazzjoni Enemalta*, 1358/1999/1, Civil Court (First Hall) of 19th November 2013. The previous job of the claimant does not constitute that if he had not been injured, he would not have been able to find a better job in the future.
[231] *Caruana Alexander v Bonnici Daniel*, 253/2000/1, Civil Court (First Hall) of 15th March 2011.

	Estimation of the physical suffering includes subsidiary costs, such as recovery, special nutrition and personal care. Personal care costs, however, cannot exceed the indexed gross minimum wage. *The disability rate includes the value of a traumatic point that is equal to the double gross minimum wage in the State at the day of a road accident.	Assessment of a cognitive or emotional stance of the injured party that impacts his or her regular life. *Compensation to the tortfeasor if he or she is a person other than the policyholder.	*Maintenance costs of survivors (spouse or dependants); *Test (manifestly close to the deceased).
	Article 26(2), (3) Rule No. 20/2017:[232] if the claimant is unable to work due to the injury suffered in a road accident, he or she is required to demonstrate the net average monthly income earned in the last year before the day of the road accident in order to determine the reasonable compensation. An indexed gross minimum wage is guaranteed for seniors and claimants in training (on the day of the road accident).		
	Evidences: (1) medical records are deemed reasonable in order to establish the rate and duration of physical injury; (2) the score communicated by the National Institute of Forensic Medicine *Mina Minovici*[233] of Bucharest; (3) forensic and psychological reports are regarded as convincing evidence, although they are subject to mutual out-of-court settlement or in-court dispute.		

Although similar to the Swedish model of regulation[234], Law No. 132 excludes compensation for the damage caused during loading and unloading operations;[235] it is regarded complex if the accident occurred with a truck-transporter (Carrier), in France[236] or Germany[237], where the insurance undertaking of such a truck-transporter (MMTPL) will be obliged to cover any damage caused to a third-party during loading and unloading operations. Broadly similar to the statutory base of most of the MSs, in the Romanian jurisdiction, the policyholder is explicitly designated as excluded from the right to compensation; albeit, the right to compensation should be granted to the driver (tortfeasor) if he or she is a person other than the policyholder. In contrast to other MSs, Romania remains tightly bound with the minimum gross wage in determining the amount of compensation.

Even though compensation for intangible damage given the classic RTA is not explicitly designated within the Maltese statutory base, there is a clear tendency in the Maltese jurisprudence towards recognising non-pecuniary damage as an integral part of the 'actual loss', and therefore

[232] Rule No. 20/2017 on the motor vehicle insurance in Romania of 27th July 2017 (in force as of August 1st, 2017). (Norma nr. 20/2017 privind asigurările auto din România).

[233] The National Institute of Forensic Medicine *Mina Minovici* in Bucharest conducts a comprehensive forensic medical examination, which is considered highly professional, and therefore convincing in-court evidence.

[234] According to the Swedish jurisprudence, no compensation shall be awarded if damage was caused in connection with loading and unloading activities not related to the normal use of the vehicle. In SkfVN 1948: 58 (Non-life Insurance Conditions Committee. Ruling 1948: 58), a driver was unloading tires when one of the tires rolled and injured a pedestrian; the damage was found not to have occurred as a result of the normal use of the vehicle. In FFR 1961: 291 (Insurance Legal Association's case collection (FFR) 1961: 291), when logs were being unloaded from a truck, some of them fell onto a person; it was held that there was no causal link between the normal use of the vehicle and the injury endured by the victim.

[235] Article 12(l) *Exclusions*. Law No. 132 of May 31, 2017 on the compulsory insurance against civil liability for the damage to third parties caused by vehicle and tram accidents. *Official Journal* No. 431 of June 12, 2017.

[236] Article R. 211-5. Code des assurances. Cour de cassation, Chambre civile 2, 21 novembre 2013, n° de pourvoi 12-14.714. In English: Court of Cassation. Judgment from November 21st, 2013 – 12-14.714. It is noteworthy that, previously, Article R. 211-8 contained an exclusion clause for loading and unloading operations, but the above exclusion clause was removed by Décret n° 83-482 du 9 juin 1983 amending Article R. 211-8 of the Insurance Code (Code des assurances).

[237] BGH, Urteil v. 08.12.2015, Az: VI ZR 139/15. English: German Federal Court of Justice. Judgment of the VI. Civil Senate from December 8th, 2015 – VI ZR 139/15.

identifying an obligation to compensate for intangible damage. When determining the amount of compensation for future losses, the Maltese courts can award a particular figure that is regarded reasonable and more conservative than exaggerated despite the lack of real evidence of the amount claimed. For this reason, there is a high variability of the quantum of compensation awarded by the domestic courts from case to case.

Although all the examined nation states have adopted the fault-based liability model of regulation, i.e., rigidly based on the concepts of 'wrong', 'fault', or 'error', the realisation of the liability assessment varies significantly from state to state. Here, the implication of *res ipsa loquitur* (in the UK and Ireland) and the realisation of the principles of fairness and proportionality in the liability assessment (EU-5) strictly depends on the discretion of the domestic courts on merits. Having regard to the analysed judicial practice, while there is certain flexibility of the national UK and Irish courts in the comprehension of 'wrong', the national Cypriot, Maltese and Romanian courts remain conservative when assessing the liability based on the concepts of 'fault' or 'wrong'. While given the comprehension of 'fault', the EU-5 can be classified in two groups through the prism of (relatively) convergent jurisprudence, i.e., the UK and Ireland on the one hand, and Cyprus, Malta, and Romania on the other hand: in determining the extent of contributory negligence, the judicial practice remains divergent in all the indicated jurisdictions.

The basis for substantiating the claim for compensation requires the claimant to possess sufficient knowledge in the domestic statutory base (e.g., compensation for the driver, responsible for the accident in Romania, if he or she is a person other than the policyholder) and judicial practice (e.g., RTA unrelated damage given a remote and mild *causal nexus* in the UK) in order to exercise the available heads of claims. Even though the Irish jurisprudence imposes certain judicial financial caps (e.g., EUR 35,000 – EUR 400,000) in compensation for both pecuniary and non-pecuniary damage given the principle of proportionality and the earlier established national case law, the quantum of the ultimate compensation exceeds the highest judicial threshold adopted in the Cypriot, Maltese, and Romanian jurisdictions.

1.2.2. 'Strict liability' or 'no-fault liability' model of regulation

The vast majority of the MSs of the European Union adhere to the civil law system; whereby the named countries have integrated the strict liability or the no-fault liability model of regulation into their national jurisdictions. Similar to the countries-representatives of the fault-based liability model of regulation, the strict liability rules adopted in the civil law-type countries vary significantly from state to state. Among such discrepancies, the scope of the defences, or the so-called escape clause, the concept of contributory negligence and the compensation system establish the largest doctrinal inconsistency.

(MSs)	Basis for liability	Special category of victims / *Force majeure*	Contributory negligence / Joint liability
(A)	Statutory provisions		
	Sections 1, 7 Railway and Motor Vehicle Liability Act (EKHG)[238]	Section 9(1) EKHG	Sections 1301, 1304 General Civil Code (ABGB)[239]

[238] Eisenbahn- und Kraftfahrzeughaftpflichtgesetz – EKHG. StF: BGBl. Nr. 48/1959. In English: Railway and Motor Vehicle Liability Act (EKHG).
[239] Allgemeines bürgerliches Gesetzbuch – ABGB. StF: JGS Nr. 946/1811. In English: General Civil Code (ABGB).

	Symbiosis of strict-liability and negligence-based liability. *Notion of 'involvement' in a road accident should be regarded extensively, among other things, by invoking any motorist who has taken on a direct or indirect, active or passive role (beyond mere coincidence) in a traffic accident; *Alcohol intoxication as an offence;[240] **Gradinger v Austria*[241]	Compensation should be excluded if the accident was caused by an unavoidable event other than error, breakdown, or failure of the operation/application of a motor vehicle.	Despite the presumed right to compensation, the legislator has distinguished the contributory negligence clause as a measure of defence or the so-called escape clause; *Proportionate responsibility; *If the extent of attribution cannot be determined, the parties should be held equally liable; *Right balance rule; *Joint and several liability.
	Judicial practice		
	2Ob314/97h;[242] 2Ob48/93;[243] 2Ob59/89[244]		2Ob24/16t[245]
(D)	Statutory provisions		
	July 10, 2020: Law on liability in the event of accidents involving trailers and vehicles on the road;[246] Road Traffic Regulations (StVO) ;[247] Civil Code (BGB)[248]	Section 7(2) StVG[249]	Section 245(1) BGB

[240] Section 5. Straßenverkehrsordnung 1960 – StVO. In English: Road Traffic Act 1960. Negligence or imprudent negligence for the purposes of TPL.

[241] *Gradinger v Austria*, No. 15963/90, Case of European Court of Human Rights of 23rd October 1995. The position of the national courts demonstrated an uncompromising attitude towards the negligence of life-threatening conducts in traffic, although it had an unfair character in the treatment of the tortfeasor.

[242] Urteil des Obersten Gerichtshofs (OGH) 2Ob314/97h vom 2. September 1999. In English: Judgment of the Supreme Court. Judgment from September 2nd, 1999 – 2Ob314/97h.

[243] Urteil des Obersten Gerichtshof (OGH) 2Ob48/93 vom 16. September 1993. In English: Judgment of the Supreme Court. Judgment from September 16th, 1993 – 2Ob48/93.

[244] Urteil des Obersten Gerichtshof (OGH) 2Ob59/89 vom 14. November 1989. In English: Judgment of the Supreme Court. Judgment from November 14th, 1989 – 2Ob59/89.

[245] Urteil des Obersten Gerichtshofs (OGH) 2Ob24/16t vom 25. Mai 2016. In English: Judgment of the Supreme Court. Judgment from May 25th, 2016 – 2Ob24/16t. Illegal trace on a public road: the Court ruled that the fault of the two drivers equates to that of the claimant (passenger) (1:1:1), thus, based on the right balance, the claimant should bear one-third of the damage, and the defendants are jointly and severally liable for the remaining two-thirds of the damage according to Section 1301 of the ABGB.

[246] Gesetz zur Haftung bei Unfällen mit Anhängern und Gespannen im Straßenverkehr vom 10.07.2020. Bundesgesetzblatt Jahrgang 2020 Teil I Nr. 35, ausgegeben am 16.07.2020, Seite 1653. In English: Law on liability in the event of accidents involving trailers and vehicles on the road.

[247] Straßenverkehrs-Ordnung (StVO) vom. 06.03.2013. (BGBl. I S. 814). In English: Road Traffic Regulations (StVO).

[248] Bürgerliches Gesetzbuch (BGB) vom. 18.08.1896 (BGBl. I S. 1245). In English: Civil Code (BGB).

[249] Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act (StVG).

	Symbiosis of strict-liability and negligence-based liability. Negligence basis: Article 823(1)(2) BGB	The obligation to compensate damage is excluded if the accident was caused by an unavoidable and unforeseeable event (*force majeure*); *Concept of *force majeure* established by the *Reichsgericht* and the Federal Court of Justice.[250]	If the injured person contributed to the occurrence of own damage, he or she should bear compensation having regard to the individual circumstances of the case and the extent to which the victim and the tortfeasor mainly caused the damage; *Assessment: factor of balance; *VI ZR 171/07: complete disclaimer of liability can only be decided based on a comprehensive balance of interests having regard to all circumstances of an individual case.
	Judicial practice		
		14 U 231/04[251]	VI ZR 282/10;[252] VI ZR 171/07;[253] VI ZR 95/58;[254] VI ZR 59/97[255]

Having regard to the indicated above judicial practice, it is possible to conclude that there is a principle of a comprehensive balance of interests under both the German and the Austrian jurisdictions, whereas it is subsequently necessary not to refrain from weighing up the fault of the individual culprits. A satisfactory result could only be achieved if the principle of the total debt (compensation to an injured person) is reconciled with the principle of a comprehensive balance, and the individual balance is combined with a balance of solidarity gained from the overall view.

(MSs)	**Personal injury**		
	Physical suffering / Disability	**Psychological injury**	**Indirect victims**
The principle of *restitutio in integrum* applies			
(A)	Statutory provisions		
	Sections 12–14 EKHG		

[250] Circumstances of *force majeure* are the basis for an extraordinary event that is not carried out from the outside by the elemental forces of nature or by the actions of third persons, and which, according to reasonable human experience, is unpredictable and which, in view of economically acceptable means, cannot be prevented by the utmost care that is reasonably expected under the circumstances.

[251] Urteil des Oberlandesgericht Celle, Az: 14 U 231/04 vom 12.05.2005. In English: Judgment of the Celle Higher Regional Court. Judgment from May 12th, 2005 – 14 U 231/04.

[252] BGH, Urteil vom 20.09.2011, Az.: VI ZR 282/10. In English: German Federal Court of Justice. Judgment from September 20th, 2011 – VI ZR 282/10.

[253] BGH, Urteil vom 06.11.2008, Az.: VI ZR 171/07. In English: German Federal Court of Justice. Judgment from November 6th, 2008 – VI ZR 171/07.

[254] BGH, Urteil vom 16.06.1959, Az.: VI ZR 95/58. In English: German Federal Court of Justice. Judgment from June 16th, 1959 – VI ZR 95/58.

[255] BGH, Urteil vom 20.01.1998, Az.: VI ZR 59/97. In English: German Federal Court of Justice. Judgment from January 20th, 1998 – VI ZR 59/97. An assessment based on the right balance (the extent of contribution into the damage) may result in only one party bearing full compensation in a case, albeit both parties to the accident contributed into the occurrence of the damage.

	Compensation: (1) medical treatment; (2) financial disadvantage as a result of temporary or permanent incapacity for work and disability;[256] (3) incurring additional costs from increased needs; (4) the costs of preventing progression; (5) reduction in earning capacity; (6) personal care costs; (7) an annuity pension.	*Pain and suffering; *All-round grief; *Loss of amenity;[257] *Pain allowance: assessment principle *Rechtssatz*;[258]. *Divorce ≠ prospects for a marriage.[259]	*Maintenance costs of survivors (presumed life time); *Test (manifestly close to the deceased).
	*Determining quantum of compensation: case-law (domestic and other MSs)		
	Judicial practice		
		2Ob22/85;[260] 2Ob261/04b[261]	
(D)	Statutory provisions		
	Sections 11, 13 StVG; Sections 249, 252, 823 BGB	Section 11 StVG; Section 253 BGB	Section 10 StVG
	Compensation: (1) treatment costs; (2) personal care expenses; (3) actual and future loss of income; (4) legal costs.	*Pain and suffering; *Loss of amenity; *Pain allowance: relatively low.	*Maintenance costs of survivors (presumed life time); *Test (manifestly close to the deceased).
	Judicial practice		

[256] A strict boundary is drawn between disability and incapacity for work. Disability is a medical concept, among other things, the extent of a decrease in the anatomical or functional order of the victim, which most commonly leads to the inability to perform certain actions, but not necessarily to the inability to work. Meanwhile, the incapacity for work results from the inability to engage in any activity requiring certain qualifications, training, experience and general constant psychological state of the victim. The medical institution must accurately verify both the incapacity for work and the disability in order to be eligible for in-court evidence.

[257] In cases where the consequences impede or limit the personal autonomy of the claimant to carry out the essential activities in the development of ordinary life, to enjoy leisure time he or she used to enjoy before the road accident, a compensation for loss of amenity may be granted. Beyond the satisfaction from leisure activities, the loss of amenity includes complexity in relation to the fundamental human activities, such as deglutition, ingestion of food and liquids, changing the resting position, making decisions, and carrying out other tasks and activities.

[258] Rechtssatz. RS OGH 1985/5/9 7Ob566/85, 2Ob68/92, 6Ob649/95, 2Ob83/99s, 9Ob147/00h, 2Ob25/01t, 7Ob160/01g, 8ObA20 vom. 9. Mai 1985. RS0042887. To examine the eligibility of the requested pain allowance, the national court should take into account the given circumstances, the applicable statutory provisions, and the balance between the circumstances and the applicable legislation on the individual grounds of the case.

[259] Only prospects for a marriage of an unmarried person could be met following a road accident; but not the likelihood that a married person might be divorced or widowed after an accident and might not be able to find a new partner (2Ob22/85).

[260] Urteil des Obersten Gerichtshof (OGH) 2Ob22/85 vom 10. Oktober 1985. In English: Judgment of the Supreme Court. Judgment from October 10th, 1985 – 2Ob22/85. It was deemed necessary to compensate for the feelings of displeasure caused by the pain purporting to enable the claimant to obtain certain amenities and reliefs in other means as a substitute for the suffering and in place of the joy of life that has been deprived of him.

[261] Urteil des Obersten Gerichtshof (OGH) 2Ob261/04b vom 3. Februar 2005. In English: Judgment of the Supreme Court. Judgment from February 3rd, 2005 – 2Ob261/04b.

		3 U 468/95;[262] VI ZR 548/12;[263] VI ZR 353/89;[264] VI ZR 106/90[265]	

In the Austrian jurisdiction, the pain allowance is subject to a calculation based on the overall or the individual balance; whereby the derogation from the established legal principle (*Rechtssatz*) is exceptionally permissible in order to avoid unequal treatment by the Case Law. Under the German Case Law, the established amount of pain allowance is relatively low[266] in comparison to the non-pecuniary damage compensation in Austria, the United Kingdom, Ireland, France, Denmark, Finland, the Netherlands, Greece, and Poland. Pursuant to the German judicial practice, compensation for a psychological effect resulting from an accident does not imply that such an obligation is regarded to be organic; whereas, on the contrary, it is inevitable to demonstrate a sufficient causal link between psychological pain and a harmful event and to substantiate the claim on the balance of probabilities. Here, the road traffic victims are confronted with complexities in substantiating their claim in order to seek compensation for psychological damage. However, assuming that the *causal nexus* is proven and the claim is sufficiently substantiated, examples of the indicated judicial practice demonstrate the recent tendency towards a higher quantum of compensation for non-pecuniary damage. Here, it signifies certain flexibility in German jurisdiction with regards to the reconsideration of the currently set pain allowance and compensation system in a broader sense.

	Statutory provisions		
	Section 1 Liability Act[267]	Section 24(a) Liability Act	Section 25 Liability Act
(DK)	**Symbiosis of strict-liability and fault-based liability.** *Any person liable for personal injury should pay compensation; *The burden of proof rests with the claimant to demonstrate the damage and the *causal nexus*; *Neither denial nor reduction in compensation for personal injury is feasible if the claimant is able to demonstrate *causal nexus*; ***No-fault liability**: personal injury**.**	A minor under the age of 15 is liable for the harmful act under the same rules as adults; albeit, compensation may be reduced or eliminated given the nature of the misconduct and the victim's ability to bear own damage.	National courts may derogate from the obligation to award compensation in the event when the claimant has committed wilful misconduct leading to a traffic collision and injury; *'Wilful' or 'intentional' misconduct is subject to the strict burden of proof on the part of the defendant; *The division of the burden to compensate the damage between several tortfeasors should be

[262] OLG Nürnberg, Urteil vom. 01.08.1995, Az.: 3 U 468/95. In English: Nuremberg Higher Regional Court. Judgment from August 1st, 1995 – 3 U 468/95. A new pain allowance was established for a couple who lost three children in a fatal road traffic accident; whereby it was believed that severe depression and grief would prevent a couple from continuing to lead their previous life for an indefinite time, if ever since.

[263] BGH, Urteil vom. 27.01.2015, Az.: VI ZR 548/12. In English: German Federal Court of Justice. Judgment from January 27th, 2015 – VI ZR 548/12. It was held that watching a spouse caught and killed by a motor vehicle at a high speed in a traffic accident as a motorcyclist cannot be compared with receiving an accident message in view of the intensity of the emotional stance and all-round grief.

[264] BGH, Urteil vom. 02.10.1990, Az.: VI ZR 353/89. In English: German Federal Court of Justice. Judgment from October 2nd, 1990 – VI ZR 353/89.

[265] BGH, Urteil vom. 09.04.1991, Az.: VI ZR 106/90. In English: German Federal Court of Justice. Judgment from April 9th, 1991 – VI ZR 106/90.

[266] In the case 3 U 468/95 discussed below, a couple was awarded 30,000 DM and 20,000 DM (approximately 10,000 EUR and 15,000 EUR). In the case VI ZR 548/12 analysed below, the claimant was awarded 4,000 EUR.

[267] Bekendtgørelse af lov om erstatningsansvar (jf. lovbekendtgørelse nr. 266 af 21. marts 2014). In English: Liability Act.

			carried out in accordance with the extent of liability and the individual circumstances of the case.
(FIN)	Statutory provisions		
	Motor Vehicle Insurance Act[268] Section 1 Law on damages[269]	Sections 2, 3 Law on damages	Sections 1, 3 (C. 6) Law on damages
	Symbiosis of strict-liability and fault-based liability. In 1959, strict liability was introduced as the Motor Vehicle Insurance Act. *Liability is imposed on any person using the vehicle, unless such a user proved that the victim (completely or to a certain degree) contributed to his or her damage; *The reverse burden of proof implies the need for the owner or keeper of the vehicle to prove that the harmful event did not occur, or even if so, did not occur due to negligence on his or her part; *Fault or negligence: property damage; *Strict liability: personal injury.	*Rule of Reasonable Assessment: person under the age of 18 or a person who has been declared incapacitated.	In the event that the injured party has contributed to his or her damage, compensation may be reasonably reduced. **Candolin*;[270] *If several tortfeasors caused the damage, they should be jointly and severally liable; albeit, the attributable liability should be assigned to each tortfeasor given the degree of fault and, if reasonable, other factors.
(S)	Statutory provisions		
	Motor Vehicle Liability Act 1916[271] Tort Liability Act 1972[272]	Sections 4, 5 Tort Liability Act 1972	Sections 13, 23 Traffic Damage Act 1975[273]
	1916: Motor Vehicle Liability Act introduced presumed liability. *Extensive no-fault insurance system; *The main principle of the assigned liability is based on negligence or the so-called 'culpa'; *Fault or negligence: property damage; ***No-fault liability**: personal injury; ***Exception:** no-fault liability rules apply in the event of collision with a non-motorised road user whose clothing/belongings have been damaged; *Notion 'damage in traffic';[274] *Adequate *causal nexus* (NJA 1993 s.41)	*Rule of Reasonable Assessment: a person under the age of 18 or a person who has been declared incapacitated.	If several tortfeasors caused the damage, they should be jointly and severally liable; albeit, attributable liability should be assigned to each tortfeasor given the degree of fault and, if reasonable, other factors.
	Judicial practice		

[268] Motor Vehicle Insurance Act of 26th June 1959. Liikennevakuutusasetus (kumoutunut) (279/59).
[269] Law on damages of 31st May 1974 Vahingonkorvauslaki. 31.5. 1974/412.
[270] *Katja Candolin, Jari-Antero Viljaniemi and Veli-Matti Paananen v Vahinkovakuutusosakeyhtiö Pohjola and Jarno Ruokoranta*. Judgment of the Court (First Chamber) of 30 June 2005, Case No. C – 537/03, ECR 2005 I-05745.
[271] Lag (1916:312) angående ansvarighet för skada i följd av automobiltrafik (Bilansvarighetslagen). In English: Motor Vehicle Liability Act 1916.
[272] Skadeståndslagen (1972:207). In English: Tort Liability Act 1972.
[273] Trafikskadelag (1975:1410). In English: Traffic Damage Act 1975.
[274] A road traffic accident with a parked vehicle must be regulated pursuant to Section 11 of the Traffic Damage Act based on a strict liability clause, since a parked vehicle cannot be regarded as such participating in the road traffic; albeit, if the involved vehicle had been unlawfully parked, such a vehicle is considered to be in traffic, and thus the fault-based liability clause will apply under Section 10 of the Traffic Damage Act.

	NJA 1993 s.41[275]; SkfVN 1950: 55[276]; RH 1995: 100[277]; SkfVN 1948: 21[278]		

Having regard to the interrelation of the statutory provisions and the judicial practice, it is conceivable to view the Danish liability scheme regarding a personal injury as a system of absolute liability; albeit, comparable to the French *faute inexcusable*,[279] national courts may derogate from the obligation to award compensation in the event the claimant has committed wilful misconduct leading to a traffic collision and an injury. Although both the Swedish and the Finish jurisdictions have set out clauses corresponding to the absolute liability with regard to a personal injury endured in a road accident, there are two distinctive elements of the liability assessment, i.e., a reversed burden of proof is imposed in Finland, and the notion 'in traffic' is srt forth in Sweden, which constitute a significant divergence, and, therefore, can lead to two different outcomes of the liability assessment in identical circumstances of the case. Here, the indicated discrepancy may produce a disadvantageous impact on cross-border victims.

(DK)	Statutory provisions		
	Sections 1–2, 3–5 Liability Act		Sections 12–14, 26(a) Liability Act
	Compensation: (1) loss of actual and future income, (2) recovery costs, (3) other costs related to the injury; Compensation for future losses should be fixed at a wage which must not exceed the expected average annual expenditure multiplied by 10. *The value of household work is equated with the business income.	*Pain and suffering; *Loss of amenity; *DKK 130 per day (DKK 50,000 max.).	*Compensation for survivors; *Test (manifestly close to the deceased).
	Judicial practice		
	KEN # 11558[280]	KEN # 10272[281]	
(FIN)	Statutory provisions		

[275] NJA 1993 s.41 (Supreme Court. New legal archive – 1993 s.41).

[276] SkfVN 1950: 55 (Non-life Insurance Conditions Committee. Ruling 1950: 55). A man ran through a parked vehicle with the side window open, and pressed the engine start button; as a result, the vehicle drove into another vehicle positioned in front of it. It was decided that the damage was caused 'in traffic', and so a compensation should be awarded according to Section 8 of the Traffic Damage Act.

[277] RH 1995: 100 (Court of Appeal – 1995: 100). The pedestrian, who had been hit by the vehicle, was cured in a hospital but died as a result of a rare side effect of the prescribed drugs. The death of the victim was not directly and manifestly related to the accident itself but was related to the prescribed medication and an implausible side effect, thus, *causal nexus* was not proven.

[278] In SkfVN 1948: 21 (Non-life Insurance Conditions Committee. Ruling 1948: 21), the oil hose was disconnected from a stationary tanker; although the tanker had its engine turned off, it was held that the damage was caused 'in traffic' as a result of the tanker's passive involvement.

[279] The notion of '*faute inexcusable*' is discussed in detail in Sub-section 1.2.3.

[280] KEN nr 11558 af 14.01.2015. In English: Danish Appeals Board. Decision from January 14th, 2015 – 11558. It was held that medical evidence that the claimant is in constant need of treatment along with medical evidence that the drug has a healing effect is required to accept future recovery costs.

[281] KEN nr 10272 af 26.01.2018. In English: Danish Appeals Board. Decision from January 26th, 2018 – 10272. A five-year-old (a passenger) is compensated for the death of his mother in a solo road accident; whereby the amount of DKK 120,000 is regarded reasonable as the claimant spent indefinite time in the vehicle watching his deceased mother and father with severe brain damage.

	Sections 1, 2 (C.5) Law on damages	Section 2(c) (C.5) Law on damages	Sections 2(d)-4 (C.5) Law on damages
	*Personal injury of a tortfeasor must be compensated by the MTPL insurer. Compensation: (1) loss of actual and future income; (2) recovery costs; (3) other costs related to the injury.	*Refusal in compensation for severe shock; *Pain and suffering and other harm; *Permanent harm; *Assessment criterion: quality of life.	*Maintenance costs of survivors; *Personal care costs; *Test (manifestly close to the deceased).
	Judicial practice		
		HD 1984-II-122[282]	
(S)	Statutory provisions		
	Sections 1, 8, 10, 14 Traffic Damage Act 1975		
	*Medical expenses and other related costs; *Loss of income; *Personal injury (treatment) of a tortfeasor.	*Pain and suffering; *Loss of amenity; *Severe shock.	*Compensation for survivors; *Test (manifestly close to the deceased).
	Judicial practice		
		NJA 1993 s.41 (I/II);[283] NJA 1981 s.920.[284]	NJA 1996 s.377;[285] NJA 1999 s.632.[286]

In contrast to the compensation system set forth in Germany (based on the balance of probabilities), in Denmark, the procedure for substantiating the claim for compensation for intangible damage is simplified. Presuming that the claimant was able to explicitly demonstrate the causal link between the injury (psychological damage) and the road accident, neither denial nor reduction in compensation is feasible regardless of the fault or misconduct being involved. In Finland, a compensation for pain and suffering should be awarded given the nature and severity of the injury, the nature and duration of the treatment, and the overall duration of the injury. With regard to irreversible harm, specific assessment should be made having regard to the quality of the life of the victim as a factor in increasing the compensation.

Broadly similar to the German model, in Finland, the claimant must substantiate the claim with respect to the quality of life in order to seek sufficient compensation for intangible damage; albeit, in neither country, the supporting claim methods are limited or exhaustive. Given the established judicial practice in Finland, there is a tendency to deprive the indirect victims from the right to compensation for intangible damage (the indirect victim is confronted with a difficulty to demonstrate the *causal nexus*, since the former did not participate in a road accident

[282] Supreme Court of Finland. Judgment from June 6th, 1984 – HD:1984-II-122. It was held that a compensation for the shock injury caused by a parent watching the death of a child cannot be awarded as there is no legal basis for such a compensation.

[283] NJA 1993 s.41 (I/II) (Supreme Court. New legal archive – 1993 s.41). It was held that severe shock and depression are plausible consequences following the death of a close person as a result of deliberate misconduct.

[284] NJA 1981 s.920 (Supreme Court. New legal archive – 1981 s.920). No compensation is awarded in the case of contributory negligence treated as a suicide.

[285] NJA 1996 s.377 (Supreme Court. New legal archive – 1996 s.377). It was ruled that gross negligence was related to deliberate misconduct; thus, compensation after the death of a son and brother was awarded to the surviving family members.

[286] NJA 1999 s.632 (Supreme Court. New legal archive – 1999 s.632). The threshold set by the Supreme Court designates that either wilful misconduct or gross negligence is considered reasonable grounds for non-economic compensation for the family members of the deceased.

himself/herself). Here, it constitutes the principal divergence between the compensation systems set forth in Finland and in other (strict-liability) MSs. In Sweden, intangible damage compensation for indirect victims can be awarded in the case of a deliberate misconduct or gross negligence on the part of the defendant. Having regard to the judicial practice, the family members of the deceased are deprived from the right to compensation in the case of contributory negligence on the part of the victim with an element of suicide.

	Statutory provisions		
	Article 6:162 Civil Code (BW)[287] Article 185 Road Traffic Act (WVW)[288]	Article 6:164 BW Article 185 WVW	Article 6:101 BW Article 6:102 BW
(NL)	**Symbiosis of strict-liability and fault-based liability.** *Strict liability clause against the vehicle owner (or keeper) expands the scope of liability under the *culpa* or *schuld* criteria set out in the Civil Code; *Three types of misconduct: (1) violation of subjective right, (2) wilful or imprudent misconduct or omission in violation of statutory provisions, and (3) conduct contrary to unwritten standards of behaviour in society; *Road Traffic Regulation 1990[289] designates the standards of behaviour required while in traffic; *Allocation of the burden of proof;[290] *If the violation of the traffic requirements on the part of the defendant is proven, the *causal nexus* is assumed; *Whenever an accident occurs between two motor vehicles or two non-motorised road users, the fault-based liability clause applies.	*In the event that the injured party is under the age of 14, the exemption from liability cannot be invoked regardless of *force majeure* or gross negligence. If a minor under the age of 14 commits deliberate misconduct, the defendant may be released from the obligation to compensate for the damage, and the parents of the minor will be held responsible for the damage endured. *Given the presumed liability in a road traffic accident (with non-motorised road user), the former may only be waived if *force majeure* is demonstrated or wilful misconduct or gross negligence is proven on the part of the claimant.	*Conflicting determination of the share of fault. *As a rule, contributory negligence may be assigned to the injured party, if it has been proven that the claimant failed to act with due care, among other things, exposed himself or herself to danger. *In the event that the damage was caused by several tortfeasors, they should be jointly and severally liable; albeit, attributable liability should be assigned to each tortfeasor given the degree of fault.
	Judicial practice		
	NJ 2001 (524);[291] RvdW 2000 (212);[292] NJ 1993 (568)[293]		NJF 2004 (517);[294] NJ 1990 (578)[295]

[287] Burgerlijk Wetboek (BW) (Boek 6). In English: Civil Code (BW).
[288] Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act (WVW).
[289] Reglement verkeersregels en verkeerstekens 1990 (RVV 1990). In English: Road Traffic Regulation 1990.
[290] The allocation of the burden of proof, in principle, requires the claimant to demonstrate that the damage endured is a direct consequence of the blameworthy act committed by the defendant.
[291] HR 19 January 2001, NJ 2001, 524 (Ter Hofte/Oude Monnink Motors). In English: Supreme Court. Judgment from January 19th, 2001 – NJ 2001, 524.
[292] R 27 October 2000, RvdW 2000, 212. In English: Supreme Court. Judgment from October 27th, 2000 – RvdW 2000, 212.
[293] HR 15 January 1993, NJ 1993, 568 (Puts/Ceha). In English: Supreme Court. Judgment from January 15th, 1993 – NJ 1993, 568. Although pursuant to the strict-liability clause there is a reversed burden of proof, in the indicated judgment, it was held that, in the event, an injured party initiates a lawsuit against a driver who is not the owner or keeper of the vehicle, the burden of proof is shifted to that injured party.
[294] Rb Rotterdam, 19 May 2004, NJF 2004, 517. In English: Court of Rotterdam. Judgment from May 19th, 2004 – NJF 2004, 517.
[295] HR 1 June 1990, NJ 1990, no. 13914 (578). In English: Supreme Court. Judgment from June 1st, 1990 – NJ 1990. A failure to wear a seatbelt in itself does not constitute attributable share into the damage; instead, there should be a causal link between not wearing a seatbelt and exacerbating the damage.

(L)	Statutory provisions		
	Articles 1382-1383 Civil Code[296]	Civil Code	Road Traffic Code[297]
	Symbiosis of strict-liability and fault-based liability. *Liability extends to the driver of the vehicle and not to the owner or the lawful keeper of the vehicle; *Every person is liable for damage caused through negligence or carelessness; *An excessive-insurance regime that provides full compensation for road traffic victims; *Article 13 of the Road Traffic Code: illegally in motion.	Exemption from liability is generally accepted in the event of *force majeure* or other fortuitous circumstances; albeit, any defectiveness of the vehicle cannot be regarded as *force majeure* or fortuitous circumstances, and therefore the driver will remain liable for any damage caused by the failure during his or her operation. *Full compensation on the basis of strict liability for victims under the age of 12, over the age of 75, and persons with disabilities of at least 80 per cent.[298]	Contributory negligence is recognised in the jurisdiction of Luxembourg; whereby the defendant is required to explicitly demonstrate that the claimant committed a breach of reasonable care (deliberate or imprudent misconduct or omission) that resulted in the damage or its aggravation. For the most part, this violation is expressed in breach of the standard requirements set out in the Road Traffic Code.
	Judicial practice		
	51/09/2009 (2659)[299]		322/10 VI[300]
(B)	Statutory provisions		
	Articles 1382–1384 Civil Code[301]; Article 29bis Vehicle Liability Insurance Act 1989[302]	Article 19bis-11 Vehicle Liability Insurance Act 1989	Road Traffic Code[303]

[296] Code Civil. (Décrété le 5 mars 1803. Promulgué le 15 du même mois). In English: Civil Code.
[297] Code de la route. Loi du 14 février 1955 concernant la réglementation de la circulation sur toutes les voies publiques. (Mém. A – 15 du 7 mars 1955, p. 471). In English : Road Traffic Code.
[298] La Fédération Européenne des Victimes de la Route (FEVR). Stricter liability in Europe (May 2013).
[299] Cour de cassation (cassation civile) 14-07-2009 (51/09), 2659. In English: Court of Cassation. Judgment from July 14th, 2009 – (51/09), 2659. It was held that the exclusion of the right to compensation for an insured whose vehicle is engaged in the occurrence of damage pursuant to Article 8 of the Grand-Ducal Regulation (*Règlement grand-ducal* (Mém. A – 166 du 19 novembre 2003, p. 3282)), does not apply if the damage was caused by another driver (in this case, an employee).
[300] Cour de cassation, 12-07-2010 (322/10 VI), Not 20696/09/CC. In English: Court of Cassation. Judgment from July 12th, 2010 – 322/10 VI. It was held that excessive violation of the speed limit (exceeding the speed of 50 km/h) within the urban area by the voluntary rescue service was justified only having regard to the vital prognosis of the patient at stake (referred to as "the superior interest at stake").
[301] Code Civil. 21 Mars 1804. 1804-03-21/33. In English: Civil Code.
[302] Loi du 21 novembre 1989 relative à l'assurance obligatoire de la responsabilité en matière de véhicules automoteurs. M.B. 08.12.1989. In English: Vehicle Liability Insurance Act 1989.
[303] Arrêté royal du 1er décembre 1975 portant règlement général sur la police de la circulation routière et de l'usage de la voie publique (Code de la route). M.B. 09.12.1975. In English: Road Traffic Code.

	Symbiosis of strict-liability and fault-based liability. *'Fault', 'negligence' or 'carelessness' on the part of the defendant. *If the vehicle that caused the damage was technically defective, the liability of the owner or lawful keeper is assumed, unless the owner proves that the harmful event would have occurred in any case had the vehicle not been defective; *Strict-liability (absolute)**:** Article 29bis; *A vehicle should not necessarily be in motion, so a stationary or parked vehicle, whether lawfully or not, is regarded as 'in traffic'; *The victim is only required to demonstrate the damage, the 'involvement' of the alleged tortfeasor and the *causal nexus*; as soon as these conditions have been met, the insurer of the vehicle 'involved' in the road traffic accident is obliged to pay compensation on the basis of the established legal merits.	*Force majeure* or 'Act of God' defence against the liability is recognised in the jurisdiction of Belgium; albeit, in the event of minor negligence, the defence under the *force majeure* clause is excluded; *In the event that the insurance undertaking is exempted from the obligation to pay compensation for damage to third parties as a result of *force majeure* or other fortuitous circumstances or a theft of the vehicle, the injured person is entitled to compensation through the Guarantee Fund;[304] *Following the regulatory model adopted in France, Germany, Luxembourg and the Netherlands, national courts restrict[305] the ability to invoke contributory negligence against minors under the age of 15.	If the defendant proves that the damage was caused by deliberate or imprudent misconduct of third parties or the victim himself/herself, the liability may be partially or completely relieved; *Neither defence of contributory negligence is justified if the defendant is demonstrated to have committed wilful misconduct towards the claimant; *In order to invoke the defence of contributory negligence, the defendant is required to explicitly demonstrate that the claimant committed a breach of reasonable care (deliberate or imprudent misconduct or omission) that resulted in the damage or its aggravation.
	Judicial practice		
	Belge Etat v L.K. (C.03.0037.F) ;[306] C.09.0313.F[307]		

Taking into account the analysis of the symbiosis of statutory provisions and judicial practice in the Netherlands, the shift in the burden of proof, i.e., when the defendant is a subject other than the owner or keeper of the vehicle, may produce an adverse effect on cross-border victims, compared to an identical scenario in other MSs. Although there is a provision according to which a *causal nexus* is presumed in case of proof of a traffic violation on the part of the defendant, the Dutch national courts apply distinctive practice, i.e., a causal link between the violation of the Road Traffic Regulation 1990, and the exacerbating of the damage must be proven. In contrast to the Belgian and Dutch approaches, in Luxembourg, the waiver of the exclusion of the right to compensation for an insured whose vehicle is engaged in the occurrence of damage, if the damage was caused by another driver (e.g., an employee), produces a beneficial effect on the road traffic victims. The Belgian standpoint towards the notion of 'involvement' (broadly similar to the French model of MTPL regulation)[308] constitutes a beneficial treatment of the road traffic victims. Except for the property damage and the damage to the driver of the vehicle (the

[304] Fonds Commun de Garantie Belge. In English: Guarantee Fund.

[305] Andrea Renda, Lorna Schrefler. Compensation of victims of cross-border road traffic accidents in the EU: Assessment of selected options. Centre for European Policy Studies, Brussels, IP/C/JURI/FWC/2006-171/LOT 1, PE 378.292, p. 7.

[306] Cour de cassation. *Belge Etat v L.K.* 19 mars 2004, C.03.0037.F (60742). In English: Court of Cassation. Judgment from March 19th, 2004 – C.03.0037.F. 'Involvement' in a road accident can be proven independently of a direct impact between vehicles or a vehicle and a non-motorised road user.

[307] Cour de cassation. 19 mars 2012, C.09.0313.F. In English: Court of Cassation. Judgment from March 19th, 2012 – C.09.0313.F. The Court of Cassation held that, although the use of a 'machine' cannot be regarded as the use of a motor vehicle for the purposes of the liability rules under the Vehicle Liability Insurance Act 1989 and the Road Traffic Code when the damage constitutes a characteristic of the damage that may be caused by a motor vehicle, such damage should be regarded as damage 'in traffic'.

[308] The notion of 'involvement' is discussed in detail in Sub-section 1.2.3.

insured),[309] the damage in the event of a personal injury or death, suffered by survivors/dependents, including damage to clothing,[310] must be jointly reimbursed by the insurance companies of the involved vehicles even if 'fault' or 'negligence' cannot be attributed to either party.

(NL)	Statutory provisions		
	Articles 6: 95-97, 100, 106–108 (B.6) BW		
	Compensation: (1) treatment costs; (2) personal care expenses; (3) actual and future loss of income.	*Pain and suffering; *Loss of amenity; *Absence of direct physical injury allowed; *No psychological discomfort (NJ 1997 (662)).	*Compensation for survivors; *Test (manifestly close to the deceased).
	*Determining quantum of compensation: case-law (domestic and other MSs).		
	Judicial practice		
	NJ 2000 (742);[311] NJ 1992 (714)[312]	NJ 1997 (134);[313] NJ 1998 (778);[314] NJ 1997 (662)[315]	
(L)	Statutory provisions		
	Article 1382 Civil Code		
	Compensation: (1) medical expenses resulting from the injury; (2) personal care, accommodation, special equipment and other related expenses; (3) irreversible injuries resulting in permanent disability; (4) loss of actual and future income; (5) legal costs.	*Pain and suffering; *Loss of amenity; *Disfigurement;[316] **Luxair*.[317]	*Compensation for survivors; *Test (manifestly close to the deceased).
	*Determining the quantum of compensation: case-law (domestic and other MSs).		
(B)	Statutory provisions		
	Article 29bis Vehicle Liability Insurance Act 1989		

[309] This also excludes dependents of the insured/driver of the insured vehicle.
[310] This also extends to functional prostheses, prescribed tools, such as glasses, contact lenses, and others.
[311] Hof Arnhem 14 December 1999, NJ 2000, 742. In English: Arnhem Court of Appeal. Judgment from December 14th, 1999 – NJ 2000. Compensation award EUR 136,000.
[312] HR 8 July 1992, NJ 1992, 714 AMC/O. In English: Supreme Court. Judgment from July 8th, 1992 – NJ 1992, (714). Gross medical error (set out pain allowance quantum, applicable in RTAs).
[313] HR 1 November 1996, NJ 1997, 134. In English: Supreme Court. Judgment from November 1st, 1996 – NJ 1997 (134). Compensation for psychological pain might reasonably be awarded in the absence of direct physical injury.
[314] HR 26 June 1998, NJ 1998, 778, Kramer/ABN AMRO. In English: Supreme Court. Judgment from June 26th, 1998 – NJ 1998, (778). *Causal nexus*.
[315] HR 2 May 1997, NJ 1997, 662. In English: Supreme Court. Judgment from May 2nd, 1997 – NJ 1997, (662).
[316] This damage covers all externally visible consequences, such as scars, burns, lameness and other. As a rule, an expert assessment is required to make a claim.
[317] Cour d'appel. 21-01-2014 (44/14 V), Not. 21340/02/CD. In English: Court of Appeal. Judgment from January 21st, 2014 – 44/14 V. The Court of Appeal referred to the approach to compensation for non-pecuniary damage following the death of a family member in the French jurisdiction. A correlation was observed between tremendous air crashes and collective road accidents, given the circumstances relating to the collective dimension of the accident; where the announcement and regular commentary on the accident in the media affects the psychological state of the victim and thus justifies an increase in the assessment of moral damage.

	Compensation: (1) treatment (*Pretium Doloris* or *Quantum Doloris*); (2) personal care and other related costs; (3) loss of actual and future income or reduction of the victim's competitive value on the labour market; *Temporary incapacity for work (ITT – ITP);[318] *Life annuity = life expectancy table[319] + retirement age (set at 65)[320] (expected to be raised to 66 in 2025); *Permanent incapacity for work: change of index (price dynamics) annuity.	*Pain and suffering; *Loss of amenity; *Disfigurement (*le préjudice esthétique*).	*Damage endured by the victim; *Loss of the breadwinner; *Prejudice of affection; *Loss of chance of not having lived longer (*le préjudice ex haerede*); *Test (manifestly close to the deceased).

Given the analysis of both statutory provisions and judicial practice, the compensation system for intangible damage in the Netherlands should be viewed as one of the most favourable systems to the road traffic victims; although the claimant must explicitly demonstrate the *causal nexus*, the individual assessment of the pain allowance is shifted to the national courts, and the procedure of substantiating the claim is simplified. Having regard to the judicial practice, the pain allowance is relatively high (e.g., EUR 136,000) in comparison with other MSs representatives of the strict-liability model of regulation. Pursuant to the Dutch Case Law, compensation for psychological damage is also recognised given the absence of a physical injury; albeit, the damage should be severe by nature and not purely a psychological discomfort.

In both Luxembourg and Belgium, a wider spectrum of compensation positions is recognised; albeit, when seeking compensation for intangible damage, the claimant must explicitly demonstrate that the damage is certain and not purely hypothetical (e.g., future loss). Pursuant to the Belgian judicial practice, the compensation for the loss of chance of not having lived longer (*le préjudice ex haerede*) became a legitimate position in compensation for non-pecuniary damage which is meant to be awarded to the indirect victim. At this juncture, Belgium and France remain two jurisdictions in the European Union recognising the above position in compensation for indirect victims.[321]

	Statutory provisions	
(GR)	Article 914 Civil Code[322]; Law GN'/1911[323]	Article 5 Law GN'/1911 and provisions of Civil Law

[318] Temporary incapacity can be total (*l'incapacité totale de travail* – ITT) or partial (*l'incapacité temporaire partielle de travail* – ITP).

[319] Direction Générale Statistique. Tables de mortalité et espérance de vie. 24/01/2019 (9993040). In English: Directorate General Statistics. Mortality tables and life expectancies.

[320] SPF Sécurité sociale. Un contrat social performant et fiable: Commission de réforme des pensions 2020–2040. Annexe 3.2 Les conditions d'âge en sécurité sociale. (2014), D/2014/10.770/23. In English: FPS Social Security. An effective and reliable social contract: Pension Reform Commission 2020–2040. Annex 3.2 Age conditions in social security.

[321] Compensation for 'loss of chance of not having lived longer' is discussed in detail in Sub-section 1.2.3.

[322] Προεδρικό Διάταγμα 456/1984: Αστικός Κώδικας και Εισαγωγικός Νόμος, (ΦΕΚ 164/Α/1984), 24-10-1984. In English: Civil Code.

[323] Νόμος ΓπΝ'/1911 (υπ' αριθμ. 3950). In English: Civil Code. Presidential Decree 456/1984.

	Symbiosis of strict-liability and fault-based liability. *Fault-based liability: anyone who, through fault or negligence harms another person is held liable and must recover the damage respectfully; *Strict liability: an obligation to compensate for the damage in the event of death or personal injury caused by a motor vehicle; *Article 5 Law GN'/1911: the driver is released from liability if the accident occurred due to a defectiveness of the vehicle which he did not know and could not have known; albeit, the burden of proof that the vehicle malfunction was unknown and unforeseen rests with the driver.	The injured passenger cannot rely on the strict liability clause against the insurer of the vehicle (causing the damage) in which he/she travelled; *In the event of *force majeure* or 'Act of God', the driver may be exempted from strict liability.	*If the damage was caused partly through the fault of the driver and partly through the negligence of the victim, they are jointly and severally liable for the damage; although the liability portion should be assigned to each party given the degree of fault and, if reasonable, other factors. *In the event that the damage was caused by several tortfeasors, they should be jointly and severally liable; albeit, attributable liability should be assigned to each tortfeasor given the degree of fault.
	Judicial practice		
			2478/2018[324]
(1)	Statutory provisions		
	Articles 2043, 2054(3) Civil Code[325]	Articles 2047, 2048 Civil Code	Article 2055 Civil Code
	Symbiosis of strict-liability and fault-based liability. *Liability arises on the grounds of 'fault', whereby everyone who causes the damage to another person must ensure the restoration of the victim to the extent had the accident not happened; *Strict liability against the policyholder is assumed based on Article 2054(3) of the Civil Code; *The driver may be released from strict liability if he proves that, even by observing the due diligence and reasonable care, the damage could not have been avoided.	The injured passenger cannot rely on the strict liability clause against the driver of the vehicle (causing the damage) in which he/she travelled unless such a passenger was being carried for reward on a commercial basis. *In the event of *force majeure* or 'Act of God', the driver may be exempted from strict liability.	It is possible to reduce the quantum of compensation award proportionally to the degree of fault that was contributed to an accident or the aggravation of the damage; *If several tortfeasors caused the damage, they should be jointly and severally liable; however, unless proven otherwise, it is deemed that all tortfeasors/parties involved contributed to the accident to the same extent.
(E)	Statutory provisions		
	Article 1902 Civil Code[326]	Article 1908 Civil Code	

[324] Πρωτοδικείο. ΜΠρΑθ 2478/2018, 606776/4715/2017. Court of First Instance. Judgment No. 2478/2018, 606776/4715/2017.

[325] Codice Civile. R.D. 16 marzo 1942, n. 262. In English: Civil Code.

[326] Real Decreto de 24 de julio de 1889 por el que se publica el Código Civil (Código Civil). *Gaceta de Madrid* núm. 206, de 25/07/1889. In English: Civil Code.

	Symbiosis of strict-liability and fault-based liability. *The basis for compensation is 'fault' or (deliberate/imprudent) negligence committed by a tortfeasor; *Strict-liability basis: Royal Legislative Decree 8/2004 which approves the Regulation and Supervision of the Private Insurances[327] and the Law 35/2015 on the reform of the system for the assessment of damage caused to persons in road accidents;[328] *Strict liability assumed against the driver (person in control of a vehicle) in the event of a personal injury or death.	In the event of *force majeure* or 'Act of God', the driver may be exempted from strict liability.	No provision in the Spanish jurisdiction would precisely address joint liability for a road traffic accident. On the other hand, the Spanish legislator recognises shared liability among several tortfeasors, i.e., under Article 123 of Law 48/1960 of Air Navigation.[329]
(P)	Statutory provisions		
	Article 503 Civil Code[330]	Article 505 Civil Code	Article 497 Civil Code
	Symbiosis of strict-liability and fault-liability. *The liability rests within the driver of the vehicle causing the damage, even if such vehicle is not in circulation / in traffic.	In the event of *force majeure* or 'Act of God', the driver may be exempted from strict liability.	If several tortfeasors caused the damage, they should be jointly and severally liable; however, unless proven otherwise, it is deemed that all the involved tortfeasors/parties contributed to the accident to the same extent.

Pursuant to the statutory provisions of Portugal, Spain and Greece, strict liability is assumed against the driver (the person in control of a vehicle), while, in the Italian jurisdiction, the strict liability clause is enforced against the policyholder. Although the above discrepancy constitutes divergent treatment of the defendant in identical circumstances of the case, it does not provide with an adverse effect on the cross-border road traffic victims. Greece remains the only state among the analysed jurisdictions where the driver is released from liability if the accident occurred due to a defectiveness of the vehicle which he or she did not know and could not have known; albeit, the burden of proof that the vehicle malfunction was unknown and unforeseen rests with the driver. Here, having regard to the EU-28 practice in MTPL matters, a potential disadvantageous effect on the cross-border victims is evident.

(GR)	Statutory provisions		
	Articles 929-931 Civil Code	Article 932 Civil Code	Articles 928, 932 Civil Code
	Compensation: (1) treatment costs; (2) personal care expenses; (3) actual and future loss of income; *Lump sum; Assessment: future perspectives of the victim (disability/incapacity for work).	*Constitutional principle of proportionality. *High variability in quantum of compensation; *Principle of reasonableness of compensation.	*Maintenance costs of survivors; *Test (manifestly close to the deceased); *Severe shock, nervous breakdown or depression caused by the death message.

[327] Real Decreto Legislativo 8/2004, de 29 de octubre, por el que se aprueba el texto refundido de la Ley sobre responsabilidad civil y seguro en la circulación de vehículos a motor. *BOE* núm. 267, de 05/11/2004. In English: Royal Legislative Decree 8/2004 that approves the Regulation and Supervision of the Private Insurances.

[328] Ley 35/2015, de 22 de septiembre, de reforma del sistema para la valoración de los daños y perjuicios causados a las personas en accidentes de circulación. *BOE* núm. 228 de 23 de Septiembre de 2015. In English: Law 35/2015 on the reform of the system for the assessment of damage caused to persons in road accidents.

[329] Ley 48/1960, de 21 de julio, sobre Navegación Aérea. *BOE* núm. 176, de 23/07/1960. In English: Law 48/1960 of Air Navigation.

[330] Código Civil. Decreto-Lei nº 47344. Série I de 1966-11-25. In English: Civil Code.

	Judicial practice		
		ΑΠ 90/2017;[331] ΑΠ 464/2017[332]	ΑΠ 1425/2010;[333] ΑΠ 624/2010[334]
(1)	Statutory provisions		
	Article 5 Law Nr. 57/2001;[335] Articles 2056–2059 Civil Code		
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income; *Permanent disability/incapacity for work: Annex A Law Nr. 57/2001 (coefficient);[336] *Temporary disability/incapacity for work: % of incapacity per day.	*Pain and suffering (extended scope); *Loss of amenity; *Disfigurement (*danno estetico*); *Proportion to the loss of physical or psychological integrity (between 25% and 50%).[337]	*Test (manifestly close to the deceased); **iure successionis* or *pretium pains*.
	Judicial practice		
		n° 23146/19[338]	n° 20795[339]
(E)	Statutory provisions		
	Articles 105–111 Royal Legislative Decree 8/2004; Article 98 Law 35/2015		
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*Pain and suffering (extended scope); *Loss of amenity (*pérdida de calidad de vida*); *Disfigurement (*perjuicio estético*); *Loss of unborn child; **Perjuicio excepcional*.	*Test (manifestly close to the deceased).
	Balthazar formula[340] – (((100 – M) x m) / 100) + M		
	Judicial practice		

[331] ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 90/2017 (12.1.2017). In English: The Supreme Court of Greece. Judgment from January 12th, 2017 – 90/2017. Overturned appellate decision: the amount awarded was too high.
[332] ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 464/2017. (20.3.2017). In English: The Supreme Court of Greece. Judgment from March 20th, 2017 – 464/2017. Overturned appellate decision: the amount awarded was too low.
[333] ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 1425/2010. (30.9.2010). In English: The Supreme Court of Greece. Judgment from September 30th, 2010 – 1425/2010.
[334] ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 624/2010. (14.4.2010). In English: The Supreme Court of Greece. Judgment from April 14th, 2010 – 624/2010.
[335] Legge 5 marzo 2001, n. 57 "Disposizioni in materia di apertura e regolazione dei mercati," Gazzetta Ufficiale n. 66 del 20 marzo 2001. Law of 5 March 2001, No. 57 "Provisions regarding the opening and regulation of markets," *Official Journal* No. 66 of 20 March 2001.
[336] The established amount of compensation should decrease with the age of the claimant by 0.5 per cent for each year, as soon as the claimant turns 11 years old.
[337] Andrea Renda, Lorna Schrefler. Compensation of victims of cross-border road traffic accidents in the EU: Assessment of selected options. Centre for European Policy Studies, Brussels, IP/C/JURI/FWC/2006-171/LOT 1, PE 378.292, p. 9.
[338] Cassazione civile, sez. 6, ordinanza 17/09/2019 n° 23146/19. In English: Court of Cassation (civil). Judgment from September 17th, 2019 – 23146/19. It was ruled that, although the claimant must prove subjective psychological pain endured as a result of personal injury, the accurate use of the paradigms on presumptions should be observed by the national courts in order to recognise the moral suffering when reasonable.
[339] Cassazione civile, sez. 3, ordinanza 20/08/2018 n° 20795/18. In English: Court of Cassation (civil). Judgment from August 20th, 2018 – 20795/18. It was held that the survivors had suffered the disruption of the parental relationship, which must be regarded as *pretium pains*, and thus converted into monetary compensation.
[340] Where 'M' is the score of the major sequel, and 'm' the score for the minor sequel. Article 98. Law 35/2015.

	STS 490/2013;[341] STS 4290/2015;[342] STS 6523/1987;[343] STS 2640/1988;[344] STS 2356/1989;[345] STS 21/1990[346]		
(P)	Statutory provisions		
	Articles 495 Civil Code	Articles 496, 566 Civil Code	Articles 495, 496 Civil Code
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*Pain and suffering (extended scope); *Loss of amenity; *Disfigurement (*dano estético*).	*Test (manifestly close to the deceased); *Balance of reasonableness: personal care by family members.
	*Principles of proportionality and equality = reasonableness of the quantum awarded.		
	National Table for the Assessment of Permanent Disabilities in Civil Law (approved: Decree-Law No. 352/2007).[347] *Higher compensation on the merits; *Decree-Law No. 153/2008[348] (determining quantum).		
	Judicial practice		
	STJ nº 2618/08;[349] TC nº 565/2018[350]	STJ nº 1382/16.8T8VRL.G1.S1[351]	STJ nº 4025/06;[352] STJ nº 709/07[353]

[341] Tribunal Supremo – Sala Primera, de lo Civil. STS 490/2013 de 15 julio de 2013 (Recurso 761/2011). In English: Supreme Court – First Chamber, Civil. Judgment from July 15th, 2013 – STS 490/2013. Assessment of concurrent consequences (Balthazar formula applies).

[342] Tribunal Supremo. Sala de lo Civil. STS 4290/2015 de 23 octubre de 2015 (583/2015). In English: Supreme Court. Civil. Judgment from October 23rd, 2015 – STS 4290/2015. Non-pecuniary damage does not possess any direct or sequential economic translation.

[343] Tribunal Supremo. Sala de lo Civil. STS 6523/1987 (20/10/1987). In English: Supreme Court. Civil. Judgment from October 20th, 1987 – STS 6523/1987.

[344] Tribunal Supremo. Sala de lo Contencioso. STS 2640/1988 (15/04/1988). In English: Supreme Court. Judgment from April 15th, 1988 – STS 2640/1988.

[345] Tribunal Supremo. Sala de lo Contencioso. STS 2356/1989 (05/04/1989). In English: Supreme Court. Judgment from April 5th, 1989 – STS 2356/1989.

[346] Tribunal Supremo. Sala de lo Contencioso. STS 21/1990 (03/01/1990). In English: Supreme Court. Judgment from January 3rd, 1990 – STS 21/1990.

[347] Decreto-Lei nº 352/2007. Diário da República nº 204/2007, Série I de 2007-10-23. In English: Decree-Law No. 352/2007.

[348] Decreto-Lei nº 153/2008. Diário da República nº 151/2008, Série I de 2008-08-06. In English: Decree-Law No. 153/2008.

[349] Supremo Tribunal de Justiça (STJ) de 14-10-2008, Revista nº 2618/08 – 6.ª Secção. In English: Supreme Court of Justice. Judgment from October 14th, 2008 – 2618/08 – 6.ª. It was held that, although the claimant had been declaring lower income to the Tax Authority to obtain social security discounts, when assessing the quantum of compensation, the real income had to be taken into account.

[350] Tribunal Constitucional, Acórdão nº 565/2018, Diário da República nº 241/2018, Série II de 2018-12-14. In English: Constitutional Court, Judgment from December 14th, 2018 – 565/2018. It was held that determining the quantum of compensation strictly based on the income that is fiscally proven, after fulfilment of the declarative obligations, restricts the fundamental right to proof, to effective judicial protection and preventing the court from reaching an accurate assessment.

[351] Supremo Tribunal de Justiça (STJ) de 29-01-2019, Revista nº 1382/16.8T8VRL.G1.S1 – 1.ª Secção. In English: Supreme Court of Justice. Judgment from January 29th, 2019 – 1382/16.8T8VRL.G1.S1 - 1.ª. It was argued that the STJ (Supreme Court of Justice in Portugal) should not syndicate the quantum of compensation precluding itself from controlling the rules and limits on the use of the principles of proportionality and equality, which leads to the reasonableness of the quantum awarded.

[352] Supremo Tribunal de Justiça (STJ) de 01-03-2007, Revista nº 4025/06 – 7.ª Secção. In English: Supreme Court of Justice. Judgment from March 1st, 2007 – 4025/06 – 7.ª. Compensation for daily care by the husband of his wife after the road accident was justified in the quantum of EUR 68,992 having regard to sensitive case circumstances.

[353] Supremo Tribunal de Justiça (STJ) de 29-03-2007, Revista nº 709/07 – 7.ª Secção. In English: Supreme Court of Justice. Judgment from March 29th, 2007 – 709/07 – 7.ª. It was argued that the wage of the appointed care person must

Pursuant to the indicated judicial practice of the Supreme Court, it has been argued that the Greek courts do not always respect the constitutional principle of proportionality having regard to the award of compensation for psychological pain in the event of a traffic accident. Here, the quantum of compensation for intangible damage can vary widely;[354] although the pain allowance can reach a relatively high index in comparison to other MSs, due to the high variability of the quantum awarded at the discretion of the national courts, the average amount of compensation for psychological damage does not constitute a high level of pain allowance. Given the analysis of the judicial practice in Italy, the quantum for compensation for intangible damage is tightly related to the declared coefficient of the physical injury, and thus it does not vary widely depending on the region. Despite the manifest connection of a physical injury and psychological damage, an accurate use of the paradigms on presumptions should be observed by the national courts in order to recognise the moral suffering when reasonable.

In Portugal, given the principles of fairness, proportionality and reasonableness, the national courts are required to assess evidence of the quality of life of the claimant as disclosed before the court (e.g., regardless of the previous false declared income to the Tax Authority), and therefore to reach an accurate assessment of the ultimate quantum of compensation. Pursuant to the Portuguese judicial practice, the index of pain allowance is relatively high (including reimbursement per claims filed by the indirect victims). In the same vein, although a number of legal instruments were set out in the Spanish jurisdiction to enable the national courts to determine the reasonable quantum of compensation, it was continuously argued in the judicial practice that non-pecuniary damage does not possess any direct or sequential economic translation; thus, an ultimate amount of compensation remains on the discretion of the domestic courts given the individual circumstances of the case, admissible evidence, and rationality. Given the compensation for psychological damage, there is no objective formula which would enable the legal system to ensure a fair and reasonable quantum of compensation. The existing statutory provisions and jurisprudence are navigating the national courts towards the mechanism of assessment of compensation for non-pecuniary damage, albeit, they do not preclude the courts from independent and distinct decisions as long as the principle of proportionality and the balance of probabilities are observed.

	Statutory provisions		
	Articles 415, 436 Civil Code[355]	Article 436 Civil Code	Articles 362, 441 Civil Code
(PL)	**Symbiosis of strict-liability and fault-liability.** *Fault-based liability; *Strict-liability basis or 'risk principle'. *Strict liability is based on the assumption that those who use certain devices that endanger others, including the environment, should be liable for damages resulting therefrom, even in the	**Force majeure* recognised.	*Contributory negligence recognised; *Joint and several liability.

be taken into account in order to justify or not justify the amount claimed by a family member after quitting the job in order to provide with the necessary assistance for a family member following the road accident.

[354] A variety of compensation for non-pecuniary damage can be found in a number of judgments of the national courts of Greece, such as Μον.Πρ.Πατρ.441/2007; In English: Court of First Instance of Patras. Judgment No. 441/2007, Μον.Πρ.Ρεθυμ.60/2007; In English: Court of First Instance of Rethymno. Judgment No. 60/2007, Εφ.Λαρ.919/2005; In English: Court of Appeal. Judgment No. 919/2005.

[355] Ustawa z dnia 23 kwietnia 1964 r. Kodeks Cywilny. Dz.U. 1964 nr 16 poz. 93. In English: Civil Code.

	absence of 'fault', 'negligence' and 'carelessness'.		
(H)	Statutory provisions		
	Articles 6:519, 6:535 Civil Code[356]	Articles 6:521, 6:535 Civil Code	Articles 6:524, 6:525, 6:536, 6:539 Civil Code
	Symbiosis of strict-liability and fault-based liability. *Fault-based liability; *Strict-liability: every person who engages in an activity involving an increased risk shall be obliged to compensate the resulting damage; *Article 6:520: the defendant may be released from liability in the event the damage was caused in an emergency given the principle of proportionality.	The tortfeasor should be released from liability if he/she proves that the damage was caused by *force majeure* or other fortuitous circumstances.	The quantum of compensation should be reconsidered in view of the victim's attributed fault in the occurrence of the accident or aggravation of the damage; *In the event the damage was caused by several operators, they should be liable in proportion to their fault; albeit, if the fault cannot be attributed to either party, the damage shall be borne by each party separately.
	Judicial practice		
	BDT2007. 1689;[357] BH2011. 195[358]		BH236. 2003;[359] BH121. 1976;[360] BH363. 1984[361]

Unlike other MSs which have established absolute strict liability, in the jurisdictions of Poland and Hungary, if the sole fault or negligence is proven on the part of the claimant, the defendant can be exempted from liability even in the event of a personal injury claim. In contrast to the vast majority of other MSs, the defendant may be released from liability in the event the damage was caused in an emergency given the principle of proportionality.

(PL)	Statutory provisions		
	Articles 444, 447 Civil Code	Article 445 Civil Code	Articles 445–446.1 Civil Code

[356] 2013. évi V. törvény a Polgári Törvénykönyvről. 2013. évi V. törvény (Ptk. (új)). In English: Civil Code.
[357] BDT2007. 1689. In English: Szeged Court of Appeal – 2007. 1689. It was held that any conduct that leads to damage is unlawful unless the law explicitly excludes the unlawfulness of the conduct causing the damage; following the above judicial practice, the unlawfulness of the conduct is automatically assumed unless it is proven by law as excluded.
[358] BH2011. 195. It was held that the consent of the victim to the road accident (deliberate conduct) eliminates the illegality of the damage, and thus it relieves the insurer of its obligation to compensate for damages under the compulsory motor insurance.
[359] BH236. 2003. In English: The Kúria (Highest Court) – 236. 2003.
[360] BH121. 1976. In English: The Kúria (Highest Court) – 121. 1976.
[361] BH363. 1984. In English: The Kúria (Highest Court) – 363. 1984.

	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income; *Time-bar: 40 years + (V CSK 558/17); *Lump sum (disability/incapacity for work).	*Psychological trauma or PTSD; *Principles of proportionality and reasonableness or appropriateness; *To eliminate unjust enrichment.	*Loneliness; *Psychological suffering; *Severe shock; *PSTD; *Personal care costs; *Household activities; *Loss of breadwinner; *High compensation rate.
	Judicial practice		
	V CSK 558/17[362]	II CKN 756/97;[363] II UKN 681/98;[364] II CKN 605/00[365]	III CSK 279/2010;[366] V CSK 448/16;[367] II CSK 94/10[368]
(H)	Statutory provisions		
	Article 6:528 Civil Code	Article 6:527 Civil Code	Article 6:529 Civil Code
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*Principles of proportionality and reasonableness; *Different judicial approach in determining the quantum of compensation (Insurance Law Sector of the Hungarian Bar Association).[369]	*Maintenance costs of survivors; *Test (manifestly close to the deceased); *Annuity.
	Judicial practice		
	BH332. 1997;[370] BDT2007. 1565[371]		

Broadly similar to the understanding of the *restitutio in integrum* in the Netherlands, in Poland, compensation for harm must be sufficiently high and result in the opinion of the injured person that the damage was rectified; then, such a compensation gives a sense to justice. Accordingly, the pain allowance established through the judicial system in Poland remains relatively high compared to most of the MSs (e.g., PLN 1,200,000).[372] In contrast to the criteria established in the French and Belgium doctrines, in Poland, determining the amount of compensation based on the victim's life rate would undermine the constitutional principle of

[362] Sąd Najwyższy. Sygn. akt V CSK 558/17 (11 stycznia 2019 r.). In English: Supreme Court. Judgment from January 11th, 2019 – V CSK 558/17. If a disease is revealed even after 40 years following the road accident, national courts should assess the quantum of compensation; albeit, the burden of proof to convince the court concerning aggravation of the damage rests with the claimant.

[363] Sąd Najwyższy. Sygn. akt II CKN 756/97 (19 maja 1998 r.). In English: Supreme Court. Judgment from May 19th, 1998 – II CKN 756/97.

[364] Sąd Najwyższy. Sygn. akt II UKN 681/98 (10 czerwca 1999r.). In English: Supreme Court. Judgment from June 10th, 1999 – II UKN 681/98.

[365] Sąd Najwyższy. Sygn. akt II CKN 605/00 (18 kwietnia 2002r.). In English: Supreme Court. Judgment from April 18th, 2022 – II CKN 605/00.

[366] Sąd Najwyższy. Sygn. akt III CSK 279/2010 (3 czerwca 2011 r.). In English: Supreme Court. Judgment from June 3rd, 2011 - III CSK 279/2010. Loss of an immediate person is irreversible and cannot be overlooked by the national courts.

[367] Sąd Najwyższy. Sygn. akt V CSK 448/16 (7 kwietnia 2017 r.). In English: Supreme Court. Judgment from April 7th, 2017 – V CSK 448/16.

[368] Sąd Najwyższy. Sygn. akt II CSK 94/10 (17 września 2010 r.). In English: Supreme Court. Judgment from September 17th, 2010 – II CSK 94/10. Victim's life rate cannot be included into the assessment of compensation for intangible damage.

[369] On June 6, 2008, a meeting of the Insurance Law Sector of the Hungarian Bar Association took place, dedicated to the judicial practice in determining the quantum of compensation for non-pecuniary damage.

[370] BH332. 1997. In English: The Kúria (Highest Court) – 332. 1997.

[371] BDT2007. 1565. In English: Szeged Court of Appeal – 2007. 1565.

[372] 265,203 EUR at the time of writing the thesis.

equality and the general sense of justice. Poland remains the only member state which eliminates the time-bar for personal injury and future aggravation of the psychological and physical state of the victim; albeit, the burden of proof to convince the court concerning aggravation of the damage rests with the claimant.

In Hungary, although the statutory provisions precisely designate heads of claim (both pecuniary and non-pecuniary), the quantum of compensation for those heads of claim are wide-ranging; the national courts following two distinct courses in determining the quantum for compensation, i.e. (1) the quantum of compensation is assessed based on the judicial practice having regard to the similar case circumstances, and (2) independent approach of assessment given the only case circumstances.

(HR)	Statutory provisions		
	Articles 1045, 1049, 1063, 1069 Law on Obligations[373]	Articles 1050–1051, 1067, 1071 Law on Obligations	Articles 1067 (3–4), 1072 (2) Law on Obligations
	Symbiosis of strict-liability and fault-liability. *Strict liability clause for the damage caused in connection with the use of a motor vehicle or any other dangerous thing or activity, unless it is proven that the damage was not caused through the use of a motor vehicle or any other dangerous thing. In the event of a road traffic accident, the owner of a vehicle is assumed liable for the damage stemming from the use of a dangerous object, while the driver is assumed liable in relation to the dangerous activity (use of a motor vehicle); *The defectiveness of a motor vehicle cannot release the owner or the driver of such a vehicle from the obligation to compensate for the damage that occurred due to malfunction of the vehicle (Article 1066).	*All passengers must receive fair compensation for personal injury endured as a result of a road accident and with regard to belongings carried inside a vehicle; **ex ante* (pre-accident) agreements that would exclude compensation for passengers in the vehicle must be regarded as null and void; *The owner of the vehicle may be exempted from liability if he or she proves that the damage occurred due to *force majeure* or any other unforeseeable cause that could not have been prevented, avoided or eliminated; *If the damage was caused by a minor under seven years of age or a person with a mental impairment who was unable to understand his/her conduct and the *causal nexus*, such a person is regarded subject to the liability waiver.	The owner of a vehicle can be released from the obligation to compensate for the damage if he or she proves that either the accident or the damage occurred solely or partially due to a fault or negligence of the injured party or a third party, which such an owner acting at utmost care could not reasonably foresee, avoid, or eliminate. *The burden of proof to explicitly demonstrate a fault or negligence on the part of the claimant rests with the defendant; *Joint and several liability
	Judicial practice		
			K 601/00[374]
(BG)	Statutory provisions		
	Article 45 Law on Obligations and Contracts[375]		Articles 51, 53 Law on Obligations and Contracts

[373] Zakon o obveznim odnosima. NN 35/05, 41/08, 125/11, 78/15, 29/18. In English: Law on Obligations.

[374] Općinski sud u Rijeci br. K 601/00 od 18. siječnja 2001. In English: Municipal court. Judgment from January 18th, 2001 – K 601/00. It was held that the defendant was in breach of Article 63 of the Law on Traffic Safety (Zakon o sigurnosti prometa na cestama NN 67/08-42/20), among other things, did not comply with the requirement to keep sufficient distance between his vehicle and the vehicle he was passing by; such a violation resulted in multiple injuries and a further death of the passenger. Although there was no direct impact between the vehicles, the violation of traffic rules was regarded as sufficient and constituted the required causal link for compensation.

[375] Закон за задълженията и договорите. (Попр. ДВ. бр. 2 от 5.12.1950 г.- доп. ДВ. бр. 42 от 22.05.2018 г.). In English: Law on Obligations and Contracts.

	Symbiosis of strict-liability and fault-based liability. *Liability is based on 'fault' or 'negligence'; however, such negligence is automatically assumed against the owner of a vehicle until proven otherwise; *The owner of a vehicle is regarded to be the owner of a thing that may endanger other persons; *Although, in principle, a motor vehicle may expose persons to danger in the course of utilisation (the use of a motor vehicle), there is no such concept explicitly indicated in the Bulgarian statutory provisions referring to a strict liability clause.	Although there is no explicit clause for the strict liability concerning minors involved in a road traffic accident, the jurisprudence recognises the inability of the minors to understand the consequences of their actions accurately, and, thus, relieve such a category of the victim from co-liability when reasonable. *An owner may be exempted from liability if he or she proves that a road traffic accident occurred due to *force majeure* or other fortuitous circumstances which he or she – exercising utmost care – could not foresee, avoid, or eliminate.	If the owner of a vehicle proves that a road traffic collision or the damage occurred solely or partially due to the fault or negligence of the injured party, such an owner may be completely or partially released from liability; albeit, the burden of proof to clearly demonstrate the fault on the part of the injured party rests with the defendant (the owner of a motor vehicle). *Joint and several liability.
	Judicial practice		
		93/2010[376]	

Having regard to the analysis of both statutory provisions and jurisprudence in the jurisdictions of Croatia and Bulgaria, both legislators recognise the strict liability enforced against the owner of the vehicle (a hazardous thing) and against the driver in connection with the use of a motor vehicle (a dangerous activity). Although there is no absolute liability in relation to personal injury, the allocation of the burden of proof stipulates an advantageous position of the road traffic victims.

(HR)	Statutory provisions		
	Section 7 *Repairing damage*: Law on Obligations		
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*2002 Orientation Criteria for determining the quantum of compensation for non-pecuniary damage;[377] *Orientation Criteria 2020;[378] *Pain allowance.	*Maintenance costs of survivors; *Test (manifestly close to the deceased).
(BG)	Statutory provisions		
	Article 53 Law on Obligations and Contracts; Decree No.4 of 23.XII.1968[379]		
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*Principle of fairness and proportionality; *To mitigate the harmful outcome; *Test (manifestly close to the deceased).	

[376] Върховен касационен съд. Решение №165/26.10.2010 по дело №93/2010. In English: Supreme Court. The Supreme Court held that, although the victim (a minor) entered the carriageway, no contributory negligence can be assigned to such a victim, in so far as the minor was unable to direct his actions and understand the public impediment to his conduct.

[377] Vrhovni sud Republike Hrvatske od 29. studenog 2002., br. Su-1331-VI/02 i 1372-11/02, u primjeni Zakona o obveznim odnosima. In English: The Supreme Court of the Republic of Croatia, November 29, 2002, Nos. Su-1331-VI/02 and 1372-11/02, in application of the Law on Obligations.

[378] Vrhovni sud Republike Hrvatske od 5. ožujka 2020. i 15. lipnja 2020., br. Su-IV-47/2020-5, u primjeni Zakona o obveznim odnosima. In English: The Supreme Court of the Republic of Croatia, March 5, 2020, and June 15, 2020, Nos. Su-1331-VI/02 and 1372-11/02, in application of the Law on Obligations.

[379] Постановление № 4 от 23.XII.1968 г. за обобщаване практиката по определяне на обезщетенията за имуществени и неимуществени вреди от непозволено увреждане. In English: Decree No. 4 of 23.XII.1968 on summarising the practice of determining compensation for pecuniary and non-pecuniary damages from tort.

	Judicial practice		
		1018/2015;[380] 507/2015;[381] 188/2015[382]	

In 2020, the Supreme Court of Croatia increased all amounts designated for personal injury compensation by 50 per cent; in order to avoid miscalculation, entirely all previously set out amounts were increased by 50 per cent without any additional formula. Determining the quantum of compensation for intangible damage in the course of litigation, the national courts will have to apply new amounts indicated in monetary units in compliance with the Orientation Criteria 2020. In the same vein, the national courts in Bulgaria must follow the instructions set out in Decree No.4 of 23.XII.1968 for determining compensation for non-pecuniary damage. The principle of fairness is essential when it comes to the determination of compensation; thus, it must be conditioned by a number of specific and objectively existing circumstances, such as the nature of the disability, the manner in which the act was committed, the circumstances in which the act was committed, the psychological consequences resulting from it for the victim, the change they impose onto the life of the victim, which the determining court is obliged not only to indicate, but also to assess as a whole.

(CZ)	Statutory provisions		
	Articles 2894–2895, 2909, 2927 Civil Code[383]	Article 18 Zákon 250/2016 Sb;[384] Articles 2918, 2920, 2925 Civil Code	Articles 2915, 2918 Civil Code
	Symbiosis of strict liability and fault-based liability. *Fault-based liability; *Strict liability clause: a wrongdoer is assumed liable irrespective of a fault, negligence or carelessness; *The liability is assumed against the operator of a (conventional) motor vehicle; *According to Article 2898, an *ex ante* agreement which precludes or limits the obligation to compensate for the damage must be regarded as void and null.	A minor over the age of 15 is considered liable for the damage if he or she was able to understand his/her conduct and assess its consequences; *In the event of *force majeure* or other unforeseeable and unavoidable circumstances, the driver may be relieved from the obligation to compensate for the damage.	*Contributory negligence is recognised. The fault or contributory negligence on the part of the victim is likely to be the result of a violation of the requirements set out in the Road Traffic Act; *If several tortfeasors caused the damage, they are obliged jointly and severally compensate for the damage, each to the extent of his or her fault.
	Judicial practice		

[380] Върховен касационен съд. Decision No. 12/25.03.2016 in Case No 1018/2015. In English: Supreme Court.
[381] Върховен касационен съд. Decision No. 36/08.03.2016 in Case No 507/2015. In English: Supreme Court.
[382] Върховен касационен съд. Decision No. 40/18.03.2016 in Case No 188/2015. In English: Supreme Court.
[383] Zákon č. 89/2012 Sb. (Zákon občanský zákoník). 33/2012. 22.03.2012. In English: Civil Code.
[384] Zákon 250/2016 Sb. ze dne 12. července 2016 o odpovědnosti za přestupky a řízení o nich. In English: Act 250/2016 Coll. of July 12, 2016, on liability for offenses and their proceedings.

	290/2012[385]		3966/2009;[386] 1244/2017[387]
(SK)	Statutory provisions		
	Sections 420, 427 Civil Code[388]	Section 432 Civil Code	Sections 438–441 Civil Code
	Symbiosis of strict liability and fault-based liability. *A breach of a legal obligation (§ 420), the occurrence of damage and the causal link between the breach of a legal obligation and the damage to invoke the obligation to compensate for the damage; *If the defendant proves not to be at fault, he or she may be exempted from the general liability; *Every person who operates a motor vehicle should be regarded liable for the damage caused in the course of the operation of such a vehicle unless the operator proves that the damage could not be foreseen and avoided even by exercising the utmost care and due diligence.	In the event of *force majeure* or other unforeseeable and unavoidable circumstances, the driver may be relieved from the obligation to compensate for the damage.	*Contributory negligence is recognised. The fault or contributory negligence on the part of the victim is likely to be the result of a violation of the requirements set out in the Road Traffic Act; *If several tortfeasors caused the damage, they are obliged jointly and severally compensate for the damage, each to the extent of his or her fault.
	Judicial practice		
			5 Cdo 71/03[389]
(SLO)	Statutory provisions		
	Articles 131, 149-150 Law on Obligations[390]	Articles 137, 153 Law on Obligations	Articles 153 (3), 154 (3), 171, 186 Law on Obligations

[385] Nejvyšší soud České republiky. sp. zn. 25 Cdo 290/2012, ze dne 29.5.2013. In English: The Supreme Court of the Czech Republic. Judgment from May 29th, 2013 – 25 Cdo 290/2012. It was ruled that, although both parties equally contributed to the damage, the share of 40 per cent in fault on the part of the injured party is justified, thereby emphasising the higher demands placed on the conduct of the driver of the motor vehicle, among other things, the danger posed by the vehicle to pedestrians, or, because of the disproportionate vulnerability of the pedestrian.

[386] Nejvyšší soud České republiky. sp. zn. 25 Cdo 3966/2009, ze dne 25.1.2012. In English: The Supreme Court of the Czech Republic. Judgment from January 25th, 2012 – 25 Cdo 3966/2009. To the extent that the actions of the injured party were involved in the damage, the liability of the defendant is excluded.

[387] Nejvyšší soud České republiky. sp. zn. 25 Cdo 1244/2017, ze dne 27.4.2017. In English: The Supreme Court of the Czech Republic. Judgment from April 27th, 2017 – 25 Cdo 1244/2017. The Supreme Court of the Czech Republic ruled that the deceased victim remains 80 per cent liable as a result of her fatally reckless and risky behaviour. The defendant (a truck driver) ran over the deceased victim who was lying on the side of the road at night under the influence of alcohol. It was held that the defendant could not recognise a lying person on the side of the road, and thus could not avoid or eliminate the fatal incident.

[388] Zákon č. 40/1964 Zb. (Občiansky zákonník). 19/1964. 05.03.1964. In English: Civil Code.

[389] Najvyšší súd Slovenskej republiky, sp. zn. 5 Cdo 71/03, z 29. januára 2004. In English: The Supreme Court of the Slovak Republic. Judgment from January 29th, 2004 – 5 Cdo 71/03.

[390] Obligacijski zakonik (OZ). Uradni list RS, št. 97/07 – 64/16 – odl. US in 20/18 – OROZ631. 03.10.2001. In English: Law on Obligations.

	Symbiosis of strict liability and fault-liability. *Fault-based liability: liability is assumed against the tortfeasor unless he or she proves that the damage was not caused through his/her fault or negligence. *Strict liability clause: liability is assumed against the owner of an object causing the damage from which an increased danger originates; *The principle of subjective liability with a reverse burden of proof is applicable (Article 154).	A minor is not liable until the age of 7, or between the ages of 7 and 14, unless it is proven that the minor could understand his/her conduct and the harmful consequences of such behaviour. *The owner may be released from liability if he/she proves that the damage occurred due to *force majeure* or other unavoidable circumstances beyond his/her control or if the damage was caused solely through the fault or negligence of the victim or third parties.	*Contributory negligence is recognised. The fault or contributory negligence on the part of the victim is likely to be the result of a violation of the requirements set out in the Road Traffic Act; *Joint and several liability; *If it is impossible to determine the share of fault attributed to every party of a road accident, they should be regarded liable in equal parts.
	Judicial practice		
	137/2005[391]		1036/2009;[392] 387/2006[393]

In the Czech, Slovak and Slovenian jurisdictions, liability assessment occupies a leading position, where utmost care and due diligence are viewed as the principal elements in determining the extent of liability between the parties involved in a road traffic accident. The principle of subjective liability with the reverse burden of proof ensures a beneficial position of the road traffic victims. When determining the degree of liability, entirely all circumstances of the case, i.e., reasonable care and due diligence, breach of the traffic requirements, the gravity of the harmful consequences and other relevant factors, should be taken into account.

(CZ)	Statutory provisions		
	Sections 2951–2952, 2955, 2958–2968 Civil Code		
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	*Assessment: gravity and duration of the injury, incapacity for work, psychological consequences, such as psychological trauma or post-traumatic shock, future perspectives of the victim and other; *Principles of fairness and proportionality.	*Test (manifestly close to the deceased); *Severe shock, nervous breakdown or depression caused by the death message.
	There is a growing tendency in the jurisprudence towards the higher quantum of compensation for intangible damage.[394]		

[391] Višje sodišče v Kopru, sodba I Cp 137/2005, 14.02.2006. In English: Higher Court. Judgment from February 14th, 2006 – I Cp 137/2005. The burden of proof to explicitly demonstrate that the harmful event occurred without fault on the part of the alleged tortfeasor is one of the essential elements of the civil liability model set out in the Slovenian jurisdiction; and therefore, the violation of the rules governing the conduct must be proven.

[392] Višje sodišče v Celju, sodba Cp 1036/2009, 06.05.2010. In English: Higher Court. Judgment from May 6th, 2010 – Cp 1036/2009. It was held that the motorcyclist could not prevent the accident under the test of the average reaction capacity in the given circumstances. The lack of a driving license does not constitute any causal link between the damage and the road accident; whereby the pedestrian who was improperly crossing the road was found partly liable for causing the accident (70:30 fair split justified).

[393] Vrhovno sodišče Republike Slovenije, II Ips 387/2006, 24.01.2008. In English: The Supreme Court of the Republic of Slovenia. Judgment from January 24th, 2008 – II Ips 387/2006. The degree of fault of the motorcyclist who was driving under the powerful influence of alcohol (3.33 to 3.74 g/kg in the blood) justifies the distribution of the liability at a ratio of 80:20.

[394] Nejvyšší soud České republiky, sp. zn. 30 Cdo 1627/2005, ze dne 31.1.2006; In English: The Supreme Court of the Czech Republic. Judgment from January 31st, 2006 - 30 Cdo 1627/2005. Nejvyšší soud České republiky, sp. zn.

	Judicial practice		
		968/2008[395]	87/2004[396]; 146/2010[397]
(SK)	Statutory provisions		
	Sections 444 –447b Civil Code	Section 442a Civil Code	Sections 448–449a Civil Code
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income; *Lump sum or annuity (disability/incapacity for work).	*No compensation for psychological suffering (in road accidents); *Compensation for intangible damage recognised only in crimes of corruption and infringement or threat of an intellectual property right; **Katarína Haasová v Rastislav Petrík and Blanka Holingová*;[398] *Concept of 'damage'.	*Inclusion of the right to family and private life within the intangible dimension (265/2009); *Maintenance costs of survivors; *Personal care costs.
	Judicial practice		
		695/2017[399]	265/2009;[400] 326/2006[401]
(SLO)	Statutory provisions		
	Articles 169, 174 Law on Obligations	Articles 179, 182, 185 Law on Obligations	Articles 172 –173, 180(1) (4) Law on Obligations

30 Cdo 1286/2005, ze dne 28.2.2006; In English: The Supreme Court of the Czech Republic. Judgment from February 28th, 2006 – 30 Cdo 1286/2005. Nejvyšší soud České republiky, sp. zn. 30 Cdo 2545/2008, ze dne 10. 7. 2008; In English: The Supreme Court of the Czech Republic. Judgment from July 10th, 2008 – 30 Cdo 2545/2008. Vrchní soud v Praze, sp. zn. 1 Co 301/2008, ze dne 22.1.2009; In English: Higher Court in Prague. Judgment from January 22nd, 2009 – 1 Co 301/2008. Nejvyšší soud České republiky, sp. zn. 30 Cdo 476/2011, ze dne 25.4.2012; In English: The Supreme Court of the Czech Republic. Judgment from April 25th, 2012 – 30 Cdo 476/2011. Vrchní soud v Praze, sp. zn. 1 Co 303/2010, ze dne 29.3.2011; In English: Higher Court in Prague. Judgment from March 29th, 2011 – 1 Co 303/2010. Vrchní soud v Praze, sp. zn. 1 Co 265/2006, ze dne 29.3.2011; In English: Higher Court in Prague. Judgment from March 29th, 2011 – 1 Co 265/2006. Vrchní soud v Praze, sp. zn. 3 Co 49/2012, ze dne 15.1.2013. In English: Higher Court in Prague. Judgment from January 15th, 2013 – 3 Co 49/2012.

[394] Civilinis kodeksas. *Valstybės žinios*, 2000-09-06, Nr. 74-2262. In English: Civil Code.

[395] Nejvyšší soud České republiky. sp. zn. 25 Cdo 968/2008, ze dne 26.11.2009. In English: The Supreme Court of the Czech Republic. Judgment from November 26th, 2009 – 25 Cdo 968/2008.

[396] Vrchní soud v Olomouci, sp. zn. 1 Co 87/2004, ze dne 23.2.2005. In English: Higher Court in Olomouc. Judgment from February 23rd, 2005 – 1 Co 87/2004. In the event of the death of a loved one, the harmful consequences are irreversible, and the monetary compensation for the pain and grief should be regarded as such to be able to mitigate the loss to a certain extent.

[397] Vrchní soud v Praze, sp. zn. 1 Co 146/2010, ze dne 13.7.2010. In English: Higher Court in Prague. Judgment from July 13th, 2010 – 1 Co 146/2010. Compensation CZK 1,950,000 for the survivors.

[398] *Katarína Haasová v Rastislav Petrík and Blanka Holingová*. Judgment of the Court (Second Chamber) of 24 October 2013, Case No. C – 22/12, ECLI:EU:C:2013:692.

[399] Ústavný súd Slovenskej republiky, sp. zn. II. ÚS 695/2017, z 5. decembra 2018. In English: The Constitutional Court of the Slovak Republic. Judgment from December 5th, 2018 – II. ÚS 695/2017. The Constitutional Court of the Slovak Republic held that, although the Civil Code does not explicitly define the concept of 'damage', through the wording of the provisions, it should be understood as both pecuniary and non-pecuniary damage, or such, including intangible nature.

[400] Ústavný súd Slovenskej republiky, sp. zn. 5 Cdo 265/2009, z 12. februára 2011. In English: The Constitutional Court of the Slovak Republic. Judgment from February 12th, 2011 – 5 Cdo 265/2009. Psychological injury in the form of severe shock.

[401] Ústavný súd Slovenskej republiky, sp. zn. 3 Cdo 326/2006, z 26. júla 2007. In English: The Constitutional Court of the Slovak Republic. Judgment from July 26th, 2007 – 3 Cdo 326/2006. Increasing (valorisation) of the average income must be taken into account when determining the quantum of compensation for the maintenance costs of the survivors.

	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income; *Lump sum or annuity (disability/incapacity for work).	Assessment: extent of injuries, the duration of treatment, the pain and inconvenience, healing perspectives (if any), the age and psychological balance of the injured person. *Reduction of compensation for material damage should apply *mutatis mutandis* to compensation for the non-pecuniary damage. *Principles of fairness and proportionality; *Criterion of persuasiveness.	*Maintenance costs of survivors; *Test (manifestly close to the deceased); *Pain and grief.
	Judicial practice		
	598/95;[402] 4658/2010;[403] 248/98;[404] 440/99[405]		

Broadly similar to the Spanish perspective upon the compensation for intangible damage, in the Czech Republic, while it is deemed feasible to determine compensation through the prism of the reduced value on the labour market, loss of incomes, necessary adjustments in the personal and professional plans for the future, compensation for pain and grief after the death of a family member remains hardly objective. In Slovenia, given the established judicial practice, the compensation for intangible damage must be impeded in the broader social contexts, which, in the field of tort law, are reflected through the inter-institutional relationships between minor, moderate and severe damage and thereof compensation for them.

On the contrary, the Slovak legislator does not designate grounds for compensation for intangible damage. In *Haasová*, the CJEU held that the Motor Insurance Directive (on the day of the judgment – Third Council Directive 90/232/EEC) must be interpreted as meaning that the compulsory insurance against the civil liability in respect of the use of motor vehicles must cover compensation for non-pecuniary damage endured by the next of kin of the deceased victims of a road traffic accident, in so far as such a compensation is provided for under the civil liability provisions adopted in the domestic law. For this reason, it should be concluded that, until there is no explicit obligation under the MID to cover non-pecuniary damage for the victim of a road traffic accident, the MSs may either impose or disregard the right to compensation for intangible damage following a road accident, among other things, compensation for pain and suffering, loss of amenity, grief, severe shock and other. However, having regard to the analysed recent judicial practice in Slovakia, there is a tendency towards considering the concept of 'damage' according to the Civil Code in a broader scope, i.e., including intangible damage.

(LT)	Statutory provisions

[402] Vrhovno sodišče Republike Slovenije, sodba II Ips 598/95, 13.03.1997. In English: The Supreme Court of the Republic of Slovenia. Judgment from March 13th, 1997 – II Ips 598/95.

[403] Višje sodišče v Ljubljani, II Cp 4658/2010, 23.03.2011. In English: Higher Court in Ljubljana. Judgment from March 23rd, 2011 – II Cp 4658/2010. Criterion of persuasiveness.

[404] Vrhovno sodišče Republike Slovenije, sodba II Ips 248/98, 04.02.1999. In English: The Supreme Court of the Republic of Slovenia. Judgment from February 4th, 1999 – II Ips 248/98.

[405] Vrhovno sodišče Republike Slovenije, sodba II Ips 440/99, 08.03.2000. In English: The Supreme Court of the Republic of Slovenia. Judgment from March 8th, 2000 – II Ips 440/99. Determining the quantum of compensation, two surgeries undergoing by the injured party, 29 days of hospitalization, three-month immobilization, 116 physical treatments, the sizeable scar on the left knee, loss of fit for the job as a miner and the loss of amenity, among other things, the victim is no more able to play sports and ride a motorcycle, were taken into consideration.

	Article 6.270 Civil Code[406]	Articles 6.253, 6.275, 6.278 Civil Code	Articles 6.253(5), 6.270(4), 6.279, 6.282 Civil Code
	*Strict-liability clause: a person whose activities involve an increased source of risk to others (the use of a motor vehicle), must compensate for the damage caused by the higher risk source, unless it is proven that the damage was caused by *force majeure*, intent or gross negligence on the part of the victim; **ex ante* and *ex post* agreements, which precludes or limits the obligation to compensate for the damage caused through the deliberate act or gross negligence, must be regarded as void and null (Article 6.252); *Lithuania remains the last member state in the European Union which provides an opportunity to affirm liability in the European Accident Statement (*Eismo įvykio deklaracija*).[407]	In the event of *force majeure*, actions of the government, fault or negligence of a third party or the injured person, an operator may be released from the civil liability in full or in part; *If the damage was caused through the fault, negligence or inaction of a minor under the age of 14 or a person who had been declared incapacitated, they should be released from the obligation to compensate for the damage.	*Contributory negligence is recognised; *Joint and several liability.
	Judicial practice		
	e3K-3-251-1075/2018[408]		2K-50/2010[409]
(LV)	Statutory provisions		
	Articles 1779, 2347 Civil Code[410]	Article 1780 Civil Code	Articles 31(4)–(7), 33 Civil Code
	Every person who causes harm through a negligent act or omission must compensate for the damage; *A person whose activity involves an increased danger, among other things, the use of a motor vehicle, must compensate for the personal injury caused by the source of the increased danger; ***Liability assessment:** MIB methodological instructions.[411]	If the damage was caused by a minor under seven year of age or a person with a mental impairment who was unable to understand his/her conduct and the *causal nexus*, such a person is regarded subject to liability waiver; **force majeure* clause is recognised.	The MIB methodological instructions include the criteria for determining the degree of liability between the persons involved in a road accident, shares in the fault depending on various case scenarios and the procedure for determining the degree of liability; *Joint and several liability; *Violation of the Road Traffic Act.[412]

[406] Civilinis kodeksas. *Valstybės žinios*, 2000-09-06, Nr. 74-2262. In English: Civil Code.

[407] Section 14 of the *Lithuanian European Accident Statement* contains a declaration of liability; in the rest of the MSs, the above section corresponds to the general remarks regarding a road traffic accident.

[408] Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. e3K-3-251-1075/2018. (2018 m. birželio 22 d.). In English: Supreme Court of Lithuania. Judgment from June 22nd, 2018 – e3K-3-251-1075/2018. It was ruled that the European Accident Statement is the main and primary document that the insurer must follow in determining the liability; however, it does not release the insurer from the obligation to accurately and responsibly investigate the circumstances necessary to establish the fact, consequences and the quantum of insurance indemnity. Nevertheless, the European Accident Statement is the main, but not the only document, based on which the insurer determines the liability or the extent of liability.

[409] Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K–424/2008. (2008 m. gruodžio 9 d.). In English: Supreme Court of Lithuania. Judgment from December 9th, 2008 – 2K–424/2008. Gross negligence on the part of the victim. A reduced amount of compensation.

[410] Civillikums. *Valdības Vēstnesis*, 41, 20.02.1937. In English: Civil Code.

[411] Latvijas Transportlidzekļu apdrošinataju birojs. Transportlidzekļu apdrošinataju biroja metodiskie noradijumi "Ceļu satiksmes negadijuma iesaistito personu atbildibas pakapes noteikšana." Prot. Nr. 2. (Speka no 2009.gada 1. apriļa). In English: Motor Insurers Bureau of Latvia. Methodological instructions *Determining the degree of responsibility of persons involved in a road traffic accident*.

[412] Ceļu satiksmes noteikumi. *Latvijas Vēstnesis*, 122, 27.06.2015. In English: Road Traffic Act.

	Judicial practice		
	SKC-156;[413] SKK-96/2020[414]		SKC-40[415]
(EST)	Statutory provisions		
	Sections 1043, 1056 Law on Obligations[416]	Sections 139, 1052, 1057 Law on Obligations	Sections 137, 138, 1050 (2–3) Law on Obligations
	*Fault-based liability: every person who causes the damage through the fault or negligence to another person is required to compensate for the damage; *If a tortfeasor proves that the damage was caused not through his or her fault or negligence, such an alleged tortfeasor may be exempted from the liability (Section 1050-1); *Strict liability clause: in the event of damage caused by a dangerous thing or activity, the person who was operating the source of the increased risk should be regarded liable, irrespective of a fault or negligence.	The possessor of a motor vehicle should be deemed liable if the damage occurred in connection to the use of a motor vehicle unless it is proven that the damage was caused by *force majeure* or through the intentional act of the injured party. *A minor under the age of 14 is released from the liability for the damage caused either through the fault or negligence.	The degree of liability should be assessed having regard to the individual case circumstances, age, education, general knowledge, personal abilities and other relevant characteristics of an alleged culprit; *Violation of the Road Traffic Act;[417] *Joint and several liability.
	Judicial practice		
		No. 3-2-1-111-05[418]	No. 3-2-1-7-13;[419] No. 2-09-66992/20;[420] No. 2-05-21469/17;[421] No. 2-03-

[413] LR Augstākā tiesa, Nr. SKC-156 (17.03.2004). In English: Supreme Court of the Republic of Latvia. Judgment from March 17th, 2004 – SKC-156. Non-compliance with the use of a tachograph.

[414] LR Augstākā tiesa, SKK-96/2020 (14.01.2020). In English: Supreme Court of the Republic of Latvia. Judgment from January 14th, 2020 – SKK-96/2020. The driver-firefighter (the State Fire and Rescue Service) was driving with flashing lights to release persons trapped in a vehicle; however, the high speed given the meteorological conditions, i.e., a dark, wet and slippery road surface, cannot be justified even having regard to the fact that the driver was on duty.

[415] LR Augstākā tiesa, Nr. SKC-40 (26.01.2005). In English: Supreme Court of the Republic of Latvia. Judgment from January 26th, 2005 – SKC-40. Knowingly operating a motor vehicle being tired to a large extent should be regarded gross negligence.

[416] Võlaõigusseadus. *Riigikogu*, RT I 2001, 81, 487. In English: Law on Obligations.

[417] Liiklusseadus. *Riigikogu*, RT I 2010, 44, 261. In English: Road Traffic Act.

[418] Riigikohus. 3-2-1-111-05 (21.11.2005). In English: Supreme Court of Estonia. Judgment from November 21st, 2005 – 3-2-1-111-05. The *force majeure* might exclude the liability of the possessor of an increased source of risk in the event it is proven that an extreme natural factor replaces a hazard posed by a thing of a greater source of danger, and which both the possessor and the injured party could not reasonably foresee, avoid, or eliminate.

[419] Riigikohus. 3-2-1-7-13 (19.03.2013), p. 33. In English: Supreme Court of Estonia. Judgment from March 19th, 2013 – 3-2-1-7-13.

[420] Tallinna Ringkonnakohus. 2-09-66992/20 (08.02.2011). In English: Tallinn District Court. Judgment from February 8th, 2011 – 2-09-66992/20. Alcohol intoxication: compensation for damage reduced by 50 per cent.

[421] Tallinna Ringkonnakohus. 2-05-21469/17 (28.10.2008). In English: Tallinn District Court. Judgment from October 28th, 2008 – 2-05-21469/17. The motorist who was driving on a prohibited traffic light was found 90 per cent liable, while another driver, who was making a left turn manoeuvre without exercising due diligence, was held 10 per cent liable.

			519/15;[422] No. 2-03-798/7;[423] No. 2-11-60772/8[424]

The MTPL regulation in the Baltic States demonstrates the rigid model of liability assessment. Here, a fair, reasonable and proportional mechanism of the liability assessment corresponding to an advantageous regulation for the road traffic victims is applicable; albeit, given the analysis of the judicial practice, no absolute strict liability in relation to personal injury for non-motorised road users has been established. Accordingly, the extent of the liability attributable to every party in a road accident must be determined having regard to the individual circumstances of the case, i.e., a breach of the traffic requirements and the gravity of the harmful consequences. The Supreme Court of Estonia ruled that, when there is no possibility to determine the extent of liability attributed to each participant, each party to a road accident should compensate in full for the damage caused to the other.[425] The aforementioned standpoint corresponds to the model of regulation set out in the French jurisdiction,[426] wherein the absence of a possibility to the assigned liability to only one party to a road traffic accident, having regard to the proven involvement in a road collision, both parties should compensate for the damage in full to each other.

	Statutory provisions		
	Articles 6.249, 6.251(1), 6.283, 6.286 Civil Code	Article 6.250 Civil Code	Articles 6.283, 6.284 (3) Civil Code
(LT)	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income (in connection with incapacity for work). *Discretion of the court. Assessment: the degree of disability, physical and psychological shock, loss of opportunities for social communication and chances of recovery and future life prospects; *Assessment of future damage based on actual probabilities.	*Physical pain; *Spiritual experience; *Loss of amenity; *Mental shock; *Psychological suffering. Assessment: all consequences of the harmful event, the degree of fault of the tortfeasor, the financial situation of the tortfeasor, the amount of compensation for material damage and other relevant circumstances in the case along with the criteria of fairness, reasonableness, and proportionality.	*Compensation to survivors; *Part of the deceased's income; *The quantum of compensation for survivors may not be changed, except in the cases where a child is born after the death of the victim.

[422] Tallinna Ringkonnakohus. 2-03-519/15 (22.06.2006). In English: Tallinn District Court. Judgment from June 22nd, 2006 – 2-03-519/15. The motorist driving with the headlights off was held 25 per cent liable for making himself hardly visible to other road traffic participants.

[423] Tallinna Ringkonnakohus. 2-03-798/7 (16.05.2006). In English: Tallinn District Court. Judgment from May 16th, 2006 – 2-03-798/7. Alcohol intoxication (both parties). Liability shares 70:30 given the additional violation of the Road Traffic Act.

[424] Harju Maakohus Kentmanni kohtumaja. 2-11-60772/8 (17.12.2012). In English: Harju County Court, Kentmann courthouse. Judgment from December 17th, 2012 – 2-11-60772/8. The compensation was reduced to zero (i.e., it was excluded).

[425] Riigikohus. 3-2-1-7-13 (19.03.2013). In English: Supreme Court of Estonia. Judgment from March 19th, 2013 – 3-2-1-7-13.

[426] The criteria governing the liability and the right to the compensation for damage caused by the use of a motor vehicle in the French jurisdiction shall be analysed in detail in Sub-section 1.2.3 below.

		Law on Compulsory Insurance Against Civil Liability in Respect of the Use of Motor Vehicles: it abolishes the limited maximum amount of compensation for non-pecuniary damage (EUR 5,000). *The principles for determining and approving administration of the damage caused as a result of a road traffic accident: Resolution No. 795.[427]	
	Judicial practice		
	2K-204/2009[428]	3K-3-560/2010;[429] 3K-3-371/2003;[430] 2K-50/2010[431]	2K-188/2009; 3K-3-364/2007[432]
(LV)	Statutory provisions		
	Articles 1786, 2348 Civil Code	Articles 18(2), 19, 23 Law on compulsory civil liability insurance for owners of motor vehicles; Articles 1635, 2351 Civil Code	
	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income.	Assessment: (1) established jurisprudence; (2) comparable case circumstances; and (3) principles of fairness and proportionality besides the (4) medical report *per se*; *Principle of a 'full member of society'.	*Discretion of the court; *Assessment: age and ability of the deceased; *Test (manifestly close to the deceased).
	Judicial practice		
	K22-0028;[433] SKK-181/2008[434]	K12-0220-14/14[435]	SKC-23/2019[436]
(EST)	Statutory provisions		
	Sections 128, 130 Law on Obligations		Sections 129, 134(3) Law on Obligations

[427] LR Vyriausybės nutarimas dėl eismo įvykio metu padarytos žalos administravimo ir draudimo išmokos mokėjimo taisyklių ir indeksuotų draudimo sumų dydžių patvirtinimo. *Valstybės žinios*, 2004-06-29, Nr. 100-3718. In English: Resolution of the Government of the Republic of Lithuania on the approval of the rules for the administration of the damage caused during a traffic accident, the payment of insurance indemnities and the amounts of indexed insurance payments.

[428] Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K-204/2009. (2009 m. gegužės 26 d.). In English: Supreme Court of Lithuania. Judgment from May 26th, 2009 – 2K-204/2009. Determining the quantum of compensation, unclear chances of recovery and future life prospects must be taken into account.

[429] Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. 3K-3-560/2010. (2010 m. gruodžio 27 d.). In English: Supreme Court of Lithuania. Judgment from December 27th, 2010 – 3K-3-560/2010. Assessment criteria.

[430] Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. 3K-3-371/2003. (2003 m. kovo 26 d.). In English: Supreme Court of Lithuania. Judgment from October 26th, 2003 – 3K-3-371/2003. Objectivity in determining the compensation for intangible damage.

[431] Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K-50/2010. (2010 m. kovo 2 d.). In English: Supreme Court of Lithuania. Judgment from March 2nd, 2010 – 2K-50/2010. Assessment criteria.

[432] Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 3K-3-364/2007. (2007 m. spalio 8 d). In English: Supreme Court of Lithuania. Judgment from October 8th, 2007 – 3K-3-364/2007. The list of criteria set out in the domestic law for determining the amount of compensation for intangible damage to the survivors is not exhaustive.

[433] Ludzas rajona tiesa, Nr. K22-0028 (08.02.2008). In English: Ludza District Court. Judgment from February 2nd, 2008 – K22-0028. Assessment criteria.

[434] LR Augstākā tiesa, Nr. SKK-181/2008 (28.04.2008). In English: Supreme Court of the Republic of Latvia. Judgment from April 28th, 2008 – SKK-181/2008. No reconciliation with the tortfeasor, in so far as such a tort is regarded a threat to the public safety and is no longer only the interest of the injured party.

[435] Daugavpils tiesa. Nr. K12-0220-14/14 (22.01.2014). In English: Daugavpils Court. Judgment from January 22nd, 2014 – K12-0220-14/14. Assessment criteria.

[436] LR Augstākā tiesa, Nr. SKC-23/2019 (31.01.2019). In English: Supreme Court of the Republic of Latvia. Judgment from January 31st, 2019 – SKC-23/2019. Implication of a criminal offence.

	Compensation: (1) treatment; (2) personal care expenses and other relevant costs; (3) loss of actual and future income; *Medical expenses of the tortfeasor.	Financial cap: Section 32 of the Motor Third Party Liability Insurance Act (EUR 100 – EUR 3200); *In case of destructed property: Section 134(4) Law on Obligations; *Principles of reasonableness and proportionality.	*Compensation for maintenance; *Test (manifestly close to the deceased).
	Principles for determining the compensation for the maintenance and incapacity benefit set out in Sections 27–29 of the Motor Third Party Liability Insurance Act.[437]		
	Judicial practice		
		3-2-1-144-00;[438] 3-2-1-81-05[439]	

In Latvia, in the event of death as a result of a criminal offence (gross negligence or deliberate misconduct in RTAs), the compensation for intangible damage is presumed and is not required to be proven. In contrast to other MSs in the European Union, the Estonian legislator designates the lump sums (intangible damage) which are to be paid by the insurance undertaking in the event of any endured bodily injury. The legislator provides with a possibility to claim from EUR 100 in the case of minor damage to EUR 3200 in the case of particularly severe damage. Estonia remains the only member state where the claimant has a right to claim a compensation for intangible damage in relation to the destroyed property (given the total absence of a bodily injury) if it is proven that the claimant had a special interest in the destroyed thing, in particular, for personal reasons.[440] Unlike the approach established in Latvia and Lithuania, in the Estonian jurisdiction, the insurance undertaking must indemnify the medical expenses of the driver who caused a road traffic accident to the medical institution,[441] unless a road accident took place in a state other than Estonia, which does not require the insurer of the liable person to compensate for the treatment of the insured.[442]

Given the judicial practice established in Lithuania, the principle of *restitutio in integrum* cannot be objectively applied in its entirety, in so far as it is not feasible to determine the amount of intangible damage in monetary terms accurately; albeit, the award of compensation should be as fair as possible in order to mitigate both the physical and the psychological suffering of the victim. Broadly similar to most of the MSs, the claim for non-pecuniary damage for survivors must be explicitly substantiated by the claimant; however, the list of the criteria set out in the domestic law is not exhaustive. After the abolition of fixed amounts of compensation for non-pecuniary damage, although the pain allowance remains low, there is a clear tendency in the judicial practice to award higher amounts of compensation having regard to both severe physical and psychological pain of the (direct and indirect) victim.

[437] Liikluskindlustuse seadus. *Riigikogu* RT I, 13.03.2019, 14. In English: Motor Third Party Liability Insurance Act.
[438] Riigikohus. 3-2-1-144-00 (18.01.2001). In English: Supreme Court of Estonia. Judgment from January 18th, 2001 – 3-2-1-144-00. Assessment criteria.
[439] Riigikohus. 3-2-1-81-05 (27.09.2005). In English: Supreme Court of Estonia. Judgment from September 27th, 2005 – 3-2-1-81-05. The domestic court is not required to collect, of its motion, evidence of the circumstances which may affect the amount of the compensation for intangible damage.
[440] Section 134(4) of the Law on Obligations.
[441] The insurance undertaking can refuse to pay compensation for medical expenses of the insured if the driver who caused the insured event was intoxicated at the time of the road traffic accident or caused the accident deliberately. Section 44. Liikluskindlustuse seadus. *Riigikogu* RT I, 13.03.2019, 14. In English: Motor Insurance Act.
[442] *Ibid.*

1.2.3. '*Loi Badinter'* or RTAs civil liability regulation in the French jurisdiction

Whereas both strict liability and fault-based liability models are part of the legal systems of the rest of the European Union, the French Government has developed a rather distinct model for regulating the civil liability to road traffic accidents, including unprecedented victim-favourable clauses. Since July 5, 1985, road traffic accidents occurring in France, as well as in the territories under its jurisdiction, have been regulated by *Loi n° 85-677 du 5 juillet 1985 tendant à l'amélioration de la situation des victimes d'accidents de la circulation et à l'accélération des procédures d'indemnisation*,[443] translated into English as the *Act on the Improvement of the Situation with respect to the Road Traffic Victims and on the Acceleration of the Compensation Proceedings*, with broad support from the former Minister of Justice in France Robert Badinter; therefore, it is currently called *Loi Badinter*, or the Badinter Law. Before the introduction of the Badinter Law in France, the French civil liability regulation for road accidents was based on the concept of the *Liability of Thing* (LoT). The comprehension of LoT is based on the inevitable need to take control of a vehicle that is considered a thing. Thus, the driver is considered fully responsible for any damage caused by his/her vehicle. The legal concept should not be understood as the sole responsibility for the thing under the control of the driver. Instead, LoT is the responsibility for a thing in the care of the owner, regardless of whether the damage was caused during the operation of the vehicle or not. According to the LoT concept, as integrated into the French civil liability regulation, either the tortfeasor or the liable insurance undertaking on behalf of the policyholder could refuse or limit the compensation to the victim based on a mistake (error) caused by the victim, the so-called contributory negligence, or gross negligence. If the victim crossed the carriageway without paying due attention to the approaching vehicles, in the event of a road traffic accident, this might be considered as contributory negligence; thus, a reduction in the compensation may be accepted. Given the odd number of cases involving restriction of the right to compensation in France, in 1982, the Court of Cassation interpreted the LoT in the DESMARES[444] case. Under the circumstances of the above case, the victims were indisputably farther from the crosswalk when they were hit by a motor vehicle. Investigators found bloodstains left by the victims, of which the first was at a distance of 0.40 meters from the right edge of the avenue, about 5 meters behind the pedestrian crossing, whereas the second stain was at a distance of 1.30 meters from the same edge and 4.30 meters further than the first. Pursuant to the classic French LoT, the victims' 'misconduct could have been foreseen from the pieces of the evidence gathered. Moreover, victims were considered not to comply with Article R-219[445] of the Road Traffic Code,[446] among other things, the obligation to cross the road with due diligence. Despite this, the busy road during the rush hour was considered to be consistent with the regular pedestrian behaviour; thus, non-compliance with the provisions of the Road Traffic Code was respectfully rejected. Any bloodstains, i.e., the distance between the bloodstains and the pedestrian crossing,

[443] Loi n° 85-677 du 5 juillet 1985 tendant à l'amélioration de la situation des victimes d'accidents de la circulation et à l'accélération des procédures d'indemnisation. Version consolidée au 14 janvier 2010. In English: Law No. 85-677 of July 5, 1985 aimed at improving the situation of victims of traffic accidents and accelerating compensation procedures.

[444] Cour de cassation. Chambre civile 2 du 21 juillet 1982, n° de pourvoi 81-12.850. Publié au bulletin. In English: Court of Cassation. Judgment from July 21st, 1982 – 81-12.850.

[445] Article R-219 of the Road Traffic Code was abolished by Décret 2001-251 2001-03-22 art. 5 JORF 25 mars 2001 en vigueur le 1er juin 2001.

[446] Code de la route. Version en vigueur au 11 juillet 2020. In English: Road Traffic Code.

must be regarded as a result of the inertia at the moment of the collision, and were therefore dismissed by the Court. Any testimony from the witnesses who saw the scene after the clashes should be considered hearsay, and was therefore dismissed by the Court. Any fault assigned to the victims did not have the character of an unpredictable and insurmountable event, and therefore it justifies the decision to compensate without further limitation or differentiation of liability. The Court resolved the issue of exoneration by ruling on the precedent basis that the compensation should never be reduced unless the *force majeure* was determined to occur.

As a result, French lawmaking institutions have taken a step forward to strengthen the protection system for the road traffic victims in France by establishing the Badinter Law which eliminates the *force majeure* clause and imposes a number of limitations on the victim's contributory negligence claim. The Badinter Law ultimately excludes the possibility of rejecting a compensation claim, regardless of the heads of claim, among other things, either material (property) damage or a personal injury suffered in a road traffic accident, even though there is no liability supporting evidence other than the fact of pure involvement in a road accident. The involvement in a road accident should be regarded as passive or active participation in a collision in a certain way. There are no precise determinations or conditions defining exclusions from involvement other than those set out in the judicial practice, which means that, basically, every situation that involves a vehicle's interaction with an accident will constitute *prima facie* involvement for the purposes of the Badinter Law. Thus, in the French jurisdiction, involvement replaces causation in an accident.

The concept of 'involvement'			
Case No.	**Court**	**Circumstances / Reasoning**	**Decision**
n°06-14.484[447]	Court of Cassation	Proven involvement should be distinguished from comprehension of 'fault' or 'liability'.	'Involvement' should be regarded as any vehicle that, in any capacity, intervened in the accident.
n°10-17.927[448]	Court of Cassation	The victims who participated in the tandem in the off-road cycling competition, having fallen on the track while being passed by a Fire and Rescue Service truck.	Given no direct contact and intervention = involvement confirmed.
n°98-10.190[449]	Court of Cassation	The lack of contact at the time of the incident is not significant for engagement assessment.	In the absence of any contact, but when the behaviour of one of the drivers changes the action of another motorist, the involvement is granted.
n°00-20.594[450]	Court of Cassation	An indirect impact on the victim's behaviour in traffic.	Given no direct contact and intervention = involvement confirmed.
n°03-12.323[451]	Court of Cassation	The mere presence of a vehicle near the crash site was not sufficient to establish involvement.	No involvement established.

[447] Cour de cassation. Chambre civile 2 du 4 juillet 2007, n° de pourvoi 06-14.484. Publié au bulletin. In English: Court of Cassation. Judgment from July 4th, 2007 – 06-14.484.
[448] Cour de cassation. Chambre civile 2 du 1 juin 2011, n° de pourvoi 10-17.927. Publié au bulletin. In English: Court of Cassation. Judgment from June 1st, 2011 – 10-17.927.
[449] Cour de cassation. Chambre civile 2 du 18 mai 2000, n° de pourvoi 98-10.190. Publié au bulletin. In English: Court of Cassation. Judgment from May 18th, 2000 – 98-10.190.
[450] Cour de cassation. Chambre civile 2 du 14 novembre 2002, n° de pourvoi 00-20.594. Publié au bulletin. In English: Court of Cassation. Judgment from November 14th, 2002 – 00-20.594.
[451] Cour de cassation. Chambre civile 2 du 8 juillet 2004, n° de pourvoi 03-12.323. Publié au bulletin. In English: Court of Cassation. Judgment from July 8th, 2004 – 03-12.323.

n°05-13.251[452]; n°02-17.545[453]	Court of Cassation	Successive collisions occurred in a continuous sequence.	Involvement in a complex accident was established.

Back in 2014, the Court of Cassation drew the ultimate scope of 'involvement' in a road traffic accident; since and after, any accident involving a vehicle, (1) regardless of whether the road traffic accident occurred on a public road (in traffic), or in private premises; (2) regardless of whether the vehicle was engine-on or engine-off; and (3) whether or not the driver was in the vehicle at the time of the collision, the incident should be regarded a road traffic accident if any vehicle, in any capacity, intervened in the accident. In case n°13-13.265,[454] a kite surfer was lifted by a gust of wind ashore and was found unconscious in front of a stationary vehicle parked in a public lot. It was found that, on the shore, the kite surfer immediately ran into a parked vehicle that caused him to suffer a severe bodily injury. The Court of Cassation found the circumstances of the case to constitute an 'involvement' in a road traffic accident, and, therefore, eligibility of the kite surfer to receive compensation for the damage. The interpretation given by the Court of Cassation in the kite-surfing case remains precedential in France, and it has never been experienced in the other MSs of the European Union. Given the interpretation presented by the Court of Cassation in the above case, it can be concluded that the principal task of the Badinter Law is to consolidate the protection system for the road traffic victims in the French jurisdiction at all costs.

Pursuant to the Badinter Law, the only exception to the obligation to compensate the victim may apply in the case of *faute inexcusable*,[455] or wilful misconduct (a voluntary action on the part of the victim seeking damage); here, in spite of this, victims, such as pedestrians, minors (children under 16 years old),[456] the elderly (over 70 years old), or disabled persons (in terms of the working capacity below or equal to 20 per cent), can neither be rejected nor reduced in compensation, regardless of *faute inexcusable*.[457] In all other cases, it is imperative to explicitly demonstrate the inexcusable fault on the part of the victim. Both types of misconduct are subject to rigid interpretation by the Court of Cassation. While deliberate misconduct contains the hypothesis of a suicide or an attempted suicide, *faute inexcusable* is explicitly defined as a fault of exceptional gravity on the part of the victim who unreasonably endangers himself/herself and other traffic users in the knowledge of the possible harmful consequence(s).

The concept of '*faute inexcusable*'			
Case No.	**Court**	**Circumstances / Reasoning**	**Decision**

[452] Cour de cassation. Chambre civile 2 du 3 mai 2006, n° de pourvoi 05-13.251. Inédit. In English: Court of Cassation. Judgment from May 3rd, 2006 – 05-13.251.

[453] Cour de cassation. Chambre civile 2 du 13 mai 2004, n° de pourvoi 02-17.545. Publié au bulletin. In English: Court of Cassation. Judgment from May 13th, 2004 – 02-17.545.

[454] Cour de cassation. Chambre civile 2 du 6 février 2014, n° de pourvoi 13-13.265. Inédit. In English: Court of Cassation. Judgment from February 6th, 2014 – 13-13.265.

[455] A fault of an exceptional gravity.

[456] In addition, the Court of Cassation ruled that a party that has paid compensation to a minor victim (a pedestrian under the age of 16) in a view of a special category of victims, is entitled to exercise the right of recourse against the person responsible for the road traffic accident. Cour de cassation. Chambre civile 2 du 17 juin 2010, n° de pourvoi 09-67.530. Publié au bulletin. In English: Court of Cassation. Judgment from June 17th, 2010 – 09-67.530.

[457] Article 3. Loi n° 85-677 du 5 juillet 1985 tendant à l'amélioration de la situation des victimes d'accidents de la circulation et à l'accélération des procédures d'indemnisation. Version consolidée au 14 janvier 2010. In English: Law No. 85-677 of July 5, 1985 aimed at improving the situation of victims of traffic accidents and accelerating compensation procedures.

n°94-13.912[458]	Court of Cassation	The victim remained in the middle of the carriageway at night in order to stop a motorist and to return to his home.	*Faute inexcusable* was not established, since the victim thought he could be seen in the headlights of the vehicles.
n°02-18.587[459]	Court of Cassation	The victim was running on a four-lane carriageway.	*Faute inexcusable* was established.
n°86-11.275[460]	Court of Cassation	The victim was carelessly and recklessly crossing a three-lane carriageway.	*Faute inexcusable* was established.

Here, it can be concluded that, although in the vast majority of cases, the attributable fault will be present on both sides, i.e., non-compliance with the requirements of due diligence in traffic, there is a feasible possibility of invoking an exemption clause in the event of the behaviour of exceptional gravity solely on the part of the victim. An escape clause or *faute inexcusable* may be designated as an event or an action that could not have been foreseen and avoided due to the victim's deliberate and/or reckless behaviour.

In the French jurisdiction, the term 'pedestrian' is extended to the driver of a motor vehicle under certain circumstances. In Case n°87-10.321,[461] the Court of Cassation considered a driver to be a pedestrian who – for whatever reason – got out of his/her vehicle. By analogy, in Case n°85-14.655,[462] the driver in his vehicle while being towed was regarded as a pedestrian. However, more sophisticated analysis is required concerning the motorcycle driver to determine the status of the pedestrian. In Cases n°96-18.421[463] and n°03-84.991[464], the Court of Cassation ruled that the ejected driver was no longer in control of his vehicle during the second impact, and therefore must be regarded as a pedestrian. On the other hand, when the ejection corresponds to the impact (one action), the victim remains treated as 'the driver', i.e., in Case n°01-17.486,[465] it was stated that the sequence of events constitutes the same accident, and therefore the victim remains the driver even after being ejected out of the motorcycle. In the same vein, in Case n°93-18.897,[466] it was ruled that the events occurred in a single stroke of time. Therefore, the motorcyclist should be regarded as a driver and not as a pedestrian after being ejected. In the French jurisdiction, the pedestrian status remains a guarantee of compensation unless wilful misconduct or *faute inexcusable* is proven on the part of the victim. It is noteworthy that there have been several attempts to challenge the special category of the victims in the view of the constitutional principle

[458] Cour de cassation. Assemblée plénière du 10 novembre 1995, n° de pourvoi 94-13.912. Publié au bulletin. In English: Court of Cassation. Judgment from November 10th, 1995 – 94-13.912.
[459] Cour de cassation. Chambre civile 2 du 5 février 2004, n° de pourvoi 02-18.587. Publié au bulletin. In English: Court of Cassation. Judgment from February 5th, 2004 – 02-18.587.
[460] Cour de cassation. Chambre civile 2 du 20 juillet 1987, n° de pourvoi 86-11.275. Publié au bulletin. In English: Court of Cassation. Judgment from July 20th, 1987 – 86-11.275.
[461] Cour de cassation. Chambre civile 2 du 10 mars 1988, n° de pourvoi 87-10.321. Publié au bulletin. In English: Court of Cassation. Judgment from March 10th, 1988 – 87-10.321.
[462] Cour de cassation. Chambre civile 2 du 14 janvier 1987, n° de pourvoi 85-14.655. Publié au bulletin. In English: Court of Cassation. Judgment from January 14th, 1987 – 85-14.655.
[463] Cour de cassation. Chambre civile 2 du 29 avril 1998, n° de pourvoi 96-18.421. Publié au bulletin. In English: Court of Cassation. Judgment from April 29th, 1998 – 96-18.421.
[464] Cour de cassation. Chambre criminelle du 9 mars 2004, n° de pourvoi 03-84.991. Publié au bulletin. In English: Court of Cassation. Judgment from March 9th, 2004 – 03-84.991.
[465] Cour de cassation. Chambre civile 2 du 5 juin 2003, n° de pourvoi 01-17.486. Publié au bulletin. In English: Court of Cassation. Judgment from June 5th, 2003 – 01-17.486.
[466] Cour de cassation. Chambre civile 2 du 16 avril 1996, n° de pourvoi 93-18.897. Publié au bulletin. In English: Court of Cassation. Judgment from April 16th, 1996 – 93-18.897.

of equality; albeit, in Cases n°10-17.096[467] and n°10-25.281,[468] the Court of Cassation refused to consider the priority issue of constitutionality, which criticized the general treatment of the victim driver based on the principle of equality. In the cases listed above, the Court of Cassation indicated that the Badinter Law established a right to compensation for all victims of road traffic accidents and that, for the reasons of general interest, including the road safety, only the victim's fault is in the nature, at the discretion of the judge, to limit or exclude his or her right to compensation, and therefore there is no disproportionate infringement. It was suggested in *Bulletin d'information* N°663,[469] that the Badinter Law was inspired by the Vienna Convention[470] on Road Traffic which establishes a general principle of the duty of care in relation to the most vulnerable users, such as pedestrians, cyclists, and in particular, minors and people with disabilities, which forces the Badinter Law to deviate from the strict equality of the treatment for victims.

In contrast to most of the MSs in the European Union, in the French jurisdiction, the number of indisputable evidences, which can be treated as evidence of either *faute inexcusable* or fault in its classical understanding, is strictly limited.

Evidences	
Liability	**Statutory base / Judicial practice**
Signed European Accident Statement (*Constant Amiable D'accident Automobile*).	As proof of 'involvement': admissible without both signatures. As proof of liability: inadmissible without both signatures.
Independent eyewitness statement.[471]	Testimony from passengers, relatives, friends or colleagues may be presented as evidence, such a testimony does not possess convincing probative value (partial witnesses). Article 202, Code of Civil Procedure.
Police Report.	Article R231-1(3) (a) Road Traffic Code.
Declarations sur l'honneur.	*Declarations sur l'honneur* possesses a strong value of proof once a third party certifies that his or her statement (declaration or testimony) is based on pure truth on his or her honour.

Notably, none of the French legal acts or court judgments refers to video footage, such as a dashcam, or security video footage, as indisputable evidence of the involvement in an accident or the fault (error). Thus, in practice, this may be a case for a road traffic accident captured on video footage (e.g., CCTV);[472] however, such video recordings will not be considered as in-court admissible evidence of the involvement in a road collision or a committed fault.

If liability cannot be attributed to one of the participants in the RTA, all parties to the accident are entitled to 100 per cent compensation pursuant to Article 4 of the Badinter Law. Article 4, however, requires each party involved to compensate the opposing party on the reciprocal basis; in this case, each vehicle owner or insurance undertaking against civil liability will jointly decide

[467] Cour de cassation. Chambre civile 2 du 16 décembre 2010, n° de pourvoi 10-17.096. Publié au bulletin. In English: Court of Cassation. Judgment from December 16th, 2010 – 10-17.096.

[468] Cour de cassation. Chambre civile 2 du 31 mars 2011, n° de pourvoi 10-25.281. Inédit. In English: Court of Cassation. Judgment from March 31st, 2011 – 10-25.281.

[469] Cour de cassation. Bulletin d'information N°663 du 15 juin 2007 : Diffusion de jurisprudence, doctrine et communications. In English: Court of Cassation. Newsletter N°663 of 15 June 2007: Case law, doctrine and communications.

[470] United Nations. Convention on Road Traffic of 8 November 1968.

[471] It is important that the witness of the road accident is declared to be an eyewitness who was able to observe the whole incident from its beginning to its end. The independent witness should be considered a witness without an economic or any other personal interest with respect to his or her testimony/declaration.

[472] Closed-circuit television (CCTV), or the so-called video surveillance.

on the application of Article 4 and begin the reciprocal compensation procedure. The reimbursement mechanism remains unchanged regardless of whether the fault (error) was attributed to certain participants in the accident or not. Reciprocal compensation under the jurisdiction of France remains unique and has never been experienced in the rest of the European Union. However, if it can be shown that only one party is to blame for the accident, that driver should not receive compensation for the damage. In other words, the fault or error of the driver-victim excludes his or her right to compensation if this was the sole cause of the accident. In Case n°93-16.640,[473] the Court of Cassation ruled that, when a fault is attributed to only one motorist, there is no need to prove whether the other driver could have foreseen or avoided the accident; here, the only driver who is found to be at fault is exempted from the right to claim a compensation for damage. Likewise, in order to be eligible for partial damage, the claimant must explicitly demonstrate that the other motorist is partially at fault for the incident. In Case n°89-11.859,[474] the Court of Cassation held that the failure to prove the attributable fault on the part of the second driver deprives the claimant of the right to partial compensation. While there is a clear distinction in the French jurisprudence between a fault that contributed to the accident as such and a fault that contributed to damage or injury, it should be viewed in the general context as a fault that limits or excludes the compensation for damage.[475]

Although the French jurisdiction has set several exemptions and certain thresholds that remain never experienced in other jurisdictions of the European Union, the privilege given to certain road victims, such as cyclists, pedestrians and other non-motorised road users, is also recognised in the domestic law of some other MSs, e.g., Denmark[476]and the Netherlands.[477] Thus, under the French Law, compensation for bodily harm (corporeal claim) to the privileged victim is mandatory, regardless of whether the driver of the vehicle is liable or not. However, the privileged victim is not eligible for any compensation for the property damage, such as the cost of a damaged bike, scooter, roller-skates, helmet and other – unless the liability explicitly lies with the driver of the vehicle. In addition to the aforementioned privileged category of the road traffic victims, passengers injured at the time of the accident are considered a separate category of victims. In the event that a passenger is injured as a consequence of a road accident, such a passenger should be reimbursed without delay, and thus, in the vast majority of cases, such a reimbursement is likely to occur before one of the participants in the road accident is held liable (if any). Thus, the insurance undertaking of the vehicle on which such a passenger was travelling at the time of the collision must compensate for the damage. Subsequently, when the issue of liability is fully resolved, such an insurance organisation may bring a recourse action to the responsible party.

It is, however, necessary to distinguish a corporeal claim on behalf of the passenger from his or her claim for damaged items being transported inside the vehicle at the time of the incident.

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[473] Cour de cassation. Chambre civile 2 du 18 octobre 1995, n° de pourvoi 93-16.640. Publié au bulletin. In English: Court of Cassation. Judgment from October 18th, 1995 – 93-16.640.

[474] Cour de cassation. Chambre civile 2 du 17 février 1993, n° de pourvoi 89-11.859. Publié au bulletin. In English: Court of Cassation. Judgment from February 17th, 1993 – 89-11.859.

[475] Cour de cassation. Chambre civile 2 du 16 octobre 1991, n° de pourvoi 89-14.865. In English: Court of Cassation. Judgment from October 16th, 1991 – 89-14.865. Publié au bulletin; In English: Court of Cassation. Cour de cassation. Chambre civile 2 du 16 novembre 1994, n° de pourvoi 93-10.156. Publié au bulletin. In English: Court of Cassation. Judgment from November 16th, 1994 – 93-10.156.

[476] §3 Grundregler m.v., §27 Forpligtelser over for gående. Færdselsloven LBK nr 1324 af 21/11/2018. In English: §3 Basic rules, etc., §27 Obligations regarding pedestrians. Traffic Act LBK No. 1324 of 21/11/2018.

[477] Article 185. Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act (WVW) 1994.

Under Article 1384 of the Civil Code,[478] the liable driver or the insurance undertaking, on behalf of the liable driver, is responsible for damage caused to the victim's property at the time of the road collision. The aforementioned article is intended both for the third party in a vehicle other than that which belongs to the liable driver and for the belongings of a passenger travelling in the same vehicle as the responsible driver. Thus, with the equal legal effect, a passenger in a vehicle owned by the responsible driver can claim a compensation for the material damage to the transported and damaged items. According to Article L211-1 of the Insurance Code,[479] the family members of the policyholder are entitled to regular compensation; thus, in the event that a liable driver collides with his or her spouse's vehicle, causing him or her to suffer both personal and material damage, that driver or his insurance undertaking against the civil liability remains liable for a compensation.

Although the Badinter Law removes certain LoT rules in relation to a shared fault, the possibility to invoke contributory negligence on the part of the victim remains feasible.

Contributory negligence			
Case No.	**Court**	**Circumstances / Reasoning**	**Decision**
n°10-20.036[480]	Court of Cassation	A motorcyclist got stuck in the rear of vehicle A and, due to losing control of the motorcycle, fell and was hit by vehicle B driving in the opposite lane. The collision could not be foreseen or prevented by the driver of vehicle B.	In the absence of the proven fault attributed to the drivers involved (A and B), contributions are made between them in equal shares.
n°99-21.377[481]	Court of Cassation	The victim was intoxicated (2.44 g/l of alcohol in his blood) at the time of the road traffic accident.	The alcohol in the blood of a road user must demonstrate a clear link to the accident; otherwise, no fault or contributory negligence can be constituted on the part of such a road user.
n°04-17.428[482]	Court of Cassation	The presence of alcohol and cannabis in the blood of the victim could impair the victim's reflexes, thus being considered misconduct, and, therefore, it must deprive the injured party of the right to a compensation.	Overturned judgment (reasoning).
n°89-14.865[483]	Court of Cassation	Driving without a protective helmet at the time of the accident.	An attributable fault to the injury given the victim's head trauma.
n°02-14.918[484]	Court of Cassation	The victim was not wearing a seat belt.	No cause-and-effect link between the fatal injuries and the absence of seat belts was established.

[478] Code Civil (Mise à jour à compter de 2006). Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique, NOR ECFI1524250L. In English: Civil Code.

[479] Code des assurances. Version en vigueur au 2 août 2003. Modifié par Loi n°2007-1774 du 17 décembre 2007 – art. 1. In English: Insurance Code.

[480] Cour de cassation. Chambre civile 2 du 1 juin 2011, n° de pourvoi 10-20.036. Publié au bulletin. In English: Court of Cassation. Judgment from June 1st, 2011 – 10-20.036.

[481] Cour de cassation. Chambre civile 2 du 27 septembre 2001, n° de pourvoi 99-21.377. Inédit. In English: Court of Cassation. Judgment from September 27th, 2001 – 99-21.377.

[482] Cour de cassation. Chambre civile 2 du 13 octobre 2005, n° de pourvoi 04-17.428. Publié au bulletin. In English: Court of Cassation. Judgment from October 13th, 2005 – 04-17.428.

[483] Cour de cassation. Chambre civile 2 du 16 octobre 1991, n° de pourvoi 89-14.865. Publié au bulletin. In English: Court of Cassation. Judgment from October 16th, 1991 – 89-14.865.

[484] Cour de cassation. Chambre civile 2 du 22 janvier 2004, n° de pourvoi 02-14.918. Publié au bulletin. In English: Court of Cassation. Judgment from January 22nd, 2004 – 02-14.918.

n°01-85.432[485]	Court of Cassation	Driving without a helmet, shoes and with a naked torso.	No *causal nexus* in the aggravation of the damage was established (bodily injury).

After decades of a hesitant compensation mechanism in France, in 2005, judge Dintilhac[486] determined each head of claim fairly accurately in an effort to achieve a victim-favourable compensation procedure. Extraordinary attention was paid to the category of the loss associated with pain and suffering.

Personal injury / Heads of claim		
Physical suffering / Disability	**Psychological injury**	**Indirect victims**
The principle of *restitutio in integrum* applies		
Statutory provisions		
Articles 731, 1147 Civil Code		
Scale[487] 0.5/7 - 7/7: *0.5/7 – 1.5/7 (≤ EUR 1,500); *2/7 – 2.5/7 (≤ EUR 3,000); *3/7 – 3.5/7 (≤ EUR 6,000); *4/7 – 4.5/7 (≤ EUR 15,000); *5/7 – 5.5/7 (≤ EUR 30,000); *6/7 – 6.5/7 (≤ EUR 45,000); *7/7 (≥ EUR 45,000).	**Pain and suffering:** **Pretium doloris* (psychological suffering); **Préjudice esthétique* (disfigurement); **Préjudice d'agrément* (loss of amenity); **Perte de Chance de Survie* (P.C.S.) ('loss of chance of not having lived longer').[488]	*Loss of the breadwinner; **Pretium doloris*; *P.C.S.; **Préjudice d'affection ou d'absence* (loss of affection or absence). Quantum is determined based on judicial practice: *Spouse (or partner) (≤ EUR 30,000); *Minor children (≤ EUR 30,000); *Adult children (≤ EUR 20,000); *Adult children (C.2)[489] (≤ EUR 15,000).
Judicial practice		

[485] Cour de cassation. Chambre criminelle du 3 septembre 2002, n° de pourvoi 01-85.432. Inédit. In English: Court of Cassation. Judgment from September 3rd, 2022 – 01-85.432.

[486] Jean-Pierre Dintilhac – Président de la deuxième chambre civile de la Cour de cassation. In English: President of the second civil chamber of the Court of Cassation.

[487] Bearing in mind the complexity of pain and suffering assessment, as well as the strict time frame according to the Motor Insurance Directive and the Insurance Code, the personal injury compensation scale has been established.

[488] In the French jurisprudence, also referred to as *le Préjudice de vie abrégée*.

[489] An adult child living separately.

n°05-19.020;[490] n°05-02.080;[491] n°11-83.770;[492] n°15-84.238;[493] n°18-85.616;[494] n°18-26.564;[495] n°09-87.385.[496]

The comprehension of a shortened-life injury, i.e., P.C.S. as reasonable knowledge of imminent death is considered severe moral pain and suffering for the victim and therefore requires separate compensation that passes to the heirs of the victim. Given that P.C.S. does not possess any direct or sequential economic translation, the quantum of compensation is determined on the discretion of the reputable court on the merits. The time the victim remains conscious of anticipating his or her impending death is significant in determining the quantum for compensation for P.C.S., whether the victim survived for months or even mere seconds after the accident. In 2008, the *Tribunal de Grande Instance d'Evreux* awarded EUR 40,000 compensation for pain and suffering caused by injuries incompatible with life and the subsequent death 2 hours after the road traffic accident.[497] Later, on November 28, 2008, the *Tribunal de Grande Instance de Bourges* ordered a compensation of EUR 90,000 for P.C.S.[498]

On January 30, 2009, the *Tribunal de Grande Instance de Nanterre* awarded EUR 10,000 to the family of the deceased having regard to the age of the victim.[499] Developing an awareness of P.C.S. comprehension, there is an inevitable call for the additional criteria, such as the age of the victim. Shortened life expectancy is calculated given the probabilities of death and based on the life/mortality tables;[500] here, the difference in the proposal for a final settlement in respect of the infliction of pain and suffering, in view of the age of the victim, should be considered admissible for the purposes of fair and reasonable compensation. Accordingly, in the event of an interruption in a minor's life, compensation for pain and suffering is usually higher, as it was ordered by the *Tribunal de Grande Instance de Nouméa* awarding the compensation for pain and suffering

[490] Cour de cassation. Chambre civile 1 du 13 mars 2007, n° de pourvoi 05-19.020. Publié au bulletin. In English: Court of Cassation. Judgment from March 13th, 2007 – 05-19.020. Awarded EUR 110,000 compensation for P.C.S.

[491] Cour d'appel de Dijon du 12 février 2008, n° de RG 05-02.080. In English: Dijon Court of Appeal. Judgment from February 12th, 2008 – RG 05-02.080. Awarded EUR 30,000 compensation for P.C.S.

[492] Cour de cassation. Chambre criminelle du mardi 23 octobre 2012, n° de pourvoi 11-83.770. Publié au bulletin. In English: Court of Cassation. Judgment from October 23rd, 2012 – 11-83.770. Compensation of EUR 125,701 for P.C.S. to the victim who deceased in 3 hours and 30 minutes after the accident.

[493] Cour de cassation. Chambre criminelle du mardi 27 septembre 2016, n° de pourvoi 15-84.238. Publié au bulletin. In English: Court of Cassation. Judgment from September 27th, 2016 – 15-84.238. Compensation of EUR 15,000 in respect of a victim who survived for a few seconds after a road traffic accident.

[494] Cour de cassation. Chambre criminelle du 14 mai 2019, n° de pourvoi 18-85.616. Inédit. In English: Court of Cassation. Judgment from May 14th, 2019 – 18-85.616.

[495] Cour de cassation. Chambre civile 2 du 20 mai 2020, n° de pourvoi 18-26.564. Inédit. In English: Court of Cassation. Judgment from May 20th, 2020 – 18-26.564. Two or more consecutive accidents must constitute one accident to determine compensation for P.C.S.

[496] Cour de cassation. Chambre criminelle du 5 octobre 2010, n° de pourvoi 09-87.385. Inédit. In English: Court of Cassation. Judgment from October 5th, 2010 – 09-87.385. To be eligible for a compensation for the loss of a chance of survival, the victim should be conscious to realise his or her state and acquaintance of imminent death.

[497] Fédération Nationale des Victimes de la Route. Perte de Chance de Survie (P.C.S.) Bordeaux, le 9 mars 2009, (mise à jour le 07 janvier 2013). In English: National Federation of victims from traffic accidents. Loss of Chance of Survival (P.C.S.).

[498] Fédération Nationale des Victimes de la Route. Préjudice de vie abrégée: jugements et jurisprudences. Décisions des tribunaux concernant le Préjudice de vie abrégée (anciennement Perte de chance de survie). In English: National Federation of victims from traffic accidents. Loss of Chance of Survival (P.C.S.): Case Law.

[499] *Ibid.*

[500] Institut national de la statistique et des études économiques. Tables de mortalité par sexe, âge et niveau de vie (06.02.2018). National Institute of Statistics and Economic Studies. Life tables by gender, age and standard of living.

following the death of a minor victim within several hours after a road accident.[501] The judgment ordered EUR 8,380 compensation for suffering and EUR 125,701 P.C.S.; whereas on July 23, 2010, the *Tribunal Correctionnel de Nouméa* increased the compensation for the shortened life, ultimately bringing it to EUR 167,600.[502] Although it had been previously considered as a rule that in order to be eligible for a compensation the victim should be conscious to realise his or her state and acquaintance of the imminent death, the *Tribunal de Grande Instance d'Evreux* awarded a compensation for P.C.S. when medical experts had established that a coma is vigilant and agitated, and therefore the awareness of suffering arises; and even in a deep coma with occasional circulatory activity, the painful perception remains possible.[503] Thus, it can be concluded that each case is subject to rigorous analysis so that to determine whether the victim is eligible for P.C.S. or not.

In addition to the established right to compensation for P.C.S., survivors can claim compensation for the 'loss of affection or absence', in French *le préjudice d'affection ou d'absence*. Jean-Pierre Dintilhac defined the loss of affection in *Rapport du groupe de travail chargé d'élaborer une nomenclature des préjudices corporels*[504] as the pain and suffering of a relative or an immediate person after the death of the direct victim. It is, however, important to assess whether the claimant is entitled to a compensation for *le préjudice d'affection ou d'absence* or not. The survivors who had a close (manifest) connection with the victim are eligible for a compensation for the loss of affection. Despite the classical understanding of the close connection with the victim, there have been a number of legal discussions in France as to whether there is a prejudice of affection in the case of a child born after the death of one of its parents. As a rule, insurers are inclined to argue that such a newborn child cannot claim to have a close (manifest) connection with the deceased parent, since they did not have the opportunity to meet each other. In 2017, the Court of Cassation ultimately resolved this issue, ruling that the loss of a father even before the birth of a son is considered damage (suffering), along with a causal link between the damage itself and the death, among other things, suffering due to the absence of one of the parents.[505] The judgment rendered in Case n°16-26.687 demonstrates the application of the principle *infans conceptus pro nato habetur quoties de commodis ejus agitur*, where, retroactively, it can be assumed that a child conceived on the day of an event has a legal status that allows him or her to be treated as a person who has a close (manifest) connection with the victim. Indemnification systems in France are actively developing new categories of loss that provide fair restitution and thus provide an optimal level of compensation for the victims of traffic accidents and other incidents (e.g., environmental damage).[506]

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[501] Fédération Nationale des Victimes de la Route. Préjudice de vie abrégée : jugements et jurisprudences. Décisions des tribunaux concernant le Préjudice de vie abrégée (anciennement Perte de chance de survie). In English: National Federation of victims from traffic accidents. Loss of Chance of Survival (P.C.S.): Case Law.

[502] *Ibid.*

[503] *Ibid.*

[504] Groupe de travail dirigé par Jean-Pierre Dintilhac, Président de la deuxième chambre civile de la Cour de cassation. *Rapport du groupe de travail chargé d'élaborer une nomenclature des préjudices corporels*. Juillet 2005. Retrieved online on 12 July 2020 from: https://www.vie-publique.fr/sites/default/files/rapport/pdf/064000217.pdf.

[505] Cour de cassation. Chambre civile 2 du 14 décembre 2017, n° de pourvoi 16-26.687. Publié au bulletin. In English: Court of Cassation. Judgment from December 14th, 2017 – 16-26.687.

[506] Pierre Bentata. On the joint use of safety regulation and civil liability to promote safe management of hazardous operations: a French case study. *Journal of Risk Research*, 2014, Vol. 17, No. 6, pp. 721–734 (p. 722).

The entire Section 1.3 reveals principal and profound discrepancies between the civil liability systems established in the MSs. When differences in the liability assessment, justification for a claim, and compensation systems between countries representing the fault-based liability and the strict liability systems are explicit, the above analysis also demonstrates a fundamental divergence between the MSs representing the same civil liability system, i.e., the fault-based or the strict liability system.

The analysis of the principal standpoints on the civil liability regulation established at the domestic level among the countries-representatives of the strict liability model of regulation reveals a range of substantial discrepancies. Whereas most of the MSs rely on the principle of comprehensive balance of interests, by weighing up the 'fault' or 'misconduct' of the individual tortfeasors, other states rely on the absolute strict liability in relation to the personal injury without exercising a rigid balance of interests and probabilities (e.g., Denmark, the Netherlands, Finland). Exemption from liability, or the so-called escape clause, should be viewed as relatively distinct among the MSs; where most of the states have integrated a general exemption under the *force majeure* clause. Yet, others may exempt a tortfeasor from the liability given the case of emergency (e.g., Hungary), defectiveness or malfunction of the vehicle (e.g., Greece), gross contributory negligence (reduction by 100 per cent) or '*faute inexcusable*' on the part of the claimant (e.g., Denmark and France). Having regard to the EU-23 statutory provisions, the strict liability clause can be enforced against (1) the policyholder, (2) the driver, or (3) the owner of the vehicle (not necessarily the policyholder). Consequently, MSs enforcing liability regime against the CV driver (i.e., Romania, Ireland, Malta, Cyprus, Luxembourg, Belgium, Portugal, Hungary, Czech Republic, Slovakia, Slovenia); against the CV owner/keeper (i.e., Austria, Germany, Denmark, Finland, Sweden, the Netherlands, Italy, Spain, Poland, Bulgaria, Lithuania, Latvia, Estonia, France); while the dual liability regime against both the CV owner and the driver is enforced in Greece and Croatia. In the same vein, certain MSs impose the reversed burden of proof or enforce the shifts in the burden of proof whenever reasonable. Given the symbiosis of the statutory provisions and the judicial practice, the concepts 'in traffic' (e.g., Sweden) and 'involvement' (e.g., France and Belgium) implicate the investigation and the assessment processes in the most evident manner, i.e., the grounds for liability, the substantiation of the claim, the evidence base, and therefore have a substantial effect on the cross-border victims. Given the different admissible evidence (depending on the state), cross-border victims face certain complexities in substantiating a claim for compensation, with the result that specific evidence of liability is deemed inappropriate in certain MSs (e.g., CCTV data). The examined discrepancies in the statutory provisions and the judicial practice among the MSs constitute a divergent treatment of both the defendant and the claimant in comparable circumstances of the case depending on the jurisdiction governing the settlement, and therefore produce an adverse effect on the cross-border victims.

Having regard to the extensive analysis provided above, it is possible to conclude that although all (strict liability) MSs have integrated the principle of *restitutio in integrum* within the domestic compensation systems, the realisation of the above principle, through an award of a certain quantum of compensation for both pecuniary and non-pecuniary damage, (given comparable circumstances of the case and gravity of the damage) extensively varies among the states (from EUR 3,200 to EUR 270,000). Even though the compensation systems remain broadly resembling in part of compensation for pecuniary damage (except for pure mathematical formulas, e.g., the Balthazar formula), i.e., including the national guidelines, instructions and coefficients for disability and incapacity for work, at this juncture, both the index of pain allowance and the positions in compensation for intangible damage, i.e., heads of claim (e.g., Loss of chance of not

having lived longer), are significantly distinct. Having regard to the analysed judicial practice of the MSs, the pain allowance can widely vary not just among the EU members, but also within the same jurisdiction. Thus, there is no ground rule with regard to the compensation levels in the EU.[507] Although most of the MSs determine the amount of compensation for psychological damage in tight connection with the physical injury, i.e., the gravity of injury, the duration of treatment, the perspectives of healing and the national coefficients given both the disability and the incapacity for work, the ultimate quantum for intangible damage compensation depends on the discretion of the national courts on the merits.[508] Even though certain examples of the judicial practice of the EU neighbouring countries are taken into consideration by the national courts, as a rule, the domestic case law is viewed as a restrictive fulcrum when determining the amount of compensation.

Even though the compensation mechanism in relation to cross-border road accidents is harmonised at the European Union level through the MID, the compensation systems remain divergent. Following the CJEU judgment in *Haasová*, it should be concluded that as long as there is no explicit obligation under the MID to cover non-pecuniary damage for the victim of a road traffic accident, the MSs may either impose or disregard the right to compensation for intangible damage. The significance of the divergence in compensation systems can produce a disadvantageous and discriminative effect on the cross-border victims, i.e., the index of pain allowance, paradigms on presumptions and the balance of probabilities, assessment of concurrent consequences, distinct treatment of indirect victims and positions in compensation for intangible damage. Given that non-pecuniary damage does not possess any direct or sequential economic translation, at this juncture, the feasibility to approximate the laws of the MSs in respect of the compensation system having regard to the intangible damage is relatively low. At this stage, the rigid approximation of the compensation system at the European Union level would require most of the MSs to derogate from the principal course set out at the national level; albeit, seeking to ensure the high level of cross-border victims protection at the European Union level, it is advisable to reconsider certain essential elements in the compensation system, i.e., the rights of the indirect victims and the minimum positions of compensation for non-pecuniary damage.

[507] Jean Albert. Report. Compensation of victims of cross-border road traffic accidents in the EU: comparisons of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. ETD/2007/IM/H2/116, pp. 1–360 (p. 53).
[508] *Ibid.*

2. INTELLIGENT CONNECTED VEHICLES (ICVs): RTAs INVOLVING ICVs CIVIL LIABILITY REGULATION

The autonomous flight control system (autopilot) was introduced at the beginning of the twentieth century;[509] however, the pilots continue to perform both take-offs and landings without the automatic piloting system's full autonomy. Assuming no latent malfunction of the aircraft, the pilot remains a subject responsible for the aircraft's operation, the passengers' and crew members' safety, and the decisions made while in the air. At this juncture, the society claims to be ready for applying the 'autopilot' in the on-ground vehicular systems (with forecasts of the completion of market penetration by 2060 with almost all the vehicles sold driverless);[510] thus, ICVs reflect the nearest future worldwide traffic flow. The shift from the CVs to the ICVs is gradual (based on the 'evolutionary path' principle, increasing the level of automation as the technology advances),[511] i.e., from Level 0, or 'no driving automation', to Level 5, or 'full driving automation'.[512] Thus, the EU traffic will face a transition period where the safe and efficient coexistence of CVs and ICVs should be preserved,[513] certainly given the inherent hazard as demonstrated through the fatal incidents, e.g., the self-driving Tesla crash.[514] The European CEN TC278 Road Transport and Traffic Telematics committee set the Intelligent Transport Systems (ITS) guidelines and standards[515] enabling the deployment of ICVs in the EU given the Directive 2010/40/EU[516] at

[509] Brian L. Stevens, Frank L. Lewis. *Aircraft Control and Simulation: 2nd Edition*. (2003), John Wiley & Sons, Inc. ISBN 0-471-37145-9, pp. 1–655 (p. 255).

[510] Adriano Alessandrini, Andrea Campagna, Paolo Delle Site, Francesco Filippi, Luca Persia. Automated Vehicles and the Rethinking of Mobility and Cities. *Transportation Research Procedia* 5 (2015), pp. 145–160 (p. 150).

[511] Pierluigi Coppola, Fulvio Silvestri. Autonomous vehicles and future mobility solutions. *Autonomous Vehicles and Future Mobility*. Elsevier (2019), pp. 1–15 (p. 9).

[512] SAE (Society of Automotive Engineers) International provides a taxonomy with precise determinations for six levels of driving automation (from level 0 to level 5): Level 0 – No Driving Automation, the driver is required to operate the vehicle and make entirely all decisions alone, even when enhanced by active safety systems; Level 1 – Driver Assistance, the driver performs all driving tasks independently, albeit sharing of the lateral or longitudinal motion control subtasks is possible between the driver and automation system; Level 2 – Partial Driving Automation, the driver is required to be in control of operational tasks, albeit sharing of both lateral and longitudinal motion control subtasks is allowed between the driver and automation system; Level 3 – Conditional Driving Automation, the operation is performed by an automatic driving system, albeit the driver is required to respond in the event of the Dynamic Driving Task (DDT) operation-system failures, or any other failures directly relating to the performance; Level 4 – High Driving Automation, the operation is performed by an automatic driving system without any reasonable expectation that a user will respond to a request to intervene; Level 5 – Full Driving Automation, the sustained and unconditional performance by an automatic driving system without any expectation that a user will respond to a request to intervene. Society of Automotive Engineers (SAE). *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*. Standard SAE J3016-2018. 2018.

[513] Meng Lu, Robbin Blokpoel, Julian Schindler, Sven Maerivoet, Evangelos Mintsis. ICT Infrastructure for Cooperative, Connected and Automated Transport in Transition Areas. *Proceedings of 7th Transport Research Arena TRA* 2018, April 16–19, 2018, Vienna, Austria, pp. 1–10 (p. 2).

[514] Victoria A. Banks, Katherine L. Plant, Neville A. Stanton. Driver error or designer error: Using the Perceptual Cycle Model to explore the circumstances surrounding the fatal Tesla crash on 7th May 2016. *Elsevier: Safety Science* (2018), Vol. 108, pp. 278–285 (p. 279).

[515] Jaroslav Machan, Christian Laugier. Intelligent Vehicles as an Integral Part of Intelligent Transport Systems. *European Research Consortium for Informatics and Mathematics (ECRIM)* 2013, No. 94, pp. 6–7 (p. 6).

[516] 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. OJ L 207.

deploying ITS in the field of the road transport. To enable automated driving on higher levels, the Information and Communications Technology (ICT) infrastructure should be developed and implemented beforehand, where the core components towards CAD are the vehicles, the infrastructure, i.e., sensors and processing units, and IT services.[517] The communication may involve the following: (1) between/among the ICVs (vehicle-to-vehicle or V2V); (2) between/among the ICVs and Road Side Units (RSUs), Traffic Management Centres (TMCs)[518] (also referred as to Traffic Operations Centres (TOCs)),[519] connected sensors, connected traffic lights and other heterogeneous technologies[520] (vehicle-to-infrastructure or V2I); and (3) between the ICVs and supporting technologies, e.g., Cloud and multi-access edge computing (MEC) (vehicle-to-technologies or V2X) (V2X also referred as to vehicle-to-everything).[521]

The Supporting Services as an integral part of the ICT4CART[522] architecture consists of the functional blocks enabling CAD in Europe, i.e., (1) the Traffic Control Centre (TCC) (also referred as to the Transportation Management Centre (TMC))[523] ensures the availability of the relevant data, e.g., speed limits, construction zones and weather conditions, while (2) the Map Services provide the relevant data on the traffic lanes, the location of pedestrian crossings and other relevant traffic data.[524] To enable ICV localisation, which in the conditions of high-density traffic flow requires precise vehicle positioning within the range of a few centimetres,[525] the Location Correction Data transmits correction data to the Global Navigation Satellite Systems

[517] Michael Buchholza, Jan Strohbecka, Anna-Maria Adaktylosb, Friedrich Voglb, Gottfried Allmerb, Sergio Cabrero Barrosc, Yassine Lassouedc, Markus Wimmerd, Birger Hättyd, Guillemette Massote, Christophe Ponchele, Maxime Bretine, Vasilis Sourlasf, Angelos Amditisf. Enabling automated driving by ICT infrastructure: A reference architecture. *Proceedings of 8th Transport Research Arena TRA* 2020, April 27–30, 2020, Helsinki, Finland, pp. 1–10 (p. 4).

[518] Sakib M. Khan, Mizanur Rahman, Amy Apon and Mashrur Chowdhury. Characteristics of Intelligent Transportation Systems and its Relationship with Data Analytics. *Analytics for Intelligent Transportation Systems*, Chapter 1, Elsevier (2017), pp. 1–29 (p. 6).

[519] Farook Sattar, Fakhri Karray, Mohamed S. Kamel, Lobna Nassar, Keyvan Golestan. Recent Advances on Context-Awareness and Data/Information Fusion in ITS. *International Journal of Intelligent Transportation Systems Research* 14, (2016), pp. 1–19 (p. 7).

[520] Panos Papadimitratos, Arnaud de La Fortelle, Knut Evenssen, Roberto Brignolo, Stefano Cosenza. Vehicular Communication Systems: Enabling Technologies, Applications, and Future Outlook on Intelligent Transportation. *IEEE Communications Magazine* (2009), Vol. 47, No. 11, pp. 84–95 (p. 84).

[521] Muhammad Azmat, Sebastian Kummer, Lara Trigueiro Moura, Federico Di Gennaro, Rene Moser. Future Outlook of Highway Operations with Implementation of Innovative Technologies Like AV, CV, IoT and Big Data. *Multidisciplinary Digital Publishing Institute (MDPI)*, Logistics (2019) 3, No. 15, pp. 1–20 (p. 4).

[522] ICT4CART is a project funded by the European Union's *Horizon 2020* research and innovation programme which aims at designing, implementing and testing in real-life conditions a versatile ICT infrastructure.

[523] The Transportation Management Centre (TMC) is the centre of traffic management system where information about the transportation network is collected and combined with other operational and control data with the objective to manage the transport network. The TMC should not be viewed as a technology *per se*, but rather as a centre that operates the relevant communications equipment (partially automatically, partially through the personnel from different agencies). Elizabeth Deakin. *Intelligent Transportation Systems: A Compendium of Technology Summaries*. Published: University of California Transportation Center, UC Berkeley (2003), pp. 1–83 (p. 28).

[524] *Ibid.*

[525] Rafael Vivacqua, Raquel Vassallo, Felipe Martins. A Low Cost Sensors Approach for Accurate Vehicle Localization and Autonomous Driving Application. *Multidisciplinary Digital Publishing Institute (MDPI)*, Sensors 17, No. 10: 2359, pp. 1–33 (p. 29), (p. 30).

(GNSS) either through on-ground stations or network channels.[526] Whilst the above-indicated modules are related to the cooperative data exchange, the onboard ICV Sensors (e.g., radar, Light Detection and Ranging (LiDAR), camera, and infrared),[527] or the onboard equipment (OBE)[528] are viewed as a principal source of information which enables ICV to base its decisions for automatic driving control (the full autonomy of the automatic driving system).

Under the case scenario when the master ICV platoon (also referred as to Platooning: Inter-Vehicle Coordination)[529] receives an incident notification through an RSU (RSU transmits ICV-relevant data under the real-time control and management of the central unit)[530] given V2I communication, the master ICV communicates the received notification of the hazardous event to other ICVs by using V2V communication.[531] At this juncture, the uncertainty in the architecture of V2V and V2I exists, i.e., V2V communication requires reducing channel congestions to prove its reliability and stability given the high density of the traffic flow; in contrast, V2I communication (although more stable and reliable than V2V) incurs a longer transmission delay than V2V communication.[532] On the other hand, V2V communication gives rise to new in-traffic hazards, i.e., due to connectivity and potential faults (in data transmission) from a single (master) ICV, multiple vehicles can be affected at once.[533] Contemporaneously, potential glitches may arise in V2I communication, e.g., connected traffic lights, whereby manufacturer-specific communication protocols[534] apply.

The current large-scale testing conditions (e.g., 5G-Mobix), as well as the projects carrying out the Field Operational Tests (FOTs)[535] in several MSs involving cross-border traffic require to

[526] Michael Buchholza, Jan Strohbecka, Anna-Maria Adaktylosb <…>. (p. 5).

[527] Ankur Sarker, Haiying Shen, Mizanur Rahman, Mashrur Chowdhury, Kakan Dey, Fangjian Li, Yue Wang, Husnu S. Narman. A Review of Sensing and Communication, Human Factors, and Controller Aspects for Information-Aware Connected and Automated Vehicles. *IEEE Transactions on Intelligent Transportation Systems* (2019), Vol. 21, No. 1, pp. 7–29 (p. 8).

[528] Pushkin Kachroo, Neveen Shlayan, Sumit Roy, Michael Zhang. High-Performance Vehicle Streams: Communication and Control Architecture. *IEEE Transactions on Vehicular Technology*, (2014) Vol. 63, No. 8, pp. 3560–3568 (p. 3560).

[529] Andrew Marinik, Richard Bishop, Vikki Fitchett, Justin F. Morgan, Tammy E. Trimble, Myra Blanco. *Human factors evaluation of level 2 and level 3 automated driving concepts: Concepts of operation*. (2014) (Report No. DOT HS 812 044). Washington, DC: National Highway Traffic Safety Administration, pp. 1–299 (p. 29).

[530] Jorge Godoy, Vicente Milanés, Joshué Pérez, Jorge Villagrá, Enrique Onieva. An auxiliary V2I network for road transport and dynamic environments. *Transportation Research Part C: Emerging Technologies* (2013), Vol. 37, pp. 145–156 (p. 148).

[531] Ankur Sarker, Haiying Shen, Mizanur Rahman, Mashrur Chowdhury <…>. (p. 8).

[532] *Ibid*.

[533] Christoph Schmittner, Zhendong Ma, Thomas Gruber. Standardization Challenges for Safety and Security of Connected, Automated and Intelligent Vehicles. *2014 International Conference on Connected Vehicles and Expo (ICCVE)*, Vienna, 2014, pp. 941–942 (p. 941).

[534] Zsolt Szalay, Tamás Tettamanti, Domokos Esztergár-Kiss, István Varga, Cesare Bartolini. Development of a Test Track for Driverless Cars: Vehicle Design, Track Configuration, and Liability Considerations. *Periodica Polytechnica Transportation Engineering* (2018), Vol. 46, Issue 1, pp. 29–35 (p. 33).

[535] Field Operational Tests (FOTs) is defined as a research aimed at evaluating the functions under normal operating conditions in road traffic environments in order to identify real-world effects and benefits. FOT-Net (Field Operational Test Networking and Methodology Promotion) and CARTRE (Coordination of Automated Road Transport Deployment for Europe). FESTA Handbook: Version 7 (2018), pp. 1–213 (p. 24).

consider the legal implications in all the concerned countries. Thus, essential divergences in domestic laws make it inevitable to consult legal experts at every MS affected by the FOTs,[536] thus decelerating the deployment of CAD in the EU. Besides, civil liability issues, i.e., the distribution of the legal culpabilities, reflect a growing concern regarding the commercialisation goals of ICVs and their acceptance by users.[537]

Given the above analysis, which explains the essential ICVs state-in-the-art, it is feasible to identify the allegedly involved agents, and therefore determine the possible distribution of the legal culpabilities in the case of RTA. To assign the liability, it is required to identify the cause[538] of an RTA; thus, the dynamics[539] of the incident is viewed as being of extraordinary importance, i.e., RTA dynamics can be facilitated from the recorded onboard data, the so-called 'black box' (BB),[540] or Event Data Recorders (EDRs).[541] Having regard to the explicit RTA causation, it is feasible to invoke the following subjects to liability:

(1) Human driver at Level 0–3 Automation
(2) ICV operator[542] at Level 4–5 Automation
(3) ICV as a 'product' (ICV.p) (with reference to the producer), including sophisticated hardware, software and OBEs failures as an integral part of ICV
(4) Road equipment (with reference to empowered institutions), e.g., RSUs, TCC failures, missing signs
(5) Network, i.e., VANETs or cellular network failure (with reference to empowered network providers)
(6) Third parties, e.g., local institution (e.g., *Rijks-waterstaat* in charge of the A15 in the Netherlands) given inadequate road conditions (e.g., road surface), the driver of the CV in the mixed traffic flow conditions, non-motorised road users, animals
(7) **force majeure* as a cause of an RTA, joint liability and contributory negligence

[536] FOT-Net (Field Operational Test Networking and Methodology Promotion) and CARTRE (Coordination of Automated Road Transport Deployment for Europe). FESTA Handbook: Version 7 (2018), pp. 1–213 (p. 29).
[537] Nacer Eddine Bezai, Benachir Medjdoub, Amin Al-Habaibeh, Moulay Larbi Chalal, Fodil Fadli. Future cities and autonomous vehicles: analysis of the barriers to full adoption. *Energy and Built Environment* (2021), Vol. 2, Issue 1, pp. 65–81 (p. 73).
[538] Giampiero Lupo. Risky Artificial Intelligence: The Role of Incidents in the Path to AI Regulation. *Law, Technology and Humans* 5, No. 1 (2023), pp. 133–152 (p. 141).
[539] FOT-Net and CARTRE <…>. (p. 29).
[540] Clemens Kaufmann, Christine Turetschek. Connecting Black Box Data and Driving Behaviour Observation for Better Understanding of Driving Behaviour. *Proceedings of European Conference on Human Centred Design for Intelligent Transport Systems* (2008), HUMANIST publications: Lyon, France, pp. 101–110 (p. 102); Sadie Whittam. Mind the compensation gap: towards a new European regime addressing civil liability in the age of AI. *International Journal of Law and Information Technology*, 2022, 30, pp. 249–265 (p. 251).
[541] Anastas Punev. Autonomous Vehicles: The Need for a Separate European Legal Framework. *European View* 2020, Vol. 19, No. 1, pp. 95–102 (p. 98).
[542] For the purposes of clarity, the term 'ICV operator' shall be used to refer to both the ICV user and the ICV driver; albeit, if a distinction is required between an ICV user and an ICV driver in terms of independent responsibilities and legal consequences, either the 'ICV user' or the 'ICV driver' shall be specified.

2.1. ICVs Civil Liability Regulation at the European Union Level

2.1.1. Options on regulation at the European Union level

The introduction of the ICVs in the EU will have its unquestionable effect within the RTAs civil liability (tort law), PL, and insurance law. Given the initiatives launched by the European Commission, it is believed that the EU law-making institutions view the soft approach, i.e., interpretative guidance, as a sufficient tool towards the smooth regulation of CAD at the European Union level.[543] Having regard to the potential and foreseeable harmful consequences that could arise from the use of ICVs in the EU, the academia[544] is questioning the adequacy of the currently existing legal instruments regarding the distribution of the liability in ICV-related cases. Against this background, Sub-section 2.1.1.1. provides an in-depth analysis of the applicability of the currently existing EU legal tools to ICVs considering the results obtained in Sub-sections 1.1. to 1.2. given the necessary alterations corresponding to the 'minimum clause' ICV regulation approach at the European Union level. The 'minimum clause' regulation should be seen as a set of the minimum rules with regard to the ICVs civil liability regulation, i.e., excluding a broader range of rules, such as the rules relating to the heads of claim and the unified liability regime. The 'minimum clause' regulation would allow MSs to independently adopt certain regulatory mechanisms and develop domestic standpoints regarding the liability model. Herewith, Sub-section 2.1.1.2. focuses, in particular, on the symbiosis of the PL and RTA regulations (given the principal convergence and divergence in MSs RTA civil liability regulation applicable to CVs analysed in Sub-section 1.3.).

2.1.1.1. The PLD: 'minimum clause' approach

For more than thirty years, the strict liability regime concerning the harm caused by the defective product has proved to be an effective tool in the field of the EU consumer protection system; whereby, the harmonisation of the strict liability rules served as an instrument for the producers to ensure smooth market penetration with their products.[545] Although all MSs have implemented the maximum (full) harmonisation clause PLD, the former continue to impose alterations within their domestic compensation mechanisms as complementary tools to those established under the PLD.[546] Thence, there is the potential to protect the victims of defective products at different levels depending on the jurisdiction in which the case falls.

A consumer who has suffered losses from a defective product is entitled to a claim under the PLD for those damages, but not for the loss of the defective product itself. In accordance with

[543] Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125–162 (p. 128).
[544] Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125–162 (p. 160).
[545] Expert Group on Liability and New Technologies – New Technologies Formation. Liability for Artificial Intelligence and Other Emerging Technologies. *Publication Office of the European Union*: Brussels, 2019, pp. 1–65 (p. 27).
[546] *Ibid*. (p. 27).

the Guiding Principles for Updating the Product Liability Directive for the Digital Age,[547] either a new insurance/compensation scheme should be established, or the PLD should be reformed. It is argued that the definition of a 'product' under PLD is not sufficient in the Digital Era; 'product' should cover "the combination of goods with digital elements and digital content with digital services supplied"[548] according to the definition indicated within the Digital Content and Services Directive.[549] However, this concern is expected to disappear with amendments to the PLD. In accordance with Proposal 2022/0302 (COD) for a Directive on liability for defective products (hereinafter – Proposal 2022/0302),[550] a 'product' must include both digital manufacturing files and software.[551]

Although the PLD serves an essential preventive effect[552] to the producers of the ICVs by reasonably encouraging them to take the necessary steps to avoid defects in their products, the PLD current wording puts under question the sustainability of the optimal coverage to the victims in ICVs-related incidents. The PLD reform should not be seen as to exclude the producer's liability given the new digital technologies and robotics, but to verify the adequacy of the PLD to provide for sufficient incentives.[553] For this reason, it is required to scrutinise the optimality of the PLD in application to ICVs having regard to the available technical data provided in the above Sub-section 2.1.

The Shift in the Apportionment of Liability

The sharp trend of the expecting tendency for the full shifting from CVs to the ICVs designates a shift in the legal culpability from the human driver to the producer or the ICV itself; herewith, the shift in the legal culpability is likely to undermine the conventional social apportionment of blame in RTAs.[554] Having in mind the full automation of the ICVs (without the possibility to regain control over the operational process)[555] and given that the operator's application of the ICV system was proper, it is viewed legitimately unreasonable to argue that the

[547] Christian Twigg-Flesner in consultation with ELI Members and adopted by the ELI Council. European Law Institute. Guiding Principles for Updating the Product Liability Directive for the Digital Age. Vienna, 2021, pp. 1–12.
[548] *Ibid*. (p. 6).
[549] Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services (Text with EEA relevance). OJ L 136.
[550] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD).
[551] *Ibid*. Article 4(1).
[552] Gerhard Wagner. Produkthaftung für autonome Systeme. *Archiv für die civilistische Praxis (AcP)* 217.Band, Heft (2017), pp. 707–765 (p. 726).
[553] Erica Palmerini, Andrea Bertolini. Liability and Risk Management in Robotics. In Reiner Schulze, Dirk Staudenmayer (Eds.). *Digital Revolution: Challenges for Contract Law in Practice*. First Edition 2016, pp. 225–260 (p. 253).
[554] Jameson M. Wetmore. Redefining Risks and Redistributing Responsibilities: Building Networks to Increase Automobile Safety. *Science, Technology and Human Values*. Vol. 29, No. 3, 2004, pp. 377–405 (pp. 384–386).
[555] Regaining control over the operational process should be viewed as an ability to switch the self-driving function off and to take control over the vehicle. Maria Lubomira Kubica. Autonomous Vehicles and Liability Law. *American Journal of Comparative Law* 70, No. Supplement 1 (2022), pp. i39–i69 (p. i50).

ICV operator should be deemed at fault.[556] The legal culpability should be attributed depending on the authority over decision making (e.g., CV under human control and ICV operation without supervision).[557] On the contrary, it might be legitimate to assess the proportionality in the distribution of the liability between the producer (or the one operating the parameters and thus owning the control of the behaviour of ICV)[558] and the user given the specific duties attributed to a user of ICV, i.e., the proactive monitoring of the road traffic, or the observation of hazard notifications. The above option is deemed relevant on the lower levels (Level 1 – Level 3) of ICVs automation. Albeit, on the higher levels (Level 4 – Level 5) of automation, given the claim of the manufacturers that the system is not expecting the intervention of a user at any time (if not even prohibiting it for the safety issues), it would be unreasonable to envisage the apportionment of legal culpability to a user for not monitoring the road traffic situation or ignoring the hazard notifications. Contemporaneously, on the higher ICVs automation levels, the ICV operators will encounter the necessity to obey the warnings as well as the instructions given the optimal product information. The obligation to obey the product information at higher levels of automation justifies the obligation to proactively monitor the traffic and respond to hazard alerts at lower levels of automation. Therefore, given the *duty of obedience*, the assignment of liability to both the producer and the user is feasible on lower and higher ICVs automation levels.

Regarding both the lower and the higher ICVs automation levels, the producers may be held liable under multiple liability theories, given that ICVs users were either not informed, or were not appropriately warned about the system's capabilities.[559] Product information, i.e., warnings and instructions, analysed in Sub-section 1.1.1. above, is viewed of extraordinary importance[560] in the apportionment of the liability between the producer and the ICV operator.[561] To ensure that the product information provided to ICVs users is optimal, the manufacturer must specify (1) the purpose of the ICV, (2) the system structure and operating guidelines, (3) the monitoring duties, (4) the required steps in the event of a system failure, and (5) the system maintenance required in the manual.[562] The users' acknowledgement (before the ICV system is activated) that they understand the way the system works, e.g., its limitations and hazard notifications, is required; albeit, given the misuse of the system,[563] the shift in the apportionment

[556] James M. Anderson, Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, and Tobi A. Oluwatola. *Autonomous Vehicle Technology: A Guide for Policymakers*. Santa Monica, CA: RAND Corporation, 2016, pp.1–214 (p. 116).
[557] Béla Csitei. Self-driving cars and criminal liability. *Debreceni Jogi Műhely*, 2020. Évi (XVII. Évfolyam) 3–4. Szám (2020. December 30.), pp. 34–46 (p. 39).
[558] Elena Kirillova, Oleg Blinkov, Natalija Ogneva, Aleksey Vrazhnov and Natal'ja Sergeeva. Artificial Intelligence as a New Category of Civil Law. *Journal of Advanced Research in Law and Economics (JARLE)* 11, No. 1 (Spring 2020), pp. 91–98 (p. 97).
[559] *Ibid*. (p. 127), (p. 128).
[560] Martin Ebers. Autonomes Fahren: Produkt und Produzentenhaftung. In Bernd H. Oppermann, Jutta Stender-Vorwachs (Eds.). *Autonomes Fahren: Rechtsfolgen, Rechtsprobleme, technische Grundlagen*. C.H.Beck 2017, pp. 93–125 (p. 111).
[561] Jake Feiler. The Artificially Intelligent Trolley Problem: Understanding Our Criminal Law Gaps in a Robot Driven World. *Hastings Science and Technology Law Journal* 14, No. 1 (2023), pp. 1–34 (p. 21).
[562] *Ibid*. (p. 115).
[563] The misuse of the system, its elements and types, shall be analysed in detail below in Sub-section 2.1.2.1.

of the liability from the producer to the user, in the absence of the optimal product information should be eliminated. In accordance with Proposal 2022/0302, a shared liability between a producer and an injured party is allowed when the damage is caused both by the defectiveness of the product and by the fault of the injured person.[564] However, it is not clear who assesses whether both the defectiveness of the product and the fault of the victim contributed to the damage, in what proportion the fault should be split, and whether the fault of the victim would lead to the same damage without the presence of a defect in the product.

In the distribution of liability between the manufacturer and the user of ICV, the reasonable expectation test plays a crucial role. Here, the reasonableness of the consumer expectations is vague, given that ICVs aim to decrease the RTAs rate. ICVs users may reasonably expect ICVs to perform more efficiently than the human drivers at the CVs' steering wheel.[565] Academia argues that the ICV participating in the RTA is considered a system failure, according to which, the ICV could not prevent an accident with other vehicles or obstacles.[566] Furthermore, the user of an ICV is likely to collate the overall performance of the ICV with his or her driving skills instead of the average human driver; thus, the expectations of such a user will be *ex ante* higher compared to the average driver. Besides, with the growth of technology advancement, there is an expected proportional growth in the reasonable safety expectations of the ICVs users.[567] Under Proposal 2022/0302, the reasonable expectation test remains in place, albeit without further clarification regarding its assessment.[568] The analysis provided in Sub-section 1.1.1. demonstrates that the application of the reasonable expectation test in PL disputes remains at the discretion of the national courts and may vary depending on the jurisdiction at issue. Given the absence of the optimal guidance to applying the reasonable expectation test in ICVs-related cases, the ultimate divergence in the interpretation between the domestic courts of the MSs is expected to increase.

Defences to PL Action

[564] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 12(2).
[565] Martin Ebers. Autonomes Fahren: Produkt und Produzentenhaftung. In Bernd H. Oppermann, Jutta Stender-Vorwachs (Eds.). *Autonomes Fahren: Rechtsfolgen, Rechtsprobleme, technische Grundlagen*. C.H.Beck 2017, pp. 93–125 (p. 98).
[566] Araz Taeihagh, Hazel Si Min Lim. Governing autonomous vehicles: emerging responses for safety, liability, privacy, cybersecurity, and industry risks. *Transport Reviews* (2019), Vol. 39, Issue 1, pp. 103–128 (p. 107).
[567] Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125–162 (p. 145).
[568] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 6(1) (h).

The defences, such as "absence of the defect at the momentum of product release,"[569] the "state of scientific and technical knowledge"[570] (also referred to as the *state-of-the-art defence*)[571] and the private consumption clause[572] allow the manufacturer to avoid the liability given the type of potential and foreseeable ICVs-PL-related incidents, and thus, given the opacity of the ICVs, they are viewed as major obstacles towards unhindered protection of the victims. Considering the first defence, it was concluded by the Expert Group on Liability and New Technologies[573] that the emerging digital technologies could not be viewed completed upon the release since they undergo continuous upgrades, e.g., periodic software updates, and interact continuously and frequently with other systems and/or data sources.[574] Therefore, such technologies remain vital and open for subsequent input even after they were put into circulation; hence, this phenomenon shifts the conventional notion of a released completed product to the product requiring continuous services.[575] Although such a defence as the "absence of the defect at the time of product release" will be inapplicable to ICVs by its scope (given the necessary pro-active alterations to PLD), there is a lack of imperative action directed at the manufacturer, i.e., the need to maintain the product after its release. For this reason, the notion of *monitoring duty* is required at the European Union level, given the specific ICV architecture and its utilisation. The monitoring duty vis-à-vis to the manufacturer does not represent a precedent in the domestic jurisdictions of the MSs. In *Evans v Triplex Safety Glass Co Ltd*,[576] it was held that the manufacturer's monitoring duty concerning the released product is continuous. In contrast, in *Carroll v Fearon*,[577] it was found that, in order to prevent any danger stemming from the product, the manufacturer must monitor its product after the release constantly, and wherever necessary, issue post-release updates to the product information, i.e., warnings and instructions. Under Proposal 2022/0302, it remains that a producer can be exempted from the liability if the defectiveness that caused the damage did not exist when the product was placed on the market.[578] Although not explicitly stated in Article 10 of Proposal 2022/0302, the Explanatory Memorandum mentions that self-learning features have been added to the non-exhaustive list of factors that courts must take into account when assessing defects.[579]

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[569] Article 7 "[…] (b) that, having regard to the circumstances, it is probable that the defect which caused the damage did not exist at the time when the product was put into circulation by him or that this defect came into being afterwards […]." Council Directive 85/374/EEC <…>.

[570] *Ibid*. "[…] (e) that the state of scientific and technical knowledge at the time when he put the product into circulation was not such as to enable the existence of the defect to be discovered […]."

[571] Corrado Druetta. Liability Issues in Advanced Robotics: An Introduction for European in-House Counsels. *International In-House Counsel Journal* (2017), Vol. 11, No. 41, pp. 1–12 (p. 5)

[572] Article 9. Council Directive 85/374/EEC <…>.

[573] The Expert Group on Liability and New Technologies is an independent expert group which was set up by the European Commission.

[574] Expert Group on Liability and New Technologies – New Technologies Formation. Liability for Artificial Intelligence and Other Emerging Technologies. *Publication Office of the European Union: Brussels*, 2019, pp. 1–65 (p. 33).

[575] *Ibid*. (p. 33).

[576] *Evans v Triplex Safety Glass Co Ltd* (1936), 1 All ER 283.

[577] *Carroll v Fearon* (1999), E.C.C. 73.

[578] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 10(1) (c).

[579] *Ibid*.

In reading Proposal 2022/0302, it appears that the national courts have discretion in assessing the exemption clause under Article 10(1) (c).

MSs may opt-out from the state-of-the-art defence application;[580] albeit, only three[581] jurisdictions have partially eliminated its application, and only two[582] MSs, specifically, Finland and Luxembourg, have completely abolished the state-of-the-art defence. The state-of-the-art defence can be justified from the standard EU perspective to promote and encourage Research and Development (R&D) and technological advancement in the EU. However, such a defence is seen as ambiguous in its scope, and that raises an issue as to whether the justification applies solely to the absolute non-discovery, or also in cases where the detection of the defect was impossible; the second scenario is deemed vague *per se* since it would require the fault assessment, which in theory was abolished by the PLD.[583] In *Commission v United Kingdom* (Sub-section 1.1.1.), the CJEU could not identify the specific elements related to the state-of-the-art defence indicating that the most advanced scientific knowledge level should be considered. In accordance with Proposal 2022/0302, the state-of-the-art defence remains in place.[584] Although, according to the Explanatory Memorandum, machine-learning should be considered in the event of a dispute, given the potential self-evolving capabilities of ICV, the state-of-the-art defence is still considered to be unfavourable to the victim. The potential of the operating system's sophisticated hardware and software components to cause an RTA constitutes the major divergence between the CVs and ICVs.[585] Machine-learning[586] algorithms denote the new area for legitimate concerns since those are proactively performing without the manufacturer's intervention. Machine-learning algorithms adopt autonomous decisions that potentially can cause a harmful event, e.g., an RTA, although the manufacturer has thoroughly exercised all the required safety duties.[587] Academia argues that the manufacturer should not be exempted from the liability at any time. Even if the most advanced scientific knowledge level when the ICV was released could not detect possible wrongs in the machine-learning algorithms' behaviour, it should trigger the manufacturer's strict liability.[588] The strict liability path is viewed as reasonably acceptable and proportional concerning the manufacturers' exhaustive knowledge vis-à-vis the machine-learning algorithms and software in general compared to the average consumer. However, the nature of such preoccupation concerning

[580] Article 15 (b). Council Directive 85/374/EEC <…>.
[581] Spain, Hungary and France. Report from the Commission. COM (2018) 246 final <…>. (p. 4).
[582] Finland and Luxembourg. *Ibid*. (p. 4).
[583] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 141).
[584] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 10(1) (e).
[585] Mark A. Geistfeld. The Regulatory Sweet Spot for Autonomous Vehicles. *Wake Forest Law Review* (2018), Vol. 53, Issue 2, pp. 337–364 (p. 354).
[586] The ability of the ICVs systems to automatically learn, decide, predict, adapt and react to changes, improving from experience, without being explicitly programmed, i.e., including reinforcement, supervised, semi-supervised, unsupervised. Horizon 2020 Commission Expert Group to advise on specific ethical issues raised by driverless mobility (E03659). Ethics of Connected and Automated Vehicles: recommendations on road safety, privacy, fairness, explainability and responsibility. 2020. *Publication Office of the European Union*: Luxembourg, pp. 1–78 (p. 13).
[587] Antonio Davola. A Model for Tort Liability in a World of Driverless Cars: Establishing a Framework for the Upcoming Technology. *Idaho Law Review* (2018), Vol. 54, No. 3, pp. 591–614 (p. 601).
[588] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 142).

the state-of-the-art defence is paradoxical, given the rapid growth in the modern technological advancement. Notwithstanding, in order to minimise the negative impact on the victims, it is required to maintain a balance between the defences to the PL action and the comparatively weaker position of the average consumer.

Distribution of Responsibilities between New Agents

Sub-section 2.1. revealed new agents potentially involved in ICVs-related incidents. An incident should be viewed as a broader concept compared to an accident, i.e., RTA; herewith, incidents may involve numerous outside ICVs agents that do not necessarily correspond to an RTA, but to another harmful event, i.e., data leakage (data privacy, data leak in machine-learning), malware attacks, or hijacking. Malware can invade an ICVs system through multiple inputs given V2V, V2I and V2X communications. The potential drawbacks in the design and operation of OBEs enabling ICVs communication can be subjugated to malware, and thus, cause an incident.[589] Another vulnerability of ICVs is the hijacking or gaining (partial or complete) control of a vehicle,[590] e.g., in 2013, such unauthorised gaining control over a Jeep Cherokee paralysed it on the highway.[591] The EU keep tackling ICVs cybersecurity issues through multiple launched projects and research committed by the EU Agency for Cybersecurity (ENISA) in collaboration with the Joint Research Centre (JRC) (2016–2021).[592] Despite the opacity and complexity of the ICVs cybersecurity, it should be accentuated that the manufacturer's protocols (defences) against cyber-attacks should be viewed as an integral and inseparable part of the ICV.p for PLD. Therefore, an incident caused by the lack of defences or infirmity of the existing protocols against cyber-attacks corresponds to the product's defect. Under Proposal 2022/0302, the product safety requirements, including safety-relevant cybersecurity requirements, are necessary to constitute the

[589] Muhammad Azmat, Sebastian Kummer, Lara Trigueiro Moura, Federico Di Gennaro, Rene Moser. Future Outlook of Highway Operations with Implementation of Innovative Technologies Like AV, CV, IoT and Big Data. *Multidisciplinary Digital Publishing Institute (MDPI): Logistics* (2019) Vol. 3, No. 15, pp. 1–20 (p. 6).

[590] Jorge Alfonso, José E. Naranjo, José M. Menéndez, Arrate Alonso. Vehicular Communications. In *Intelligent Vehicles: Enabling Technologies and Future Developments*. Elsevier (2018), pp. 103–139 (p. 135); Luigi Atzori, Alessandro Floris, Roberto Girau, Michele Nitti, Giovanni Pau. Towards the implementation of the Social Internet of Vehicles. *Computer Networks* (2018), Vol. 147, pp. 132–145, (p. 138; Internet access); Kanwaldeep Kaur, Giselle Rampersad. Trust in driverless cars: Investigating key factors influencing the adoption of driverless cars. *Journal of Engineering and Technology Management* (2018), Vol. 48, pp. 87–96 (p. 89); Javier Ibañez-Guzman, Christian Laugier. Intelligent Vehicles: Complex Software-Based Systems. *European Research Consortium for Informatics and Mathematics (ECRIM)* 2013, No. 94, pp. 19–20 (p. 19); Aleksandr Ometov, Sergey Bezzateev, Vadim Davydov, Anna Shchesniak, Pavel Masek, Elena Simona Lohan, Yevgeni Koucheryavy. Positioning Information Privacy in Intelligent Transportation Systems: An Overview and Future Perspective. *Multidisciplinary Digital Publishing Institute (MDPI): Sensors* (2019), Vol. 19, Issue 7, 1603, pp. 1–23 (p. 6).

[591] Andy Greenberg. Securing Driverless Cars from Hackers is Hard: Ask the Ex-Uber Guy who Protects Them. *Wired: Security* (2017). Retrieved online from < https://www.wired.com/2017/04/ubers-former-top-hacker-securing-autonomous-cars-really-hard-problem/> (Retrieved on 11 February 2021).

[592] The EU Agency for Cybersecurity (ENISA): Cyber Security and Resilience of smart cars: good practices and recommendations. *Publications Office of the European Union: Luxembourg*, 2016, TP-07-16-043-EN-N; Cybersecurity Challenges in the Uptake of Artificial Intelligence in Autonomous Driving. *Publications Office of the European Union: Luxembourg*, 2021, EUR 30568 EN; and other.

optimal level of security.[593] The Cybersecurity Act[594] and the Cyber-Resilience Act[595] are intended to mitigate cyber security risks, but they do not govern the producer liability. These legal instruments are intended to 'encourage' manufacturers to reduce the potential risks, although they do not provide for liability.[596] Although the intention of the legislator is positive, neither the above legal acts nor the proposal provide for unambiguous obligations of the manufacturer, nor do they tackle the cybersecurity standards.

The necessity to continuously upgrade ICVs software creates a symbiosis of the product and the service(s); thus, it poses another concern through the prism of the apportionment of liability in the case of a failure. Given the treatment of software as a product (see Sub-section 1.1.1. and Article 4(1) of Proposal 2022/0302), the victims protection under PLD will be extended. Academia argues that software (as a product) will hold software producers legally liable for a defect in the product itself, but not for a failure to release a software update, as the latter possesses the *monitoring duty* beyond the scope of the current PLD wording.[597] PLD does not limit the manufacturers' responsibility only, whereby each agent contributing to the good itself might be held liable for the product's defectiveness, including the developers and manufacturers of separate parts and components of the product.[598] However, given the complexity and opacity of the ICV, differentiating the ICV manufacturer from the software producer (provider) would jeopardise the current level of the EU consumer protection system through the heavy burden placed on the consumer-victims and third-party victims (given the need to bring legal action against multiple producers of various components). As analysed above, the necessity to distribute the duty of continuous monitoring of ICVs after being released was heightened by the Expert Group on Liability and New Technologies. Scholars argue that it might be complex to define the reasonable expectations of the user for each piece of software at issue explicitly.[599] Albeit, it should be accentuated that sophisticated software, as well as hardware and OBEs, should not be seen as a separate product from ICV or a separate service (which is beyond the scope of the PLD), as long as ICV.p implies continuous and relatively frequent software updates and constitutes an integral component of ICV. Although, under Proposal 2022/0302,[600] the manufacturer should not be exempted from the liability if the malfunction is due to a software update or the lack of such an

[593] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 6 (f).
[594] Regulation (EU) 2019/881 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013 (Cybersecurity Act) (Text with EEA relevance), OJ L 151, 7.6.2019.
[595] Proposal for a regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements and amending Regulation (EU) 2019/1020, COM(2022) 454 final.
[596] Explanatory Memorandum. Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD).
[597] Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109–200 (p. 121).
[598] Olga Shevchenko. Connected Automated Driving: Civil Liability Regulation in the European Union. *Mokslo darbai „Teisė"*, Vol. 114. Vilnius University Press: 2020, pp. 85–102 (p. 93).
[599] Michael Chatzipanagiotis, George Leloudas <…>. (p. 121).
[600] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 10(2).

update, there is no 'monitoring duty' defined nor assigned directly to the manufacturer. In the absence of the direct *monitoring duty* of the manufacturer, frequent testing for further upgrades may not be carried out, but, at the same time, it can be stated that, at the time of the release of the ICV Model 0, it was impossible to foresee certain complexities that did ultimately lead to damage (the state-of-the-art defence).

Despite weighty concerns attributed to the road equipment failures, e.g., RSUs, TCC failures, and network failures, e.g., VANETs or cellular network failure, not onlt the current PLD wording, but also Proposal 2022/0302[601] cover joint-several liability[602] if the incident was caused by both a defect in the product and a third-party failure, e.g., two-way input failure in V2I or V2X communication. Contemporaneously, PLD recognises contributory negligence[603] if the damage was caused by both a product defect and the injured person's fault, e.g., concurrent causes,[604] such as a simultaneous failure of a component and a misuse of the system. Besides, if the manufacturer provides protocols for ICV-TCC communication, in theory, it would have to eliminate the potential liability of the TCC operators.

Transition Period: ICVs Accidents in Mixed Traffic Conditions

It is argued that it would be wrong to collate algorithmic decisions (machine-learning) with those of a hypothetical average human driver[605] in comparable circumstances (the so-called *anthropocentric standard*).[606] Albeit, during the inevitable transition period, when both ICVs and CVs will obey the same traffic rules, the focus should be on an individualised approach, given the involvement of ICV; whereby collation of algorithmic decisions with the ones hypothetically made by the average human driver plays a decisive role in the overall RTA investigation.[607] An individualised or tailor-made approach (during the transition period) should be viewed as relevant to maintain the right balance of interests between the manufacturer and the user, given the product's complexity and opacity in question. With a complete transition to the automatic driving system's full autonomy across the EU, the *anthropocentric standard* is likely to be eliminated. Albeit, the tailor-made approach can increase the divergence in applying the existing *sui generis* laws to ICV-related incidents across the MSs, and this is likely to subsequently aggravate the cross-border victims' position after getting involved in ICV-related RTAs. Thence, a uniform *ex ante* approach to the ICV-related RTAs is viewed as more proportionate and reasonable, given the

[601] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 2(3) (b).
[602] Article 8(1). Council Directive 85/374/EEC <…>.
[603] Article 8(2). *Ibid*.
[604] Report from the Commission. COM (2006) 496 final <…>.
[605] Anthropocentrism is the principle and essence that must be adhered to when reflecting on the subject status of the law on artificial intelligence. Zhifeng Wen and Deyi Tong. Analysis of the Legal Subject Status of Artificial Intelligence. *Beijing Law Review* 14, No. 1 (March 2023), pp. 74–86 (p. 84).
[606] Gunther Teubner. Digitale Rechtssubjekte? Zum privatrechtlichen Status autonomer Softwareagenten. *Archiv für die civilistische Praxis (AcP)* 218.Band, Heft 2–4 (2018), S. 155–205 (51), p. 162 „1. Anthropomorphisierung?".
[607] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 143).

foreseeable potential of the increasing divergence when applying the existing legal provisions to ICV-related RTAs across the MSs.

The PLD compensation mechanism places heavier concerns vis-à-vis the potential RTAs victims in mixed traffic, as the current PLD wording provides for a limited coverage of pecuniary and non-pecuniary losses. Under the PLD, compensation for non-pecuniary damage is left to the discretion of MSs.[608] Sub-sections 2.1.1.2 and 2.3.2. provide in-depth analysis concerning the compensation mechanism for ICVs-related incidents.

It is argued that the emerging digital technologies place the current PLD wording in the limited and outdated scope incapable of tackling the major risks in connection with CAD;[609] and that the PLD does not provide an effective liability regime to protect victims in ICVs-related incidents. Although, certain manufacturers, e.g., Volvo[610], claimed to bear full liability in incidents where their ICVs are at fault, such an approach does not represent a uniform and pertinent solution in the EU, nor does it denote an easy-accessible compensation mechanism. The discretion clauses laid down in PLD increase the divergence between the domestic PL regimes; this can eventually have the potential to impact competition in the single market and imbalance the level of consumer protection.[611] The complexity in identifying the defect in ICV, i.e., given sophisticated software failures, along with the limits in specific damage restoration, i.e., economic loss, places the PLD reform as an option of ICVs regulation in question.[612] Whereas Proposal 2022/0302 (1) includes both digital manufacturing files and software within a 'product';[613] (2) expands the scope of a 'defect';[614] (3) as the 'exemption from liability' provisions are being amended,[615] the capacity of PLD is still weak in terms of providing the optimal protection to victims in the context of CAD. A strict liability regime under the PLD denotes a somewhat limited legislative effort;[616] whereby, it appears that a vast disproportion might occur given the divergent guarantees and procedures set out for the RTAs victims who suffered from the CVs and those who endured the damage from ICVs. A positive outcome under Proposal 2022/0302 is a single time-bar for bringing a claim against a potentially responsible party (i.e., up to 15 years from the date the affected person knew or should reasonably have known the defendant's identity, the damage, and the defectiveness). Albeit, in the context of CAD, this time-bar will still be unfavourable for victims in Poland, where

[608] Article 9. Council Directive 85/374/EEC <…>.
[609] Tom M. Gasser. Fundamental and Special Questions for Autonomous Vehicles. In Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner (Eds.). *Autonomous Driving: Technical, Legal and Social Aspects*. Springer (2016), pp. 523–551 (p. 546), (p. 548).
[610] Håkan Samuelsson, President and CEO of Volvo Car Group since 2012 claimed in the mass media that the company will accept full liability whenever one of its cars is in the autonomous mode. Kirsten Korosec. "Volvo CEO: We will accept all liability when our cars are in autonomous mode," (2015).
[611] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 149).
[612] Corrado Druetta. Liability Issues in Advanced Robotics <…>. (p. 5).
[613] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 4(1).
[614] *Ibid.* Article 6.
[615] *Ibid.* Article 10.
[616] Corrado Druetta. Liability Issues in Advanced Robotics <…>. (p. 6).

the statute of limitations can be extended to 40 years. The recent Proposal 2022/0302 does not address all the necessary complexities associated with ensuring a smooth ICV deployment or victim-favourable regulation. Accordingly, PLD can be seen as a useful tool for regulating claims related to a defective product as such; albeit, PLD in its scope does not have the potential to adequately intervene between the manufacturer and the RTA victim, thereby placing the PLD at a relatively weak position in the protection system for RTAs victims.

2.1.1.2. The MID: 'minimum clause' approach

Although the MID implies uniform insurance rules, i.e., the compulsory MTPL cover, a consistent compensation mechanism, as well as the minimum amounts of cover, the MID does not incorporate the substantive liability regime; nor does it designate the law governing the claim, i.e., *lex loci damni commissi* or *lex loci damni* (determined either by Rome II or the Hague Convention). The lack of the legal determination or the ambiguous and uncertain legal determination of the fundamental MTPL regulatory concepts at the European Union level constitutes a legal uncertainty, and, therefore, creates an obstacle to enhancing the protection system for cross-border RTAs victims. While the MID requires essential amendments to facilitate the achievement of the primary objectives of the MTPL policy concerning CVs, it would be wrong to omit that the complexity and opacity of the ICVs place the MID into the backstage position. While the European Parliament initiative requires monitoring whether the MID continues to serve its purpose, given the increasing use of ICVs, this initiative does not provide ICV-related amendments[617] other than an assessment, five years later, of the potential need for a new strict-liability regime vis-à-vis to ICVs.[618]

Should the operational process be conducted over a CV being obtained by violence, or a CV being stolen, the compensation body[619] is deemed responsible for the coverage in the event of RTA;[620] herewith, as a rule, the insurer is exempted from the duty to settle third-party damage. Considering the potential of ICV remote control interception, it can be argued that the 'remotely stolen' ICVs might have an immense impact on MSs compensation bodies, and, subsequently, on RTA victims. Sub-section 2.3.3. below provides analysis of remotely stolen ICVs and suggests a compensation scheme to maintain a smooth loss settlement for the ultimate victims.

The results of the analysis conducted in Sub-section 1.2. demonstrate that the strict-liability model of regulation, as a rule, is based on the hazardous nature of the CVs. Assuming the continuous application of strict-liability rules to the ICVs, it would put the ICVs into the comparable legal frames of the ultrahazardous object producing an ultrahazardous activity. ICVs were reported as a type of transport reducing fatal collisions by at least 40%[621] and improving

[617] Amendment 63. European Parliament Report of 28 January 2019 <…>.
[618] Amendment 70. *Ibid*.
[619] Article 10. Directive 2009/103/EC <…>.
[620] Article 13. Directive 2009/103/EC <…>.
[621] Adriano Alessandrini, Andrea Campagna, Paolo Delle Site, Francesco Filippi, Luca Persia. Automated Vehicles and the Rethinking of Mobility and Cities. *Transportation Research Procedia* (2015), Vol. 5, pp. 145–160 (p. 156).

safety by approximately 50%[622] – 70%[623] when operating in the real-world environment, thus, assuming the safe ICVs performance at higher levels of automation, the proportionality of such equilibration between the ICVs and CVs is reasonably questionable. On the other hand, although it can be argued that ICVs can be seen as a potentially hazard-reducing factor until they prove to serve their initial purpose, i.e., the road safety promotion, it is deemed admissible to assign ICVs to the category of a hazardous or ultrahazardous thing and activity.

Given that the MID does not imply a substantive liability regime, the above analysis demonstrates the MID's inability as a legal tool for ICVs to tackle the significant concerns connected with CAD regulation at the European Union level. On the other hand, the inclusion of the substantive liability rules within the MID is viewed as a complicated and cost-based action;[624] herewith, the alterations to the MID, in part of substantive liability rules concerning ICVs, might become a potential subject to the disbalance of the compensation mechanism for cross-border RTAs victims with CVs.

It is argued that the no-fault model of regulation, i.e., approaching their insurer for compensation, is seen as one of the options for the regulation of ICVs-related accidents.[625] Although the no-fault regime would abolish the Bonus-Malus System (BMS)[626] established in the EU, it should be recalled that the driver-victim concept is excluded from the MID.[627] The alterations to the MID, i.e., the inclusion of the driver-victim concept, would repeatedly generate irrefutable disbalance of the compensation mechanism in RTAs involving CVs and ICVs-related accidents.

Regarding the distribution of legal culpabilities between new agents[628] in question, e.g., the manufacturer or the network provider enabling V2V, V2I and V2X communication, it is questionable whether the MID can optimally allocate the risks and enhance competition within the single market.[629] Academia argues that the European Commission's standpoint remains questionable as long as ICVs are being compared to insurance schemes applicable to CVs; the MTPL insurance mechanism is inextricably linked to the fault or negligence of the driver or the vehicle owner, while ICVs at higher levels of automation eliminate the applicability of the driver's

[622] Arash Olia, Hossam Abdelgawad, Baher Abdulhai, Saiedeh N. Razavi. Assessing the Potential Impacts of Connected Vehicle: Mobility, Environmental and Safety Perspectives. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations* (2016), Vol. 20, Issue 3, pp. 229–243 (p. 232).

[623] Lishengsa Yue, Mohamed Abdel-Aty, Yina Wu, Ling Wang. Assessment of the safety benefits of vehicles' advanced driver assistance, connectivity and low level automation systems. *Accident Analysis and Prevention* (2018), Vol. 117, pp. 55–64 (p. 59).

[624] Olga Shevchenko. Connected Automated Driving: Civil Liability Regulation in the European Union. *Mokslo darbai „Teisė"*, Vol. 114. Vilnius University Press: 2020, pp. 85–102 (p. 95).

[625] James M. Anderson, Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, Tobi A. Oluwatola. *Autonomous Vehicle Technology: A Guide for Policymakers*. (2016), Published by the RAND Corporation, Santa Monica, CA, US, pp. 1–185 (p. 143).

[626] In the motor insurance sector, the Bonus-Malus System (BMS) is a system which adjusts the premiums paid by the insureds having regard to their individual claims history.

[627] Article 12(1). Directive 2009/103/EC <…>.

[628] Maria Lubomira Kubica. Autonomous Vehicles and Liability Law. *American Journal of Comparative Law* 70, no. Supplement 1 (2022), pp. i39–i69 (p. i41).

[629] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 131).

fault by the lack of the active human control over the vehicle.[630] It is argued that the evaluation process demonstrated that the MID does not require any amendments in the part of the ICVs release given the existing, technology-neutral provisions;[631] however, the MID, as such, leaves the subrogation rights at the discretion of the MSs. Against this background, even though the insurance scheme under the MID might be regarded as technology-neutral and optimal for the ICVs insurance cover (but not for civil liability regulation), the lack of harmonised subrogation rules[632] imposes an additional burden on the RTAs victims, e.g., unnecessary excess payments in case the insurer was unsuccessful in the subrogation claim with the manufacturer. The insurance scheme under the MID, however, can be viewed as adequate in the case of the no-fault liability rules set out at the domestic level (e.g., Denmark, Sweden);[633] otherwise, as analysed above, the ICV operator is deemed excluded from the insurance cover by the virtue of law.

2.1.1.3. Synergic ICVs civil liability regime

Having regard to the diversity of the emerging digital technologies and, accordingly, the vast spectrum of risks they can pose, it is hardly feasible to find a uniform solution that fits the entire variety of risks, e.g., ICVs, or Autonomous Robots based on AI for medical and social applications.[634] For this reason, ICV civil liability should be seen not only as an integral part of the new EU digital technologies requiring effective liability regulation, but also as a sector which is distinct from the liability regime, given its complexity and opacity *per se*. The previous sub-section dealt with the engagement of the currently existing *sui generis* legal tools to ICVs civil liability regulation at the European Union level. Given the results of the analysis, neither PLD nor MID alone can tackle the challenge posed by the ICVs release in the EU in such a way as not to generate a disbalance between the regulation of MTPL with CVs, RTAs involving ICV, and PL actions.

The Principle of Favor Laesi as the Base for Claim

Some researchers have argued that it would be desirable to facilitate and unify the conflict-of-law regulation so that to provide comparable treatment for ICV victims and those affected by other AI technologies.[635] Albeit, the harmonisation of the conflict-of-law rules for ICVs alone

[630] Andrea Bertolini, Pericle Salvini, Teresa Pagliai, Annagiulia Morachioli, Giorgia Acerbi, Leopoldo Trieste, Filippo Cavallo, Giuseppe Turchetti, Paolo Dario. On Robots and Insurance. *International Journal of Social Robotics* (2016), Vol. 8, pp. 381–391 (p. 386).
[631] European Commission. Frequently asked questions: Commission proposal to amend the Motor Insurance Directive. (2018), MEMO/18/3732.
[632] While, in some MSs, subrogation in cases of insurance occurs automatically after the insurer has paid the compensation, yet, in some other MSs, it must be expressly agreed with the specific terms of the contract, i.e., in some MSs, subrogation may not work to the detriment of the insured entity. European Commission Expert Group. Final Report of the Commission Expert Group on European Insurance Contract Law. European Union 2014, p. 47.
[633] Sub-section 1.2.2. above provides in-depth analysis of the no-fault liability regime set out in certain MSs.
[634] Expert Group on Liability and New Technologies <…>. (p. 18), (p. 30).
[635] Marek Swierczynski, Lukasz Zarnowiec. Law Applicable to Liability for Damages due to Traffic Accidents Involving Autonomous Vehicles. *Masaryk University Journal of Law and Technology*. (2020), Vol. 14, No. 2, pp. 177–200 (p. 188).

would leave behind the victims affected by CV, and therefore would create an unquestionable discriminatory effect between ICV victims and victims of CVs. On the one hand, the suggested amendments to the MID do not resolve the irrefutable divergent outcome from the application of *lex loci damni commissi* or *lex loci damni* in cross-border RTAs creating a *forum shopping*, which is likely to generate the same disadvantageous impact on the ultimate victims in the mixed traffic. On the other hand, the amendments exclusively to ICVs, which would trigger the *favor laesi* principle in all cross-border RTAs as a rule, would generate the discriminatory impact regarding the RTAs victims involving CVs. Against this background, in order to prevent a discriminatory impact on cross-border RTA victims, a mutual solution that would address not only the victims from CVs but also those of ICVs is advisable, i.e., legal clarity through the uniform application of the *favor laesi* principle in all cross-border RTAs cases by virtue of law should be achieved.

Compensation Mechanism for Victims in Mixed Traffic

It has been argued that relative risks must be tackled in terms of comparable liability systems, including the precise determination of recoverable damages.[636] The producer's strict-liability regime for ICV regulation can be viewed as a similar theory of liability for the PL action; albeit, it would consider ICV.p rather than ICV (as a vehicle) (ICV.v), and therefore would provide different outcomes for the victims affected by ICV.v.[637] Given the analysis provided in Section 1, although the realisation of *restitutio in integrum*, through an award of a certain quantum of compensation for both pecuniary and non-pecuniary damage, extensively varies among the MSs (from EUR 3,200 to EUR 270,000), the currently existing compensation system prevails over the PL compensation system both in terms of quality, i.e., the types of recoverable losses (including the pure economic loss), and quantity, i.e., the amounts granted per case given comparable non-pecuniary losses. Consequently, the imposition of the PL compensation mechanism to CAD would lead to an irrefutably discriminative and disadvantageous impact on the victim of ICV.v compared to CVs' victims.

On the other hand, the compensation systems in MTPL actions remain divergent across the MSs, which can produce a disadvantageous and discriminative effect on the cross-border victims, i.e., the index of pain allowance, the paradigms on presumptions and the balance of probabilities, the assessment of the concurrent consequences, different treatment of indirect victims and positions in the compensation for intangible damage. Given that non-pecuniary damage does not possess any direct or sequential economic translation, the feasibility to approximate the laws of the MSs in respect of the compensation system having regard to the intangible damage is relatively low; albeit, when seeking to ensure the high level of cross-border victims protection at the European Union level, it is advisable to reconsider certain essential elements in the compensation system, i.e., the rights of the indirect victims and the minimum positions for the compensation for non-pecuniary damage. Approximating the laws of the MSs in connection with the compensation system should be achieved in complex, i.e., by addressing both the victims of ICVs and the victims

[636] Expert Group on Liability and New Technologies <…>. (p. 36).
[637] Sub-section 2.1.2.2. shall address ICV.v and ICV.p in detail.

of CVs. Otherwise, if pursued independently (i.e., specifically either for victims of ICVs or victims of CVs), the effect of such an approximation of laws would be seen as ineffective in the general context of the protection system for cross-border RTAs victims. Subsequently, Sub-section 2.3.2. addresses the compensation system, i.e., the rights of the indirect victims and the minimum positions for the compensation for intangible damage, as an integral part of Synergic ICVs civil liability regulation regarding the essential standpoints of the MSs in connection with the compensation system for RTAs involving CVs.

Specific proposals indicated in the Report of the European Parliament on the proposal for a directive amending Directive 2009/103/EC,[638] i.e., indemnification for the victims of incidents where a vehicle is used as a weapon to commit a violent offence or a terrorist act, constitute a precedent approach in the EU in the area of MMTPL regulation and can be viewed as beneficial in the wake of the potential vulnerability of ICVs and their potential to become the target of cybercrimes, since it would take less diligence to commit such a violent act by using ICVs compared to CVs.

Redistributing of Responsibilities and Legal Culpabilities

Instead of replacing the driver's responsibility in the event of an accident by ICVs, the use of vehicles at higher levels of automation will redistribute both the responsibilities and the legal culpabilities among the new agents involved in CAD, i.e., manufacturers, deployers, network providers, infrastructure service providers, and ICVs users.[639] Some scholars have argued that, when the concept of driver's liability becomes obsolete, the risk is bound to be allocated to the ICV owner/keeper through a compulsory insurance scheme.[640] Albeit, at this stage, it is hardly feasible to eliminate the driver's liability unless the technology proves that the driver's interaction with the system, i.e., the driver's omissions and negligence in inter-performance with ICV, is impossible at any time by technical means.

The CAD-involved agents should be sufficiently informed to what extent they will be legally responsible, under what circumstances, and in what case(s).[641] Here, it is necessary not to assign more legal culpability than is legitimately reasonable to one or another group of the agents at issue. In order to avoid culpability gaps[642], i.e., unforeseen scenarios,[643] for which the imposed liability regime does not provide a subject bearing liability, and 'scapegoating',[644] i.e., the apportionment of legal culpability to one or another group of agents in question that could not predict and prevent harm through utmost care, explicit distribution of responsibilities and legal culpabilities should be drawn.

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[638] European Parliament Report of 28 January 2019 on the proposal for a directive of the European Parliament and of the Council amending Directive 2009/103/EC <…>. Amendment 20.
[639] Horizon 2020 Commission Expert Group. Ethics of Connected and Automated Vehicles <…>. (p. 55).
[640] Francesco Paolo Patti. The European Road to Autonomous Vehicles <…>. (p. 134).
[641] Horizon 2020 Commission Expert Group. Ethics of Connected and Automated Vehicles <…>. (p. 62).
[642] *Ibid*. (p. 60).
[643] Giampiero Lupo. Risky Artificial Intelligence: The Role of Incidents in the Path to AI Regulation. *Law, Technology and Humans* 5, No. 1 (2023), pp. 133–152 (p. 136).
[644] *Ibid*. (p. 62).

Considering the ongoing large-scale testing and further ICVs deployment, the interconnection between vehicles on the road can be divided into three sub-groups, i.e., CV-to-CV, ICV-to-CV, and ICV-to-ICV.[645] Being interconnected CV-to-CV, it is a human driver and, therefore, a human factor concerning the duty of care, which remains central in determining the liability;[646] in the interconnection ICV-to-CV, it is the ICV decision-making algorithms that continue to be of principal significance. As long as the ICV decision-making algorithms constitute an integral part of ICV.p, the manufacturer is deemed a right subject to bear responsibility for any misfunction in question.

On the other hand, the ICVs market penetration would not be feasible without the corresponding infrastructure, i.e., the infrastructure capable of ensuring sustained V2I communication. For this reason, ICVs infrastructure planners should not be allocated in the backstage position. The street redesign for urban areas,[647] from the lane narrowing to the lane removal,[648] smart alterations to the highways and cross-border corridors, are viewed of significant importance. Given the complexity of reconstruction and redesign of the CAD infrastructure, besides the need for close collaboration, the redistribution of responsibilities and legal culpabilities between the TCC, the local infrastructure authorities (e.g., *Rijkswaterstaat* in charge of the A15 in the Netherlands) and the infrastructure operators should be *ex ante* defined in order to avoid culpability gaps. Given the recognition of the joint-several liability, if RTA was caused by both a defect in the ICV.p and a third-party failure, e.g., two-way input failure in V2I communication, missing signs, or an inappropriate road surface, it is advisable that both the manufacturer and the third party, e.g., TCC[649] or the local infrastructure authority, given the existence of the damage, would be viewed as the subject to joint-several liability.

A comparable approach with regard to joint-several liability indeed applies to the network failure, e.g., VANETs or a cellular network failure; given a two-way input failure in V2X communication and the existence of damage, both the manufacturer and the third party, e.g., the network provider, are considered the subject to joint-several liability. Albeit, in order to avoid the chilling effect, the distribution of responsibilities between the CAD-involved agents should be communicated to the agents in terms of the legal framework, i.e., the assignment of specific duties (e.g., CAD infrastructure maintenance, installation of road signs).

Malware can invade an ICVs system through multiple inputs given V2V communication; cyberattacks and the emerging necessity to counter hostile invasions lead to a duty to ensure EU-wide ICVs cybersecurity, safety and data privacy. While the security requirements (i.e.,

[645] Xuan Di, Xu Chen, Eric Talley. Liability design for autonomous vehicles and human-driven vehicles: A hierarchical game-theoretic approach. *Transportation Research Part C* (2020), Vol. 118, 102710, pp. 1–29 (p. 27).
[646] *Ibid*. (p. 27).
[647] Marc Schlossberg, William (Billy) Riggs, Adam Millard-Ball, Elizabeth Shay. *Rethinking the street in an era of driverless cars*. University of Oregon: 2018, pp. 1–18 (p. 4).
[648] Jeremy Crute, William Riggs, Timothy Chapin, Lindsay Stevens. *Planning for Autonomous Mobility: PAS Report 529*. American Planning Association: 2018, pp. 1–84 (p. 59).
[649] As analysed in Sub-sections 2.1. and specifically 2.1.1.1., if a manufacturer provides protocols for ICV-TCC communication, in theory, it would have to eliminate the potential liability of TCC operators.

Authentication and Authorisation, Integrity, Privacy, Availability, and Calibration)[650] can be delegated to external agents, as long as cybersecurity and data privacy are directly related to ICV.p, it is still deemed reasonable to assign responsibility for maintaining the relevant safety issues for the manufacturer.

Given the rapid changeability of the emerging digital technologies, e.g., the ICVs architecture advancement from 2014 till 2023, it is hardly attainable to introduce uniform standards that could remain long-term relevant. Therefore, in order to ensure a stable CAD in Europe and to boost competition within a single market, the emphasis should be directed towards theories of liability autonomously from ICV technology standards.

Liability Regime in Claims Involving ICVs

Back in 2017,[651] the European Parliament was the first to advise on the strict-liability and the risk management options of regulation at the European Union level. On the one hand, it is argued that the risk management approach,[652] irrespectively of its taxonomy, e.g., a no-fault insurance system, may have an adverse impact on the civil liability regimes established across the EU.[653] On the other hand, the risk management rules can be seen as flexible, cost-effective and beneficial due to the effective reduction of complex litigations.[654] In the broader scope, the risk-basis approaches can maintain the balance between the parties at issue and foster to act with due care at all times, providing the classic tort defences have been abolished. The risk-basis liability regime eliminates legal uncertainty in ICVs-related incidents, thus resolving a vast spectrum of the earlier-posed legal issues. The potential customers may hesitate to purchase[655] an ICV if they fear to bear the costs for accidents under the theory of no-fault liability caused in the autonomous mode. Here, it may mainly have a comparable disadvantageous impact on the growth of the emerging digital technologies, and, in particular, on the ICVs market penetration if the potential customers would not be interested in acquiring the new technologies. However, a no-fault insurance regime can serve as a bridge from fear to bearing extra-liability to the comprehension of the extra-insurance-coverage (an excessive insurance cover) which would ensure access to compensation. Albeit, the risk management regime, as a rule, requires sufficient statistic data, e.g.,

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[650] Olga Shevchenko. Regulatory Architecture of Data Processing for Connected and Automated Driving in Europe. *International Journal of Law and Public Administration* (2019), Vol. 2, No. 2, pp. 24–33 (p. 28).

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

[652] The risk management approach constitutes the allocation of the risks and the allocation of the legal solutions *ex ante*, e.g., risk-basis liability.

[653] Reka Pusztahelyi. Liability for Intelligent Robots from the Viewpoint of the Strict Liability Rule of the Hungarian Civil Code. *Acta Universitatis Sapientiae: Legal Studies* (2019), Vol. 8, No. 2, pp. 213–230 (p. 220).

[654] Corrado Druetta. Liability Issues in Advanced Robotics <…>. (p. 7).

[655] People may also hesitate to purchase ICVs given the currently widespread general mistrust in AI according to the results obtained by the European Commission. The proposal for a regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union legislative acts. COM/2021/206 final. Once the risks associated with AI are properly managed, the result should be increased confidence in AI. Antonio Estella. Trust in Artificial Intelligence: Analysis of the European Commission Proposal for a Regulation of Artificial Intelligence. *Indiana Journal of Global Legal Studies* 30, No. 1 (2023), pp. 39–64 (p. 62).

claims history records, types of incidents (hazards) along with their real-life probabilities, in order to adequately allocate the risks. Unless vertically imposed from the EU, the no-fault liability regime in connection with ICV.v is hardly possible in 92.6% of the MSs given the analysis provided in Sub-section 1.2. Besides the lack of data to perform real-life probability calculations, the no-fault liability system represents an opposite civil liability regime to the vast majority of the MSs (other than Denmark and Sweden). Some have argued that the lack of harmonisation of the domestic civil liability regimes can deaccelerate the advancement of the EU robot liability law.[656] Some scholars argue that, given the constant interconnection of the human factor and the digital technologies, a sharp shift from the traditional legal theories adopted in the EU jurisdictions to the EU robot liability law or the 'tech-neutral'[657] tort law would pose more new legal issues than they would deliver solutions. Yet, others suggest that a strict liability model of regulation as a piece of the traditional liability rules can be viewed as a natural connector between the traditional concepts in the Tort Law and progressive AI concepts.[658]

The theory of liability is effective when both the tortfeasor and the injured party provide an optimal care level which minimises the overall social costs.[659] The traditional civil liability rules are predominantly based on the rationale that the person who creates the risk that materialises and causes damage should be held liable, given that a causal link between the action or omission of such a person and the damage is provided.[660] Scholars argue that, in such a case, the driver's or the vehicle owner's decision on how and where to use the vehicle represents the likelihood of a risk and thus a potentially harmful event and damage. Such an alleged tortfeasor allocates risks through insurance as partially achieved in the UK through the ICV insurer strict liability regime (see Sub-section 2.2.1). Conversely, ICVs rely on machine-learning algorithms capable of making decisions autonomously. Under machine-learning algorithms, a paradigm inversion occurs; herewith, ICV.p and ICV.v represent the probability of creating a risk rather than the ICV operator or the ICV owner/keeper. The paradigm inversion creates uncertainty as to whether the ICV owner/keeper should continue to be responsible for the insurance for risk allocation purposes. Sub-section 2.3.3. below provides analysis of the insurance rules for CAD in the EU.

Some MSs that adhere to the fault-based liability regime, i.e., Ireland, Romania, Cyprus and Malta (the UK reconceptualised the fault-based liability regime to the strict liability regime for accidents involving ICVs),[661] may view the imposition of a strict-liability regime for ICVs as

[656] Gerhard Wagner. Robot Liability. In Sebastian Lohsse (ed.). *Liability for Artificial Intelligence and the Internet of Things. Münster Colloquia on EU Law and the Digital Economy IV*. 2019, Nomos Verlagsgesellschaft, pp. 27–62 (p. 30, p. 37).
[657] Simon Burton, Ibrahim Habli, Tom Lawton, John McDermid, Phillip Morgan, Zoe Porter. Mind the gaps: Assuring the safety of autonomous systems from an engineering, ethical, and legal perspective. *Artificial Intelligence* (2020), Vol. 279, 103201, pp. 1–29 (p. 17).
[658] Reka Pusztahelyi. Liability for Intelligent Robots <…>. (pp. 215–216).
[659] Satish Jain, Ram Singh. Efficient Liability Rules: Complete Characterization. *Journal of Economics* (2002), Vol. 75, No. 2, pp. 105–124 (p. 108).
[660] Stephen Perry. Torts, Rights and Risks. In John Oberdiek (ed.). *Philosophical Foundations of the Law of Torts (Philosophical Foundations of Law) 1st Edition*. Oxford University Press 2014, pp. 38–64 (pp. 50–51).
[661] Sub-section 2.2.1. contains detailed analysis of the new liability regime (ICVs) in the UK.

a disbalance of the national tort law rules. Here, the coexistence[662] of a strict liability regime for ICVs and a fault-based liability regime for RTAs involving CVs would reflect a discriminatory effect on RTA victims, i.e., disproportionate treatment of RTA victims.

The proposal for a Directive on adapting non-contractual civil liability rules to artificial intelligence (hereinafter – Proposal 2022/0303)[663] is intended to facilitate the collection of evidence to enable a plaintiff to substantiate a non-contractual fault-based civil law claim for damages caused by AI.[664] Proposal 2022/0303 could be seen as an additional legal instrument for those MSs that adhere to a fault-based liability regime, but, at the same time, it would not be possible to apply the AI Liability Directive exclusively to AI claims, since Proposal 2022/0303 does not cover the vast majority of the main legal issues related to AI. Pursuant to Article 1(3), the AI Liability Directive shall not affect the application of PLD and EU legal instruments in the field of transport. In the event of an ICV incident, the affected party would still have to substantiate their claim in accordance with the rules set out in the PLD (strict-liability regime). Under Proposal 2022/0303, MSs are allowed to adopt rules in a way which is more favourable to the injured party.[665] This phenomenon may still contribute to larger regulatory discrepancies in relation to ICV (considering onboard AI components). As in Proposal 2022/0302 (PLD), the application of the presumption of causation is left to the discretion of the national courts.[666] Moreover, under Proposal 2022/0303 (AI Liability Directive), the defendant has the right to disprove any of the victim's favourable presumptions.

Traditionally, the fault-based liability regime is viewed as corrective justice, or *justitia commutativa*, while the no-fault or strict liability is regarded as distributive justice, or *justitia distributiva*.[667] The aim of distributive justice is not to repair the harm done to the other person, but rather to place the burden of repairing the harm on the other person according to his or her own position.[668] Otherwise stated, the no-fault liability regime, or the strict liability regime, which is not reflected in the accusation of misconduct,[669] places the victim in a better position than the fault-based liability model by simplifying the compensation mechanism. Given the principal objective of the EU policy in the RTAs, i.e., to minimise the negative impact for RTA victims, the risk-based liability regime is considered mainly in line with the EU policy compared to the fault-based liability regime. Contemporaneously, the strict-liability regime eliminates the plaintiff's need to

[662] Michael Chatzipanagiotis, George Leloudas <…>. (p. 177).
[663] Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive). 2022/0303 (COD).
[664] Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive). 2022/0303 (COD). Article 1(1) (a).
[665] *Ibid.* Article 1(4).
[666] *Ibid.* Article 4(5).
[667] Pierre Widmer. Comparative Report on Fault as a Basis of Liability and Criterion of Imputation (Attribution). In Pierre Widmer (ed.). *Unification of Tort Law: Fault* (Vol. 1), 2005, pp. 331–367 (p. 334).
[668] Jonas Knetsch. The Role of Liability without Fault. In Jean-Sébastien Borghetti and Simon Whittaker (Eds). *French Civil Liability in Comparative Perspective*. Hart Publishing (2019), pp. 123–142 (p. 126).
[669] Ernst Karner. A Comparative Analysis of Traffic Accident Systems. *Wake Forest Law Review* (2018), Vol. 53, No. 2, pp. 365–382 (p. 368).

deepen into the ICVs architecture to establish fault, which is cost-based and time-consuming.[670] Considering the results of the analysis obtained in Sub-section 1.2.1., those MSs which adhere to the fault-based liability regime assume the breach of the duty of care, which results in damages, as a basis for legal action and the further compensation. Given the ICVs performance, which is strictly based on machine-learning algorithms, at the higher levels of automation, the breach of duty of care *per se* becomes irrelevant.

The complexity of determining a suitable theory of the ICVs liability has prompted individual scholars to assume *casum sentit dominus*, or, in other terms, that the damage lies within the injured person.[671] In this case, the ICV operator would require to assume the own risks and distribute them by reasonable means of the insurance cover; although, in theory, such risk allocation would reflect the no-fault liability insurance, given that the victim is the ICV owner/keeper, *casum sentit dominus* as a tool which would irrefutably disbalance the currently existing EU protection system for RTA victims, since the insurance coverage of such an ICV operator would not apply to a third party victim. The far side of the liability regime based on *casum sentit dominus* is the irrebuttable presumption of the human control over the vehicle, or (the driver as a liable party),[672] i.e., the legal presumption that, despite the ICVs architecture at higher levels of automation, the human driver remains legally responsible for the vehicle. Considering the driver as the central figure of the paradigm above, the latter would be ineffective at the higher ICVs automation levels, assuming there is no human driver exercising DDT.

The no-fault liability approach addressed exclusively to ICVs would mean substantially divergent treatment of the RTAs victims involving CVs and RTAs with at least one ICV involved. The vertical EU imposition of no-fault liability regime at the European Union level, although it has a plausible potential to ensure a high-level protection system for ICVs victims and to boost competition within the common market, on the other hand, would still disbalance the currently existing civil liability regimes among the MSs and produce a discriminatory impact on the victims involved in RTAs with CVs. Concurrently, as a rule, the strict-liability enforced against the owner of the vehicle (a hazardous thing) and the driver in connection with the use of the motor vehicle (a hazardous activity); the hazard level attributable to a hazardous thing, i.e., CV, depends on the parameters of the vehicle, which has a direct impact on the magnitude of the potential damage compared to the probability of a harmful event, the so-called *volume to frequency ratio*. As a general rule, given the distribution of the liability based on the operational risk, heavy trucks are regarded as a thing of an ultrahazardous nature compared to hazardous light vehicles (passenger cars). Therefore, they are subject to presumed liability (up to a certain degree) in some MSs irrespective of the fault or the duty of care. In other terms, they are subject to certain RTAs, e.g.,

[670] Steven Wittenberg. Automated Vehicles: Strict Products Liability, Negligence Liability and Proliferation. *Illinois Business Law Journal*. (2016). Retrieved from <https://publish.illinois.edu/illinoisblj/2016/01/07/automated-vehicles-strict-products-liability-negligence-liability-and-proliferation/>. Retrieved on 14 January 2021.
[671] Ken Oliphant. Liability for Road Accidents Caused by Driverless Cars. *Singapore Comparative Law Review (SCLR)* 2019, pp. 190–197 (p. 194).
[672] James M. Anderson, Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, and Tobi A. Oluwatola. *Autonomous Vehicle Technology: A Guide for Policymakers*. Santa Monica, CA: RAND Corporation, 2016, pp.1–214 (p. 144).

in a heavy truck versus a motorbike (as an example scenario), the heavy truck driver remains subject to the presumed liability of 10% to 75% depending on the jurisdiction.[673] From the far side of the heavy trucks' ultrahazardous nature compared to the hazardous nature of light vehicles, IC heavy trucks showed better safety performance than ICVs (IC light vehicles).[674] Against this background, it would be disproportionate to invoke a comparable paradigm applicable to the conventional heavy trucks in the case of IC heavy trucks. The above example is intended to demonstrate the ineffectiveness of the patterning of the classic strict liability regime vis-à-vis the CAD, i.e., the rigid imposition of the existing strict liability regime for CVs (without the required alterations) to the ICVs.

It is argued that the producer's strict liability can be seen as a desirable option for regulating the ICVs civil liability at the European Union level. In addition to the currently existing defects under the PLD, the manufacturer would remain liable for any defect in the digital component or the digital content, irrespective of its type, i.e., Component-as-a-Product (CaaP) and Component-as-a-Service (CaaS), including the duty to provide continuous upgrades of the digital content.[675] The *monitoring duty*, including the constant software updates, is not a novelty at the European Union level, given the vastly comparable provisions set out in Directive (EU) 2019/770[676] and Directive (EU) 2019/771[677] (requiring the seller or the provider of the continuous digital content update service for a reasonable period during which the consumer is expected to receive such a service). Having regard to the ICV.p, a reasonable period for maintenance, i.e., software updates, will depend on the ICVs architecture, e.g., rapid technological growth could place an ICV released in 2025 (ICV.2025) on the list of obsolete technologies by the year 2030, due to which, the next generation software will be incompatible with ICV.2025. The inability to upgrade ICV.2025 to the next generation software does not automatically place it on the list of unsafe technologies. Therefore, the former can be continuously used on the EU public roads (the continuity of ICV.2025 on the EU public roads is to be determined based on the EU standardisation for ICVs given the ICVs technical characteristics).

Enforcing the producer's strict liability vis-à-vis RTAs involving ICVs, however, would deprive RTA victims of a more advantageous and victim-favourable compensation mechanism (MTPL action). Against this background, the symbiosis of the producer's strict liability and the ICV strict liability (though the ICV insurer), i.e., the Synergic ICVs civil liability regime, is seen as a more sustainable and satisfactory liability regime at the European Union level, designated to

[673] For instance, in the German jurisdiction, pursuant to the distribution of the liability on the basis of the operational risk, in the case of an unclear RTA, in a collision between a truck and a motorcycle, the heavy truck driver remains liable at a ratio of 75:25.

[674] Lishengsa Yue, Mohamed Abdel-Aty, Yina Wu, Ling Wang. Assessment of the safety benefits of vehicles' advanced driver assistance, connectivity and low-level automation systems. *Accident Analysis and Prevention* (2018), Vol. 117, pp. 55–64 (p. 57).

[675] Expert Group on Liability and New Technologies <…>. (p. 6).

[676] Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services. OJ L 136.

[677] Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC. OJ L 136.

strengthen the protection system for the RTA victims. 23 MSs (85.2%) pursue a strict liability regime vis-à-vis the CVs on the domestic scale. The statutory grant of the right of subrogation (ICV insurer – ICV manufacturer) allows MSs to enforce the strict liability clause directly to ICV.v, subject to the subsequent duty to insure ICV.v. Enforcing a symbiosis of strict-liability regimes, 85,2% MSs will not be required to deviate from the principal course vis-à-vis the liability regime established at the national level. Albeit, considering the emerging necessity to enforce the ICV strict-liability clause, it is required to determine the subject responsible for allocating risks vis-à-vis the use of ICV.v., i.e., the agent to whom strict liability shall be applied.

The current deliberations at both the European Union and the domestic levels designated to the legal clarity vis-à-vis to the subject responsible in the event of RTA involving ICV, i.e., a subject in control of a source of hazard (either the ICV owner/keeper or the ICV operator to bear the legal culpability). Having regard to the analysis provided in Sub-section 1.2., there are eleven MSs (40.1%) enforcing a liability regime against the CV driver, fourteen MSs (51.9%) imposing legal culpability on the CV owner/keeper, and contemporaneously, two MSs, specifically, Greece and Croatia (7.4%) providing dual liability, i.e., both the CV owner and the CV operator are concerned. The MSs representatives of the fault-based liability regime provide legal consequences against the driver, given the primary focus on the existence of a 'fault' or a 'breach of the duty of care', which would not be feasible to invoke vis-à-vis to the CV owner/keeper, who was not necessarily the driver committing a tort. In the ICV owner/keeper versus the ICV user dilemma, it is deemed reasonable and proportionate to enforce the strict liability clause against a subject allocating the most of risks, or, in other terms, a subject exercising extra control over the source of a greater danger (i.e., the primary manager of the ultrahazardous object). If the ICV user cannot impact the decision of ICV algorithms by technical means, it would be unreasonable to hold him or her legally culpable for RTA. It is required to assess the potential of the inter-performance between the ICV user and the Intelligent Connected System (ICS) to eliminate the hypothetical presumption vis-à-vis to the dual ICV operation. Sub-sections 2.1.2.1. and 2.1.2.2. provide analysis concerning the inter-performance between the ICV operator and the ICS distributing the subsequent responsibilities and the potential legal culpabilities. On the other hand, the ICV owner/keeper, among other things, is viewed as a subject tightly relating to the allocation of risks through the decision-making, i.e., the choice of the ICV use (including the decision to delegate the use of ICV to any other ICV user). Thence, the strict-liability regime's enforcement vis-à-vis to the ICV owner/keeper is considered more proportionate, reasonable, and pertinent than the strict-liability clause against the ICV user. Besides, given that the strict liability will shift the legal culpability vis-à-vis to the liable subject, i.e., the ICV manufacturer, the ICV owner/keeper will be granted the legal redress right against the ICV manufacturer. Accordingly, there remain 40.1% of the MSs that will be required to enforce the strict liability regime vis-à-vis to the ICV owner/keeper.

Force Majeure, Contributory Negligence, Joint-Several Liability

There are circumstances in which the manufacturer should not be held liable or should have its liability reduced, i.e., *force majeure* or 'neither party should be liable', contributory negligence, or joint-several liability. In contrast to the predominantly divergent liability regimes and compensation systems established in the EU domestic jurisdictions, the analysis provided in Sub-section 1.2. above demonstrates a less divergent approach between the MSs civil liability rules in connection with *force majeure*, contributory negligence, and joint-several liability. Most of the MSs have integrated general exemption under the *force majeure* clause, whereas, in other cases, the tortfeasor may be exempted from liability in the event of an emergency (e.g., Hungary), the defectiveness or malfunction of the vehicle (e.g., Greece), gross contributory negligence (reduction by 100 per cent), or '*faute inexcusable*' on the part of the claimant (e.g., Denmark and France). Under the ICVs architecture, the Greek escape clause, i.e., the defectiveness or malfunction of the vehicle, will not be pursued further in the ICVs civil liability regulation, although it may reasonably co-exist in relation with CVs. The Hungarian emergency escape clause applies only given exceptional individual circumstances of the case, and, therefore, it requires mainly legal action; herewith, such a rule of the exemption from the liability does not constitute an obstacle to the release of the ICV. Contemporaneously, gross contributory negligence, or 'faute inexcusable', indicates a higher level of protection for RTAs victims, and, therefore, it does not call into question the effectiveness of the further ICVs interaction with CVs on public roads. Unlike *force majeure* and contributory negligence, joint-several liability is equally recognised in all MSs. The civil liability rules connected with *force majeure*, contributory negligence, as well as joint-several liability, have proven to be reasonable, pertinent, and proportionate over the decades, and these can be analogically applied in ICVs-related RTA cases. Albeit, neither ICS failure, e.g., navigation defects (route planning and localisation), nor the malfunction of any ICV hard or soft components, e.g., cameras, radars, infrared or LiDAR, should constitute a *force majeure* or an unavoidable event for the purposes of CAD.

The Burden of Proof: Facilitating Proof for ICV Victims

Given the analysis in Sub-section 1.1.1., the use of presumptions is a beneficial tool in the law passing the burden of proof on the person who is duly informed about the insights to prove to the court why a particular product should be treated as defective. The judicial practice of the MSs demonstrates a fair redistribution of the burden of proof, or, in other terms, a reverse burden of proof, given technically complex products (e.g., Sweden, Finland, France, Belgium). Other MSs (e.g., UK, Ireland) provide *prima facie* evidence based on *res ipsa loquitur*, the so-called 'the affair speaks for itself',[678] and therefore can maintain a comparably facilitated burden of proof for ICV victims. Thus, overturning the traditional burden of proof does not constitute a never experienced phenomenon in the EU and should be viewed as an effective and valuable tool in ICVs-related cases. ICV victims should be eligible for the reverse burden of proof as long as ICV as a technology increases the complexity and opacity of proving the defect, the causation between the defect and

[678] The *res ipsa loquitur* principle was discussed above, in Sub-section 1.2.1.

the damage beyond what could reasonably be expected.[679] While a shift in the burden of proof was considered as an option (i.e., Option 2b), during consultations to amend the PLD, this was not approved. Instead, the harmonisation of (1) the rules on when the producers are obliged to disclose the technical information necessary for a victim in court, and (2) the conditions allowing the national courts to presume that a product was indeed defective or that the defect caused the damage, has been approved.[680] Moreover, under Proposal 2022/0302, the producer has the right to disprove any of the victim's favourable presumptions.[681]

Coincidences between Synergic ICVs Civil Liability Regime and PLD and MID

While there is growing concern that the newly established civil liability regime for CAD purposes may lead to certain overlaps[682] with PLD and MID, such interrelatedness, *in esse*, would not constitute a never experienced phenomenon at the European Union level. The safety of the product put into circulation within the common market constitutes the EU-wide core domain for consumer protection. Although certain products may not relate to specific-subject legislation, such as Regulation (EC) No 1223/2009 on cosmetic products,[683] Directive 2009/48/EC on the safety of toys,[684] or Directive 2014/35/EU on the market of electrical equipment designed for use within certain voltage limits[685] (previously Directive 2006/95/EC),[686] commonly recognise safety requirements and principles in accordance with Directive 2001/95/EC[687] on the general product safety. Under Recital (5) of the General Product Safety Directive (GPSD), the establishment of separate legal instruments with regard to each product placed within the common market is not reasonably feasible; whereas rapid technological growth may add further barriers through a range of new technologies that are placed into the circulation annually. Therefore, it should be considered inevitable to ensure smooth and precise consumer protection through the GPSD and PLD's explicit cooperation. The distinction, however, should be precisely drawn between product liability and product safety.

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[679] Expert Group on Liability and New Technologies <…>. (p. 6).
[680] Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD). Article 9.
[681] *Ibid*. Article 9(5).
[682] Tatjana Evas. A common EU approach to liability rules and insurance for connected and autonomous vehicles. *European Parliamentary Research Service (EPRS)*, (2018), PE 615.635, pp. 1–194 (p. 31).
[683] Regulation (EC) No. 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products. OJ L 342.
[684] Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys. OJ L 170.
[685] Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits. OJ L 96.
[686] Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (codified version). OJ L 374. (no longer in force).
[687] Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety. OJ L 11.

PLD purports to ensure smooth settlement of damage suffered due to a defective product when the GPSD aims to prevent any harm by guaranteeing that the products put into circulation on the common market are safe. Although there is a need to distinguish between a defect and the safety measures related to the product, all of the above subject-specific directives provide for certain overlaps, e.g., a defective product put into circulation under PLD can be seen as an unsafe product release under GPSD. Against this background, the subject-specific framework, i.e., the Synergic ICVs civil liability regime, would not produce more coincidences (Synergic ICV framework – PLD) compared to the ones already existing at the European Union level (e.g., PLD – GPSD, product information under PLD – product information under Regulation (EC) No. 1223/2009).

On the other hand, the MID overlapping should not represent a significant concern, as the principal objective is to create a balance between the victims of ICV.v and the victims of CVs. For this reason, the theory of risk probabilities plays a decisive role. While it is possible to systematise the risks of potential harm from ICV.v versus the risks of potential harm from the CVs, it is questionable whether the specific risks of ICV.p can be systematised versus the risks of any other products covered in terms of PLD.

Further comprising the European Parliament accentuated that the PLD and MID have limited capacity to tackle the legal issues posed by CAD, notably vis-à-vis the liability and insurance regimes; thus, the effectiveness and adequacy of the PLD and MID are reasonably questionable given the new risks associated with the complexity and opacity of ICVs *per se*.[688] For this reason, the possible overlap between the new liability regime and the currently existing EU legal tools, i.e., PLD and MID, does not overweigh the potential benefits of the Synergic ICVs civil liability regime.

At the first glance, it can be argued that the introduction of a separate legal framework for each separate block of the emerging digital technologies would be excessive and hardly reasonable. The ICVs represent the symbiosis of both public, i.e., governmental transport sector, and private, i.e., vehicles for private consumption, sectors, which covers the interests of both the private and the public groups, and which constitutes the sizeable potential cause for hazardous and harmful outcomes in the society unless an adequate legal framework is in place.

2.1.2. Regulatory concepts in the law governing ICVs civil liability

Considering the analysis provided in Sub-section 1.1.3., (1) the lack of legal determination, or (2) the ambiguous and uncertain legal determination of the fundamental regulatory concepts at the European Union level, and (3) the peculiarities of the legal translation into the official languages of the MSs, constitute a legal uncertainty, and, therefore, constitute an obstacle towards accomplishing the major EU objective in the RTAs policy, i.e., minimising the negative impact on the RTA victims. We can tolerate a minor legal uncertainty in the comprehension of the fundamental regulatory concepts if it does not demolish the primary goal of the MTPL policy in

[688] European Parliament resolution of 15 January 2019 on autonomous driving in European transport (2018/2089 (INI)).

the EU. Given the ICVs circulation on the EU public roads, in order to obstruct a comparable discriminatory impact on visiting-victims, it is required to explicitly determine the essential regulatory concepts beforehand so that to prevent inconsistencies in the comprehension of the above concepts, given the potential coincidences in RTAs civil liability regulation of CVs and ICVs. For this reason, Sub-sections 2.1.2.1. – 2.1.2.3. are aimed at analysing the major regulatory concepts for ICVs civil liability regulation at the European Union level.

2.1.2.1. Concept of a 'driver' and a 'user'

The ICVs machine-learning algorithms, in theory, have the potential to adapt to the changing traffic circumstances much faster than the human driver,[689] which allocates benefits to ICVs to eliminate the human error, which constitutes the largest cause of all RTAs.[690] Since the shift from the traditional driving to the fully autonomous driving is gradual, a person who will physically remain at the steering wheel of ICV at the lower levels of automation corresponds to a 'driver' in its classic understanding. The gradual transition from the 'driver' to the 'user' is supported by a series of signalising messages, analysis, and the strength of autonomous ICV solutions. On the lower level of ICVs automation, a range of signalising messages were set out, i.e., under the European Telecommunications Standards Institute (ETSI), cooperative awareness messages (CAMs)[691] and decentralised environmental notification messages (DENMs)[692] were determined. The cooperative notifications, i.e., hazardous location notifications (HLN), emergency electronic brake light (EBL), an emergency vehicle approaching (EVA), slow or stationary vehicle (SSV), and road works warning (RWW),[693] aim to support the driving performance, rather than substitute the driver who remains in control of the operational process. On the other hand, a person behind the steering wheel of ICV at higher automation levels does not require (if even is *not* prohibited for safety concerns) to intervene in the ICV operational process control. In other words, at the higher levels of ICV automation, it is ICS that performs the Dynamic Driving Task (DDT) and not the person behind the steering wheel. For the legal clarity purposes, two case scenarios should be assessed, i.e., operation at the higher levels of ICV automation with a possible input (ICV user's intervention), and without a possible input at any time during the driving performance. For this reason, this sub-section shall address the two above outlined potential scenarios and exercise the potential distribution of responsibilities and the legal consequences in the given scenarios.

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[689] Darrell M. West. Moving forward: Self-driving vehicles in China, Europe, Japan, Korea, and the United States. *Center for Technology Innovation at Brookings* (2016), pp. 1–32 (p. 4).

[690] Nidhi Karla. *Challenges and Approaches to Realizing Autonomous Vehicle Safety*. Testimony submitted to the House Energy and Commerce Committee. Subcommittee on Digital Commerce and Consumer Protection (2017), CT-463, pp. 1–14 (p. 2).

[691] European Telecommunications Standards Institute (ETSI). *Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service*. Standard ETSI EN 302 637-2. 2014.

[692] *Ibid.*

[693] Marilisa Botte, Luigi Pariota, Luca D'Acierno, Gennaro Nicola Bifulco. An Overview of Cooperative Driving in the European Union: Policies and Practices. *Multidisciplinary Digital Publishing Institute (MDPI)*, Electronics 2019, No. 8: 616, pp. 1–25 (p. 3).

Control of the Operational Process: Shared Task Authority

In the Shared Task Authority conditions, there is a possibility to engage and disengage the automated components during the operational process exercise (a shift in the subject exercising DDT).[694] Under the above outlined operational conditions, the central focus is accentuated at the comprehension level of the ICV operator concerning ICS, i.e., understanding the distribution and sharing of DDT.

Given the lack of the necessary comprehension level, the 'overthrust'[695] to ICS may occur. The 'overthrust' is referred to as putting more expectations on the ICS operational capacities than those it can actually produce.[696] The potential hazard of the 'overthrust' to ICS is the high probability of the system's misuse. The vivid example of the 'overthrust' to ICS is the Tesla RTA (Sub-section 2.1.); having regard to the National Transportation Safety Board[697] accident report, the cause of the RTA represents a combination of the failure of the truck driver to observe the right of way along with the overreliance on the ICS on the part of the ICV operator.[698] Here, the question arises concerning the task authority control and flexibility of the shift of the status from the 'driver' to 'user'.

ICV Driver and ICV User at both Lower and Higher Levels of ICV Automation

Undoubtedly, the differentiation between the ICV driver and the ICV user status plays a crucial role in determining the legal consequences of exercising control of the operational process and fulfilling the product information requirements. Against this background, it is necessary to draw a clear line between the two statuses and designate the distribution of responsibilities between the ICV driver, the ICV user, and ICS.

A. ICV driver (at the lower levels of ICV automation)
Technically: an ICV user is considered a person who must be ready to drive an ICV (up to Level 3) at all time; such an ICV driver is required to respond in the event of the DDT operation-system failures or any other failures directly relating to the performance of ICS. ICV driver should continue actively, attentively and prudently observing the traffic environment in order to be ready to regain control over the operational process (Shared Task Authority). **Legally:** an ICV driver is seen as a person exercising control over the operational process of ICV (up to Level 3); given the Shared Task Authority, the ICV driver maintains the status of a 'driver' from the beginning of his or her operational performance, i.e., exercising the operational process (DDT) until the successful transfer of the control over the operational process to ICS. It is noteworthy that an undetermined number of control transfer shifts is available during the one complete ride.
B. ICV driver (at the higher levels of ICV automation)

[694] Andrew Marinik, Richard Bishop, Vikki Fitchett, Justin F. Morgan, Tammy E. Trimble, Myra Blanco. *Human Factors Evaluation of Level 2 and Level 3 Automated Driving Concepts: Concepts of Operation*. Report No. DOT HS 812 044 (2014) Washington, DC: National Highway Traffic Safety Administration, pp. 1–299 (p. 17).

[695] Andrew Marinik, Richard Bishop, Vikki Fitchett, Justin F. Morgan, Tammy E. Trimble, Myra Blanco <…>. (p. 7, p. 12, p. 151, p. 208, p. 212).

[696] *Ibid.* (p. 7, p. 11, p. 39, p. 151, p. 208).

[697] The National Transportation Safety Board is an independent U.S. government investigative agency responsible for civil transportation accident investigation.

[698] National Transportation Safety Board. Highway Accident Report: Collision Between a Car Operating with Automated Vehicle Control Systems and a Tractor-Semitrailer Truck Near Williston, Florida May 7, 2016. *Washington, DC United States* NTSB/HAR-17/02, Accident ID: HWY16FH018, pp. 1-53.

Technically: an ICV driver is viewed as a person required to be present at the steering wheel of ICV (Level 4 – Level 5) at all time. Although it is presumed that ICS provides sustainable and unconditional performance without any expectation that the ICV user will respond to a request to intervene, such an ICV driver should maintain the legal status of a 'driver' as long as there is a reasonable possibility to regain the control over the operational process by technical means. **Legally:** an ICV driver is seen as a person exercising control over the operational process of ICV (Level 4 – Level 5); although ICS is viewed as presumably sustainable and unconditional in order not to require the ICV user's intervention at any time, such an ICV driver maintains the status of a 'driver' during all accesses to control of the operational process,[699] i.e., shifts in the control transfer (given the existence of such a possibility by technical means). Otherwise, an ICV 'driver' at the higher levels of ICV automation would not exist. In such a case, the ICS would directly perform all DDT without intervention of a human being.
C. ICV user (at the lower levels of ICV automation)
Technically: an ICV user is considered a person who must be ready to drive an ICV (up to Level 3) at all time. Such an ICV user is benefiting from the Conditional Driving Automation, whereby the control over the operational process is performed by ICS; albeit, an ICV user should exercise due care, be attentive, active and prudent at all time during the ride in order to be ready to regain control over the operational process. **Legally:** an ICV user is seen as a person actively, attentively and prudently observing the traffic environment at all time during the ride (up to Level 3); such an ICV user is required to regain control over the operational process upon the immediate request of ICS, a hazardous notification. An ICV user maintains the status of a 'user' as long as ICS exercises control over the operational process, until the successful transfer of the control over the operational process to the ICV user (whereby the shift in status from the ICV user to the ICV driver occurs). An ICV user is required to attentively and prudently fulfil all the requirements concerning ICV use under the product information, i.e., warnings and instructions (the duty of obedience). Eventually, the ICV user is seen as a person who directly impacts the ICS engagement in the DDT.[700]
D. ICV user (at the higher levels of ICV automation)
Technically: an ICV user is viewed as a person required to be present at the steering wheel of an ICV (Level 4 – Level 5) at all time. An ICV user is benefiting from the High Driving Automation or Full Driving Automation, whereby the full control over the operational process in performed by ICS without any expectation that the ICV user will respond to a request to intervene. Albeit, the potential to regain control over the operational process by technical means, i.e., a shift in the control transfer, safeguards the status of a 'driver' in respect of the given ICV user. **Legally:** As soon as a shift in the control transfer occurs, i.e., the transfer of the duty to exercise the control over the operational process (given the existence of such a possibility by technical means), the simultaneous shift in the status from an ICV user to an ICV driver occurs. An ICV user is required to attentively and prudently fulfil all the requirements concerning the ICV use under the product information, i.e., warnings and instructions (the duty of obedience). Eventually, the ICV user is seen as a person who directly impacts the ICS engagement in the DDT.[701] In case the transfer of the operational process control to a human driver is not possible by technical means at higher levels of ICV automation, the ICV 'driver' as a concept will not exist. In this case, the ICV will directly perform all of the DDT without human intervention.

Misuse of ICS at the Lower Levels of ICVs Automation

The notion of the misuse within the CAD dimension that can lead to incidents,[702] e.g., RTA, possesses two divergent sub-concepts, i.e., a deliberate misuse of ICS, and an unintentional misuse of ICS. Each sub-concept consists of two more elements, i.e., manual intervention and passive omission. If the driver acknowledged the hazardous notification but chose to ignore such an alert deliberately, the case is viewed as an example of a deliberate misuse of ICS. Should the driver acknowledge the hazardous notification but unintentionally could not provide the required

[699] Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109-200. (p. 132, p. 140).
[700] Kyle Colonna. Autonomous Cars and Tort Liability. *Case Western Reserve Journal of Law, Technology & the Internet* (2012) Vol. 4, No. 4, pp. 81–131 (p. 83).
[701] Kyle Colonna. Autonomous Cars and Tort Liability <…>. (p. 83).
[702] FOT-Net (Field Operational Test Networking and Methodology Promotion) and CARTRE (Coordination of Automated Road Transport Deployment for Europe). *FESTA Handbook*: Version 7 (2018), pp. 1–213.

immediate feedback or otherwise react appropriately, such a case would be seen as an example of an unintentional misuse. The given examples of misuse should be analysed considering that the ICV user is reasonably aware of those ICS capabilities necessary to establish the smooth Shared Task Authority between the ICS and the ICV user. Although both the manual intervention and the passive omission correspond to, either deliberate or unintentional, misuse of the ICS, they may produce different consequences and ultimate outcomes for the ICV user. The manual intervention as a deliberate misuse is viewed as a proactive action against the warning alert of the ICS. The passive omission is seen as a lack of proactive action despite the warning alert of the ICS, i.e., a breach of the duty of obedience. The reasonable knowledge of the ICV user with regard to (1) ICS capabilities, (2) assigned responsibilities to the ICV user, and (3) possible harmful consequences in the case of not fulfilling the given responsibilities correspond to the immediate negligence on the part of the ICV user and therefore require to be *ex ante* determined (given the little feasibility to avoid the Shared Task Authority between the ICV user and the ICV.v at the lower levels of ICV automation).

Given the lack of the technical uniform statements[703] (i.e., all-branded ICVs regardless of the manufacturer concerning the Shared Task Authority), analysis on the distribution of the potential responsibilities and legal culpabilities to the ICV user is based on reasonable hypotheses. When drawing reasonable hypotheses, it is required to recall that the human nature should be considered beforehand, such as a crucial challenge to suddenly and rapidly take over control of the operational process, i.e., a shift in the subject responsible for DDT. Likely, a person who is not operating the vehicle and who associates himself/herself more with a passenger instead of a driver would take additional time and effort to analyse the road environment and regain control over the operational process. Under the circumstances above, it is implausible that the driver would succeed in preventing the collision, even though one could prevent it if the control of the operational process would be under the driver's responsibility from the beginning of the journey (i.e., if DDT remained the sole responsibility of the driver). The Shared Task Authority, i.e., a continuous and frequent shift in the subject responsible for DDT, may lead to miscommunication;[704] herewith, another block of legal issues arises compared to the ICVs civil liability regulation at the higher levels of automation. Given the continuous probabilities that the ICV user can be held negligent, i.e., demonstrate a breach of the duty of care, it is required to maintain the fault-based liability regime (or, given the practice of most of the MSs, the symbiosis of the strict liability and the fault-based liability regimes) as a theory of the liability applicable to ICV at the lower levels of automation. Contemporaneously, given that the ICV user remains legally liable for the failure to prevent RTA after the ICV has alerted such a user of its inevitability (undesired legal

[703] Although there are certain statements about ICS operation and ICV driver interactions, e.g., Audi Level 3 braking system given the lack of response from the driver, at this juncture, they are viewed as rather distinct from applying a uniform classification.

[704] Edward R. Straub, Kristin E. Schaefer. It takes two to Tango: Automated vehicles and human beings do the dance of driving – Four social considerations for policy. *Transportation Research Part A: Policy and Practice* (2019), Vol. 122, pp. 173–183 (p. 177).

consequences), the likelihood that potential customers would acquire ICV is immediately decreasing.

Driver Training Dilemma

The question as to whether the ICV operator is required to be specially trained for Shared Task Authority with the ICS or not still remains unanswered. Some scholars have argued that there are three basic options available, i.e., (1) no driver training, (2) minimum-required driver training, and (3) excessive driver training.[705] Given the 'no driver training' approach, the ICV operator would be required to learn of the ICS capabilities himself/herself given the optimal product information, i.e., warnings and instructions (see Sub-sections 1.1.1. and 2.1.1.1.) delivered by the manufacturer. Under the 'minimum-required driver training', the ICV operator would be supplementarily trained to exercise the Shared Task Authority over the product information which remains available at all time for the ICV operator. Considering the 'excessive driver training' approach, the ICV operator would require thorough training with the obligatory certification to be authorised to operate an ICV. The latter approach constitutes a lighter version of the driver licensing as experienced in the CVs case. Although ICV operators should bear the risk of the lack of competence, it is seen disproportionate to leave the manufacturer behind the scene; as long as the manufacturer possesses more profound knowledge in the ICV architecture, it is instead the duty of such a manufacturer to enable ICV operators to exercise their tasks in connection with the ICV use effectively.[706] Regarding the number of the potential ICV operators per one unit, i.e., ICV.v, pro-active training can be integrated into the form of compulsory onboard (interactive) training. The onboard training would enable a smooth rotation of ICV operators per unit and would simultaneously ensure the possibility of reselling ICVs without any supplementary intervention of the ICV manufacturer.

While the absolute necessity of possessing the driver licence for an ICV driver is beyond reasonable doubt (as long as the ICV driver is subject to a constant and frequent shift in DDT), it is vaguer as to whether the ICV users (at the higher levels of ICV automation) are required to possess the driver licence in the presumed absence of any possibility to exercise DDT by technical means. On the other hand, it is seen unreasonable to entirely eliminate the possibility of the input of the ICV user as such, i.e., regaining access to take over the control of the operational process, given the existing natural disasters,[707] e.g., earthquakes, or volcano eruptions, where it would be inevitable to maintain the legitimate potential to regain undertraining of DDT given the immediate foreseeable failure of IC-infrastructure (disabling V2I, V2X and V2V communication). Consequently, as long as it remains possible by technical means to regain control over the operational process, the concept of a driver and the legal requirement for obtaining a driving

[705] Andrew Marinik, Richard Bishop, Vikki Fitchett, Justin F. Morgan, Tammy E. Trimble, Myra Blanco <…>. (pp. 85–86).
[706] Expert Group on Liability and New Technologies <…>. (p. 44).
[707] Mario Gerla, Eun-Kyu Lee, Giovanni Pau, Uichin Lee. Internet of Vehicles: From Intelligent Grid to Autonomous Cars and Vehicular Clouds. 2014 *IEEE World Forum on Internet of Things*, pp. 241–246 (p. 241).

licence (per type of the ICV operated, e.g., an IC heavy truck requires the appropriate category of the driver licence, e.g., C, C1, CE) should continue to exist. Directive 2006/126/EC[708] on driving licences, therefore, does not require any subsequential changes given the ICV release within the market.

Distribution of Responsibilities and Legal Culpabilities

The previous sub-sections elaborately dealt with the engagement of different agents in CAD; whereby the redistribution of the responsibilities between the new CAD-involved agents is viewed as unavoidable, the shift from a human driver to ICS undertaking the DDT does not ultimately relieve the human from responsibilities, and, in certain occasions, from legal culpabilities. Assessing the National Transportation Safety Board accident report in connection with the Tesla incident, it was held that the ICV user failed to pay attention, i.e., to monitor the road environment, since the ICS allowed him not to be engaged in DDT during that specific time.[709] It was argued that the ICV user made himself disengaged from the operational process regardless of both the warnings and the instructions provided by the manufacturer. Here, despite the fact that the ICV user was in breach of following the product information, i.e., warnings and instructions, it was still argued that the ICS ultimately contributed to the cause of RTA since the one in use permitted such prolonged disengagement of the ICV user. The question arises whether the prolonged disengagement itself can be considered wrong; and, if so, whether there is a basis for the launch of ICV at the higher levels of automation, given that the ICV user's disengagement is presumed at all time.

The redistribution of the dynamic tasks, responsibilities and legal culpabilities is a natural step in the CAD deployment. Herewith, given the above-determined statuses of the ICV driver and the ICV user at both the lower and the higher levels of ICV automation, there are direct duties assigned to the ICV user, i.e., actively, attentively and prudently observing the traffic environment at all times during the ride and regaining control over the operational process upon the immediate request of ICS, hazard notification (Level 3); and attentively and prudently fulfilling all the requirements concerning the ICV use under the product information, i.e., warnings and instructions (all levels of automation concerned). Therefore, despite the claims of a full shift in the legal culpability from a human-driver to ICV.v or the manufacturer, and the subsequent gradual vanishing of the notion of the driver,[710] the ICV user continues to maintain specific dynamic tasks and responsibilities, and, thus, the subsequent legal culpabilities in the case of not-fulfilling the required duties. The Law Commission and the Scottish Law Commission called upon the necessity

[708] Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences (Recast). OJ L 403.
[709] National Transportation Safety Board. Highway Accident Report <…>. (p. 11).
[710] Kadner Graziano, Thomas Michael. *Cross-border traffic accidents in the EU – the potential impact of driverless cars*. (Mandate from:) European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs. Brussels: European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs (2016), pp. 1–64 (p. 52).

to clarify the role of the 'user-in-charge',[711] i.e., the potential of the legal culpability to arise vis-à-vis the ICV user and *not* the ICV driver.

Assuming the possibility to regain control over the operational process by technical means regardless of the level of automation, it would mean an absolute requirement for the ICV user to continue fulfilling the existing requirements and duties applicable to a driver in order not to be in charge of the offence, e.g., driving or being in charge of a vehicle with alcohol concentration above the prescribed limit,[712] or being physically and mentally able to shift the DDT control, e.g., a person who cannot execute control over the operational process of the CV, in theory, should not be required (or should not be able) to regain control over DDT in ICV.

2.1.2.2. Concept of 'Mobility-as-a-Service (MaaS)'

ICVs are expected to be used as private,[713] commercial (e.g., taxi[714] and freight services)[715] and public transport. ICVs release is assimilated with the emerging Mobility-as-a-Service (MaaS)[716] paradigm (also referred as to the vehicle-as-a-service (VaaS)[717] notion), whereby the MaaS impacts on the shift in perception of the society from private ownership over the vehicle to shared mobility.[718] While shared mobility, i.e., vehicle-sharing, ride-sharing[719] (space-sharing), or ride-hailing,[720] is widely recognised and accepted concerning commercial vehicles and the public transport, the ICV architecture allows certain flexibility for ICV.v that facilitates dynamic ride-hailing.[721] Therefore, the latter is expected to be contemporaneously used among several persons,[722] e.g., all family members. Shared mobility based on the ICV architecture allows the

[711] Law Commission and Scottish Law Commission. *Automated Vehicles: A joint preliminary consultation paper*. (2018), pp. 1–212 (p. 36).
[712] Jeffrey K. Gurney. Sue my car not me: Products liability and accidents involving autonomous vehicles. *Journal of Law, Technology & Policy*, Vol. 2013, No. 2, pp. 247–277 (p. 256).
[713] Lisa Collingwood. Privacy implications and liability issues of autonomous vehicles. *Information & Communications Technology Law* (2017), Vol. 26, Issue 1, pp. 32–45 (p.33).
[714] Dirk Heinrichs. Autonomous Driving and Urban Land Use. In: Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner (Eds.). *Autonomous Driving: Technical, Legal and Social Aspects*. Springer, Berlin, Heidelberg (2016), pp. 213–231 (p. 218).
[715] Zia Wadud. Fully automated vehicles: A cost of ownership analysis to inform early adoption. *Transportation Research Part A: Policy and Practice* (2017), Vol. 101, pp. 163–176 (pp. 163–164).
[716] The MaaS paradigm can significantly change the current vehicle ownership model through the on-demand services, e.g., UbiGo in Sweden, MaaS Global Oy (Whim) in Finland, Belgium, Austria and UK.
[717] Nuno Sousa, João Coutinho-Rodrigues, Arminda Almeida, Eduardo Natividade-Jesus. Dawn of autonomous vehicles: review and challenges ahead. *Proceedings of the Institution of Civil Engineers – Municipal Engineer* (2018), Vol. 171, Issue 1, pp. 3–14 (p. 2).
[718] Francesco Ferrero, Guido Perboli, Mariangela Rosano, Andrea Vesco. Car-sharing services: An annotated review. *Sustainable Cities and Society* (2018), Vol. 37, pp. 501–518 (p. 501, p. 502).
[719] Peter Wells, Xiaobei Wang, Liqiao Wang, Haokun Liu, Renato Orsato. More friends than foes? The impact of automobility-as-a-service on the incumbent automotive industry. *Technological Forecasting & Social Change* (2020), Vol. 154, 119975, pp. 1–11 (p. 2).
[720] Jonn Axsen, Benjamin K. Sovacool. The roles of users in electric, shared and automated mobility transitions. *Transportation Research Part D* (2019), Vol. 71, pp. 1–21 (p. 4).
[721] Asif Faisal, Tan Yigitcanlar, Md Kamruzzaman, Graham Currie. Understanding autonomous vehicles: A systematic literature review on capability, impact, planning and policy. *The Journal of Transport and Land Use* (2019), Vol. 12, No. 1, pp. 45–72 (p. 50).
[722] Peter Wells, Xiaobei Wang, Liqiao Wang, Haokun Liu, Renato Orsato <…>. (p. 5).

users to access and use the ICV (owned by the ICV owner, i.e., an individual or a legal entity) based on fixed fees, i.e., per-use payment.[723] Another category of shared mobility, other than that in the classical commercial comprehension, is the peer-to-peer (P2P) vehicle-sharing which allows individuals to provide their vehicles for rent,[724] i.e., either for long- or short-time utilisation, vehicle rent as a unit, or ride rent (ride-hailing). The Getaround (ex-Drivy) can be an immediate example of P2P, where the CVs owners provide their transport units for hire (longer trips concerned).[725] While ride-hailing, as a rule, represents a platform or application designated for users to hail a ride, e.g., *Uber* and *Lyft* are vivid examples of short-range trips, i.e., a ride-hailing service.[726] Contemporaneously, *BlaBlaCar* represents the ride-sharing or space-sharing platform widely accepted and recognised in the EU and beyond.[727] The aforementioned market actors and P2P representatives, in collaboration, constitute MaaS as an already self-integrated form of mobility in the EU, and, therefore, MaaS *per se* does not constitute a never experienced phenomenon within the single market.

Should the significant parking difficulties, high parking fees, public measures towards 'cleaning' urban areas from the excessive volume of vehicles continue, ICV-sharing across all of its categories will be viewed as a highly feasible and sustainable phenomenon. Some researchers have argued that MaaS, as ride-hailing or a service on demand, will supplement the public transport.[728] Others have argued that the emerging MaaS might impact the public transport sector,[729] among other things, and involve mergers of the private and public transportation sectors.[730] Against this background, the mergers or the new forms of cooperation between the sectors give rise to a question as to what extent the redistribution of the responsibilities (given the reallocation of risks) and legal culpabilities should change.[731]

Some have argued that MaaS impacts a new spectrum of the legal issues, i.e., undefined legal statuses of the users in question and the subsequent undetermined responsibilities and legal

[723] Boyd Cohen, Jan Kietzmann. Ride On! Mobility Business Models for the Sharing Economy. *Organization & Environment* (2014), Vol. 27, Issue 3, pp. 279–296 (p. 289).
[724] Liridona Sopjani, Jenny J. Stier, Sofia Ritzén, Mia Haesselgren, Peter Georén. Involving users and user roles in the transition to sustainable mobility systems: The case of light electric vehicle sharing in Sweden. *Transportation Research Part F: Traffic Psychology and Behaviour* (2019), Vol. 71, pp. 207–221 (p. 214).
[725] Charles McLellan. Drivy: Airbnb, or Spotify, for cars. *Tech and the Future of Transportation*. Retrieved online from <https://www.zdnet.com/article/drivy-airbnb-or-spotify-for-cars/>. Retrieved on 21 February 2021.
[726] Hani S. Mahmassani. Technological Innovation and the Future of Urban Personal Travel. In Joseph Schofer, Hani S. Mahmassani (Eds.). *Mobility 2050: A Vision for Transportation Infrastructure*. Northwestern Engineering Transportation Center: 2016, pp. 41–62 (p. 54).
[727] Susan Shaheen, Adam Stocker, Marie Mundler. Online and App-Based Carpooling in France: Analyzing Users and Practices—A Study of BlaBlaCar. In Gereon Meyer, Susan Shaheen. *Distrupting Mobility*. *Lecture Notes in Mobility*. Springer, Cham. (2017), pp. 181–196 (p. 182, p. 183).
[728] Rico Krueger, Taha H. Rashidi, John M. Rose. Preferences for shared autonomous vehicles. *Transportation Research Part C: Emerging Technologies* (2016), Vol. 69, pp. 343–355 (p. 343).
[729] Patrick M. Bösch, Francesco Ciari, Kay W. Axhausen. Transport policy optimization with AVs. *Transportation Research Board* (2018), 18-06253, pp. 1–16 (p. 8).
[730] Crystal Legacy, David Ashmore, Jan Scheurer, John Stone, Carey Curtis. Planning the driverless city. T*ransport Reviews* (2018), Vol. 39, Issue 1, pp. 84–102 (p. 94).
[731] Araz Täihagh, Hazel Si Min Lim. Governing autonomous vehicles: emerging responses for safety, liability, privacy, cybersecurity, and industry risks. *Transport Reviews* (2019), Vol. 39, pp. 103–128 (p. 107).

consequences for such users. In a MaaS scheme, ICV is operated by a fleet operator who is viewed as reasonably responsible for the organisation of the ICV ride; albeit, in the case of two and more different operators, e.g., other than the frontend[732] and backend[733] operators, the distribution of the responsibilities and the subsequent apportionment of the legal culpability for the legal consequences becomes vaguer. The experts argued that, in the event of two and more operators, the strict liability rules should apply to the one who explicitly controls the allocation of the risks connected with the ICV performance.[734] Although both the control over the allocation of risks and the reasonable gains are deemed significant to qualify one out of two or three operators as the operator in charge of the ICV performance, relying on the nature of gains as the decisive factor to assign the legal culpability for one of the operators can be vague, and, therefore, lead to a legal uncertainty.[735] Against this background, it is required to explicitly designate the distribution of responsibilities between the MaaS-related agents (as part of CAD-involved agents) purporting to the hidden potential and the foreseeable legal uncertainly.

Distributing of Responsibilities and Legal Culpabilities

By its purpose, MaaS inevitably involves additional agents, e.g., frontend and backend operators. The number of operators involved depends on the category of shared mobility, i.e., vehicle-sharing, ride-sharing, or ride-hailing. In a vehicle-sharing scheme, ICV is owned either by an individual or a legal entity, while the ICV operator is a customer purchasing the vehicle-sharing service (estimated longer trips). In the case of the (traditional) ride-sharing, ICV.v is owned by a legal entity, while the ICV operator is an employee performing in the name of the ICV owner; herewith, the customers benefiting from MaaS in the given category are passengers on board of the ICV. Contemporaneously, in the P2P ride-sharing scheme, ICV.v is owned by an individual, and the ICV operator is likely to be an ICV owner; here, by analogy, the customers purchasing the ride-sharing service are passengers on board of the ICV (estimated longer trips). In the ride-hailing scheme, (1) ICV is owned either by an individual or a legal entity, while the ICV operator is either the ICV owner or an employee performing on behalf of the ICV owner; here, the customers purchasing the ride-hailing service are passengers (estimated short-range trips). In the ride-hailing scheme, (2) ICV is owned by a legal entity, while the ICV operator is a customer purchasing the ride-hailing service (estimated short-range trips).

Given the MaaS schemes, both the ICV owner and the ICV operator can be viewed as both the frontend and the backend operators simultaneously or at different times. Providing that the ICV operator is the ICV owner, such a person is deemed as both the frontend and the backend operator (in charge of the ICV maintenance), while in the case the ICV operator is a person other than the

[732] The frontend operator is seen as the primary person benefiting from the use of ICV. The frontend is what the ICV users interact with directly (interface). Expert Group on Liability and New Technologies <…>. (p. 39).
[733] The backend operator is viewed as a second individual/entity constantly the ensuring smooth ICV performance, e.g., providing the required frequent services in order to ensure the ICV operation. The backend is part of the support and operation beyond the control of the user. *Ibid*. (p. 39).
[734] Expert Group on Liability and New Technologies <…>. (p. 34).
[735] *Ibid*. (p. 41).

ICV owner, the former is seen as a frontend operator, and the latter is regarded as a backend operator. However, in schemes where the ICV operator is an employee performing on behalf of the ICV owner, the ICV owner should maintain both the frontend and the backend operator status. Given the presumed control over the risks allocation on the part of the ICV owner as a central figure to organise the ICV operational scheme, the duty to ensure the required insurance coverage for ICV.v should remain with the ICV owner (as a backend and often a frontend operator) irrespective of the benefits acquired by the ICV operator if the latter is a person other than the ICV owner. The differentiation between the frontend and the backend operators in MaaS schemes should be considered without prejudice to both responsibilities and the potential legal culpabilities of the ICV user and the ICV driver according to the analysis provided in Sub-section 2.1.2.1.

2.1.2.3. ICV as a 'product' (ICV.p) and as a 'vehicle' (ICV.v)

The previous sub-sections elaborately dealt with (1) the engagement of different CAD agents; and (2) feasible liability regimes that would stipulate ICV deployment and maintain the balance of the interest between the CAD involved agents and the potential ICV victims. However, none of the discussed liability regimes would have a potential for the smooth realisation to ensure a sustainable ICVs civil liability regime at the European Union level without uniform regulatory concepts.

ICV as a 'vehicle' (ICV.v)

Having regard to the analysis provided in Sub-section 1.1.3.2., in order to avoid the comparable disadvantageous impact on the cross-border RTA victims involving ICV compared to the cross-border RTAs involving CVs, the concept of ICV (as a vehicle) (ICV.v) should be explicitly determined *ex ante*. To prevent comparable discrepancies previously associated with the 'use of a vehicle' vis-à-vis to CVs, which has taken place after the CJEU interpretation in *Vnuk*, *Rodrigues de Andrade* and *Torreiro*, the fundamental regulatory concepts should be explicitly defined, thereby avoiding legal inconsistencies due to the peculiarities of the legal translation into the official languages of the MSs (e.g., French "*la circulation de véhicules*," Spanish "*la circulación de vehículos*," and Italian "*dalla circolazione dei veicoli*"). Given the specific technical nature of ICV.v, the EU law-making bodies should take a step forward to define the concept of ICV.v in collaboration with the representatives of the industry, having regard to the divergent ICV levels of automation, i.e., the lower and the higher levels of ICV automation. Either the taxonomy of Driving Levels of Automation (Standard SAE J3016-2018)[736] designated by SAE or the taxonomy of ICV automation levels brought by the EU manufacturers in question, independently from SAE, should be seen as a reasonable base for the ICV.v legal concept. Considering the analysis provided in Sub-sections 2.1.1.2. and 2.1.2.1., the ICV levels of automation and the subsequent ICV.v legal concept play a crucial role with regard to the distribution of the responsibilities between the involved agents (i.e., ICV user – ICV driver, ICV user – ICV

[736] Society of Automotive Engineers (SAE) <…>.

owner/keeper) and the further legal consequences in the case of not fulfilling the legal requirements.

ICV.v represents not only a light vehicle, such as a passenger car; instead, ICV.v is viewed in a broader sense as any vehicle that provides control over the operational process (DDT performing) through ICS given V2V, V2I and V2X communication. Herewith, ICV.v, under the technical specifications, can be extended beyond the road use vehicle, e.g., a railway vehicle. Against this background, it is required to define ICV.v not only in view of its possessed technicality, but also as a legally intelligible concept representing different categories of ICV.v inevitable for the distribution of responsibilities between the different involved agents, e.g., ICV.v maintenance, safety requirements, e.g., seat belts, and legal consequences (legal culpabilities), e.g., driving or being in charge of a vehicle with alcohol concentration above the prescribed limit, breach of duty of obedience.

This study proposes to define an ICV as a vehicle (ICV.v) as any road vehicle which provides control at different levels of automation over the operational process, such as DDT performing, through ICS given V2V, V2I and V2X communication. This definition is limited to the road use, which would preclude the inclusion of vehicles designed to provide various non-transportation services, such as cherry-pickers or fork lifts. Furthermore, such a definition prevents the inclusion of vehicles not capable of interconnection, i.e., V2V, V2I and V2X. After defining ICV.v, the legislator would have to determine the legal concept of the 'use of ICV.v'. It must be argued that, at this stage, we will need more data on the technical capabilities of ICV.v in order to define the 'use of ICV.v'.

ICV as a 'product' (ICV.p)

Similar to ICV.v, ICV (as a product) (ICV.p) should be explicitly determined *ex ante* at the European Union level in order to prevent any legal uncertainty applying the ICV.p concept in connection with the ICV incidents in the EU. While ICV.v concerns one group of CAD-involved agents (i.e., ICV user – ICV driver, ICV user – ICV owner/keeper), ICV.p relates to another group of agents directly involved in the CAD deployment, i.e., ICV user – ICV manufacturer, TP victim – ICV manufacturer, ICV manufacturer – infrastructure operator, ICV manufacturer – network provider. Having regard to the analysis provided in Sub-sections 2.1. and, specifically, in 2.1.1.2, the complexity of the incidents involving ICV.p generates complex and composite connections between the responsible agents, e.g., ICV user – ICV manufacturer – network provider; herewith, a definite and unambiguous determination of ICV.p at the European Union level is viewed as being of significant importance in order to enable the redistribution of responsibilities, and the subsequent apportionment of the legal consequences between newly involved agents in the PL action.

ICV.p consists of ICV itself as a unit including hard components directly relating to the manufacturing state and the physical design of a product (see Sub-section 1.1.1.); the optimal product information as a component, i.e., instructions and warnings provided by the manufacturer (Sub-sections 1.1.1., 2.1.1.1., 2.1.2.1.); soft components, i.e., a digital component or the digital

content (e.g., such sophisticated software as CaaP and CaaS);[737] and the cybersecurity protocols (components), i.e., cyber defences against cyber-attacks and data leakage. Considering the aforementioned integral components of ICV.p, it becomes possible to draw clear comprehension of ICV.p *per se* and simultaneously denote the manufacturer's responsibilities. Given that the ICV manufacturer presumably has control over the allocation of risks in connection with ICV.p, it is deemed reasonable to distribute responsibilities to such a manufacturer to maintain ICV-concerned components and subsequently to bear the legal culpability in the case of not fulfilling the responsibilities or in the event of a failure of one or more components, which led to the damage. Sub-section 2.3.1. discloses in more detail the responsibilities of the manufacturer vis-à-vis the ICV.p, the interrelatedness between the responsibilities of the manufacturer and other agents in relation to ICV.p given the concept of ICV.p consisting of a block of the integral ICV components.

2.2. ICVs Civil Liability Regulation at the Domestic Level

2.2.1. UK model: ICV insurer strict-liability regime

In the view of the emerging digital technologies, and, in particular, the expected ICV release, in July 2018, the Automated and Electric Vehicles Act 2018[738] was brought to the attention of the public in the UK. Given the complex technicality of ICV.v, which does not allow for the application of the traditional fault-based liability established in the UK,[739] the UK legislator reconceptualised the domestic MTPL regime through the symbiosis of the compulsory insurance and the strict liability clauses.[740] At a first glance, it was suggested that the symbiosis of the traditional fault-based liability (when the ICV driver undertakes the operational process) and the product liability (when ICS has control over the operational process) could be seen as a sustainable ICV liability regime; albeit, such a symbiosis of the liability regimes was respectively rejected in the course of the consultation process.[741] The given liability regime's novelty consists of the strict-liability clauses imposed directly against the ICV insurer[742] and not against the owner/keeper or the driver of the vehicle as it would be under the traditional strict-liability regimes. The critical objective laid down in the scope of the Automated and Electric Vehicles Act is to ultimately distinguish the fault or negligence on the part of the human and the technological errors, i.e., ICS malfunctions, ICS failures, on the part of ICV.p.[743] Considering the results of the analysis provided in Sub-section 1.2.2., the reconceptualised liability regime in the UK jurisdiction approximates the

[737] The difference between CaaP and CaaS shall be discussed in more detail in Sub-section 2.3.1.
[738] Automated and Electric Vehicles Act 2018 (2018 Chapter 18).
[739] Given the complexity of the ICV, it can be extremely burdensome for a claimant to establish the liability based on a fault, as it may be difficult for a claimant to demonstrate the fault and causation. Sadie Whittam. Mind the compensation gap: towards a new European regime addressing civil liability in the age of AI. *International Journal of Law and Information Technology*, 2022, 30, pp. 249–265 (p. 251).
[740] Section 2. Automated and Electric Vehicles Act 2018 (2018 Chapter 18).
[741] Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109–200. (p. 176).
[742] Law Commission and Scottish Law Commission <…>. (p. 39).
[743] Michael Chatzipanagiotis, George Leloudas <…>. (p. 132, p. 148, p. 150).

UK common law system in connection with the RTA civil liability (involving ICV.v) to the civil liability system set out in other MSs (except for Ireland, Romania, Malta, and Cyprus).

Liability Regime under the Automated and Electric Vehicles Act

The Automated and Electric Vehicles Act introduces the direct right of action against the ICV insurer given that four essential elements are observed, i.e., (1) an RTA constitutes an RTA involving ICV (also referred as to a self-driving accident)[744] on the road or in another public place;[745] (2) an RTA caused in the automation mode, i.e., at the moment of RTA, ICS was in control of the operational process;[746] (3) at the momentum of RTA, ICV was insured;[747] and (4) an RTA involving ICV in the automation mode caused the damage[748] (existence of either pecuniary or non-pecuniary losses). Distinctly from the UK fault-based liability regime applicable to CVs, the insured ICV is eligible for compensation under the same rules as any other third party enduring the damage from ICV. Pursuant to Section 8(1) (a) of the Automated and Electric Vehicles Act, an automation mode (required in order to invoke the direct right of action against the ICV insurer as a second central element) constitutes the full autonomy of ICV.v, i.e., ICS exercise full and unconditional control over the operational process (DDT) without any requirement assigned to the ICV user to monitor the road environment in order to be ready to regain control over the operational process. Therefore, the Automated and Electric Vehicles Act applies solely to the ICV at higher ICV automation levels (Level 4 – Level 5). Against this background, the RTA victims are strictly differentiated per type of vehicle, i.e., ICV or CV, and, subsequently, per ICV level of automation, i.e., higher ICV automation levels are concerned. The aforementioned division provides with the disadvantageous impact of a discriminative character on the RTA victims other than those victims from ICV (Level 4 – Level 5). Should the ICV at the higher levels of ICV automation maintain the possibility to regain control over the operational process (DDT performance) by technical means (see Sub-section 2.1.2.1.), given the second essential element for strict liability on the part of the ICV insurer, i.e., an RTA caused in the automation mode (at the moment of RTA), the rigid threshold, i.e., technical examination, shall apply to every RTA case involving ICV (Level 4 – Level 5).

The liability regime under the Automated and Electric Vehicles Act designates the obligation on the part of the ICV insurer to cover the damage given the absence of both the fault on the part of the ICV user and the absence of ICS failure or any other failure that is attributable to the ICV manufacturer, i.e., a harmful event and the subsequent damage caused exclusively by a third party. A vivid example of such exclusive legal culpability on the part of a third party is a cyber-attack.

[744] Ken Oliphant. Liability for Road Accidents Caused by Driverless Cars. *Singapore Comparative Law Review (SCLR)* 2019, pp. 190–197 (p. 195).
[745] Section 2(1) (a). Automated and Electric Vehicles Act 2018 (2018 hapter 18).
[746] *Ibid*.
[747] Sections 2(1) (b). *Ibid*.
[748] Sections 2(1) (c). *Ibid*.

Compensation Mechanism under the Automated and Electric Vehicles Act

Having regard to the third major element for the direct right of action against the ICV insurer, i.e., a valid ICV insurance coverage at the moment of a harmful event, the ICV owner/keeper should be held liable for the damage in the case of not-fulfilling the compulsory insurance requirement (not insured ICV.v). There are two options for the compensation claim available under the Automated and Electric Vehicles Act: (1) a claim for compensation against the ICV insurer based on strict liability clauses (no fault or defect is required to be proven); or (2) a claim for compensation (legal action) against the ICV owner/keeper if the latter failed to fulfil the compulsory ICV.v insurance requirement (if ICV.v was not insured at the moment of RTA). Here, the second compensation scheme is broadly distinct from the one established under the MID in respect of uninsured CVs;[749] whereby the RTA victim is eligible to bring a compensation claim directly against the MIB or the compensation body (if different from MIB), i.e., no legal action is required against the owner of the CV. Considering that the MIB does not cover the damage in the case when an uninsured ICV.v caused the RTA, the RTA victims (involving an ICV) are placed into a significantly disproportionate and disadvantageous position compared to the RTA victims from CVs. The absence of MIB guarantees is seen directly against the MID's primary goal, i.e., minimising the negative impact on the RTA victims and succeeding in a EU-wide policy vis-à-vis the MTPL insurance. Sub-section 2.3.3. below provides analysis of the potentially admissible and sustainable scheme to ensure the insurance cover *ex ante* in respect to all ICV.v so that to prevent any uninsured ICV use within the EU territory and avoid the subsequent undercompensation/non-compensation cases.

The Automated and Electric Vehicles Act maintains the potential legal culpability assigned to third parties, i.e., parties other than the ICV insurer and the ICV owner/keeper (policyholder).[750] Given the direct right of action against the ICV insurer, the latter is entitled to seek compensation from the third party at fault, e.g., the driver of the CV in the mixed traffic flow conditions, non-motorised road users, or the ICV manufacturer (the right of subrogation or the right of an insurer to claim against the person responsible for the accident).[751] Albeit, either the ICV insurer or the ICV owner/keeper will pay an excess (if any) to an injured party only in the case of successful subrogation against the tortfeasor, i.e., a third party at fault.[752] Given the *restitutio in integrum* principle (see Sub-section 1.2.1.), the injured party is eligible to bring a claim for compensation against either party at fault so that to ensure full protection against the financial consequences under the traditional rules of tort liability established in the UK.

Applicable Defences under the Automated and Electric Vehicles Act

Broadly similar to the rules set out in the traditional fault-based liability regime, an injured party can be viewed as subject to contributory negligence[753] in the event of an RTA involving an

[749] Article 25. Directive 2009/103/EC <…>.
[750] Section 2(7). Automated and Electric Vehicles Act 2018 (2018 Chapter 18).
[751] Section 5. *Ibid.*
[752] *Ibid.*
[753] Automated and Electric Vehicles Act 2018 (2018 Chapter 18). Section 3 (1).

ICV. The Automated and Electric Vehicles Act does not designate any special rules connected with contributory negligence. It refers to the Law Reform (Contributory Negligence) Act 1945 (see Sub-section 1.2.1.) which would apply conventionally should the basis for contributory negligence occur. Contemporaneously, in the traditional RTA or PL case, the reduction of compensation on the part of an injured party depends on the extent of a fault on the part of a tortfeasor in the RTA and the degree of defectiveness of the product on the part of the manufacturer in PL; herewith, given the absence of the negligence basis for the claim *per se* under the new liability regime, it will bring uncertainty and interpretive issues when applying the Law Reform (Contributory Negligence) Act 1945 to ICV incidents.[754]

Under Section 3(2), there is a tough defence against the ICV user, i.e., compensation reduction to 0% or the complete liability exemption clause if the ICV user started the ICS operational process when it was "not appropriate to do so." Here, the issue arises straight away as to what is deemed 'appropriate' vis-à-vis the launch of the ICS operational process (DDT performance), i.e., the test of appropriateness is in question. Another reasonable concern here is the complete liability exemption as such,[755] i.e., given that the 'appropriateness' of ICS launched is explicitly determined (in the future), it is seen reasonable to invoke contributory negligence and the subsequent reduction in compensation; however, the reduction in compensation to 0% is deemed disproportionate.

Another defence is the unauthorised alterations to the digital content, i.e., ICV software, or the failure to upgrade the digital content when it was required.[756] Section 4(1) can be invoked directly in combination with Section 2(1) of the Automated and Electric Vehicles Act so that to exclude or limit the ICV insurer's liability vis-à-vis the damage endured by the ICV owner/keeper. Here, it must be proven that either the unauthorised alterations to the digital content have taken place, or the ICV owner/keeper failed to fulfil 'safety-critical' software update requirements. Suppose the insured person[757] is a person other than the policyholder (the ICV owner/keeper), the aforementioned defence can be invoked solely if such an insured person had reasonable knowledge vis-à-vis the unauthorised digital content alterations being contrary to the policy.[758] The liability in the event of an ICV incident cannot be limited or restricted by any other means except for these directly envisaged in the Automated and Electric Vehicles Act.[759]

Recoverable Damages under the Automated and Electric Vehicles Act

Although the new liability regime in respect of ICV incidents in the UK jurisdiction does not limit the traditional tort law rules concerning the claim for compensation and the principle of *restitutio in integrum*, under Section 1(3), the compensation for damaged ICV.v/ICV.p; goods (for

[754] Ken Oliphant <…>. (p. 194).
[755] *Ibid*. (p. 194).
[756] Section 4. Automated and Electric Vehicles Act 2018 (2018 Chapter 18).
[757] An insured person, in relation to an insured ICV, means any person, i.e., an ICV user, whose use of the ICV is covered by the policy in question. Section 8(2). *Ibid*.
[758] Section 4(2). *Ibid*.
[759] Section 2(6). *Ibid*.

hire or any other commercial goods) carried on board of the ICV (including those goods carried inside or on the towed unit attached to ICV); and private belongings or any property in the custody of the policyholder (given the absence of defences against the policyholder / ICV owner/keeper), or the ICV user (given the defences against the policyholder / ICV owner/keeper) should be excluded by virtue of law. The exclusion of the damaged ICV itself from the cover does not constitute a precedent in the UK jurisdiction; in *Murphy v Brentwood D.C.*,[760] it was held that in the PL action, both pecuniary and non-pecuniary damages (except for pure economic loss) could be claimed other than the compensation for the defective product in question. The Automated and Electric Vehicles Act does not alter the amount of the payable compensation for the material damage caused in the RTA involving ICV, and, therefore, it refers to the limitations[761] established under the traditional MTPL rules. Given the application of the specific limits, i.e., financial caps, in connection with the payable compensation in an RTA involving an ICV and an RTA caused by CVs, there is a potential to discriminate against the ultimate RTA victims.

2.2.2. German model: ICV keeper strict-liability regime

Since 2015, Germany is the first MS to launch legal and ethical research through the Automated Driving Round Table to draw a national strategy for ICV deployment purposes. Regarding the findings delivered by the interdisciplinary group of experts, certain inevitable changes to the German RTA regulatory policy have taken place.[762] Given the unquestionable interrelatedness between the RTA policy invoking CVs and the liability regime for ICV deployment, in 2017, the German Road Traffic Act (StVG) alterations in the view of CAD were completed.[763] Broadly similar to the UK approach towards the regulation, the ICV policy in the German jurisdiction directed to the ICV at the higher levels[764] of the ICV automation (Level 4 – Level 5); the levels of the ICV automation referred to in the German jurisdiction correspond to the SAE taxonomy, i.e., 'High Driving Automation' (*hochautomatisiert*), and 'Full Driving Automation' (*vollautomatisiert*).[765] According to StVG,[766] the ICV in question must correspond to seven essential elements, i.e., (1) to control the operational process (to exercise DDT) without the ICV driver's intervention; (2) to obey the existing traffic rules; (3) to permit the ICV operator to deactivate ICS, i.e., the automation mode; (4) to allow the transfer in control over the operational process, i.e., a shift in the operational mode; (5) to acknowledge the immediate necessity of a shift in the operational mode; (6) to properly instruct the ICV operator to regain control over the

[760] *Murphy v Brentwood District Council* (1990), 2 All ER 908, (1991), UKHL 2, (1991), 1 AC 398.
[761] With the reference to Section 145(4) (b) of the Road Traffic Act 1988. Section 2(4). Automated and Electric Vehicles Act 2018 (2018 Chapter 18).
[762] Bundesministerium für Verkehr und digitale Infrastruktur. Ethik-Kommission. Automatisiertes und Vernetztes Fahren (2017), pp. 1–33. In English: Federal Ministry of Transport and Digital Infrastructure. Ethics Committee. Automated and connected driving.
[763] Sections 1a – 1c, 12, 63a. *Ibid*.
[764] Jonas Radlmayr, Klaus Bengler. Literaturanalyse und Methodenauswahl zur Gestaltung von Systemen zum hochautomatisierten Fahren. *Forschungsvereinigung Automobiltechnik e.V. (FAT)* (2015), pp. 1–53 (p. 6–8).
[765] Section 1a. Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.
[766] *Ibid*.

operational process; and (7) to provide warnings concerning any inadequate utilisation of ICS. In contrast to the ICV regulation adopted in the UK, in the German jurisdiction, the new rules to ICV deployment denote requirements for ICV data storage purposes.[767] However, the concept of a 'self-driving vehicle', or ICV, in its most autonomous state, excluding the presence of a human driver, was not included in the StVG.[768] This fact indicates that neither the industry nor the legislation is ready for the full deployment of ICVs at this stage.

Distribution of Responsibilities between the CAD-Involved Agents

Although the ICVs civil liability regulation concerns ICV.v exclusively at the higher ICV automation levels, the ICV operator is viewed as unconditionally engaged in the ICV operational process regardless of the automation mode.[769] Therefore, the ICV.v cannot be launched in the German jurisdiction in the absence of an ICV operator; the StVG expressly states that the person who activates and uses the ICV is considered a driver.[770] At this point, using the MaaS schemes, i.e., driverless on-demand commands, which could unload the repleted urban areas, is deemed unattainable. The use of ICS is allowed strictly under the product information provided by the manufacturer in question;[771] herewith, the ICS control over the operational process is permitted only under the conditions communicated by the manufacturer, i.e., the use of ICS on certain roads, in certain regions, given certain speed limitations or other conditions designated in the product information. A vivid example of a faulty use of ICS under the above clause would be the launch of an ICS (in the automation mode) in a particular cross-border corridor where V2I and V2X cannot be adequately ensured. The above clause places direct responsibility on the part of the ICV operator. Contemporaneously, the manufacturer is obliged to provide unambiguous and convenient product information to the ICV operator, i.e., guidelines, instructions and warnings in connection with OBEs, ICS capabilities, levels of automation, and any other data relevant for the use of ICV.[772]

The ICV users at the higher ICV automation levels are allowed to ride hands-off steering wheel without constantly monitoring the road environment. Albeit, the former are obliged to regain control over the operational process upon immediate necessity (hazard) notified by ICS, or once it has become obvious through the prism of the road environment that the conditions for the intended use of the highly or fully automated driving functions are no longer in place.[773] Here, it is vague as to what is viewed as the 'obvious' road environment when the conditions for the intended use of the automated mode functions are no longer in place; and, therefore, the ICV user is required to regain the operational control over DDT. A further interpretation is deemed necessary to prevent

[767] Section 1a. Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.
[768] Béla Csitei. Autonomous and Automated Vehicles in Germany and Hungary, with Special Attention to the Question of Civil Liability. *Acta Univ. Sapientiae, Legal Studies*, 10, 1 (2021), pp. 55–64 (p. 56).
[769] Section 1a(4). *Ibid*.
[770] Béla Csitei. Autonomous and Automated Vehicles in Germany and Hungary, with Special Attention to the Question of Civil Liability. *Acta Univ. Sapientiae, Legal Studies*, 10, 1 (2021), pp. 55–64 (p. 58).
[771] Section 1a (1). *Ibid*.
[772] Bundesrat Drucksachen BR-Drs 69/17 (Gesetzentwurf), 27.01.17. In English: German Federal Government.
[773] Section 1b. Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.

the ambiguity, the legal uncertainty, and the subsequent divergent court practice. Should the ICS alert the ICV user about the immediate necessity of the shift in the operational mode, the latter is required to switch into the manual driving mode immediately or 'without delay'[774] (*unverziiglich*). Against this background, an issue arises with regard to the correlation between the absence of a legal duty to monitor the road environment at the higher levels of ICV automation, and, simultaneously, to ensure a shift in the operational mode upon the ICS hazardous notification without delay; the reasonableness of the latter clause is questionable. Purporting to ensure the feasibility of the transfer in the operational mode, i.e., the transfer of control over the operational process from the ICS to the ICV driver, the ICV user must exercise the monitoring duty over the road environment at all time while in motion. Accordingly, regarding the foreseeable case-scenario where the ICS requires the ICV user to regain the operational control over the DDT, the human factor should be considered *ex ante*.[775] Research studies on the driver's reaction time and the visual perception demonstrate that the 18–35-year-old human driver reacts to the immediate hazard in a range of 0.67–0.78 s depending on the gender (e.g., the male reaction in the age group of 31–35 years is estimated at 0.69 s, while the female reaction of the same age group is equal to 0.78 s).[776] Simultaneously, the 36–60-year-old human driver will react to a sudden danger in a range of 0.77–0.95 s depending on the gender (e.g., the male reaction in the age group of 41–45 years is estimated at 0.79 s, while the female reaction of the same age group is equal to 0.77 s).[777] The above study results comprise the reaction time of a vigilant human driver, i.e., a driver who is monitoring the road environment at all time, whereby, given the absence of the monitoring duty, the ICV user would not demonstrate comparable reaction time results. The human factor in a shift of the operational modes was indeed pre-considered by the German Ethics Commission; herewith, under Principle No. 17 of the Ethical Rules for Automated Connected Vehicular Traffic (hereinafter – Ethical rules),[778] the ICS should be configured to observe the human communicative behaviour and provide the ICV user with sufficient time to accomplish the transfer over the operational process. This leads to the prerequisite to set up a reinforcement system which could replace the ICS failure or, at any rate, to securely terminate the DDT until the ICV driver regains control over the operational process.[779] The aforementioned reinforcement system corresponds to Principle No. 19 drawn by the German Ethics Commission, i.e., the ICS should switch to a 'safe condition' mode in the case of an emergency.

Liability Regime

[774] Section 1b(2). Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.
[775] Tim Hey. *Die außervertragliche Haftung des Herstellers autonomer Fahrzeuge bei Unfällen im Straßenverkehr*. Gabler, Betriebswirt.-Vlg. (2018), pp. 1–278 (p. 77).
[776] Nickolay Podoprigora, Polina Stepina, Viktor Dobromirov, Jurij Kotikov. Determination of driver's reaction time in expert studies of road traffic accidents using software and hardware complex. XIV International Conference 2020 SPbGASU "Organization and safety of traffic in large cities." *Transportation Research Procedia* (2020), Vol. 50, pp. 538–544 (p. 541).
[777] *Ibid*. (p. 541).
[778] Ethik-Kommission. Automatisiertes und Vernetztes Fahren (2017) <…>.
[779] Tobias Hammel. *Haftung und Versicherung bei Personenkraftwagen mit Fahrerassistenzsystemen*. VVW-Verlag Versicherungs (2016), pp. 1–558.

Broadly similar to the liability regime with CVs, the ICV owner/keeper's liability continues to dominate,[780] while the PL action is admissible after the principal settlement of losses between the ICV owner/keeper and the injured party. In contrast to the UK model of regulation, the newly-founded rules on the ICVs civil liability regulation, in the German jurisdiction, apportions the strict liability on the ICV keeper[781] and not directly on the ICV insurer. Assuming the smooth settlement of the third-party losses, the ICV keeper (or the ICV insurer on behalf of the ICV keeper as a policyholder) is eligible to exercise the right of subrogation against the manufacturer or any other party at fault (if any), e.g., a third-party driver, the infrastructure operator, or the network provider. Paragraph (3) of § 7 of the StVG reflects the general rule laid down in Directive 2009/103/EC;[782] in the event that the ICV user had obtained illegal access to the ICV and caused losses to a third party, the responsibility in this case passes from the ICV keeper to the ICV user.

Force Majeure

Although ICVs civil liability regulation in the German jurisdiction represents the newly-founded set of rules compared to the civil liability regulation designated for CVs (see Sub-section 1.2.2.), the clauses connected with the *force majeure*[783] and an unavoidable event[784] are invokable to ICV incidents correspondingly. Neither an ICS failure, e.g., navigation defects (route planning and localisation),[785] nor a malfunction of the ICV hard components, e.g., cameras, radars, infrared or LiDAR, constitute a *force majeure* or an unavoidable event in order to exclude the liability of the ICV keeper under the strict liability clauses.[786] Albeit, the ICV keeper (or the ICV insurer on behalf of the ICV keeper as a policyholder) is eligible to seek compensation from the manufacturer under the traditional legal provisions on subrogation. Should the ICV user be held negligent either under the general rules on tort or under special provisions addressing the ICV regulation, the subrogation against the manufacturer would not be possible.[787]

Compensation Mechanism for Victims in Mixed Traffic

Avoiding a conflict with the minimum amounts for compensation set out in the MID under the compulsory MTPL insurance scheme,[788] the limits of the ICV keeper's liability are set to EUR

[780] Gerhard Wagner. Produkthaftung für autonome Systeme <…>, (p. 758).
[781] Bundesrat Drucksachen BR-Drs 69/17 (Gesetzentwurf), 27.01.17. In English: German Federal Government.
[782] Article 13. Directive 2009/103/EC <…>.
[783] Section 7(2). Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.
[784] Section 17(3). *Ibid*.
[785] Tim Hey. *Die außervertragliche Haftung des Herstellers autonomer Fahrzeuge bei Unfällen im Straßenverkehr*. Gabler, Betriebswirt.-Vlg. (2018), pp. 1–278 (p. 72).
[786] Tobias Hammel. *Haftung und Versicherung bei Personenkraftwagen mit Fahrerassistenzsystemen*. VVW-Verlag Versicherungs. (2016), pp. 1–558.
[787] Bundesrat Drucksachen BR-Drs 69/17 (Gesetzentwurf), 27.01.17. In English: German Federal Government.
[788] The obligation to review the minimum amounts of the insurance cover is laid down in Article 9 of the MID. In 2016, the minimum amounts were revised by a Communication from the Commission to the European Parliament and the Council. The adaptation in line with inflation of minimum amounts of cover laid down in Directive 2009/103/EC relating to insurance against the civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such a liability. COM/2016/0246 final. For thirteen MSs benefiting from a transitional period for the application of MID, the minimum amounts were revised in 2018 based on the Communication from the

10 million for a personal injury and EUR 2 million for material damage.[789] The above amounts represent a higher financial cap compared to the payable limits under the MID. Albeit, under Section 12(1) StVG, in the case of personal injuries (including death) of one or more persons, the maximum amount of compensation is set at EUR 5 million; herewith, considering the divergence in the established financial caps, the RTA victims from CVs are placed into the disadvantageous position compared to the victims from ICVs.

Given the immediate right of subrogation against the manufacturer (e.g., an ICS failure as a cause of an RTA), the PL policy is determining in the compensation mechanism between the ICV keeper (or the ICV insurer on behalf of the ICV keeper as a policyholder) and the ICV manufacturer. Accordingly, the existing PL clauses will apply directly in the case of subrogation against the ICV manufacturer. Whereas personal injuries, including intangible damage and material damages, are covered given the PL policy,[790] the damage to the ICV itself as a defective product and the subsequent economic loss is not recoverable.[791] Whilst third-party victims are protected against the financial consequences based on the newly-founded legal clauses, the ICV keeper remains subject to the subsequent PL action under the traditional PL policy in the German jurisdiction. Broadly similar to the court practice of other MSs, the German courts require manufacturers to explicitly demonstrate that there was no breach of the duty of care, error, or negligence in connection with the design or the manufacturing state of the product in question;[792] herewith, the state-of-the-art defence applies to the defective product. Therefore, the issue arises whether the state-of-the-art defence will remain applied to ICV.p, including potential and foreseeable failures of the ICV sophisticated software (see Sub-section 2.1.1.1). Either the ICV keeper or the ICV insurer on behalf of the ICV keeper as a policyholder will be required to demonstrate the causal link between the damage and the defect to be granted compensation under the PL action.

Regarding the analysis in presented in Sub-sections 2.1.1.1. and 2.1.1.2., should the defect occur in machine-learning algorithms, it is hardly feasible that the claimant would possess sufficient knowledge and resources to prove such an ICS malfunction or error. Contemporaneously, the defence, such as the "absence of the defect at the momentum of product release" (Sub-section 2.1.1.1.), will continue to apply[793] to ICVs, which places the claimant into the rigid frames with a scant chance of succeeding in the PL action, e.g., regarding a subrogation claim. To prevent the above revealed disadvantageous impact on the ICV keeper (as a victim from

Commission. The adaptation is in line with the inflation of the minimum amounts of the cover laid down in Directive 2009/103/EC of the European Parliament and of the Council relating to the insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability. OJ C 233.

[789] Section 12(1). Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.

[790] Section 249. Bürgerliches Gesetzbuch (BGB) vom. 18.08.1896 (BGBl. I S. 1245). In English: Civil Code.

[791] BGH, Urteil v. 16.12.2008, Az.: VI ZR 170/07. In English: German Federal Court of Justice. Judgment from December 16th, 2008 – VI ZR 170/07.

[792] BGH, Urteil v. 26.11.1968, Az.: VI ZR 212/66. In English: German Federal Court of Justice. Judgment from November 26th, 1968 – VI ZR 212/66.

[793] *Ibid.*

ICV.p), the intervention of the EU law-making bodies is seen necessary, having in mind the rigid harmonisation clause of the PLD.

2.2.3. Status quo or laissez-faire approach

In the light of the European Parliamentary Research Service (EPRS) Study,[794] one of the discussed options of the ICV-related regulation is the so-called *status quo* or *laissez-faire* approach, which implies the absence of legal intervention at the European Union level and enables the judicial practice to fill the gaps and gradually resolve legal uncertainties. The *laissez-faire* approach at the European Union level would lead to constant requests for the preliminary rulings to the CJEU concerning both PLD and MID purporting to draw, in one or another way, the exact guidelines when governing ICV deployment. As a part of the *laissez-faire* option, a soft law[795] is most likely to be approached by the MSs. Although a soft law could have some positive impact on the AI cases (including ICVs), such an effect would be less efficient than a hard law, which is more rigid.[796] The *laissez-faire* approach at both the European Union and the domestic levels, although it is denoted by the potential to stabilise the CAD practice gradually, would not minimise the administrative costs once (1) litigation costs would be significantly high; (2) divergent court practice across the MSs would continue to exist; and (3) legislative changes at the European Union level would be inevitable to approximate the laws of the MSs and to resolve the foreseeable disproportionality in the treatment of the victims, and, therefore, the required administrative costs would double with the litigation costs which have already been spent.[797]

[794] Tatjana Evas. A common EU approach to liability rules <…>. (p. 29).
[795] Yuliya Kharitonova, Victoria Savina and Fabrizio Pagnini. Civil Liability in the Development and Application of Artificial Intelligence and Robotic Systems: Basic Approaches. *Perm University Herald Juridical Sciences* 58 (2022), pp. 683–708 p. (703).
[796] Giampiero Lupo. Risky Artificial Intelligence: The Role of Incidents in the Path to AI Regulation. *Law, Technology and Humans* 5, No. 1 (2023), pp. 133–152 (p. 134), (p. 139).
[797] Olga Shevchenko. Connected Automated Driving <…>. (p. 92).

Most of MSs, i.e., Finland,[798] Portugal,[799] Lithuania,[800] Latvia,[801] Malta,[802] Bulgaria,[803] Croatia,[804] Cyprus,[805] Czech Republic,[806] Greece,[807] Romania,[808] Slovakia[809] and Slovenia,[810] pursue the *laissez-faire* approach in respect of ICVs civil liability regulation, albeit,

[798] Pascale-L. Blyth. Of Cyberliberation and Forbidden Fornication: Hidden Transcripts of Autonomous Mobility in Finland. *Transportation Research Part D* (2019), Vol. 71, pp. 236–247. Legislative initiatives comprise, among other things, the Ethical Information Policy in the Age of Artificial Intelligence. Eettistä tietopolitiikkaa tekoälyn aikakaudella -selonteko. VM/2527/00.01.00.01/2017. In English: Ethical information policy in the era of artificial intelligence – presentation.

[799] Portugal set up a working group with the task of studying the legislative changes required to introduce new technologies related to autonomous driving in the automotive sector. Despacho n.º 2930/2019. Diário da República n.º 55/2019, Série II de 2019-03-19. In English: Order No. 2930/2019.

[800] In 2018, the Ministers of Transport of the Baltic States signed a Memorandum on the development of connected and automated driving and 5G technologies on the *Via Baltica* (Road E67) corridor. The 5G deployment is to be ensured no later than 2025 in urban areas, international land transport corridors (Via Baltica, Rail Baltica) and other national highways and roads, as well as railways. Lietuvos Respublikos Vyriausybė. Nutarimo projektas dėl Lietuvos Respublikos penktosios kartos judriojo ryšio (5G) plėtros 2020–2021 m. gairių patvirtinimo. 19-14237(3). In English: The Government of the Republic of Lithuania. Draft resolution on the development of fifth generation mobile communications (5G) in the Republic of Lithuania in 2020–2021. Approval of guidelines. 19-14237(3). In January 2018, the Order of the Minister of Transport came into force on the approval of the conditions and procedure for the testing and the participation of autonomous vehicles in the public traffic (Lietuvos Respublikos susisiekimo ministro patvirtintas savivaldžių automobilių bandymų ir dalyvavimo viešajame eisme sąlygų ir tvarkos aprašas, Nr. 12-01-30, 2018). In English: Description of the conditions and procedure for self-driving vehicle tests and participation in public traffic approved by the Minister of Transport of the Republic of Lithuania, No. 12-01-30, 2018.

[801] In 2018, the Ministers of Transport of the Baltic States signed a Memorandum on the development of connected and automated driving and 5G technologies on the *Via Baltica* (Road E67) corridor. The purpose of this memorandum is to promote interconnected automated driving and, with the aim of supporting sustainable mobility, to improve the road safety and promote innovation. The Baltic countries envisage the gradual introduction of 5G networks on *Via Baltica* so that to improve the interconnection of vehicles. Among other legislative initiatives, Order No. 587 on regional policy guidelines for 2021–2027 promoting the availability of sharing and support infrastructure. Ministru kabineta rīkojums Nr. 587. Par Reģionālās politikas pamatnostādnēm 2021. –2027. gadam.

[802] Intelligent and Smart mobility is one of the priorities of the Maltese government. IT-TLETTAX-IL LEĠIŻLATURA. P.L. 4564.

[803] Legislative initiatives comprise, among other things, the National Strategic Document "Digital Transformation of Bulgaria for the Period 2020–2030," and the subsequent project of the Concept for the Development of the Artificial Intelligence in Bulgaria by 2030 as the basis for the development of a National Action Plan/Roadmap in the field of AI. Министерство на транспорта, информационните технологии и съобщенията. Проект на Концепция за развитието на изкуствения интелект в България до 2030 г. In English: Ministry of Transport, Information Technologies and Communications. Draft Concept for the development of artificial intelligence in Bulgaria until 2030.

[804] Pursuant to the National Development Strategy of the Republic of Croatia by 2030, Croatia will invest in the construction of the broadband infrastructure and very high capacity electronic communications networks which will enable gigabit connectivity and the development of mobile electronic communications networks of the next generation, which will represent a new development platform bringing advanced broadband access, mass intelligent V2V communication without human supervision, and very reliable communication with a small delay. Hrvatski sabor. Nacionalna razvojna strategija Republike Hrvatske do 2030. godine. NN 13/2021. In English: Croatian Parliament. National development strategy until 2030. NN 13/2021.

[805] The government of Cyprus takes steps towards developments in promoting ITS in Cyprus to support subsequent V2I communication. Athanasios Maimaris. *Intelligent Transportation Systems in Cyprus – Past, Present and Future. Prospects for a Smart Pedestrian Network (SPN)*. Department of Computer Science and Engineering. SYSTEMA Research Center (2020). The National Access Point in a view of the PASSAU Declaration was bound to be implemented by the end of 2021 with the aim to expand the necessary digital infrastructure so that it can provide universal coverage to the island. Γ. Καρούσος: Η Κύπρος έχει επενδύσει και εφαρμόσει Ευφυή Συστήματα Μεταφορών στους αυτοκινητόδρομους. In English: Cyprus has invested and implemented Intelligent Transport Systems on the highways. Retrieved online from <https://m.kathimerini.com.cy/gr/kypros/g-karoysos-i-kypros-exei-ependysei-kai-efarmosei-eyfyi-systimata-metaforwn-stoys-aytokinitodromoys>. Retrieved on 11 January 2021.

contemporaneously, commit towards the ICV future deployment. Meanwhile, some MSs are in between two regulatory options, i.e., those MSs regulating the ICV testing on public roads as an experimental stage of the ICV deployment (occasionally, including legislative efforts through proposals for ICVs civil liability regulation and public consultations), e.g., Denmark,[811] Sweden,[812] Ireland,[813] Poland[814] and other MSs, as analysed below. In an effort to accelerate the development

[806] Legislative initiatives comprise, among other things, (1) Resolution No. 720 of 11 October 2017 *Vision for the development of autonomous mobility*; (2) Resolution No. 686 of 25 September 2017: Action Plan on the Future of the Automotive Industry in the Czech Republic *Czech Automotive Industry 2025*; (3) Platform for Autonomous Vehicles since 2017. Ministerstvo dopravy. Akční plán autonomního řízení. In English: Ministry of Transportation. Action plan for autonomous driving.

[807] Legislative initiatives comprise, among other things, (1) stakeholders (ICCS, eTricala) consultations with the Ministry of Infrastructure, Transport and Networks; (2) implementation of CityMobil2 pilot research project (2012–2016).

[808] Legislative initiatives comprise, among other things, the requirements (Article 3) (7) to establish and monitor strategies, policies and action plans in its area of competence on innovation, digitisation, connected, automatic and autonomous mobility, including intelligent transport systems adopted in the context of the European and international Union strategies, policies and action plans; and (8) to ensure the adoption of measures for the application and/or transposition of the European Union legislation on innovation, digitisation, connected, automatic and autonomous mobility, including intelligent transport systems. HOTĂRÂRE nr. 90 din 28 ianuarie 2020. MONITORUL OFICIAL nr. 127 din 19 februarie 2020. In English: Decision No. 90 of January 28, 2020. Official Journal No. 127 of February 19, 2020.

[809] Slovakia was one of the participants in the *AutoNet 2030* project (*Co-operative Systems in Support of Networked Automated Driving by 2030*) aimed at designing, developing, and validating a cooperative automated driving technology. The governmental initiatives addressing both the policy and the technical CAD issues comprise, among other things, the comparative study ÚPVII *Testovacia dráha pre prepojené a autonómne vozidlá*. In English: *Test track for connected and autonomous vehicles*; Action Plan and Strategy designated (1) to improve the capacity of the public administration vis-à-vis to the transport and effective cooperation with the private sector, (2) to introduce effective support for building the infrastructure for transport innovation, (3) to improve the quality of the transport policies through new data sources; A strategic plan for the development of transport in the Slovak Republic until 2030. Ministerstvo vnútra Slovenskej republiky. Dodatok Č. 2 k zmluve o poskytnutí nenávratného finančného príspevku. Z314011U087/D02. In English: Ministry of the Interior of the Slovak Republic. Addendum No. 2 to the contract on the provision of a non-refundable financial contribution. Z314011U087/D02.

[810] Legislative initiatives comprise, among other things, the *Strategy of Slovenia 2030*, including PVZHOD, PZAHOD, PSLO programs in sector CP3 "A more connected Europe by improving mobility and regional ICT connectivity." Sporazum o partnerstvu med Slovenijo in Evropsko komisijo za obdobje 2021–2027 (Izhodiščni osnutek – verzija II). *Strategija razvoja prometa v Republiki Sloveniji do leta 2030* comprises the objective towards traffic safety and promotion of the development and deployment of intelligent transport systems. In English: Partnership agreement between Slovenia and the European Commission for the period 2021–2027 (Starting draft – version II). *Strategy for the development of transport in the Republic of Slovenia until 2030*.

[811] Bekendtgørelse om Autonomous Mobility A/S' forsøg med selvkørende motorkøretøjer i Københavns Nordhavn. BEK nr 206 af 16/03/2020. In English: Notice on Autonomous Mobility A/S trials with self-driving vehicles in Copenhagen. BEK no 206 of 16/03/2020.

[812] Legislative initiatives comprise, among other things, the Proposed law (2019:000) on automated vehicle traffic and the Proposal for an ordinance (2019:000) on automated vehicle traffic. Statens offentliga utredningar. *Slutbetänkande av Utredningen om självkörande fordon på väg*. Elanders Sverige AB, Stockholm 2018. In English: Final report on the Investigation of the self-driving vehicles on the road.

[813] Department of Transport. *Cabinet approves legislation to test Autonomous vehicles on public roads*. Press release 2019. Retrieved online from <https://www.gov.ie/en/press-release/2dd62e-cabinet-approves-legislation-to-test-autonomous-vehicles-on-public-r/>. Retrieved on 11 January 2021.

[814] The government authorises the ICV testing on public roads in Poland through the amendments to the Traffic Law (Section 6) (Wykorzystanie dróg na potrzeby prac badawczych nad pojazdami autonomicznymi). Ustawa z dnia 20 czerwca 1997 r. Prawo o ruchu drogowym. Dz.U.2020.110 t.j. In English: The use of roads for research work on autonomous vehicles.

of ICV in Poland, the Polish legislators have defined an autonomous vehicle as a vehicle equipped with systems controlling the movement of this vehicle and ensuring this movement without any intervention from the driver who can take control of the vehicle at any time.[815] However, the definition itself does not contain information about whether the human control will be necessary or allowed.[816] Later, the requirement for the presence of a human driver during the tests was provided by the legislator to prevent a possible threat to the road safety.[817]

At this stage, in Lithuania, the legislator indicates that a person whose activities involve a greater danger to others (e.g., the use of a vehicle) must compensate for the damage caused by the source of a greater danger, unless it is proven that the damage was caused by *force majeure* or intentional or gross negligence on the part of the victim.[818] Yet, it is not clear whether an ICV user can be considered as a person "whose activity is associated with a greater danger to others." In the event that the Civil Code norm applies directly to an ICV user (at the higher levels of ICV automation), it would be disproportionate with regard to an end-user (given that the DDT was performed by the ICV, and that no Shared DDT was technically possible).

Today, in an effort to ensure the growth of innovations and technologies in Lithuania, the first semi-ICV has been introduced into the general circulation. The IKI brand introduced a semi-ICV capable of delivering food from an IKI supermarket to its customers. The semi-ICV *IKI* has already travelled over 2,000 km without a single accident. Albeit, the semi-ICV *IKI* can only move at a speed not exceeding 25 km/h.[819]

The French government authorises the ICV testing on public roads in France through Decree n° 2018-211[820] based on the Law Badinter (see Sub-section 1.2.3.). Under the Decree, it is permitted to test the ICV performance for private consumption, mobility service,[821] and goods carriage.[822] Any person or organisation willing to undertake ICV experiments on public roads is required to obtain the relevant authorisation, and the application for authorisation is subject to prior consultation with the administrative authorities, e.g., road operators, traffic police, and state land transport authorities.[823] Regardless of the automation mode, i.e., an ICV driver exercising DDT or ICS controlling the operational process, the ICV user is deemed the subject responsible who should

[815] Łukasz Żelechowski. Civil liability for damages caused by autonomous car vehicles: the Polish perspective. Rapports Polonais. XXI[e] Congrès International de Droit Comparé. XXI[st] International Congress of Comparative Law. Asunción 23–28 X 2022, D. Skupień, B. Lewaszkiewicz-Petrykowska (Eds.), *Lodz University Press* 2022, pp. 57–85 (p. 61).
[816] *Ibid.*
[817] *Ibid.*
[818] Civilinis kodeksas. Valstybės žinios, 2000-09-06, Nr. 74-2262. In English: Civil Code. Article 6.270.
[819] IKI news. Retrieved from: https://iki.lt/naujienos/vilnius-pirmasis-europoje-lastmile-prekes-miesto-centre-jau-pradejo-nemokamai-pristatineti-3-autonominiai-automobiliai/
[820] Décret n° 2018-211 du 28 mars 2018 relatif à l'expérimentation de véhicules à délégation de conduite sur les voies publiques. JORF n°0075 du 30 mars 2018. In English: Decree No. 2018-211 of March 28, 2018 relating to the experimentation of vehicles with driving delegation on public roads.
[821] The people transported in ICV must be informed of their participation in ICV testing and should agree to such participation. Minors are not allowed to participate in ICV testing; albeit, under certain conditions and limits, the presence of minors can be allowed in the testing of ICV performance as a passenger transport service. Article 13. *Ibid*.
[822] Article 1. *Ibid*.
[823] Article 2. *Ibid*.

regain control over the operational process at all times, particularly, in the case of emergency.[824] The ICV operator is required to receive adequate pre-training in order to participate in ICV testing.[825] In addition, the 'ICV driver' under the French jurisdiction is defined as a person who starts the driverless system of a motor vehicle.[826] Along with France, the governments of Belgium, Austria and Italy put forward the amendments to Articles 8.1, 8.5 and 13.1 of the Vienna Convention[827] (in the part of the provision that every vehicle must have a driver who constantly exercises control over the vehicle)[828] so that to ensure compliance with the Vienna Convention through a tech-neutral amendment, in order to accommodate the emergence of CAD in the EU, and the subsequent ICS control over DDT.

The Dutch Government has observed the high potential of ICV large-scale testing on open roads in the Netherlands, and, in 2015, approved the Exceptional Transport Exemption Decree[829] that allows ICV experiments; in 2018, the House of Representatives passed an amendment to the Road Traffic Act 1994[830] which facilitates the tests on the Dutch public roads. At this point, the ICV testing is lawful in the Netherlands, given that the provisional or temporary permit from the competent institution[831] has been obtained. It is required that ICV realises the road environment, i.e., speed limits, road conditions, construction works and traffic rules.[832] In the wake of the general strict-liability clause[833], neither proof of fault or negligence is required, and, therefore, either the CV owner/keeper, or the ICV owner/keeper is viewed strictly liable for the damage caused through the use of a vehicle.[834] Given the existing defences in the PL action, the Dutch legislator considers the general strict liability clause on the part of the ICV owner/keeper as a sufficient liability regime since it would be disproportionate to victims to invoke PL defences which the producer is eligible to claim.[835] Broadly similar to the German regulation, neither an ICS malfunction nor a failure of a hard component of the ICV correspond to the exemption clause[836] under the *force majeure*,[837] and, therefore, any fault, error or defect in ICV.p would trigger the strict liability of the ICV

[824] Article 12(2). Décret n° 2018-211 du 28 mars 2018 relatif à l'expérimentation de véhicules à délégation de conduite sur les voies publiques. JORF n°0075 du 30 mars 2018. In English: Decree No. 2018-211 of March 28, 2018 relating to the experimentation of vehicles with driving delegation on public roads.
[825] Article 12(3). *Ibid*.
[826] Article 2. Loi n° 85-677 du 5 juillet 1985 <…>. In English: Badinter Law.
[827] United Nations. Convention on road traffic of 8 November 1968.
[828] Nuno Sousa, João Coutinho-Rodrigues, Arminda Almeida, Eduardo Natividade-Jesus. Dawn of autonomous vehicles: review and challenges ahead. *Proceedings of the Institution of Civil Engineers – Municipal Engineer* (2018), Vol. 171, Issue 1, pp. 3–14 (p. 4).
[829] Besluit ontheffingverlening exceptioneel Vervoer (Boev). In English: Exceptional Transport Exemption Decree.
[830] Article 149a. Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act.
[831] Article 149a. *Ibid*. Article 2a. Besluit ontheffingverlening exceptioneel Vervoer (Boev). In English: Exceptional Transport Exemption Decree.
[832] Michelle Slimmen, Willem H. Van Boom. Road Traffic Liability in the Netherlands. *SSRN Electronic Journal* (2017), pp. 1–34 (p. 30).
[833] Article 185. Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act.
[834] Michelle Slimmen, Willem H. Van Boom <…>. (p. 27).
[835] Nynke E. Vellinga. From the testing to the deployment of self-driving cars: Legal challenges to policymakers on the road ahead. *Computer Law and Security Review* (2017), Vol. 33, Issue 6, pp. 847–863 (p. 861).
[836] Article 185. Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act.
[837] *Ibid*.

owner/keeper. Subsequently, the ICV owner/keeper (or the ICV insurer on behalf of the ICV owner/keeper as a policyholder) is eligible to seek compensation from the manufacturer under the traditional legal provisions on subrogation. Should the ICV user be held negligent under the general rules on the civil liability,[838] i.e., negligence on the part of the ICV user assuming inter-performance is feasible,[839] the subrogation against the manufacturer will not be possible. At a first glance, it might be seen as the existing strict-liability clauses already provide sufficient cover for the potential RTA victims involving ICV; albeit, (1) the ICV operator who is deemed to be covered only through the PL action, (2) emerging disproportionate compensation mechanisms for RTA victims and the ICV operator as a victim from ICV.v, and (3) the breach of the duty of care[840] as the basis for liability on the part of the road authority given sophisticated road infrastructure systems enabling V2I communication, should be considered as the major obstacles towards a smooth ICV deployment.

In a similar vein, the Government of Luxembourg denotes CAD as one of the major national strategies.[841] Back in 2018, the Government of Luxembourg adopted the legal framework for collaboration in the ICV open-roads testing.[842] As an integral part of the EU CAD initiatives, in 2018, the 5GCroCo (Fifth Generation Cross-Border Control)[843] project was launched to test 5G technologies along the cross-border corridor in Luxembourg, Germany and France. Despite all these legislative steps towards ICV deployment, there are no legislative initiatives announced so far in connection with the ICVs civil liability regulation in Luxembourg.[844] Until now, each vehicle on the public roads in Luxembourg must have a driver,[845] whereby the derogation from the above clause is authorised solely for ICV experimental purposes.[846]

Given the Automated Mobility Action Package,[847] the Austrian government implemented the first legal framework for ICV testing on public roads through amendments to the Motor Vehicle

[838] Article 6:162. Burgerlijk Wetboek (BW) (Boek 6). In English: Civil Code.
[839] Eric Tjong Tjin Tai, Sanne Boesten. Aansprakelijkheid, zelfrijdende auto's en andere zelfbesturende objecten. *NJB* (2016), 91(10) (496), pp. 656–664 (p. 657, p. 659).
[840] Article 6:174. Burgerlijk Wetboek (BW) (Boek 6). In English: Civil Code.
[841] The Government of the Grand Duchy of Luxembourg. *Autonomous cross-border mobility tested in Schengen*. Press-release (2019). Retrieved online from <https://www.tradeandinvest.lu/news/autonomous-cross-border-mobility-tested-in-schengen/>. Retrieved on 10 January 2021.
[842] Luxinnovation. Collaboration internationale. Conduite autonome transfrontalière. (Harmonisation – Des tests courant 2018); Luxinnovation. Rapport annuel 2018. In English: Luxinnovation. International collaboration. Cross-border autonomous driving. (Harmonisation – Tests during 2018). Luxinnovation. Annual report 2018.
[843] 5GCroCo trials 5G technologies in the cross-border corridor along France, Germany and Luxembourg in order to validate 5G features. Grant Agreement No. 825050.
[844] Lilla Vukovich, Volha Vysotskaya. Futuristic Project Becoming a Reality: Self-Driving Cars in Luxembourg. *Université du Luxembourg*: 2019, pp. 1–9 (p. 9).
[845] Code de la route. Loi du 14 février 1955 concernant la réglementation de la circulation sur toutes les voies publiques. (Mém. A - 15 du 7 mars 1955, p. 471). In English: Road Traffic Act.
[846] Le gouvernement du Grand-Duché de Luxembourg. Conseil de gouvernement. Résumé des travaux du Conseil de gouvernement du 20 avril 2018. In English: The Government of the Grand Duchy of Luxembourg. Council of Government. Summary of the work of the Council of 20 April 2018.
[847] Bundesministerium Verkehr, Innovation und Technologie. Aktionspaket Automatisierte Mobilität 2019–2022. Wien 2018. In English: Federal Ministry of Transport, Innovation and Technology. Action Package Automated Mobility 2019–2022. Vienna 2018.

Act (KFG).[848] According to the Automated Driving Regulation (AutomatFahrV),[849] ICVs can be tested on public roads only given a sufficient insurance cover, including the insurer's written statement confirming that the insurance policy is valid for ICV experiments.[850] Tests can be only performed upon verification of the test-relevant data by the Federal Minister for Transport, Innovation and Technology.[851] The ICV driver must always be ready to regain control over the operational process (DDT).[852] Although there is a relatively immense number of R&D projects and programmes, e.g., Mobility of the Future (MdZ),[853] KIRAS,[854] ALP.Lab,[855] DigiTrans,[856] a comprehensive ICVs civil liability framework has not yet been established.

Since 2015, Spain authorises ICV tests on public roads in the country, given that the insurance cover provides sufficient coverage for potential and foreseeable incidents.[857] In the wake of other MSs legislative initiatives, in 2018, the Italian government announced the Decree of 28 February 2018 to implement methods and tools for testing Smart Road and connected and automated driving.[858] Under the Decree, any person or organisation willing to test ICV on open roads in Italy should provide a sufficient insurance cover beforehand.[859]

In Estonia, although no explicit legislative step towards the ICVs civil liability regulation has been committed yet, as of March 2017, the ICV experiments on public-roads were allowed for scientific purposes.[860] Comparably to ICV.v, subject-specific clauses were incorporated into the Road Traffic Act[861] given the autonomous (fully- or semi-automated) delivery robots[862] that, although remotely operated, do not represent a motor vehicle,[863] and, subsequently, ICV for CAD. It is anticipated that, comparably to the delivery robots, the Estonian legislator will commit

[848] Bundesgesetz vom 23. Juni 1967 über das Kraftfahrwesen (Kraftfahrgesetz 1967 – KFG. 1967). In English: Motor Vehicle Act.
[849] Verordnung des Bundesministers für Verkehr, Innovation und Technologie über Rahmenbedingungen für automatisiertes Fahren (Automatisiertes Fahren Verordnung – AutomatFahrV). (StF: BGBl. II Nr. 402/2016). In English: Automated Driving Regulation (AutomatFahrV).
[850] Section 1(3) (1). *Ibid.*
[851] Section 1(3) (2). *Ibid.*
[852] Section 3(2). *Ibid.*
[853] Mobilität der Zukunft (MdZ). In English: Mobility of the Future (MdZ).
[854] KIRAS – national security research programme.
[855] ALP.Lab (Austrian Light Vehicle Proving Region for Automated Driving) – first test environment for ICVs was set up in Styria in 2017.
[856] DigiTrans focused on applications for commercial and special vehicles, especially in the area of logistics hubs and on the shared infrastructure use of test environments for automated driving.
[857] Dirección General de Tráfico. Subdirección General de Gestión de la Movilidad. Instrucción 15/V-113. In English: Directorate General for Traffic. Instruction 15/V-113.
[858] Decreto 28 febbraio 2018. Modalità attuative e strumenti operativi della sperimentazione su strada delle soluzioni di Smart Road e di guida connessa e automatica. (18A02619) (GU Serie Generale n.90 del 18-04-2018). In English: Decree 28 February 2018. Implementation modalities and operational tools of road testing of Smart Road and connected and automatic driving solutions.
[859] Article 19. *Ibid.*
[860] Riigikantselei. *Final report: self-driving vehicles on Estonian roads may signal the end of traffic deaths* (2018). Retrieved online from <https://www.riigikantselei.ee/en/news/final-report-self-driving-vehicles-estonian-roads-may-signal-end-traffic-deaths> Retrieved on 5 February 2021.
[861] Liiklusseadus. *Riigikogu*, RT I 2010, 44, 261. In English: Road Traffic Act.
[862] Section 1.2(68.1). *Ibid.*
[863] Section 1.2(40). *Ibid.*

towards introducing newly-bounded clauses to the Road Traffic Act serving exclusively for ICVs.[864]

In Hungary, amendments to Decree KöHÉM No. 5/1990[865] on roadworthiness inspections for road vehicles and Decree KöHÉM No. 6/1990[866] on the technical conditions for the placing on the market and entry into service of road vehicles were completed in 2017 in order to promote ICV or a "vehicle for development purposes"[867] testing on public roads. The above amendments and the alterations to the Regulation on the traffic rules and road transport[868] permitted ICV public experiments on the highway between Budapest and Zalaegerszeg.[869] Although ICV experiments on the public roads in Hungary became legal with the above amendments, there is no further legal action being taken yet to address the civil liability issues in the event of RTA involving ICV. It is argued that the general strict liability clause[870] based on hazardous activity is flexible and, *in esse*, allows a sufficient cover of liability arising from AI.[871] The ICV operational process is seen as a hazardous activity comparable to CVs, which precipitates the general strict-liability clause.[872]

Considering the application of the *laissez-faire* approach to the ICV deployment, the impact from the "chilling effect of tort law"[873] is reinforced provided that the distribution of responsibilities and legal culpabilities remains undetermined, and, therefore, it constitutes an emerging uncertainty. At this point, setting a subject-specific policy, i.e., legislative decisions, allocates the risks and minimises undesirable financial consequences.[874] On the other hand, when drawing ICV regulation independently from the EU law-making bodies, i.e., in the absence of a legal framework or legal guidelines at the European Union level (a vertical scheme), the MSs might arrive, thereby imposing feeble, poorly drafted, or inappropriate legislation,[875] and therefore, undesirably restricting access to ICV deployment or jeopardising the status of RTA victims.

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[864] Taivo Liivak. Tort Liability for Damage Caused by Self-driving Vehicles under Estonian Law. *Dissertationes Juridicae Universitatis Tartuensis* 80, University of Tartu Press: 2020, pp. 1–206 (pp. 72–75).

[865] 5/1990. (IV. 12.) KöHÉM rendelet a közúti járművek műszaki megvizsgálásáról. In English: Regulation on the technical inspection of road vehicles.

[866] 6/1990. (IV. 12.) KöHÉM rendelet a közúti járművek forgalomba helyezésének és forgalomban tartásának műszaki feltételeiről. In English: Decree of the Ministry of Transport and Communications on the technical conditions for the registration and keeping in circulation of road vehicles.

[867] Béla Csitei. Autonomous and Automated Vehicles in Germany and Hungary, with Special Attention to the Question of Civil Liability. *Acta Univ. Sapientiae, Legal Studies*, 10, 1 (2021), pp. 55–64 (p. 57).

[868] 1988. évi I. törvény a közúti közlekedésről. In English: Regulation on the traffic rules and road transport.

[869] Zsolt Szalay, Tamás Tettamanti, Domokos Esztergár-Kiss, István Varga, Cesare Bartolini. Development of a Test Track for Driverless Cars: Vehicle Design, Track Configuration, and Liability Considerations. *Periodica Polytechnica Transportation Engineering* (2018), Vol. 46, Issue 1, pp. 29–35 (p. 33).

[870] Section 6:535. 2013. évi V. törvény a Polgári Törvénykönyvről. 2013. évi V. törvény (Ptk. (új)). In English: Civil Code.

[871] Reka Pusztahelyi. Liability for Intelligent Robots from the Viewpoint of the Strict Liability Rule of the Hungarian Civil Code. *Acta Universitatis Sapientiae: Legal Studies* (2019), Vol. 8, No. 2, pp. 213–230 (p.225).

[872] *Ibid.*

[873] Expert Group on Liability and New Technologies <…>. (p. 27).

[874] *Ibid.*

[875] Anastas Punev. Autonomous Vehicles: The Need for a Separate European Legal Framework. *European View* 2020, Vol. 19, No. 1, pp. 95–102 (pp. 100–102).

The results of the analysis of the available ICVs civil liability regulation approaches set out at the domestic level of the MSs affirms the necessity to accord the uniform (vertical) ICVs civil liability regulation at the European Union level in order to prevent the (foreseeable) immense divergence in the liability regimes, compensation systems, and, subsequently, to ensure the minimisation of the adverse outcomes for cross-border RTA victims (involving ICV) compared to RTA victims from CVs. At this juncture, 26 MSs (96.3%) pursue the *laissez-faire* approach vis-à-vis the ICVs civil liability regulation, while Germany (3.7%) imposes a strict-liability regime on the part of the ICV owner/keeper. The UK example, on the other hand, demonstrates the potential for the reconceptualisation of a fault-based liability regime vis-à-vis to the emerging digital technologies, i.e., ICVs release; herewith, the UK example, in collaboration with the adverse outcomes of a fault-based liability regime vis-à-vis to the ICVs performance analysed above, reveals the relative feasibility for the 4-EU (i.e., Ireland, Romania, Malta, Cyprus) to pursue a strict-liability regime to ICVs on a national scale.

Having regard to the MSs (representatives of the strict-liability regime) individual commitments towards ICVs civil liability regulation, evidence suggests that the MSs hesitate to shift the liability directly to the manufacturer, thereby preventing an action through the ICV owner/keeper (or the ICV insurer on behalf of the ICV owner/keeper as a policyholder). Pursuing the Synergic ICVs civil liability regime (see Sub-section 2.1.1.2.) (i.e., symbiosis of strict-liability regimes vis-à-vis to ICV owner/keeper through the ICV insurer and the ICV insurer vis-à-vis to the ICV manufacturer), it allows to secure a smooth compensation mechanism for victims in the national systems of the MSs obstructing potential, but foreseeable, future complexities in approximating the laws of the MSs in connection with the ICVs civil liability regulation, and, contemporaneously, it does not require the MSs to deviate from the principal standpoints vis-à-vis to the compensation system through the insurance undertaking.

2.3. Realisation of the Synergic ICVs Civil Liability Regulation

2.3.1. General and specific provisions

To conclude on the appropriateness and achievability of a liability regime, it is necessary to assess the approximate (in progress) or explicit legal provisions intended to regulate a particular element or activity in the society to which the regulation is directed. Once the Synergic ICVs civil liability regime comprises the intention to approximate the liability regimes of the MSs set out in the dimension of CVs vis-à-vis to the emerging CAD, the analysis of the potential for the realisation of such an intention is indispensable. Subject-specific rules and concepts need to be developed so that to incorporate liability regimes vis-à-vis the emerging digital technologies and, in particular, CAD systems.[876] Analysing the potential for the realisation of the Synergic ICVs civil liability regime through a new directive at the European Union level, it is required: (1) to scrutinise the admissibility, pertinence, and proportionality of the approximate liability clauses; (2) to establish the schemes on the distribution of responsibilities between the CAD-involved

[876] Expert Group on Liability and New Technologies <…>. (p. 32).

agents (i.e., assignment of duties); (3) to allocate the legal culpabilities (i.e., the extent of the liability bearing by CAD-involved agents, circumstances and conditions under which the agents in question are required to bear liability); and (4) to define the liability exemption clauses (i.e., permitted derogations from assigned responsibilities, and the subsequent legal culpability, as well as the liability waiver given a breach of duties assigned to an agent in question).

Distribution of Responsibilities in Relation to ICV.p and ICV.v

To avoid ambiguity in the regulatory concepts *ex ante* and to prevent the comparable disadvantageous impact on cross-border RTA victims, when drawing the distribution of responsibilities between the CAD-involved agents, it is necessary to unambiguously determine the concepts directly related to the agents' duties in question. When determining the assignment of responsibilities to each and every relevant CAD-related agent, the subsequent elucidation is deemed of significant importance; given the complex technical element of ICV.p, and the subsequent complex technical implication of the agents, the regulatory clauses are required to be explicit and unambiguous in order to ensure unobstructed application of the legal provisions by the actors involved in the dispute-resolving process and the settlement of losses.

Regarding the analysis provided in Sub-section 2.1.2.3., it is advisable that the legislator commits towards defining and distinguishing the concepts of ICV.p and ICV.v. The implication of either ICV.p or ICV.v (in the legal dimension) gives rise to a rather different legal relationship and the subsequent responsibilities as well as the legal culpabilities between the agents in question. The results of the analysis conducted in Sub-section 2.1.2.3. enable the disclosure in more detail regarding the responsibilities of the manufacturer concerning ICV.p, the interrelatedness between the responsibilities of the manufacturer and other agents in relation to ICV.p given the concept of ICV.p consisting of a block of the integral ICV components. ICV.p implies the distribution of responsibilities and legal culpabilities between the ICV user – ICV manufacturer, TP victim – ICV manufacturer, ICV manufacturer – Infrastructure operator, and ICV manufacturer – Network provider. The legal relationships between the above-indicated agents are divergent and comprise either two-side responsibilities, or one-side responsibilities. The one-side responsibilities exist between TP victim – ICV manufacturer. Here, the TP victim is viewed as a person without any direct or indirect connectors with ICV.p, whereby the only feasible link between the TP victim and ICV.p is the harmful event, e.g., a defect in the design, manufacturing state, ICS failure including digital components, which is independent from the actions of TP victim, and which led to the damage. The TP victim should not be understood as an ICV user or an ICV owner/keeper, as the latter agents possess direct connectors with ICV.p. In TP victim – ICV manufacturer (scenario), the former does not possess any duties vis-à-vis to the ICV manufacturer, while the ICV manufacturer is a subject responsible for ensuring the safety of ICV.p; here, the conjunction of the harmful event (as the risks which are materialised) and the damage (as the consequence of the materialised risks) constitutes a breach of the duty to ensure the safety of ICV.p. The breach of the duty to ensure the safety of ICV.p gives rise to the legal culpability of the ICV manufacturer and the subsequent duty to compensate for the damage. To hold the ICV manufacturer liable, the legal

duty to ensure the safety of ICV.p should exist. To imply the legal duty to ensure the safety of ICV.p, above all, the concept of the safety of ICV.p should be established. In addition to the explicit differentiation of the product information, i.e., warnings and instructions (e.g., in the form of messages on the onboard computer),[877] and the defects in the design and the manufacturing state, the cybersecurity defences should constitute an integral part of the safety of ICV.p. The failure to provide the optimal cybersecurity defences that led to the damage should represent a breach of the duty to ensure the safety of ICV.p. Ensuring the optimal cybersecurity defences can mean reissuing software updates with a particular frequency. Given that the release of a software update may, on some occasions, require a verification or an approval by a competent agency,[878] resulting in a delay when assessing the breach of the monitoring duty or safety of ICV.p, such unavoidable delays should be considered.[879]

The two-side responsibilities exist between ICV user – ICV manufacturer, ICV manufacturer – Infrastructure operator, ICV manufacturer – Network provider. In the ICV user – ICV manufacturer scenario, the latter party possesses the same duty, i.e., to ensure the safety of the ICV.p. A significant difference between the two scenarios, i.e., TP victim – ICV manufacturer, and ICV user – ICV manufacturer, is that, in the latter case, the ICV user possesses the duties vis-à-vis to the ICV manufacturer, i.e., a duty of obedience. The ICV user's duties will depend on the level of the ICV automation, i.e., a lower or a higher level of the ICV automation (see Sub-section 2.1.2.1). The (available) legislative initiatives of the MSs (see Sub-section 2.2.) demonstrate somewhat divergent approaches in distributing the responsibilities between the ICV user, the ICV driver, and the ICV owner/keeper. Accordingly, given the different duties on the part of CAD-involved agents, there is a potential for divergent legal outcomes and the subsequent financial consequences. Given the distinct legal outcomes, the ultimate victim's position in a cross-border scenario is questionable. Thence, drawing the uniform duties on the part of the ICV user (see Sub-section 2.1.2.1.) vis-à-vis to the ICV manufacturer is advisable.

Another group implying two-side responsibilities is ICV manufacturer – Infrastructure operator. Considering the analysis conducted in Sub-section 2.1.1.2., if RTA was caused by both a defect in the ICV.p and a third-party failure (e.g., a two-way input failure in V2I communication, missing signs, or an inappropriate road surface), both the manufacturer and the third party (e.g., TCC, the local infrastructure authority, or the infrastructure planners) (given the existence of a damage) are viewed as the subject to joint-several liability. Having in mind the potential to 'scapegoating', it is required not to assign the legal culpability to one or a group of agents who could not foresee or prevent the harm through utmost care. Thence, besides the ICV manufacturer's responsibilities, it is required to draw a clear line between the responsibilities of the ICV manufacturer and the agent in charge of the supporting infrastructure. Given the ICV manufacturer's implication is strict-liability, the potential victims are protected against the two-way input failure in V2I communication; albeit, the division of the legal responsibilities between

[877] Tim Hey <…>, (p. 94).
[878] Martin Ebers <…>, (p. 102, p. 106).
[879] Tim Hey <…>, (p. 87).

the agents in question, i.e., ICV manufacturer – Infrastructure operator, will facilitate the overall compensation scheme between the CAD-involved agents. Contemporaneously, in the ICV manufacturer – Network provider scenario, a clear division of the legal responsibilities between the ICV manufacturer and the Network provider should be drawn. Although the distribution of the responsibilities between ICV manufacturer – Infrastructure operator – Network provider does not directly impact the victims in question (assuming (1) the ICV manufacturer's strict-liability regime and (2) given the concept of ICV.p consisting from a block of integral ICV components), the precise apportionment of duties will constitute legal clarity in the recourse action, and will subsequently promote ICV deployment and further R&D.

Having regard to the results of the analysis conducted in Sub-section 2.1.2.3., i.e., it is required to define ICV.v not only in the view of its possessed technicality, but as a legally intelligible concept representing different categories of ICV.v inevitable for the distribution of responsibilities between the different involved agents, e.g., ICV.v maintenance (wear and tear, a digital content update), legal requirements, e.g., wearing the seat belts, and legal consequences (legal culpabilities), e.g., driving or being in charge of a vehicle with an alcohol concentration above the prescribed limit (given the ability to access the Shared Task Authority). The long-existing regulatory concepts (both at the European Union level and the domestic level of the MSs) in the CVs dimension analysed in Section 1 demonstrate the legal framework's potentially weak elements to be addressed *ex ante*. The broader concept of a 'vehicle' brought immense concerns, whereby agricultural, esoteric vehicles and EPACs were considered as a 'vehicle' for MTPL insurance (Sub-section 1.1.3.2.). To prevent the comparable impact from the lack of a legal determination or an ambiguous and vague legal concept, it is advisable to determine ICV.v explicitly. For this reason, it is required to consider that ICV.v is viewed in a broader sense as any vehicle which provides control over the operational process (DDT performing) through ICS given V2V, V2I and V2X communication; and, therefore, under the technical specification can be extended beyond the road use vehicle, e.g., to a railway vehicle. When drawing the legal framework, the scope of ICV.v should be accurately defined (including a category of transport, e.g., a light vehicle (a passenger car), a bus, a motorcycle, a truck, and the level of ICV automation, e.g., Level 3 – Level 5). Contemporaneously, the use of ICV.v should be determined *ex ante*, e.g., the use of ICV.v on public roads and the accessibility to public premises. Otherwise, by the way of illustration, it is reasonable to foresee an incident involving ICV.v at the airport premises where the infrastructure was not adopted to allow V2I and V2X communication. The analysis which was run in Sub-section 1.1.3.2. reveals a major distinction between the 'vehicle' and the 'use of a vehicle'; thus, the subsequent impact on the RTA victims was researched given the ambiguous definition of the concepts in question at the European Union level. The ambiguity in the legal determination of the regulatory concepts at the European Union level permits MSs to derogate from the course and impose certain limitations vis-à-vis the injured parties.

As long as the access to the Shared Task Authority has been granted, the ICV operator must fulfil the requirements under the traffic regulation of the MSs, e.g., seat belts. The shift in the operational process from the driver to the ICS does not release the ICV user from fulfilling the

safety requirements. The duty to fulfil the requirements provides the potential for a breach of the duty and the subsequent legal culpability. If the driver was not wearing a seat belt at the time of the accident (providing that the ICV was in traffic at the moment of the accident), a contributory negligence clause should apply to such an ICV user if the absence of the seat belt exacerbated the damage. By analogy to the fulfilment of the safety requirements, there is a need to restrain from culpable actions, e.g., driving or being in charge of a vehicle with alcohol concentration above the prescribed limit. Assuming the Shared Task Authority, the ICV user should not be equilibrated with the vehicle's passenger, and, therefore, should fulfil the legal duties and safety requirements.

Force Majeure, Contributory Negligence, Joint-Several Liability

Considering the analysis provided in Sub-section 1.2., EU-26[880] (including certain MSs representatives of the fault-based liability regime, i.e., Cyprus, Romania, and Malta) recognises *force majeure* as a basis for a liability waiver. Contemporaneously, EU-27 recognises and applies both contributory negligence and joint-several liability clauses to CVs. Thence, in order to equilibrate liability vis-à-vis to the victim's conduct, i.e., contributing to the harmful event or to the extent of the damage, the existing clauses for contributory negligence should continue to apply. In the ICV.v scenario, the contributory negligence is likely to apply under the comparable circumstances as those analysed in Sub-section 1.2., e.g., not wearing a seat belt, a pedestrian entering the carriageway with the knowledge of potential consequences, not wearing a helmet, alcohol intoxication, an element of suicide. In the ICV.p scenario, the contributory negligence clause can be invoked if the victim had interacted with the interconnected digital systems, e.g., had modified the system.[881]

Wherever more than one agent, i.e., the ICV manufacturer and other agents, contributed to ICV.p, and wherever one or more components of ICV.p constitute a defect, the existence of joint-several liability is accepted as a general rule.[882] Albeit, following the results of the earlier sub-sections, as long as independent ICV components constitute one unit, i.e., ICV.p, the initial action for a compensation against the ICV manufacturer should be granted. The alleged tortfeasors, above all, should be jointly and severally liable vis-à-vis to the ICV manufacturer in terms of the right of subrogation afterwards. As explained above, it would be disproportionate and burdensome vis-à-vis to the injured party to imply different actions for compensation against the alleged tortfeasors concerning two and more defective ICV components; albeit, the implication of a joint-several liability should remain for just equilibration of the legal culpabilities between the ICV manufacturer and the alleged tortfeasors in question.

The Burden of Proof: Facilitating Proof for ICV Victims

Given the results of the analysis provided in Sub-section 2.1.1.2., the use of presumptions should be viewed as beneficial and acceptable for MSs vis-à-vis to the burden of proof rule given

[880] Pursuant to the analysis conducted in Sub-section 1.2.1, no defences under the *force majeure* clause are explicitly specified in the statutory provisions in the Irish jurisdiction.
[881] Expert Group on Liability and New Technologies <…>. (p. 29).
[882] *Ibid.*

the Synergic ICVs civil liability regime. Traditionally, the claimant must explicitly demonstrate the damage, the defect, and the *causal nexus* in the PL action; and the damage, the harmful event, and the *causal nexus* in MTPL action. Regarding the symbiosis of the liability regimes, i.e., Synergic ICVs civil liability regime, the claimant should remain in charge of demonstrating the damage and the *causal nexus* between the damage and the harmful event. In contrast, the cause of the harmful event, i.e., either a defect in design, or the manufacturing state, an ICS failure or a third-party error, should remain for the investigation and assessment in the action between the ICV insurer and the ICV manufacturer (i.e., the subrogation right either against the ICV manufacturer or a third-party at fault). It would be disproportionate to impose a duty to explicitly prove the existence of a defect (as a harmful event) on the part of the claimant,[883] given the complexity and opacity of the technologies in question; the burden of proof would thus comprise cost-based technical expertise which is unlikely to be affordable to the victim. The burden of proof through cost-based technical expertise on the claimant would deprive the EU policy's primary scope in the MTPL regulation, i.e., minimising the negative impact on the RTA victims. The complexities in the burden of proof comprise the cost-based expertise vis-à-vis to the software failure was demonstrated in 2009 in the Toyota case;[884] whereby, the RTA victims succeeded in proving that the braking system's software contained technical issues which led to an unintended acceleration.[885] The above case remained controversial for years, and can be deemed an exemplary case for the arguments against the traditional burden of proof and evidentiary standards to ICV.p. Thereof, the reverse burden of proof on the part of the agent, i.e., the ICV manufacturer, who possesses sufficient knowledge vis-à-vis to ICV.p, is seen admissible. The approximation of the laws of the MSs, mainly in part of the procedural rules[886] to CAD, has a significant potential to equilibrate the legal outcomes of the ICV-involved incidents. However, procedural rules comprise a number of complex rules and schemes connected with various legal terms; hence, harmonising the burden of proof rules and necessary evidentiary standards can eliminate the undesired disproportionate treatment of the cross-border victims.

Cross-Border Use of ICVs

Having regard to Directive 2010/40/EU which aims at deploying ITS in the field of the road transport (see Sub-section 2.1.), the MSs are allowed to set forth their own rules to the deployment, in particular, regarding services on its territory. Given the necessity to address the uniform requirements connected with the use of ICV, i.e., ICV maintenance, the above clause may

[883] Sadie Whittam. Mind the compensation gap: towards a new European regime addressing civil liability in the age of AI. *International Journal of Law and Information Technology*, 2022, 30, pp. 249–265 (p. 252).
[884] After the years of investigation, the *Toyota Motor Corporation* settled USD 3 million in damages by applying the *res ipsa loquitur* principle since the explicit cause of the unintended acceleration could not be found. David M. Cummings. Was the Jury Wrong about Toyota's Software?: How questionable testimony on embedded software tipped the scales. *IEEE Consumer Electronics Magazine* (2017), Vol. 6, Issue 3, pp. 103–107 (p. 106). The above discussed example can be transferred into the dimension of CAD in the EU demonstrating *ex ante* the potential and foreseeable complexities in the burden of proof rules and the evidentiary standards.
[885] David M. Cummings <…>, (pp. 103–104).
[886] Expert Group on Liability and New Technologies <…>. (p. 29).

lead to cases where an ICV registered is State A would be restrained from use in State B. Thence, the uniformity of the requirements for the ICV deployment purposes, i.e., applications and services, should be considered significant to ensure smooth cross-border circulation.

2.3.2. Justified procedure of loss settlement

Considering the analysis provided in Sub-section 1.1.3.1., the concept of the 'injured party' or 'victim', including the guarantees of compensation and the compensation mechanism *per se*, is seen as holding a central role in the RTA civil liability regime. For this reason, it is necessary to develop an accurate and sustainable compensation mechanism capable of providing a reasonable settlement of losses in cross-border RTAs involving ICV(s). The architecture of the one-pillar compensation mechanism comprises the three major components, among other things, the right of a direct action given the forum of the victim's domicile, the supplementary procedure through the Claims Representative (the cross-border element), and the explicit determination of the direct and indirect victims and their rights vis-à-vis to the alleged tortfeasors.

Right of a Direct Action: Victim's Domicile

The victim's right to pursue the compensation claim directly against the ICV insurer is viewed as being of significant importance. Given the results obtained from the stakeholders concerning the MID's revision proposals, the right of a direct action against the insurer facilitates the compensation procedure and ensures the smooth compensation mechanism for RTA victims.[887] In cross-border accidents, the right of the direct action should remain enforced given the supplementary procedure through the Claims Representative[888] in the state of the victim's domicile. The 21-years-lasting practice (2000 – 2021) of applying the supplementary procedure vis-à-vis to cross-border victims has proven its pertinence and the beneficial impact on the ultimate cross-border RTA victims. Regardless of the new CAD-involved agents, both the right of the direct action and the supplementary procedure through the Claims Representative in the state of the domicile should remain available for both the direct and the indirect victims involved in an RTA with an ICV.

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[887] GDV (German Insurance Association). Initiative: REFIT review of the Motor Insurance Directive. F6707, 6437280268-55 (2017).

[888] Council Directive 2000/26/EC remains a symbol of a beneficial tool for the protection system of RTA victims. The core attention was given to the visiting-traffic victims in the member states other than the state of domicile. Council Directive 2000/26/EC envisages the right for a victim to either pursue a tortfeasor or the liable insurance undertaking in the state where the accident occurred or to seek compensation through the Claims Representative in the state of domicile. The given scheme can also be invoked in the event a road accident occurred in the state outside the European Union (contracting party to the *Green Card Scheme*), whereas the vehicle was habitually stationed in the member state. However, the compensation scheme through the Claims Representative could be invoked merely in the event the victim suffered damage in a host state, so that he or she could pursue an action for compensation in the state of domicile. Whereas, in the event where the victim sustained damage in the state of domicile while the alleged tortfeasor was covered in the host state, the scheme through the Claims Representative would fail to apply. Thus, such a victim should have filed a claim against the insurance undertaking of the alleged tortfeasor through the compensation body in his or her state of domicile. Such a deviation was abolished only with the introduction of Council Directive 2005/14/EC, so that the victim can refer to the claims representative at the first place regardless of wherever the accident occurred and wherever in the European Union the alleged tortfeasor resides.

Given the Brussels I Regulation (recast), the RTA victim is eligible to bring an action either against the CV owner or the CV insurer (joint action) in his or her state of domicile.[889] Notwithstanding, in the event of a defect in the product, e.g., a defect in the ICV design or the manufacturing state, an ICS failure including the digital content, the victim may pursue his or her claim for the compensation to the court of the MS where the defendant is domiciled,[890] or where the harmful event took place.[891] In contrast, the place of the accident (different from the place of the victim's domicile) does not change the right of a direct action against the tortfeasor's insurer in the state of the victim's domicile in the MTPL action. The symbiosis of the legal liability regimes, i.e., the Synergic ICVs civil liability regime, inevitably comprises two potential hazards, i.e., a defective product and the RTA as a harmful event independently from the defect in ICV.p, and, therefore, the right of action vis-à-vis to the alleged tortfeasor gains a comparable symbiosis character. Given two different rights of a direct action under the Brussels I Regulation (recast), i.e., the action in the state of victim's domicile in the case of the MTPL action following the RTA and the action in the state of the defendant's domicile in the case of the PL action following the RTA, there is an emerging necessity towards dismissing any legal incompatibility. In the view of both the UK and the German legislative initiatives regarding the ICVs civil liability regulation (see Sub-sections 2.2.1. and 2.2.2.), separate clauses ensure that the third-party victim is entitled to bring the direct action against the ICV insurer. The subject-specific clause vis-à-vis to the direct right of action in terms of a separate legal framework designated for the ICVs civil liability regulation can constitute a coincidental provision given the Brussels I Regulation (recast) and the MID. However, it would prevent potential discrepancies vis-à-vis to the non-uniform rules of the direct right of action against the manufacturer's insurer (or the manufacturer) across the MSs. It will provide legal clarity as per the symbiosis of the liability regimes and the rather divergent rights of the direct action against the insurer of a vehicle (MTPL action) and the insurer of the manufacturer (or, directly, the manufacturer) (PL action).

Regarding the *Jack Odenbreit*[892] case implying the Brussels I Regulation (recast), the potential victims of an RTA involving an ICV would not benefit from the direct right of action against the manufacturer in their domicile.[893] Alongside the strict-liability regime, the right of the direct action remains the major concern in the substantive liability law regarding the emerging digital technologies and, in particular, ICV release.[894] Thence, the direct right of action, including the forum for the victim's domicile claim, should exist simultaneously so that to ensure the high level of the victim protection and prevent the discriminative character of the compensation mechanism vis-à-vis to the ICV victims compared to the RTA victims from CVs. Maintaining the

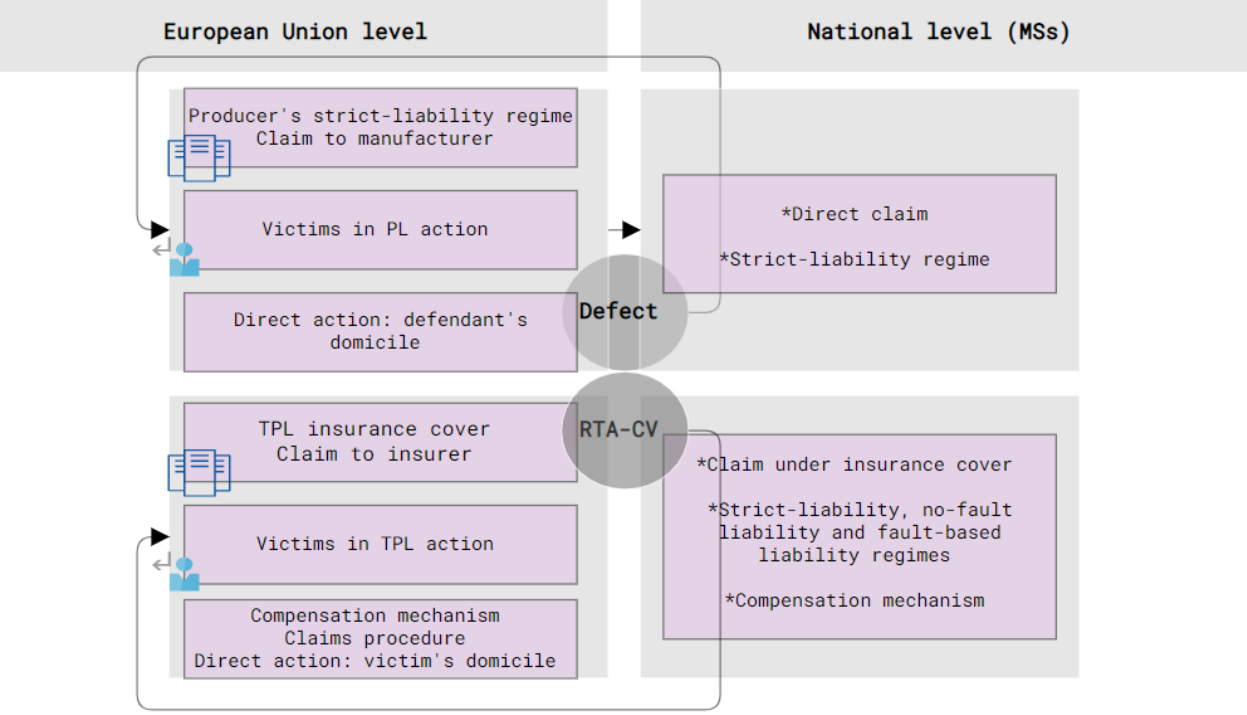
[889] Article 13. Regulation (EU) No. 1215/2012 <…>.
[890] Article 4(1). Regulation (EU) No. 1215/2012 <…>.
[891] Article 7(2). *Ibid*.
[892] *FBTO Schadeverzekeringen NV v Jack Odenbreit*. Judgment of the Court (Second Chamber) of 13 December 2007, Case No. C – 463/06, ECR 2007 I-11321.
[893] Graziano Kadner, Michael Thomas. *Cross-border traffic accidents in the EU – the potential impact of driverless cars*. Brussels: European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs (2016), pp. 1–64 (p. 10).
[894] *Ibid*. (p. 10).

currently existing direct right of the action against the manufacturer under the Brussels I Regulation (recast) provisions would deprive the ICV victims of the established advantageable clauses for RTA victims who suffered from CVs. As a result, it would bring the system into the state before the amendments were brought to the MID and the Brussels I Regulation (recast).

Compensation Mechanism: Direct and Indirect Victims

Unless (1) the legal initiative is accomplished at the European Union level vis-à-vis to the liability regime and the compensation mechanism in question; (2) legal initiatives, other than the *laissez-faire* approach, provided by the MSs independently from the *sui generis* law (see Sub-section 2.2.3.), the RTA victims (involving ICVs) will be eligible to exercise the existing two-pillars compensation mechanism pursuant to the Diagram.1 below:

Diagram.1



Considering the implication of the compensation mechanism under Diagram.1, the victims in an RTA (involving an ICV) encounter:

1. two divergent compensation schemes vis-à-vis to one RTA;
2. a different treatment of victims of one incident given the distinct procedures and guarantees (including financial caps)[895] under the two compensation schemes;
3. the presently existing overlaps in the liability regimes give rise to divergent outcomes in the loss settlement;
4. the place of jurisdiction: the defendant's domicile (PL action) compared to the victim's domicile (MTPL action).

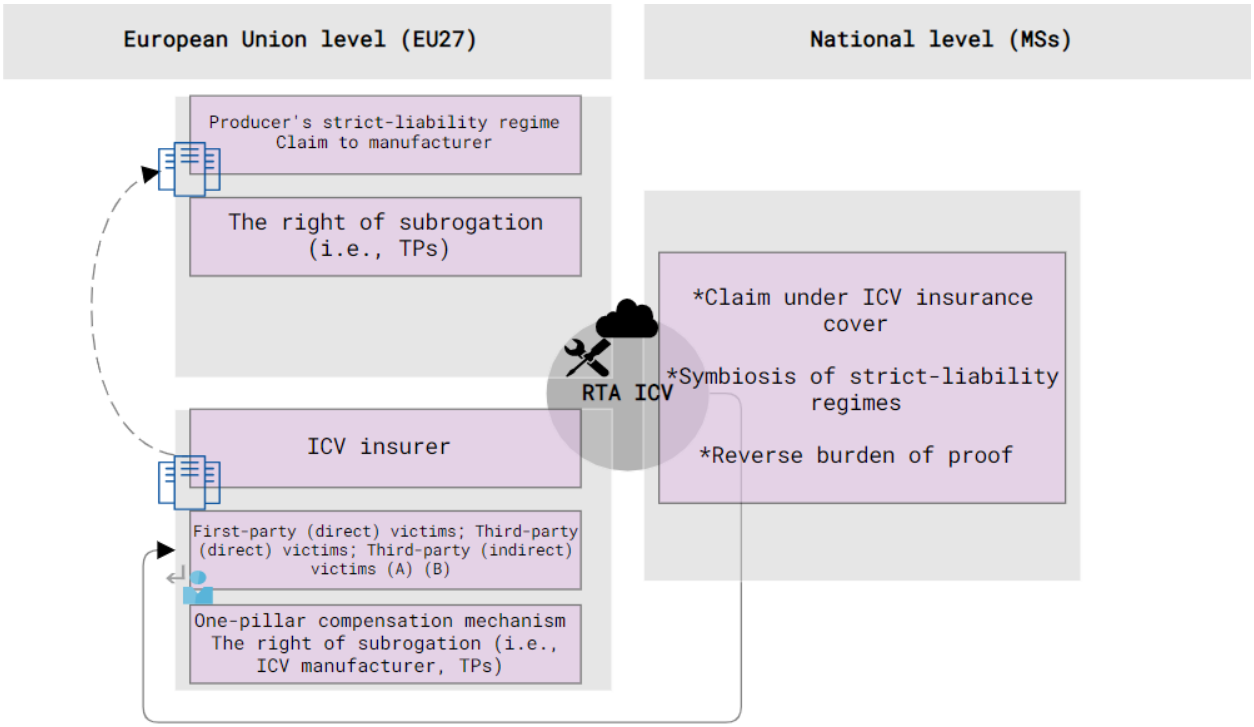
[895] Article 16(1). Council Directive 85/374/EEC <…>; Article 9. Directive 2009/103/EC <…>.

To assess the architecture of the one-pillar compensation mechanism, it is necessary to define the categories of the victims eligible for a compensation under the scheme provided in Diagram.2 below. The categories of victims can be classified as follows:

A. First-party (direct) victim, i.e., the ICV operator (victim.1), should be seen as a person 'at the steering wheel' of the ICV given both the lower and the higher levels of ICV automation. At the lower levels of ICV automation, the ICV operator is able (required) to execute DDT continuously or infrequently, depending on the driving environment. At the higher ICV automation levels, the ICV operator must observe and follow ICV's instructions and hazard notifications. The ICV operator may be the ICV owner/keeper, but not necessarily. Among the expected claims, a claim for a personal injury compensation is more probable (ICV.p is not covered).
B. Third-party (direct) victims, i.e., victims other than (victim.1), e.g., a CV driver, a non-motorised user (e.g., a pedestrian, a cyclist), the legal owners or custodians of the damaged property (e.g., a building, a fence, a gas station), a municipality (e.g., damage to the road infrastructure). Among the expected claims, the claim for a personal injury, and material damage compensation is seen as more probable.
C. Third-party (indirect) victims (A), i.e., family members or dependents of a person deceased in an RTA involving an ICV or who has become incapacitated or disabled. Among the expected claims, a claim for both pecuniary and non-pecuniary losses is feasible.
D. Third-party (indirect) victims (B), i.e., the family members or dependents of the ICV operator or the ICV owner/keeper who deceased in an RTA (who owned or used the ICV as a/the wrongdoer), or who has become incapacitated or disabled. Among the expected claims, a claim for both pecuniary and non-pecuniary losses is feasible.

Diagram.2 below contains a single option as an available one-pillar compensation scheme for the above-defined victims eligible for a compensation in RTA (involving ICV).

Diagram.2



The compensation mechanism under Diagram.2 requires the incorporation of the newly-developed compensation scheme vis-à-vis to the first-party (direct) victim and the third-party (indirect) victim (B). Albeit, the compensation scheme concerning the victims other than the first-party (direct) victim and the third-party (indirect) victims (B) remains unchanged from the implemented MID standpoint, and thereof, preserving the supplementary compensation scheme through the Claims Representative in cross-border accidents, ensures that the RTA victims (involving ICVs) get equal treatment compared to the RTA victims (involving CVs). Against this background, the potential disadvantageous and discriminatory impacts between the RTA victims involving ICVs and the RTA victims involving CVs will be eliminated. It can be argued that the incorporation of the above compensation scheme can give rise to the potential disadvantageous and discriminatory impacts (also referred to as a disproportionate superiority of the victims from ICV.p) between the victims from ICV.p and the victims from defective products other than ICV.p (PL action). Here, the particularity of the ICV.p, i.e., potential incidents – the utilisation ratio, allows prescribing the ICV.p to products involving higher risks (or hazardous products), at least during the transition period until the ICV has been proven to serve its initial purpose, i.e., an increased safety. Thence, facilitating a compensation mechanism for the first-party (direct) victim and the third-party (indirect) victim (B) is seen as reasonable and proportionate.

Minimum Provisions for Compensation for Non-Pecuniary Damage

Considering the analysis conducted in Sub-section 1.2., the MSs compensation systems remain broadly resembling in part the compensation for pecuniary damage (except for pure mathematical formulas, e.g., the Balthazar formula). Albeit, both the index of the pain allowance and the positions in compensation for intangible damage (e.g., Loss of chance of not having lived

longer, disfigurement, or '*le préjudice esthétique*', and the exceptional prejudice, or '*perjuicio excepcional*'), are significantly distinct. Unequivocally, approximating the pain allowance, i.e., the quantum of compensation for intangible damage, across the MSs is hardly feasible (low achievability) and hardly proportionate or reasonable given the sharply divergent financial stances of the MSs (e.g., MSs calculating the pain allowance based on the indexed gross minimum wage,[896] the social conditions in the society and the foreseeable alterations in the nearest future,[897] the Orientation Criteria 2020[898] and the future losses based on the expected average annual expenditure[899]). Furthermore, given the analysed judicial practice of the MSs in Sub-section 1.2., the pain allowance can widely vary not just among the EU members but also within the same jurisdiction.[900] On the other hand, the discrepancies in provisions for the compensation for intangible damage, i.e., heads of claim across the MSs, calls into question the proportionality of the compensation mechanism for EU RTA victims in general. Although the historically developed types of losses, e.g., from the health sector claim, in securing a victim-favourable compensation system (though the principle of *favor laesi*) does not negatively impact the overall compensation mechanism across the MSs, specific minimum provisions for the compensation for intangible damage are viewed as satisfactory and advisable at the European Union level. While 25 MSs (92.6%) recognise the loss of amenity (i.e., the feelings of displeasure, the loss of amenities and reliefs) and the psychological pain, PTSD for both direct and indirect victims, Finland (3.7%) recognises the loss of amenity and the psychological pain exclusively vis-à-vis to the direct victim.[901] To award compensation for psychological pain to the survivors (indirect victims) in Sweden (3.7%), either deliberate misconduct or gross negligence (in RTA) should take place.[902] Contemporaneously, 26 MSs (96.3%) acknowledge non-pecuniary damage *per se*, i.e., psychological pain, moral damage, while the Maltase (3.7%) statutory provisions invoke intangible damage compensation only vis-à-vis to the criminal offence.[903] In securing the minimum provisions for the compensation for intangible damage, i.e., the psychological pain and the loss of amenity vis-à-vis to both the direct and the indirect victims, there is a potential to ensure the overall pertinence and effectiveness of the compensation mechanism in question across the MSs, and the subsequent advantageable impact on the cross-border RTA victims.

[896] Romania: Articles 22, 26 (5). Law No. 132 <…>.
[897] Ireland: *Vernon v Colgan* (2009) IEHC 86; *Sinnott v Quinnsworth Limited* (1984). ILRN 523.
[898] Croatia: Vrhovni sud Republike Hrvatske od 5. ožujka 2020. i 15. lipnja 2020., br. Su-IV-47/2020-5, u primjeni Zakona o obveznim odnosima. In English: The Supreme Court of the Republic of Croatia.
[899] Denmark: Compensation for future losses should be fixed at a wage which may not exceed the expected average annual expenditure multiplied by 10. Article 1(a). Bekendtgørelse af lov om erstatningsansvar <…>.
[900] Jean Albert. Report. Compensation of victims of cross-border road traffic accidents in the EU: comparisons of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. ETD/2007/IM/H2/116, pp. 1–360 (p. 53).
[901] In HD:1984-II-122 it was held that a compensation for a shock injury caused by a parent watching the death of a child cannot be awarded as there is no legal basis for such a compensation.
[902] NJA 1999 s.632 (Supreme Court. New legal archive – 1999 s.632).
[903] Articles 1045–1046. Kodiċi ċivili (Kapitolu 16) 1870 (1874). In English: Civil Code. Unless the damage affected the work capacity (current and future) of the claimant. *Borg Falzon Louis v Korporazzjoni Enemalta*, 1358/1999/1, Civil Court (First Hall) of 19 November 2013.

Although full harmonisation of the heads of claim in the MSs would neither be possible nor necessary at this stage, it is arguable that establishing the EU guidelines on recognised losses should be considered as an option.[904] The approximation of the laws of the MSs vis-à-vis to the compensation system should be achieved in complex, i.e., by addressing both the victims of ICVs and the victims of CVs. Otherwise, if pursued independently (i.e., separately for victims of ICVs or victims of CVs), the effect of such an approximation of laws would be seen as disproportionate and ineffective in the general context of the protection system for cross-border RTAs victims.

2.3.3. Insurance terms for the purposes of ICVs

The insurance law remains one of the three branches of law to be impacted through the ICV release in the EU single market. In the insurance law dimension, the liability regime is seen as a paramount element as long as it directly correlates with the insurance system through the allocation of the costs, i.e., the burden to mitigate the losses.[905] The previous sub-sections elaborately analysed the admissible liability regime and the pertinent compensation mechanism at the European Union level vis-à-vis to the emerging CAD in the EU, considering the long-lasting tort law traditions across the MSs and the peculiarities in the compensation systems. With the change of the liability regime and the one-pillar compensation mechanism in question, the insurer's role becomes more significant than ever before. The insurer's role will stand in the central focus not only vis-à-vis to ICV.v, but also to the ICV manufacturer given the whole product line and the further potential for the legal culpability in the case of an ICV incident. On the other hand, the insurer will mostly remain of extraordinary importance vis-à-vis to CAD-involved agents other than the ICV owner/keeper, the ICV operator, and the ICV manufacturer, i.e., an Infrastructure provider, or a Network provider. Accordingly, the insurance cover plays a detrimental role in the ICVs civil liability regulation beyond the mere ICV.v cover.

Transitional Period at the EU Insurance Market: Mixed Traffic Flow

Some scholars have suggested that holding the ICV manufacturers strictly liable vis-à-vis to RTAs involving ICVs would, eventually, impose an insurer element on the ICV producer.[906] Others have argued that making the ICV manufacturer strictly liable to the ICV incident would be reflected through the final retail price for ICV.p in the EU single market.[907] Albeit, providing that even separate components of ICVs, including the soft digital content, such as CaaP and CaaS, constitute one integral unit, and thereof ICV.p, the ICV manufacturer would remain strictly liable vis-à-vis to the RTA injured parties. Regarding the analysis provided above in Section 2, the

[904] Jean Albert. Report. Compensation of victims of cross-border road traffic accidents in the EU: comparisons of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. ETD/2007/IM/H2/116, pp. 1–360 (p. 59, p. 209, p. 212).
[905] Maurice Schellekens. Self-driving cars and the chilling effect of liability law. *Computer Law & Security Review* (2015), Vol. 31, Issue 4, pp. 506–517 (p. 516).
[906] Jean-François Bonnefon, Azim Shariff, Iyad Rahwan. Autonomous Vehicles Need Experimental Ethics: Are We Ready for Utilitarian Cars? *ArXiv* (2015), Vol. abs/1510.03346, pp. 1–15 (p. 2).
[907] Expert Group on Liability and New Technologies <…>. (p. 42).

symbiosis of the liability regimes and the compensation mechanism through the ICV insurer can facilitate the settlement of losses and ensure a smooth ICV deployment in the EU. Albeit, the symbiosis liability regime and the compensation mechanism in question do not abolish nor, in any way, eliminate, the strict liability vis-à-vis to the ICV manufacturer. On the other hand, it is argued that, regardless of the strict liability on the part of the ICV manufacturer, given the possible difficulties in the action of subrogation, the ICV owner/keeper would be directly affected through the insurance premium[908] which is not based on the use of the vehicle.[909] Here, it is necessary to recall the differentiation in the insurance market price per engine size (or, also referred to as to the 'engine capacity') of the vehicles, apart from the claims history (with reference to BMS)[910] and other detrimental elements for the insurance premium calculation, i.e., the age of the insured individual, and his/her driving experience. In the case of powerful engine-sized vehicles, the insurance premium will be inevitably higher than for a smaller-capacity vehicle in the insurance market. The above distinction in the insurance premium per engine size is reasonably justified in the view of the vehicle's ultimate capacity, which unavoidably correlates with the engine size and the subsequent potential to the volume of the damage in the case of an RTA. Against this background, the higher insurance premium for ICVs (at least, during the transitional period until ICVs have proven to serve their initial purpose, i.e., a decrease in the number of RTAs) does not represent a discriminatory treatment or a precedential solution at the insurance market through the prism of the *potential hazard – insurance indemnification* ratio.

On the other hand, during the transitional period (in the mixed traffic flow), the insurance premium can disproportionally increase on the part of the CVs' insureds. Here, the MTPL insurance undertakings will have to consider the potential of RTA in the (ICV – CV) scenario, whereby the driver of the CV is at fault, and therefore the insurance gets to face the subsequent potential of the costly repairs of the ICV, i.e., OBEs, ICS. This phenomenon would promote an advantage in the competition for ICV.v compared to CV[911] and could subsequently impact the public's decision to switch from CVs to ICVs.

Post-Transitional Period at the EU Insurance Market: Autonomous Traffic Flow

Broadly distinct from the predictions in the transitional period at the EU insurance market, once ICVs have proven to serve their initial purpose, i.e., an increased safety on the EU public roads, the insurance premium is expected to decrease compared to the insurance premium for CVs.[912] Even today, certain EU insurers are offering a twenty per cent reduction in the insurance

[908] Gerhard Wagner. Robot Liability. In Sebastian Lohsse (ed.). *Liability for Artificial Intelligence and the Internet of Things. Münster Colloquia on EU Law and the Digital Economy IV*. 2019, *Nomos Verlagsgesellschaft*, pp. 27–62 (p. 52).

[909] Gerhard Wagner. Produkthaftung für autonome Systeme <…>, (p. 740).

[910] Ulrich Meyer. Motor Liability Insurance in Europe. Comparative Study of the Economic-Statistical Situation. In Jürgen Basedow, Ulrich Meyer, Dieter Rückle, Hans-Peter Schwintowski. *Paneuropäische Tarifstruktur in der Kfz-Haftpflichtversicherung*. Versicherungswissenschaftliche Studien. (2005), pp. 35–188 (p. 43).

[911] Jan Eichelberger. Autonomes Fahren und Privatversicherungsrecht. In Markus Ahlers (ed.). *Autonomes Fahren: Rechtsprobleme, Rechtsfolgen, technische Grundlagen*. 2. Auflage. C.H. Beck. (2020), pp. 203–230.

[912] Zia Wadud. Fully automated vehicles: A cost of ownership analysis to inform early adoption. *Transportation Research Part A* (2017), Vol. 101, pp. 163–176 (p. 168).

premium in the MTPL cover for CVs with a lane-keeping function and Adaptive Cruise Control (ACC).[913] As explained above, when calculating the insurance premium, the insurer is broadly relying on the individual claim history in order to adjust the BMS. If all the elements impacting the partition of the risks could be detected and rated, the tariff categories would be consistent.[914] The perspectives to imply the complex systems vis-à-vis to the risk profiles analytics, including real-time streaming, ensures the availability, sustainability and easy accessibility of the data for the ICV insurer.[915] Thence, adjusting the tariff categories, given the explicit ICV data, allows anticipating more affordable and favourable insurance conditions compared to CVs.

The doctrine advises that first-party insurance (e.g., Denmark, Sweden) may be regarded as a solution to the ICVs civil liability regulation even without a further *ad hoc* legal framework.[916] The first-party insurance cover vis-à-vis to ICV incidents resolves several legal issues in question, i.e., the burden of proof, the lack or ambiguity of the regulatory concepts, and overlaps in divergent liability regimes.[917] In 2017, in the course of the Strasbourg plenary session, MEPs called for a compulsory insurance scheme and a supplementary fund,[918] which could ensure the mitigation of losses vis-à-vis to the RTA victims (involving ICVs).[919] When drawing the liability rules and the insurance system in question, there is a need to equilibrate the corrective justice (with reference to the justified settlement of losses), and, contemporaneously, to promote ICV market penetration.[920] However, such an insurance system, above all, requires acceptance from the insurance providers.[921] Besides, no-fault liability insurance cannot replace the risk allocation and subsequently replace fair and reasonable liability regimes.[922] Considering the analysis conducted in Sub-section 2.1.1.2. based on the analysis which was implemented in Sub-section 1.2., the no-fault liability regime (first-party insurance cover) in connection with the ICV.v is hardly feasible in 92.6% of the MSs. Eventually, the vertical imposition of the first-party liability insurance at the European Union level would force most of the MSs to derogate from the principal course set out at the domestic level.

On the other hand, the involvement of the insurer under Diagram.2 above, not only ensures the smooth compensatory scheme vis-à-vis to the RTA victims (involving ICVs), but, *in esse*, does not require the insurance undertakings to deviate from protecting their interests under the available

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[913] Walter Olson. *Why we won't be getting VW's Lane Assist*. (2008) Retrieved online from <https://www.overlawyered.com /2008/04/why-we-wont-be-getting-vws-lane-assist/>. Retrieved on February 10, 2021.
[914] Jean Lemaire. Bonus-Malus Systems in Automobile Insurance. In J. David Cummins. *Huebner International Series on Risk, Insurance, and Economic Security*. Kluwer Academic Publishers. (1995), pp. 1–243 (Preface).
[915] Expert Group on Liability and New Technologies <…>. (p. 50).
[916] Maurice Schellekens <…>. (pp. 514–515).
[917] Tiago Sérgio Cabral. Liability and artificial intelligence in the EU: Assessing the adequacy of the current Product Liability Directive. *Maastricht Journal of European and Comparative Law* 2020, Vol. 27, No. 5, pp. 615–635.
[918] Jean Albert. Report. Compensation of victims of cross-border road traffic accidents in the EU: comparisons of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. ETD/2007/IM/H2/116, pp. 1–360 (p. 59, p. 70, p. 211).
[919] European Parliament. Robots and artificial intelligence: MEPs to call for EU-wide liability rules. Briefing. 13–16 February 2017 – Strasbourg plenary session. (Civil law rules on robotics 2015/2103(INL)).
[920] Horizon 2020 Commission Expert Group. Ethics of Connected and Automated Vehicles <…>. (p. 63).
[921] Expert Group on Liability and New Technologies <…>. (p. 30, p. 47, p. 61).
[922] *Ibid.*

right of subrogation. When assessing two different insurance schemes, i.e., the first-party insurance cover (the no-fault liability insurance cover) and the ICV insurance cover under Diagram.2 above, the latter mechanism permits the insurer to remain a part of the social ecosystem[923] and, concomitantly, maintain their own commercial interests.

Simultaneously, setting new categories of the insurance cover, e.g., cyber-security insurance,[924] cyber-liability and technology errors and omissions insurance, separately from the ICV insurance cover addressed in Sub-section 2.3.2., and the first-party insurance cover analysed above, should not impact the compensation mechanism under the ICV insurance cover between the ICV insurer and the RTA victims, i.e., first-party (direct) victims, third-party (direct) victims, and third-party (indirect) victims (A) (B). The supplementary insurance cover can be seen as a beneficial tool in the compensatory schemes between the ICV manufacturer and the respective insurer, as well as between CAD-involved agents (other than the ICV manufacturer) and the insurance undertakings given the distribution of the responsibilities and the legal culpabilities, e.g., one-way or two-way input failure in V2I, V2X communication (see Sub-sections 2.1.1.2. and 2.3.1.).

ICV Manufacturer Insurance Cover in Case of Insolvency

In the course of the revision of PLD effectiveness by the European Commission[925] (see Sub-section 1.1.1.), there was a proposal to adopt the compulsory PL insurance at the European Union level (broadly similar to the MTPL insurance cover under the MID); albeit, the availability and the easy accessibility of the PL insurance cover at the EU insurance market, as well as the lack of records vis-à-vis to practical PL insurance complexities, led to the suspension in the developing of the proposal concerning the mandatory PL insurance cover. Until now, the MSs are free to decide on the compulsory insurance cover in the sectors other than those regulated through the biding insurance cover at the European Union level; thence, the mandatory PL insurance cover vis-à-vis to the health sector exists in France.[926] Although there were proposals to establish the mandatory PL insurance cover in the case of a manufacturer's insolvency, the compensation scheme under Diagram.2 above (see Sub-section 2.3.2.) serves as a protective mechanism to ensure a reasonable settlement of losses with the victims irrespective of the manufacturer's (in)solvency, i.e., the cover of the ICV operator. In securing the reimbursement for a subrogation claim (ICV manufacturer – ICV insurer), the ICV owner/keeper does not incur the subsequent costs by increasing the insurance premium, i.e., alterations in the BMS (unless contributory negligence is proven on the part of the ICV operator).

Insurance Scheme vis-à-vis to ICV Incidents

Having in mind the corrective justice in the settlement of losses, it is required to avoid the potential unreasonable delays in the compensation procedures to the RTA victims (involving

[923] *Ibid.*
[924] *Ibid.*
[925] Commission of the European Communities. COM (2000) 893 final <…>.
[926] Article L251-1. Code des assurances. In English: Insurance Code.

ICVs). Given the currently available compensation scheme in respect of CVs, in the absence of a compensation offer or a reasonable response on the part of the alleged tortfeasor's insurer in three months,[927] the obligation to settle the damage can be invoked on the part of the compensation body set out in the MS where the tortfeasor's vehicle is habitually stationed. Regarding the compensation mechanism under Diagram.2, the insurance undertakings play a crucial role as they are viewed as a subject directly compensating the ICVs victims, foreseeably without any confirmation of a possible subrogation from the liable agent in question, e.g., the ICV manufacturer. The settlement period should be viewed as particularly sensitive given the vulnerability of the potential ICVs victims, e.g., non-motorised road users suffering a personal injury. The settled distribution of responsibilities and the apportionment of the legal culpabilities between the CAD-involved agents at the European Union level alone does not guarantee (and should not guarantee by its nature) the smooth compensation to the RTA victims (involving ICVs). Thence, a range of supplementary EU initiatives should accompany the liability regime vis-à-vis to ICV incidents, such as insurance terms covering the practical side of the claims arising from the use of ICVs. The compensation scheme (including the insurance terms) under the MID demonstrated its pertinence and beneficial impact on the RTA victims involving CVs. Here, the implication of the comparable insurance terms (e.g., a compensation offer within the three-month time limit) should be viewed as advantageous and acceptable vis-à-vis to the ICV insurance cover.

The Burden of Insurance Dilemma

The paradigm inversion analysed in Sub-section 2.1.1.1. creates uncertainty as to whether the ICV owner/keeper should continue to be responsible for the insurance for the risk allocation purposes. Some scholars have argued that a shift in the liability regime, i.e., from the driver's liability to the ICV manufacturer's liability,[928] gives rise to a comparable shift in the duty to insure.[929] As explained above, in securing reimbursement for a subrogation claim (ICV insurer – ICV manufacturer), the ICV owner/keeper does not incur any subsequent costs by increasing the insurance premium. Therefore, the duty to insure *per se* does not represent a burdensome obligation on the ICV owner/keeper. According to the results of the analysis conducted in Sub-section 2.1.2.2., it can be argued that the imposition of a duty to insure vis-à-vis to the ICV owner/keeper is deemed reasonable and proportionate. Regarding the compensation scheme per Diagram.2 above, the ICV insurer's role remains central in the justified settlement of losses; albeit, in order to launch the above mechanism, the ICV.v must be insured beforehand.

Uninsured ICV.v

[927] Article 22. Directive 2009/103/EC <…>.
[928] Maria Lubomira Kubica. Autonomous Vehicles and Liability Law. *American Journal of Comparative Law* 70, no. Supplement 1 (2022), pp. i39–i69 (p. i67).
[929] Adam D. Thierer, Ryan Hagemann. Removing Roadblocks to Intelligent Vehicles and Driverless Cars. Wake Forest Journal of Law & Policy (2015), Vol. 5, Issue 2, pp. 339–391 (p. 362).

The remarkable stride in the insurance scheme vis-à-vis to the CVs is that Council Directive 84/5/EEC[930] obliged the member states to establish a governmental institution that would be able to undertake a settlement procedure if the vehicle which caused an accident was uninsured. However, the exclusion clause laid down in Article 1(4) does not preclude the compensation body from denial in compensation in the event that a person voluntarily entered the vehicle, which caused the damage or injury whilst knowing that it was uninsured. At this point, unless the provisions laid down in the MID vis-à-vis to the CVs will be revokable, *mutatis mutandis*, to ICVs, there is a strong need to regulate the emerging issue of the potentially uninsured ICV.v on the EU public roads. Traditionally, the implication of the compensation bodies set out across the MSs has proven to be an effective tool to ensure a reasonable settlement of losses to the RTA victims who suffered the damages in RTA involving an uninsured CV. The implication of the compensation bodies vis-à-vis to ICVs again requires applying the MID to ICVs at the European Union level. Given the historical results on the compensation provided through the compensation bodies, the application of the insurance terms laid down in the MID vis-à-vis to the CVs is advisable to apply *mutatis mutandis* to ICVs. Considering the potential of the remote theft of the ICV in coordination with the guaranteed right of subrogation to the ICV manufacturer as a subject responsible for cyber defences, the one-pillar compensation scheme (under Diagram.2) though the ICV insurer instead of the compensation body[931] promotes a swift compensation and, contemporaneously, removes the burdensome duty from the compensation body.

Although the compensation bodies play the central role in the compensation mechanism to the RTA victims who suffered from uninsured CVs, considering the ICV technicality, the other protective and preventive measurements are deemed possible in order to remove the burden of compensation (in the case of an uninsured vehicle) from the compensation bodies across the MSs. Broadly similar to the interactive acknowledgement of the ICV use onboard (see Sub-section 2.1.2.1), the insurance data, i.e., a valid insurance policy, integrated into the ICS, is an admissible, sustainable and advantageous decision to verify the insurance cover. This will ensure that no uninsured ICV can be used by technical means, i.e., the inability to start ICV by technical means without a valid insurance contract shall be achieved. To enable the above scheme, the insurance policy data should be directly linked with the ICS; herewith, the ICV should not start the operational process unless the ICS has automatically confirmed the valid insurance cover. However, to implement the above scheme, the tight collaboration between the EU law-making bodies and the industry is unavoidable

[930] Second Council Directive 84/5/EEC of 30 December 1983 on the approximation of the laws of the Member States relating to insurance against civil liability in respect of the use of motor vehicles. OJ L 8.
[931] Article 13. Directive 2009/103/EC <…>.

CONCLUSIONS AND RECOMMENDATIONS

1. The results of the analysis of the ICVs civil liability regulation approaches (both permanent and those set out exclusively for ICVs experimental purposes) established at the national level of the Member States (MSs) affirms the necessity to accord the uniform ICVs civil liability regulation at the European Union level. The uniform ICVs civil liability regulation has a potential to prevent the immense divergence in the liability regimes, as well as compensation systems, and to subsequently ensure the minimisation of the adverse outcomes for cross-border road-traffic accident (RTA) victims compared to RTA victims from conventional vehicles.

2. The liability regimes at the lower and higher ICV automation levels should be different: **Higher ICV automation levels (i.e., Level 4 – Level 5).** The fault-based liability regime assumes the breach of the duty of care, as a basis for a legal action and a further compensation in RTAs. Therefore, given the ICVs performance, which is strictly based on machine-learning algorithms, at the higher ICV automation levels, the breach of the duty of care *per se* becomes irrelevant. Accordingly, the fault-based liability regime as a uniform liability regime at the European Union level, vis-à-vis to the ICVs, cannot be considered feasible, proportionate, and pertinent.

Lower ICV automation levels (i.e., up to Level 3). Sufficient knowledge of the ICV operator is required with respect to (1) the Intelligent Connected System (ICS) capabilities, (2) the assigned responsibilities to the ICV operator, and (3) the possible harmful consequences in the case of not fulfilling the given responsibilities, which would correspond to the negligence on the part of the ICV operator. Given the scant feasibility to avoid the Shared Task Authority, i.e., a shift in control over the ICV operational process between the ICV operator and ICS at the lower ICV automation levels, it is required to maintain the fault-based liability regime (or, given the practice of most of the MSs, the symbiosis of the strict-liability and the fault-based liability regimes) as a theory of the liability applicable to ICVs at the lower levels of automation.

3. The ‘minimum clause’ approach employing the Product Liability Directive (PLD) in collaboration with the Motor Insurance Directive (MID), i.e., the producer’s strict liability, as a uniform liability regime vis-à-vis to the ICVs at the European Union level, is viewed as a lower cost-based approach. Albeit, the level of sustainability and reasonableness of such a regime is relatively low. It calls into question whether the ‘minimum clause’ approach can ensure a smooth compensation mechanism for the RTA victims in the national systems of the MSs, and, therefore, wheyjer it can be regarded as satisfactory and proportionate at the European Union level. Employing PLD vis-à-vis to the RTAs involving ICV would give rise to the disproportional treatment of the RTAs victims from the CVs and those who endured the damage from ICVs. PLD can be seen as an effective tool for regulating claims related to a defective product as such; albeit, PLD in its scope does not have the potential to adequately intervene between the ICV manufacturer and the RTA victim (given the direct claims), thereby placing PLD at a relatively weak position in the protection system for RTAs victims. Contemporaneously, even though the insurance scheme under the MID might be regarded as technology-neutral and optimal for the ICVs insurance cover (but not a civil liability regulation), the lack of harmonised subrogation rules imposes an additional burden on the RTAs victims, i.e., unnecessary excess payments in the case the ICV insurer was

unsuccessful in a subrogation claim with the ICV manufacturer. The insurance scheme under the MID vis-à-vis the ICVs, however, can be viewed as adequate in the case of a uniform no-fault liability regime at the European Union level; otherwise, the ICV operator is deemed excluded from the insurance cover by the virtue of law. Accordingly, neither PLD nor MID can tackle alone the challenge posed by the emerging digital technologies, in particular, ICVs release in the EU, in such way as not to generate any disbalance between the regulation of (1) the Motor Third-Party-Liability (MTPL) with CVs, (2) the RTAs involving ICVs, and (3) the Product Liability (PL) actions.

4. The no-fault liability regime designated exclusively to ICVs would denote a substantially divergent treatment of the RTAs victims involving CVs vis-à-vis to RTAs with at least one ICV involved. The vertical EU imposition of the no-fault liability regime at the European Union level, although feasible, and despite having a plausible potential to ensure a high-level protection system for ICVs victims and to boost competition within the common market, on the other hand, would nevertheless disbalance the currently existing civil liability regimes among the MSs and deliver a discriminatory impact on the victims involved in RTAs with CVs. At this juncture, unless vertically imposed from the EU, no-fault liability regime in connection with the ICVs is hardly achievable in 92.6% of the MSs. The vertical imposition of the first-party liability insurance at the European Union level would force most of the MSs to derogate from the principal course vis-à-vis the liability regime established at the domestic scale.

5. The symbiosis of the producer's strict liability and the ICV strict liability (through the ICV insurer), i.e., the Synergic ICVs civil liability regime, is seen as a more sustainable and satisfactory liability regime at the European Union level (compared to the producer's strict liability, the fault-based liability, and the no-fault liability regimes), designated to strengthen the protection system for the RTA victims. At this juncture, 23 MSs (85.2%) are pursuing a strict-liability regime vis-à-vis to the CVs on the domestic scale. The statutory grant of the right of subrogation (ICV insurer – ICV manufacturer) allows MSs to enforce the strict-liability clause directly to ICV.v, subject to the subsequent duty to insure ICV.v. Enforcing a symbiosis of the strict-liability regimes, 85.2% of the MSs will not be required to deviate from the principal course vis-à-vis to the liability regime established at the national level. Albeit, considering the emerging necessity to enforce an ICV strict-liability clause, it is required to determine the subject responsible for allocating risks vis-à-vis the use of ICV.v., i.e., the agent to whom the strict liability shall be applied.

6. There are eleven MSs (40.1%) enforcing a liability regime against the CV driver, fourteen MSs (51.9%) imposing the legal culpability on the CV owner/keeper, and contemporaneously, two MSs, i.e., Greece and Croatia (7.4%), providing the dual liability regime, i.e., both the CV owner/keeper and the CV driver are concerned. The MSs representatives of the fault-based liability regime (EU4) provide legal consequences against the driver, all above, given the primary focus on the existence of a 'fault' or a 'breach of the duty of care', which would not be feasible to invoke vis-à-vis to the CV owner/keeper who was not necessarily the driver committing a tort. In the ICV owner/keeper – ICV user dilemma, it is deemed reasonable and

proportionate to enforce a strict liability clause against a subject allocating the most of risks, or, in other terms, a subject exercising extra control over the source of a greater danger (i.e., the primary manager of the ultrahazardous object). If the ICV user cannot impact a decision of the ICV algorithms by technical means, it would be unreasonable to hold him or her legally culpable for RTA. The ICV owner/keeper is seen as a subject closely relating to the allocation of risks through the decision-making, i.e., to the choice of the ICV use (including the decision to delegate the ICV to any other ICV user). Thence, the enforcement of the strict liability regime vis-à-vis to the ICV owner/keeper is considered more proportionate, reasonable, and pertinent than the strict liability clause against the ICV user. Besides, given that the strict liability will shift the legal culpability vis-à-vis to the ultimately liable subject, i.e., the ICV manufacturer, the ICV insurer (on behalf of the ICV owner/keeper as a policyholder) will be granted the legal redress right against the ICV manufacturer. Accordingly, there remain 40.1% of the MSs which are bound to be required to enforce the strict-liability regime vis-à-vis to the ICV owner/keeper.

7. Having regard to the MSs (representatives of the strict-liability regime) individual commitments towards the ICVs civil liability regulation, evidence suggests that the MSs hesitate to shift the liability directly to the manufacturer preventing an action through the ICV owner/keeper (or the ICV insurer on behalf of the ICV owner/keeper as a policyholder). Pursuing the Synergic ICVs civil liability regime (i.e., a symbiosis of the strict liability regimes vis-à-vis to the ICV owner/keeper through the ICV insurer and the ICV insurer vis-à-vis to the ICV manufacturer) allows securing a smooth compensation mechanism for the victims in the national systems of the MSs obstructing the potential, but foreseeable, future complexities in approximating the laws of the MSs in connection with the ICVs civil liability regulation, and, contemporaneously, which does not require the MSs to deviate from the principal standpoints vis-à-vis to the compensation system through the insurance undertaking.

8. The EU26 (except for Ireland) (including certain MSs representatives of the fault-based liability regime, i.e., Cyprus, Romania, and Malta) recognise the *force majeure* as a basis for a liability waiver. Contemporaneously, EU27 recognise and apply both the contributory negligence and the joint-several liability clauses to CVs. To equilibrate the liability vis-à-vis to the victim's conduct, i.e., while contributing to the harmful event or the extent of the damage, the currently existing clauses for contributory negligence should continue to be applicable. In the ICV 'as a vehicle' (ICV.v) scenario, the contributory negligence is likely to apply under the comparable circumstances vis-à-vis to the CVs (e.g., not wearing a seat belt, a pedestrian entering the carriageway with the knowledge of the potential consequences, not wearing a helmet, alcohol intoxication, an element of suicide). In the ICV 'as a product' (ICV.p) scenario, the contributory negligence clause can be invoked if the victim had interacted with the interconnected digital systems, e.g., had modified the ICS. Where more than one agent, i.e., the ICV manufacturer along with other agents, contributed to ICV.p, and where one or more components of ICV.p constitute a defect, the existence of joint-several liability is accepted as a general rule; as long as independent ICV components constitute one unit, i.e., ICV.p, the initial action for a compensation against the ICV manufacturer should be granted. The alleged tortfeasors, above all, should be jointly and

severally liable vis-à-vis to the ICV manufacturer in terms of the right of subrogation afterwards. It would be disproportionate and burdensome vis-à-vis to the injured party to imply different actions for a compensation against the alleged tortfeasors concerning two or more defective ICV components; albeit, the implication of a joint-several liability should remain for the just equilibration of the legal culpabilities between the ICV manufacturer and the alleged tortfeasors in question.

9. ICV.p implies the distribution of responsibilities and legal culpabilities between the ICV user – ICV manufacturer, TP victim – ICV manufacturer, ICV manufacturer – Infrastructure operator, and ICV manufacturer – Network provider. The legal relationships between the above-indicated agents are divergent and comprise either two-side responsibilities or one-side responsibilities. The breach of duty to ensure the safety of ICV.p gives rise to the legal culpability of the ICV manufacturer and the subsequent duty to compensate for the damage. To hold the ICV manufacturer liable, the legal duty to ensure the safety of ICV.p should exist. To imply the legal duty to ensure the safety of ICV.p, above all, the concept of the safety of ICV.p should be established. In addition to the explicit differentiation of the product information, i.e., warnings and instructions (e.g., in the form of messages on the onboard computer), defects in the design and the manufacturing state, cybersecurity defences should constitute an integral part of the safety of ICV.p; thence, the failure to provide the optimal cybersecurity defences that led to the damage should represent a breach of the duty to ensure the safety of the ICV.p.

10. It is advisable that the legislator commits towards unambiguously defining and distinguishing between the concepts of ICV.p and ICV.v. The implication of either ICV.p or ICV.v (in the legal dimension) gives rise to a rather different legal relationship and the subsequent responsibilities and the legal culpabilities between the agents in question:

ICV.v does not represent a pure light vehicle (a passenger car). Instead, ICV.v is viewed in a broader sense as any vehicle which provides control over the operational process (DDT performing) through ICS given the vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I) and vehicle-to-technologies (V2X) communication; herewith, ICV.v, under technical specifications, can be extended beyond the road use vehicle, e.g., to a railway vehicle. Against this background, it is required to define ICV.v not only given its possessed technicality, but also as a legally intelligible concept representing different categories of the ICV.v inevitable for the distribution of responsibilities between the different involved agents. This study proposes to define an ICV as a vehicle (ICV.v) as any road vehicle which provides control at different levels of automation over the operational process, such as DDT performing through ICS given V2V, V2I, and V2X communication. This definition is limited to the road use, which would preclude the inclusion of the vehicles designed to provide various non-transportation services, such as cherry-pickers or fork lifts. Furthermore, such a definition prevents the inclusion of vehicles not capable of interconnection, i.e. V2V, V2I, and V2X. After defining ICV.v, the legislator would have to determine the legal concept of the ‘use of ICV.v’. It must be argued that. at this stage, we will still need more data on the technical capabilities of ICV.v in order to define the ‘use of ICV.v’.

ICV.p consists of (1) ICV itself as a unit including hard components directly relating to the manufacturing state and the physical design of a product; (2) the optimal product information as a component, i.e., the instructions and warnings provided from the manufacturer; (3) the soft components, i.e., the digital components or the digital content, e.g., sophisticated software as Component-as-a-Product (CaaP) and Component-as-a-Service (CaaS), enabling the ICV operational process, i.e., V2V, V2I and V2X communication; and (4) the cybersecurity protocols (components), i.e., cyber defences against cyber-attacks (cybersecurity) and data leakage (data privacy).

11. Approximating the pain allowance, i.e., the quantum of compensation for intangible damage, across the MSs is hardly feasible (due to low achievability) and hardly proportionate or reasonable given the sharply divergent financial stances of the MSs. On the other hand, the discrepancies in the provisions for the compensation for intangible damage, i.e., the heads of claim across the MSs, call into question the proportionality of the compensation mechanism for the EU RTA victims in general. In securing the minimum provisions for the compensation for intangible damage, i.e., psychological pain and the loss of amenity vis-à-vis to both direct and indirect victims, there is a potential to ensure the overall pertinence and effectiveness of the compensation mechanism in question vis-à-vis the cross-border RTA victims. Approximating the laws of the MSs in connection with the compensation system should be achieved in complex, i.e., by addressing both the victims of ICVs and the victims of CVs. Otherwise, if pursued independently (i.e., for the victims of ICVs or the victims of CVs), the effect of such an approximation of laws would be seen disproportionate and ineffective in the general context of the protection system for cross-border RTAs victims.

Bibliography

International legal acts:

1. Explanatory Report on the 1971 Hague Traffic accidents Convention, *HCC Publications*, 1970.
2. Hague Convention on the Law Applicable to Traffic Accidents of 4 May 1971, 3-VI-1975.
3. United Nations. Convention on road traffic of 8 November 1968.
4. United Nations. Convention on the Contract for the International Carriage of Goods by Road (CMR) of 19 May 1956.

EU legal acts:

1. Treaty on the Functioning of the European Union of 26 October 2012. OJ C 326.
2. 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. OJ L 263.
3. 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. OJ L 207.
4. Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences (Recast). OJ L 403.
5. Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services. OJ L 136.
6. Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits. OJ L 96.
7. Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety. OJ L 11.
8. Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (codified version). OJ L 374.
9. Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys. OJ L 170.
10. Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC. OJ L 136.
11. Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the MSs concerning liability for defective products. OJ L 210.
12. Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I). OJ L 177.
13. Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Brussels I Recast), OJ L 351.

14. Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products. OJ L 342.
15. Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II). OJ L 199.
16. Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC. OJ L 151.
17. Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles. OJ L 60.
18. Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles. OJ L 60.
19. Regulation (EU) 2019/881 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013 (Cybersecurity Act) (Text with EEA relevance), OJ L 151, 7.6.2019.
20. Proposal for a Directive of the European Parliament and of the Council on liability for defective products. 2022/0302 (COD).
21. Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive). 2022/0303 (COD).
22. Proposal for a regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements and amending Regulation (EU) 2019/1020, COM(2022) 454 final.

National legal acts:

Austria

1. Allgemeines bürgerliches Gesetzbuch – ABGB. StF: JGS Nr. 946/1811. In English: General Civil Code.
2. Bundesgesetz vom 23. Juni 1967 über das Kraftfahrwesen (Kraftfahrgesetz 1967 – KFG. 1967). In English: Motor Vehicle Act.
3. Eisenbahn- und Kraftfahrzeughaftpflichtgesetz – EKHG. StF: BGBl. Nr. 48/1959. In English: Railway and Motor Vehicle Liability Act.
4. Straßenverkehrsordnung 1960 – StVO. In English: Road Traffic Act 1960.
5. Verordnung des Bundesministers für Verkehr, Innovation und Technologie über Rahmenbedingungen für automatisiertes Fahren (Automatisiertes Fahren Verordnung – AutomatFahrV). (StF: BGBl. II Nr. 402/2016). In English: Automated Driving Regulation.

Belgium

6. Arrêté royal du 1er décembre 1975 portant règlement général sur la police de la circulation routière et de l'usage de la voie publique (Code de la route). M.B. 09.12.1975. In English: Road Traffic Code.
7. Code Civil. 21 Mars 1804. 1804-03-21/33. In English: Civil Code.

8. Loi du 21 novembre 1989 relative à l'assurance obligatoire de la responsabilité en matière de véhicules automoteurs. M.B. 08.12.1989. In English: Vehicle Liability Insurance Act 1989.
9. SPF Sécurité sociale. Un contrat social performant et fiable : Commission de réforme des pensions 2020-2040. Annexe 3.2 Les conditions d'âge en sécurité sociale. (2014), D/2014/10.770/23. In English: FPS Social Security. An effective and reliable social contract: Pension Reform Commission 2020-2040. Annex 3.2 Age conditions in social security.

Bulgaria

10. Закон за задълженията и договорите. (Попр. ДВ. бр. 2 от 5.12.1950 г.- доп. ДВ. бр. 42 от 22.05.2018 г.). In English: Law on Obligations and Contracts.
11. Постановление № 4 от 23.XII.1968 г. за обобщаване практиката по определяне на обезщетенията за имуществени и неимуществени вреди от непозволено увреждане. In English: Decree No. 4 of 23.XII.1968 on summarising the practice of determining compensation for pecuniary and non-pecuniary damages from tort.

Croatia

12. Zakon o obveznim odnosima. NN 35/05, 41/08, 125/11, 78/15, 29/18. In English: Law on Obligations.
13. Zakon o sigurnosti prometa na cestama NN 67/08-42/20. In English: Law on Traffic Safety.

Cyprus

14. Ο περί Αστικών Αδικημάτων Νόμος (ΚΕΦ.148). In English: Civil Offences Act.

Czech Republic

15. Zákon 250/2016 Sb. ze dne 12. července 2016 o odpovědnosti za přestupky a řízení o nich. In English: Act 250/2016 Coll. of 12 July 2016, on liability for offenses and their proceedings.
16. Zákon č. 89/2012 Sb. (Zákon občanský zákoník). 33/2012. 22.03.2012. In English: Civil Code.

Denmark

17. Bekendtgørelse af lov om erstatningsansvar. (jf. lovbekendtgørelse nr. 266 af 21. marts 2014). In English: Liability Act.
18. Færdselsloven LBK nr 1324 af 21/11/2018. In English: Traffic Act LBK no. 1324 of 21/11/2018.

Estonia

19. Liikluskindlustuse seadus. *Riigikogu* RT I, 13.03.2019, 14. In English: Motor Third Party Liability Insurance Act.
20. Liiklusseadus. *Riigikogu*, RT I 2010, 44, 261. In English: Road Traffic Act.
21. Võlaõigusseadus. *Riigikogu*, RT I 2001, 81, 487. In English: Law on Obligations.

Finland

22. Liikennevakuutusasetus (kumoutunut) (279/59). In English: Motor Vehicle Insurance Act of 26th June 1959.
23. Vahingonkorvauslaki. 31.5. 1974/412. In English: Law on damages of 31st May 1974.

France
24. Code Civil (Mise à jour à compter de 2006). Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique, NOR ECFI1524250L. In English: Civil Code.
25. Code de la route. Version en vigueur au 11 juillet 2020. In English: Road Traffic Code.
26. Code de la santé publique. Modifié par LOI n°2020-1525 du 7 décembre 2020. In English: Public Health Code.
27. Code des assurances. Version en vigueur au 2 août 2003. Modifié par Loi n°2007-1774 du 17 décembre 2007. In English : Insurance Code.
28. Décret n° 2018-211 du 28 mars 2018 relatif à l'expérimentation de véhicules à délégation de conduite sur les voies publiques. JORF n°0075 du 30 mars 2018. In English: Decree No. 2018-211 of March 28, 2018 relating to the experimentation of vehicles with driving delegation on public roads.
29. Fédération Nationale des Victimes de la Route. Perte de Chance de Survie (P.C.S.) Bordeaux, le 9 mars 2009, (mise à jour le 07 janvier 2013). In English: National Federation of victims from traffic accidents. Loss of Chance of Survival.
30. Fédération Nationale des Victimes de la Route. Préjudice de vie abrégée: jugements et jurisprudences. Décisions des tribunaux concernant le Préjudice de vie abrégée (anciennement Perte de chance de survie). In English: National Federation of victims from traffic accidents. Loss of Chance of Survival: case law.
31. Loi n° 85-677 du 5 juillet 1985 tendant à l'amélioration de la situation des victimes d'accidents de la circulation et à l'accélération des procédures d'indemnisation. Version consolidée au 14 janvier 2010. In English: Law No. 85-677 of July 5, 1985 aimed at improving the situation of victims of traffic accidents and accelerating compensation procedures.

Germany
32. Bundesrat Drucksachen BR-Drs 69/17 (Gesetzentwurf), 27.01.17. In English: German Federal Government.
33. Bürgerliches Gesetzbuch (BGB) vom. 18.08.1896 (BGBl. I S. 1245). In English: Civil Code.
34. Gesetz zur Haftung bei Unfällen mit Anhängern und Gespannen im Straßenverkehr vom 10.07.2020. Bundesgesetzblatt Jahrgang 2020 Teil I Nr. 35, ausgegeben am 16.07.2020, Seite 1653. In English: Law on liability in the event of accidents involving trailers and vehicles on the road.
35. Straßenverkehrsgesetz (StVG) vom. 03.05.1909. (BGBl. I S. 1653). In English: Road Traffic Act.
36. Straßenverkehrs-Ordnung (StVO) vom. 06.03.2013. (BGBl. I S. 814). In English: Road Traffic Regulations.

Greece
37. Νόμος ΓπΝ’/1911 (υπ' αριθμ. 3950). In English: Civil Code. Presidential Decree 456/1984.

38. Προεδρικό Διάταγμα 456/1984: Αστικός Κώδικας και Εισαγωγικός Νόμος, (ΦΕΚ 164/A/1984), 24-10-1984. In English: Civil Code.
39. Υπουργική Απόφαση 5338/17.1.2018 - Κωδικοποίηση του ν. 2251/1994 (Α΄ 191). In English: "Ministerial Decision 5338/17.1.2018. Codification of Law 2251/1994 (Government Gazette A' 191) "Consumer Protection".

Hungary
40. 1988. évi I. törvény a közúti közlekedésről. In English: Regulation on the traffic rules and road transport.
41. 2013. évi V. törvény a Polgári Törvénykönyvről. 2013. évi V. törvény (Ptk. (új)). In English: Civil Code.
42. 5/1990. (IV. 12.) KöHÉM rendelet a közúti járművek műszaki megvizsgálásáról. In English: Regulation on the technical inspection of road vehicles.
43. 6/1990. (IV. 12.) KöHÉM rendelet a közúti járművek forgalomba helyezésének és forgalomban tartásának műszaki feltételeiről. In English: Decree of the Ministry of Transport and Communications on the technical conditions for the registration and keeping in circulation of road vehicles.

Ireland
44. Civil Liability Act 1961 (No. 41 of 1961).

Italy
45. Codice Civile. R.D. 16 marzo 1942, n. 262. In English: Civil Code.
46. Decreto 28 febbraio 2018. Modalita' attuative e strumenti operativi della sperimentazione su strada delle soluzioni di Smart Road e di guida connessa e automatica. (18A02619) (GU Serie Generale n.90 del 18-04-2018). In English: Decree 28 February 2018. Implementation modalities and operational tools of road testing of Smart Road and connected and automatic driving solutions.
47. Legge 5 marzo 2001, n. 57 "Disposizioni in materia di apertura e regolazione dei mercati", Gazzetta Ufficiale n. 66 del 20 marzo 2001. Law of 5 March 2001, no. 57 "Provisions regarding the opening and regulation of markets", Official Journal no. 66 of 20 March 2001.

Latvia
48. Ceļu satiksmes noteikumi. *Latvijas Vēstnesis,* 122, 27.06.2015. In English: Road Traffic Act.
49. Civillikums. *Valdības Vēstnesis*, 41, 20.02.1937. In English: Civil Code.
50. Latvijas Transportlidzekļu apdrošinataju birojs. Transportlidzekļu apdrošinataju biroja metodiskie noradijumi "Ceļu satiksmes negadijuma iesaistito personu atbildibas pakapes noteikšana". Prot. Nr. 2. (Speka no 2009.gada 1. apriļa). In English: Motor Insurers Bureau of Latvia. Methodological instructions "Determining the degree of responsibility of persons involved in a road traffic accident".

Lithuania
51. Civilinis kodeksas. *Valstybės žinios*, 2000-09-06, Nr. 74-2262. In English: Civil Code.

52. Lietuvos Respublikos Transporto priemonių valdytojų civilinės atsakomybės privalomojo draudimo įstatymas. Official Gazette *Valstybės žinios*, 2007, Nr. 63. In English: Law on Compulsory Civil Liability Insurance of Motor Vehicle Operators of the Republic of Lithuania. Official Journal "Valstybės žinios", 2007, No. 63.
53. LR Vyriausybės nutarimas dėl eismo įvykio metu padarytos žalos administravimo ir draudimo išmokos mokėjimo taisyklių ir indeksuotų draudimo sumų dydžių patvirtinimo. *Valstybės žinios*, 2004-06-29, Nr. 100-3718. In English: Resolution of the Government of the Republic of Lithuania on the approval of the rules for the administration of damage caused during a traffic accident, the payment of insurance indemnities and the amounts of indexed insurance payments.

Luxembourg

54. Code Civil. (Décrété le 5 mars 1803. Promulgué le 15 du même mois.). In English: Civil Code.
55. Code de la route. Loi du 14 février 1955 concernant la réglementation de la circulation sur toutes les voies publiques. (Mém. A - 15 du 7 mars 1955, p. 471). In English : Road Traffic Code.

Malta

56. Kodiċi ċivili (Kapitolu 16) 1870 (1874). In English: Civil Code (Chapter 16).

Netherlands

57. Besluit ontheffingverlening exceptioneel Vervoer (Boev). In English: Exceptional Transport Exemption Decree.
58. Burgerlijk Wetboek (BW) (Boek 6). In English: Civil Code.
59. Reglement verkeersregels en verkeerstekens 1990 (RVV 1990). In English: Road Traffic Regulation 1990.
60. Wegenverkeerswet (WVW) 1994. In English: Road Traffic Act.

Poland

61. Ustawa z dnia 23 kwietnia 1964 r. Kodeks Cywilny. Dz.U. 1964 nr 16 poz. 93. In English: Civil Code.

Portugal

62. Código Civil. Decreto-Lei nº 47344. Série I de 1966-11-25. In English: Civil Code.
63. Decreto-Lei nº 153/2008. Diário da República nº 151/2008, Série I de 2008-08-06. In English: Decree-Law No. 153/2008.
64. Decreto-Lei nº 352/2007. Diário da República nº 204/2007, Série I de 2007-10-23. In English: Decree-Law No. 352/2007.
65. Despacho n.º 2930/2019. Diário da República n.º 55/2019, Série II de 2019-03-19. In English: Order No. 2930/2019.

Romania

66. Codul Civil din 17 iulie 2009. Legea nr. 287/2009. In English: Civil Code. Law No. 287/2009.

67. Legea nr. 132/2017 - asigurarea obligatorie de răspundere civilă auto pentru prejudicii produse terţilor prin accidente de vehicule şi tramvaie. In English: Law No. 132 of 31 May 2017 on the compulsory insurance against civil liability for the damage to third parties caused by vehicle and tram accidents. OJ No. 431 of June 12, 2017.
68. Norma nr. 20/2017 privind asigurările auto din România. In English: Rule No. 20/2017 on motor vehicle insurance in Romania of 27th July 2017.

Slovakia
69. Zákon č. 40/1964 Zb. (Občiansky zákonník). 19/1964. 05.03.1964. In English: Civil Code.

Slovenia
70. Obligacijski zakonik (OZ). Uradni list RS, št. 97/07 - 64/16 – odl. US in 20/18 – OROZ631. 03.10.2001. In English: Law on Obligations.

Spain
71. Ley 35/2015, de 22 de septiembre, de reforma del sistema para la valoración de los daños y perjuicios causados a las personas en accidentes de circulación. *BOE* núm. 228 de 23 de Septiembre de 2015. In English: Law 35/2015 on the reform of the system for the assessment of damage caused to persons in road accidents.
72. Ley 48/1960, de 21 de julio, sobre Navegación Aérea. *BOE* núm. 176, de 23/07/1960. In English: Law 48/1960 of Air Navigation.
73. Real Decreto de 24 de julio de 1889 por el que se publica el Código Civil (Código Civil). *Gaceta de Madrid* núm. 206, de 25/07/1889. In English: Civil Code.
74. Real Decreto Legislativo 8/2004, de 29 de octubre, por el que se aprueba el texto refundido de la Ley sobre responsabilidad civil y seguro en la circulación de vehículos a motor. *BOE* núm. 267, de 05/11/2004. In English: Royal Legislative Decree 8/2004 that approves the Regulation and Supervision of the Private Insurances.

Sweden
75. Lag (1916:312) angående ansvarighet för skada i följd av automobiltrafik (Bilansvarighetslagen). In English: Motor Vehicle Liability Act 1916.
76. Skadeståndslagen (1972:207). In English: Tort Liability Act 1972.
77. Trafikskadelag (1975:1410). In English: Traffic Damage Act.

United Kingdom
78. Automated and Electric Vehicles Act 2018 (2018 chapter 18).
79. Civil Liability Act 2018 (2018 chapter 29).
80. Fatal Accidents Act 1976 (1976 chapter 30) of 1 September 1976.
81. Judicial College. Guidelines for the Assessment of General Damages in Personal Injury Cases: Fifteenth Edition of 4th December 2019, pp. 1-112. ISBN: 978-0-198-85093-9.
82. Law Reform (Contributory Negligence) Act 1945 of 15th June 1945 (8 & 9 Geo. 6.) Chapter 28.
83. Road Traffic (Compensation for accidents) Bill 1934.
84. Road Traffic Act 1988 (1988 Chapter 52).
85. The Judicial Studies Board for Northern Ireland. Guidelines for the Assessment of General Damages in Personal Injury Cases in Northern Ireland (Fourth edition) of 4th March 2013.

Doctrine:

1. Adam D. Thierer, Ryan Hagemann. Removing Roadblocks to Intelligent Vehicles and Driverless Cars. Wake Forest Journal of Law & Policy (2015), Vol. 5, Issue 2, pp. 339-391.
2. Adriano Alessandrini, Andrea Campagna, Paolo Delle Site, Francesco Filippi, Luca Persia. Automated Vehicles and the Rethinking of Mobility and Cities. *Transportation Research Procedia* 5 (2015), pp. 145-160.
3. Aleksandr Ometov, Sergey Bezzateev, Vadim Davydov, Anna Shchesniak, Pavel Masek, Elena Simona Lohan, Yevgeni Koucheryavy. Positioning Information Privacy in Intelligent Transportation Systems: An Overview and Future Perspective. *Multidisciplinary Digital Publishing Institute (MDPI): Sensors* (2019), Vol. 19, Issue 7, 1603, pp. 1-23.
4. Anastas Punev. Autonomous Vehicles: The Need for a Separate European Legal Framework. *European View* 2020, Vol. 19, No. 1, pp. 95-102.
5. Anderson, James M., Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, and Tobi A. Oluwatola. *Autonomous Vehicle Technology: A Guide for Policymakers*. Santa Monica, CA: RAND Corporation, 2016, pp.1-214.
6. Andrea Bertolini, Pericle Salvini, Teresa Pagliai, Annagiulia Morachioli, Giorgia Acerbi, Leopoldo Trieste, Filippo Cavallo, Giuseppe Turchetti, Paolo Dario. On Robots and Insurance. *International Journal of Social Robotics* (2016), Vol. 8, pp. 381-391.
7. Andrea Bertolini. Robots as Products: The Case for a Realistic Analysis of Robotic Applications and Liability Rules. *Law, Innovation and Technologies* (2013), Vol. 5, Issue 2, pp. 214-247.
8. Andrea Renda, Lorna Schrefler. Compensation of victims of cross-border road traffic accidents in the EU: Assessment of selected options. Centre for European Policy Studies, Brussels, IP/C/JURI/FWC/2006-171/LOT 1, PE 378.292.
9. Andrew Marinik, Richard Bishop, Vikki Fitchett, Justin F. Morgan, Tammy E. Trimble, Myra Blanco. *Human factors evaluation of level 2 and level 3 automated driving concepts: Concepts of operation*. (2014) (Report No. DOT HS 812 044). Washington, DC: National Highway Traffic Safety Administration, pp. 1-299.
10. Andy Greenberg. Securing Driverless Cars from Hackers is Hard: Ask the Ex-Uber Guy who Protects Them. *Wired: Security* (2017). Retrieved online from https://www.wired.com /2017/04/ubers-former-top-hacker-securing-autonomous-cars really-hard-problem/.
11. Ankur Sarker, Haiying Shen, Mizanur Rahman, Mashrur Chowdhury, Kakan Dey, Fangjian Li, Yue Wang, Husnu S. Narman. A Review of Sensing and Communication, Human Factors, and Controller Aspects for Information-Aware Connected and Automated Vehicles. *IEEE Transactions on Intelligent Transportation Systems* (2019), Vol. 21, No. 1, pp. 7-29.
12. Antonio Davola. A Model for Tort Liability in a World of Driverless Cars: Establishing a Framework for the Upcoming Technology. *Idaho Law Review* (2018), Vol. 54, No. 3, pp. 591-614.
13. Antonio Estella. Trust in Artificial Intelligence: Analysis of the European Commission Proposal for a Regulation of Artificial Intelligence. *Indiana Journal of Global Legal Studies* 30, no. 1 (2023), pp. 39-64.

14. Giampiero Lupo. Risky Artificial Intelligence: The Role of Incidents in the Path to AI Regulation. *Law, Technology and Humans* 5, no. 1 (2023), pp. 133-152.
15. Elena Kirillova, Oleg Blinkov, Natalija Ogneva, Aleksey Vrazhnov and Natal'ja Sergeeva. Artificial Intelligence as a New Category of Civil Law. *Journal of Advanced Research in Law and Economics (JARLE)* 11, no. 1 (Spring 2020), pp. 91-98.
16. Jake Feiler. The Artificially Intelligent Trolley Problem: Understanding Our Criminal Law Gaps in a Robot Driven World. *Hastings Science and Technology Law Journal* 14, no. 1 (2023), pp. 1-34.
17. Zhifeng Wen and Deyi Tong. Analysis of the Legal Subject Status of Artificial Intelligence. *Beijing Law Review* 14, no. 1 (March 2023), pp. 74-86.
18. Yuliya Kharitonova, Victoria Savina and Fabrizio Pagnini. Civil Liability in the Development and Application of Artificial Intelligence and Robotic Systems: Basic Approaches. *Perm University Herald Juridical Sciences* 58 (2022), pp. 683-708.
19. Maria Lubomira Kubica. Autonomous Vehicles and Liability Law. *American Journal of Comparative Law* 70, no. Supplement 1 (2022), pp. i39-i69.
20. Araz Taeihagh, Hazel Si Min Lim. Governing autonomous vehicles: emerging responses for safety, liability, privacy, cybersecurity, and industry risks. *Transport Reviews* (2019), Vol. 39, Issue 1, pp. 103-128.
21. Asif Faisal, Tan Yigitcanlar, Md Kamruzzaman, Graham Currie. Understanding autonomous vehicles: A systematic literature review on capability, impact, planning and policy. *The Journal of Transport and Land Use* (2019) Vol. 12, No. 1, pp. 45-72.
22. Athanasios Maimaris. *Intelligent Transportation Systems in Cyprus - Past Present and Future. Prospects for a Smart Pedestrian Network (SPN)*. Department of Computer Science and Engineering. SYSTEMA Research Center (2020).
23. Béla Csitei. Autonomous and Automated Vehicles in Germany and Hungary, with Special Attention to the Question of Civil Liability. *Acta Univ. Sapientiae, Legal Studies*, 10, 1 (2021), pp. 55-64.
24. Béla Csitei. Self-driving cars and criminal liability. *Debreceni Jogi Műhely*, 2020. Évi (XVII. Évfolyam) 3-4. Szám (2020. December 30.), pp. 34-46.
25. Berrymans Lace Mawer (BLM) Motor Group. Briefing Note: Vnuk v Zavarovalnica Triglav d.d. (2014) CJEU C-162/13 of April 2015. *Research Education Development Journal*. p. 1-13.
26. Boyd Cohen, Jan Kietzmann. Ride On! Mobility Business Models for the Sharing Economy. *Organization & Environment* (2014), Vol. 27, Issue 3, pp. 279-296.
27. Brian L. Stevens, Frank L. Lewis. *Aircraft Control and Simulation: 2nd Edition*. (2003) John Wiley & Sons, Inc. ISBN 0-471-37145-9, pp. 1-655.
28. Charles McLellan. Drivy: Airbnb, or Spotify, for cars. *Tech and the Future of Transportation*. Retrieved online from <https://www.zdnet.com/article/drivy-airbnb-or-spotify-for-cars/>.
29. Christian von Bar, Eric Clive (editors). Hans Schulte-Nölke (coordinator). Study Group on a European Civil Code and Research Group on EC Private Law (Acquis Group). *Principles, Definitions and Model Rules of European Private Law. Draft Common Frame of Reference (DCFR)* of 2009. European Law Publishers GmbH, Munich. ISBN 978-3-86653-098-0.

Christoph Schmittner, Zhendong Ma, Thomas Gruber. Standardization Challenges for Safety and Security of Connected, Automated and Intelligent Vehicles. *2014 International Conference on Connected Vehicles and Expo (ICCVE)*, Vienna, 2014, pp. 941-942.
30. Clemence Cavoli, Brian Phillips, Tom Cohen, Peter Jones. *Social and behavioural questions associated with Automated Vehicles: A Literature Review*. (2017) London: Department for Transport, pp. 1-124.
31. Clemens Kaufmann, Christine Turetschek. Connecting Black Box Data and Driving Behaviour Observation for Better Understanding of Driving Behaviour. *Proceedings of European Conference on Human Centred Design for Intelligent Transport Systems* (2008), HUMANIST publications: Lyon, France, pp. 101-110.
32. Corrado Druetta. Liability Issues in Advanced Robotics: An Introduction for European in-House Counsels. *International In-House Counsel Journal* (2017) Vol. 11, No. 41, pp. 1-12.
33. Crystal Legacy, David Ashmore, Jan Scheurer, John Stone, Carey Curtis. Planning the driverless city. T*ransport Reviews* (2018), Vol. 39, Issue 1, pp. 84-102.
34. Christian Twigg-Flesner in consultation with ELI Members and adopted by the ELI Council. European Law Institute. Guiding Principles for Updating the Product Liability Directive for the Digital Age. Vienna, 2021, pp. 1-12.
35. Darrell M. West. Moving forward: Self-driving vehicles in China, Europe, Japan, Korea, and the United States. *Center for Technology Innovation at Brookings* (2016), pp. 1-32.
36. David M. Cummings. Was the Jury Wrong about Toyota's Software?: How questionable testimony on embedded software tipped the scales. *IEEE Consumer Electronics Magazine* (2017), Vol. 6, Issue 3, pp. 103-107.
37. Dirk Heinrichs. Autonomous Driving and Urban Land Use. In: Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner (Eds.). *Autonomous Driving: Technical, Legal and Social Aspects*. Springer, Berlin, Heidelberg (2016), pp. 213-231.
38. Duncan Fairgrieve, Geraint Howells, Peter Møgelvang-Hansen, Gert Straetmans, Dimitri Verhoeven, Piotr Machnikowski, André Janssen, Reiner Schulze. Product Liability Directive. In Piotr Machnikowski (Ed.). *European product liability: an analysis of the state of the art in the era of new technologies*. Cambridge: Intersentia (2016), pp. 17-110.
39. Edward R. Straub, Kristin E. Schaefer. It takes two to Tango: Automated vehicles and human beings do the dance of driving – Four social considerations for policy. *Transportation Research Part A: Policy and Practice* (2019), Vol. 122, pp. 173-183.
40. Elizabeth Deakin. *Intelligent Transportation Systems: A Compendium of Technology Summaries*. Published: University of California Transportation Center, UC Berkeley (2003), pp. 1-83.
41. Eric Tjong Tjin Tai, Sanne Boesten. Aansprakelijkheid, zelfrijdende auto's en andere zelfbesturende objecten. *NJB* (2016), 91 (10) (496), pp. 656-664.
42. Erica Palmerini, Andrea Bertolini. Liability and Risk Management in Robotics. In Reiner Schulze, Dirk Staudenmayer (Ed.) *Digital Revolution: Challenges for Contract Law in Practice*. First Edition 2016, pp. 225-260.
43. Ernst Karner. A Comparative Analysis of Traffic Accident Systems. *Wake Forest Law Review* (2018) Vol. 53, No. 2, pp. 365-382.
44. Farook Sattar, Fakhri Karray, Mohamed S. Kamel, Lobna Nassar, Keyvan Golestan. Recent Advances on Context-Awareness and Data/Information Fusion in ITS. *International Journal of Intelligent Transportation Systems Research* 14, (2016), pp. 1-19.

45. Francesco Ferrero, Guido Perboli, Mariangela Rosano, Andrea Vesco. Car-sharing services: An annotated review. *Sustainable Cities and Society* (2018), Vol. 37, pp. 501-518.
46. Francesco Paolo Patti. The European Road to Autonomous Vehicles. *Fordham International Law Journal*, Vol. 43, Issue 1, pp. 125-162.
47. Gerhard Wagner. Produkthaftung für autonome Systeme. *Archiv für die civilistische Praxis (AcP)* 217.Band, Heft (2017), pp. 707-765.
48. Gerhard Wagner. Robot Liability. In Sebastian Lohsse (Ed.). *Liability for Artificial Intelligence and the Internet of Things. Münster Colloquia on EU Law and the Digital Economy IV*. 2019, Nomos Verlagsgesellschaft, pp. 27-62.
49. Giovanni Comandé. Product Liability in Italy in Piotr Machnikowski (ed.) European Product Liability. An Analysis of the State of the Art in the Era of New Technologies. EGTL European Group on Tort Law: Intersentia, pp. 276-308. ISBN 978-1-78068-398-0.
50. Goldberg Richard S., Miller C. J. *Product Liability* (2nd Edition). Oxford University Press: 2004, pp. 971.
51. Groupe de travail dirigé par Jean-Pierre Dintilhac, Président de la deuxième chambre civile de la Cour de cassation. *Rapport du groupe de travail chargé d'élaborer une nomenclature des préjudices corporels*. Juillet 2005. Retrieved online from: https://www.vie-publique.fr/sites/default/ files/rapport/pdf/064000217.pdf.
52. Gunther Teubner. Digitale Rechtssubjekte? Zum privatrechtlichen Status autonomer Softwareagenten. *Archiv für die civilistische Praxis (AcP)* 218.Band, Heft 2-4 (2018), S. 155-205 (51).
53. Hani S. Mahmassani. Technological Innovation and the Future of Urban Personal Travel. In Joseph Schofer, Hani S. Mahmassani (Eds.). *Mobility 2050: A Vision for Transportation Infrastructure*. Northwestern Engineering Transportation Center: 2016, pp. 41-62.
54. Helmut Koziol. Harmonising Tort Law in the European Union: Advantages and Difficulties. *ELTE Law Journal* 2013/1, ISSN 2064 4965, pp. 73-88.
55. James M. Anderson, Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, Tobi A. Oluwatola. *Autonomous Vehicle Technology: A Guide for Policymakers*. (2016) Published by the RAND Corporation, Santa Monica, Calif, pp. 1-185.
56. James Marson, Katy Ferris, Alex Nicholson. Irreconcilable Differences? The Road Traffic Act and the European Motor Vehicle Insurance Directives. *The Journal of Business Law* (2017) 1, pp. 51-70.
57. Jameson M. Wetmore. Redefining Risks and Redistributing Responsibilities: Building Networks to Increase Automobile Safety. *Science, Technology and Human Values*. Vol. 29, No. 3, 2004, pp. 377–405.
58. Jan Eichelberger. *Autonomes Fahren und Privatversicherungsrecht*. In Markus Ahlers (Ed.). *Autonomes Fahren: Rechtsprobleme, Rechtsfolgen, technische Grundlagen*. 2. Auflage. C.H. Beck 2020, pp. 203-230.
59. Jaroslav Machan, Christian Laugier. Intelligent Vehicles as an Integral Part of Intelligent Transport Systems. *European Research Consortium for Informatics and Mathematics (ECRIM)* 2013, No. 94, pp. 6-7.
60. Javier Ibanez-Guzman, Christian Laugier. Intelligent Vehicles: Complex Software-Based Systems. *European Research Consortium for Informatics and Mathematics (ECRIM)* 2013, No. 94, pp. 19-20.

61. Jean Albert. Report. Compensation of victims of cross-border road traffic accidents in the EU: comparisons of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. ETD/2007/IM/H2/116, pp. 1-360.
62. Jean Lemaire. Bonus-Malus Systems in Automobile Insurance. In J. David Cummins. *Huebner International Series on Risk, Insurance, and Economic Security*. Kluwer Academic Publishers: 1995, pp. 1-243.
63. Jean-François Bonnefon, Azim Shariff, Iyad Rahwan. Autonomous Vehicles Need Experimental Ethics: Are We Ready for Utilitarian Cars? *ArXiv* (2015), Vol. abs/1510.03346, pp. 1-15.
64. Jean-François Bonnefon, Azim Shariff, Iyad Rahwan. The social dilemma of autonomous vehicles. *Science AAAS* (2016), Vol. 352, Issue 6293, pp. 1573-1576.
65. Jeffrey K. Gurney. Sue my car not me: Products liability and accidents involving autonomous vehicles. *Journal of Law, Technology & Policy*, Vol. 2013, No. 2, pp. 247-277.
66. Jeremy Crute, William Riggs, Timothy Chapin, Lindsay Stevens. *Planning for Autonomous Mobility: PAS Report 529*. American Planning Association: 2018, pp. 1-84.
67. John Mclntosh. Software Product Liability of 30 July 1993. Retrieved online from: https://www.academia.edu/9510340/Software_Product_Liability, pp. 1-5.
68. Jonas Radlmayr, Klaus Bengler. Literaturanalyse und Methodenauswahl zur Gestaltung von Systemen zum hochautomatisierten Fahren. *Forschungsvereinigung Automobiltechnik e.V. (FAT)* 2015, pp. 1-53.
69. Jonn Axsen, Benjamin K. Sovacool. The roles of users in electric, shared and automated mobility transitions. *Transportation Research Part D* (2019), Vol. 71, pp. 1-21.
70. Jonas Knetsch. The Role of Liability without Fault. In Jean-Sébastien Borghetti and Simon Whittaker (eds). *French Civil Liability in Comparative Perspective*. Hart Publishing 2019, pp. 123-142.
71. Jorge Alfonso, José E. Naranjo, José M. Menéndez, Arrate Alonso. Vehicular Communications. In Felipe Jiménez (Ed.). *Intelligent Vehicles: Enabling Technologies and Future Developments*. Elsevier (2018), pp. 103-139.
72. Jorge Godoy, Vicente Milanés, Joshué Pérez, Jorge Villagrá, Enrique Onieva. An auxiliary V2I network for road transport and dynamic environments. *Transportation Research Part C: Emerging Technologies* (2013), Vol. 37, pp. 145-156.
73. Kadner Graziano, Thomas Michael. *Cross-border traffic accidents in the EU – the potential impact of driverless cars*. (Mandate from:) European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs. Brussels: European Parliament's Committee on Legal Affairs / Policy Department for Citizens' Rights and Constitutional Affairs (2016), pp. 1-64.
74. Kanwaldeep Kaur, Giselle Rampersad. Trust in driverless cars: Investigating key factors influencing the adoption of driverless cars. *Journal of Engineering and Technology Management* (2018), Vol. 48, pp. 87-96.
75. Ken Oliphant. Liability for Road Accidents Caused by Driverless Cars. *Singapore Comparative Law Review (SCLR)* 2019, pp. 190-197.
76. Kyle Colonna. Autonomous Cars and Tort Liability. *Case Western Reserve Journal of Law, Technology & the Internet* (2012) Vol. 4, No. 4, pp. 81-131.
77. La Fédération Européenne des Victimes de la Route (FEVR). Stricter liability in Europe. (May 2013).

78. Lilla Vukovich, Volha Vysotskaya. Futuristic Project Becoming a Reality: Self-Driving Cars in Luxembourg. *Université du Luxembourg*: 2019, pp. 1-9.
79. Liridona Sopjani, Jenny J. Stier, Sofia Ritzén, Mia Haesselgren, Peter Georén. Involving users and user roles in the transition to sustainable mobility systems: The case of light electric vehicle sharing in Sweden. *Transportation Research Part F: Traffic Psychology and Behaviour* (2019), Vol. 71, pp. 207-221.
80. Lisa Collingwood. Privacy implications and liability issues of autonomous vehicles. *Information & Communications Technology Law* (2017), Vol. 26, Issue 1, pp. 32-45.
81. Lishengsa Yue, Mohamed Abdel-Aty, Yina Wu, Ling Wang. Assessment of the safety benefits of vehicles' advanced driver assistance, connectivity and low level automation systems. *Accident Analysis and Prevention* (2018), Vol. 117, p. 55-64.
82. Luigi Atzori, Alessandro Floris, Roberto Girau, Michele Nitti, Giovanni Pau. Towards the implementation of the Social Internet of Vehicles. *Computer Networks* (2018), Vol. 147, pp. 132-145.
83. Łukasz Żelechowski. Civil liability for damages caused by autonomous car vehicles: the Polish perspective. Rapports Polonais. XXIe Congrès International de Droit Comparé. XXIst International Congress of Comparative Law. Asunción 23-28 X 2022, D. Skupień, B. Lewaszkiewicz-Petrykowska (eds.), *Lodz University Press* 2022, pp. 57-85.
84. Marc Schlossberg, William (Billy) Riggs, Adam Millard-Ball, Elizabeth Shay. *Rethinking the street in an era of driverless cars*. University of Oregon: 2018, pp. 1-18.
85. Marek Swierczynski, Lukasz Zarnowiec. Law Applicable to Liability for Damages due to Traffic Accidents Involving Autonomous Vehicles. *Masaryk University Journal of Law and Technology* (2020) Vol. 14, No. 2, pp. 177-200.
86. Marija Krvavac. The Hague Convention on the Law Applicable to Traffic Accidents and Rome II Regulation. *Collection of Papers: Faculty of Law, Nis* (2018) Vol. 79, pp. 141-156.
87. Marilisa Botte, Luigi Pariota, Luca D'Acierno, Gennaro Nicola Bifulco. An Overview of Cooperative Driving in the European Union: Policies and Practices. *Multidisciplinary Digital Publishing Institute (MDPI)*, Electronics 2019, No. 8: 616, pp. 1-25.
88. Mario Gerla, Eun-Kyu Lee, Giovanni Pau, Uichin Lee. Internet of Vehicles: From Intelligent Grid to Autonomous Cars and Vehicular Clouds. 2014 *IEEE World Forum on Internet of Things*, pp. 241-246.
89. Mark A. Geistfeld. The Regulatory Sweet Spot for Autonomous Vehicles. *Wake Forest Law Review* (2018), Vol. 53, Issue 2, pp. 337-364.
90. Martin Ebers. Autonomes Fahren: Produkt und Produzentenhaftung. In Bernd H. Oppermann, Jutta Stender-Vorwachs (Ed.). *Autonomes Fahren: Rechtsfolgen, Rechtsprobleme, technische Grundlagen*. C.H.Beck 2017, pp. 93-125.
91. Maurice Schellekens. Self-driving cars and the chilling effect of liability law. *Computer Law & Security Review* (2015), Vol. 31, Issue 4, pp. 506-517.
92. Mauro Bussani, Gert Bruggemeier. "Tort Law in the European Union". *American Journal of Comparative Law*, Vol. 64, No. 4 (2016), pp. 1019-1023.
93. Mauro Bussani, Marta Infantino. Harmonisation of Tort Law in Europe. *Encyclopedia of Law and Economics.* Springer Science & Business Media New York 2014. DOI 10.1007/978-1-4614-7883-6_530-1, pp. 1-16.
94. Meng Lu, Robbin Blokpoel, Julian Schindler, Sven Maerivoet, Evangelos Mintsis. ICT Infrastructure for Cooperative, Connected and Automated Transport in Transition Areas.

Proceedings of 7th Transport Research Arena TRA 2018, April 16-19, 2018, Vienna, Austria, pp. 1-10.
95. Michael Buchholza, Jan Strohbecka, Anna-Maria Adaktylosb, Friedrich Voglb, Gottfried Allmerb, Sergio Cabrero Barrosc, Yassine Lassouedc, Markus Wimmerd, Birger Hättyd, Guillemette Massote, Christophe Ponchele, Maxime Bretine, Vasilis Sourlasf, Angelos Amditisf. Enabling automated driving by ICT infrastructure: A reference architecture. *Proceedings of 8th Transport Research Arena TRA* 2020, April 27-30, 2020, Helsinki, Finland, pp. 1-10.
96. Michael Chatzipanagiotis, George Leloudas. Automated Vehicles and Third-Party Liability: A European Perspective. *University of Illinois Journal of Law, Technology & Policy* 2020, No. 1, pp. 109-200.
97. Michael Faure. Compulsory Liability Insurance: Economic Perspectives, pp. 319-341. (In *Compulsory Liability Insurance from a European Perspective*. Attila Fenyves, Christa Kissling, Stefan Perner, Daniel Rubin (eds.). European Centre of Tort and Insurance Law, Institute for European Tort Law of the Austrian Academy of Sciences and the University of Graz. Vol. 35., Walter de Gruyter 2016, pp. 1-555.
98. Michelle Slimmen, Willem H. Van Boom. Road Traffic Liability in the Netherlands. *SSRN Electronic Journal* (2017), pp. 1-34.
99. Nacer Eddine Bezai, Benachir Medjdoub, Amin Al-Habaibeh, Moulay Larbi Chalal, Fodil Fadli. Future cities and autonomous vehicles: analysis of the barriers to full adoption. *Energy and Built Environment* (2021), Vol. 2, Issue 1, pp. 65-81.
100. Nagy, Csongor István (2010) *The Rome II Regulation and Traffic Accidents: Uniform Conflict Rules with Some Room for Forum Shopping – How So?* Journal of Private International Law 93-108 (April 2010). DOI: 10.1080/17536235.2010.11424374.
101. Nickolay Podoprigora, Polina Stepina, Viktor Dobromirov, Jurij Kotikov. Determination of driver's reaction time in expert studies of road traffic accidents using software and hardware complex. XIV International Conference 2020 SPbGASU "Organization and safety of traffic in large cities". *Transportation Research Procedia* (2020), Vol. 50, pp. 538-544.
102. Nidhi Karla. *Challenges and Approaches to Realizing Autonomous Vehicle Safety*. Testimony submitted to the House Energy and Commerce Committee. Subcommittee on Digital Commerce and Consumer Protection (2017), CT-463, pp. 1-14.
103. Niguel Santolino, Jean-Philippe Boucher (2009) *Modelling the disability severity score in motor insurance claims: an application to the Spanish case*. Research Institute of Applied Economics 2009. Working Papers 2009/02, pp. 1-25.
104. Nikolas Thomopoulos, Moshe Givoni. The autonomous car—a blessing or a curse for the future of low carbon mobility? An exploration of likely vs. desirable outcomes. *European Journal of Futures Research* (2015), Vol. 3:14, pp. 1-14.
105. Nuno Sousa, João Coutinho-Rodrigues, Arminda Almeida, Eduardo Natividade-Jesus. Dawn of autonomous vehicles: review and challenges ahead. *Proceedings of the Institution of Civil Engineers - Municipal Engineer* (2018), Vol. 171, Issue 1, pp. 3-14.
106. Nynke E. Vellinga. From the testing to the deployment of self-driving cars: Legal challenges to policymakers on the road ahead. *Computer Law and Security Review* (2017), Vol. 33, Issue 6, pp. 847–863.

107. Olga Shevchenko. Connected Automated Driving: Civil Liability Regulation in the European Union. *Mokslo darbai "Teisė"*, Vol. 114. Vilnius University Press: 2020., pp. 85-102.
108. Olga Shevchenko. Motor Third Party Liability after CJEU Interpretation of the Directive 103/2009/EC in Vnuk Judgment. *Mokslo darbai "Teisė"*, Vol. 111. Vilnius University Press: 2019., pp. 130-144.
109. Olga Shevchenko. Regulatory Architecture of Data Processing for Connected and Automated Driving in Europe. *International Journal of Law and Public Administration* (2019), Vol. 2, No. 2, pp. 24-33.
110. Panos Papadimitratos, Arnaud de La Fortelle, Knut Evenssen, Roberto Brignolo, Stefano Cosenza. Vehicular Communication Systems: Enabling Technologies, Applications, and Future Outlook on Intelligent Transportation. *IEEE Communications Magazine* (2009), Vol. 47, No. 11, pp. 84-95.
111. Pascale-L. Blyth. Of Cyberliberation and Forbidden Fornication: Hidden Transcripts of Autonomous Mobility in Finland. *Transportation Research Part D* (2019), Vol. 71, pp. 236-247.
112. Patrick M. Bösch, Francesco Ciari, Kay W. Axhausen. Transport policy optimization with AVs. *Transportation Research Board* (2018), 18-06253, pp. 1-16.
113. Paula Giliker. Can 27(+) 'Wrongs' Make a Right? The European Tort Law Project: Some Sceptical Reflections. *King's Law Journal*, July 2009, 20(2), DOI: 10.1080/09615768.2009.11427733, pp. 257-279.
114. Peter Hay. Contemporary Approaches to Non-Contractual Obligations in Private International Law (Conflict of Laws) and the European European UnionEuropean Union's Rome II Regulation. *Forum iuris communis Europae* 4-2007, pp. I-137-I-196.
115. Peter Wells, Xiaobei Wang, Liqiao Wang, Haokun Liu, Renato Orsato. More friends than foes? The impact of automobility-as-a-service on the incumbent automotive industry. *Technological Forecasting & Social Change* (2020), Vol. 154, 119975, pp. 1-11.
116. Pierre Bentata. On the joint use of safety regulation and civil liability to promote safe management of hazardous operations: a French case study. *Journal of Risk Research*, 2014, Vol. 17, No. 6, pp. 721-734.
117. Pierluigi Coppola, Fulvio Silvestri. Autonomous vehicles and future mobility solutions. *Autonomous Vehicles and Future Mobility*. Elsevier (2019), pp. 1-15.
118. Pierre Widmer. Comparative Report on Fault as a Basis of Liability and Criterion of Imputation (Attribution). In Pierre Widmer (Ed.). *Unification of Tort Law: Fault* (Vol. 1), 2005, pp. 331-367.
119. Pushkin Kachroo, Neveen Shlayan, Sumit Roy, Michael Zhang. High-Performance Vehicle Streams: Communication and Control Architecture. *IEEE Transactions on Vehicular Technology*, (2014) Vol. 63, No. 8, pp. 3560-3568.
120. Rafael Vivacqua, Raquel Vassallo, Felipe Martins. A Low Cost Sensors Approach for Accurate Vehicle Localization and Autonomous Driving Application. *Multidisciplinary Digital Publishing Institute (MDPI)*, Sensors 17, No. 10: 2359, pp. 1-33.
121. Rafał Mańko. The notion of "consumer" in EU law of 6th May 2013. *Anuario Espanol de Derecho Internacional Privado*. 130477REV1.
122. Raul Lafuente Sanchez. "Law Applicable to Cross Border Road Traffic Accidents: Negative Consequences resulting from the Absence of Harmonization of Limitation

Periods and Possible Solutions". *Anuario Espanol de Derecho Internacional Privado* (2018), pp. 495-531.
123. Raul Lafuente Sanchez. Liability for Damages Caused by an Uninsured Vehicle Parked on Private Land and Right of Subrogation by the Compensation Body against the Vehicle's Owner (Note on the ECJ Judgement of 4 September 2018, Case C-80/17, Juliana). *Bitacora Millennium DIPr* (2019) Vol. 9, pp. 43-69.
124. Reka Pusztahelyi. Liability for Intelligent Robots from the Viewpoint of the Strict Liability Rule of the Hungarian Civil Code. *Acta Universitatis Sapientiae: Legal Studies* (2019), Vol. 8, No. 2, pp. 213-230.
125. Rico Krueger, Taha H. Rashidi, John M. Rose. Preferences for shared autonomous vehicles. *Transportation Research Part C: Emerging Technologies* (2016), Vol. 69, pp. 343-355.
126. Robert Merkin, Maggie Hemsworth. Thomson Reuters (Professional) UK Limited (Sweet&Maxwell). *The Law of Motor Insurance: Second Edition*. (2015) CPI Group (UK) Ltd. ISBN: 978-0-414-04519-4, pp. 1-906.
127. Sadie Whittam. Mind the compensation gap: towards a new European regime addressing civil liability in the age of AI. *International Journal of Law and Information Technology*, 2022, 30, pp. 249–265.
128. Sakib M. Khan, Mizanur Rahman, Amy Apon and Mashrur Chowdhury. Characteristics of Intelligent Transportation Systems and its Relationship with Data Analytics. *Analytics for Intelligent Transportation Systems*, Chapter 1, Elsevier (2017), pp. 1-29.
129. Satish Jain, Ram Singh. Efficient Liability Rules: Complete Characterization. *Journal of Economics* (2002), Vol. 75, No. 2, pp. 105-124.
130. Simon Burton, Ibrahim Habli, Tom Lawton, John McDermid, Phillip Morgan, Zoe Porter. Mind the gaps: Assuring the safety of autonomous systems from an engineering, ethical, and legal perspective. *Artificial Intelligence* (2020), Vol. 279, 103201.
131. Stephen Perry. Torts, Rights and Risks. In John Oberdiek (Ed.). *Philosophical Foundations of the Law of Torts (Philosophical Foundations of Law) 1st Edition*. Oxford University Press 2014, pp. 38-64.
132. Steven Wittenberg. Automated Vehicles: Strict Products Liability, Negligence Liability and Proliferation. *Illinois Business Law Journal* (2016). Retrieved online from https://publish.illinois.edu/illinoisblj/2016/01/07/automated-vehicles-strict-products-liability-negligence-liability-and-proliferation/.
133. Susan Shaheen, Adam Stocker, Marie Mundler. Online and App-Based Carpooling in France: Analyzing Users and Practices—A Study of BlaBlaCar. In Gereon Meyer, Susan Shaheen. *Distrupting Mobility*. *Lecture Notes in Mobility*. Springer, Cham. (2017), pp. 181-196.
134. Sylvie Gallage-Alwis. Product Liability Cases in Civil Law Countries: A Pro-Plaintiff Approach. *Defense Counsel Journal*, Vol. 87, No. 2, April 2020, p. 1-20.
135. Symeon C. Symeonides. Choice of Law in Cross-Border Torts: Why Plaintiffs Win and Should. *Hastings Law Journal* 337 (2009), Vol. 61, Issue 2, pp. 337-411.
136. Symeon C. Symeonides. Rome II and Tort Conflicts: A Missed Opportunity. *The American Journal of Comparative Law* (2008) Vol. 56, Issue 1, pp. 173-222.

137. Taivo Liivak. Tort Liability for Damage Caused by Self-driving Vehicles under Estonian Law. *Dissertationes Juridicae Universitatis Tartuensis* 80, University of Tartu Press: 2020, pp. 1-206.
138. Tatjana Evas. A common EU approach to liability rules and insurance for connected and autonomous vehicles. *European Parliamentary Research Service (EPRS)*, (2018), PE 615.635, pp. 1-194.
139. Thomas Verheyen. Modern Theories of Product Warnings and European Product Liability Law (2019) 15(3) *Utrecht Law Review*, pp. 44-56.
140. Tiago Sérgio Cabral. Liability and artificial intelligence in the EU: Assessing the adequacy of the current Product Liability Directive. *Maastricht Journal of European and Comparative Law* 2020, Vol. 27, No. 5, pp. 615-635.
141. Tim Hey. *Die außervertragliche Haftung des Herstellers autonomer Fahrzeuge bei Unfällen im Straßenverkehr*. Gabler, Betriebswirt.-Vlg (2018), pp. 1-278.
142. Tobias Hammel. *Haftung und Versicherung bei Personenkraftwagen mit Fahrerassistenzsystemen*. VVW-Verlag Versicherungs (2016), pp. 1-558.
143. Tom M. Gasser. Fundamental and Special Questions for Autonomous Vehicles. In Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner (Ed.) *Autonomous Driving: Technical, Legal and Social Aspects* 2016 Berlin, Heidelberg: Springer, pp. 523-551.
144. Ulrich Meyer. Motor Liability Insurance in Europe. Comparative Study of the Economic-Statistical Situation. In Jürgen Basedow, Ulrich Meyer, Dieter Rückle, Hans-Peter Schwintowski. *Paneuropäische Tarifstruktur in der Kfz-Haftpflichtversicherung*. Versicherungswissenschaftliche Studien (2005), pp. 35-188.
145. Vadim Mantrov. "Clarifying the Concept of Victim in the Motor Vehicle Drivers' Liability Insurance: The ECJ's Judgement in Case C-442/10". *European Journal of Risk Regulation* (2012) Vol. 3, No. 2, pp. 257-260.
146. Victoria A. Banks, Katherine L. Plant, Neville A. Stanton. Driver error or designer error: Using the Perceptual Cycle Model to explore the circumstances surrounding the fatal Tesla crash on 7th May 2016. *Elsevier: Safety Science* (2018), Vol. 108, pp. 278-285.
147. Walter Olson. *Why we won't be getting VW's Lane Assist*. (2008) Retrieved online from https://www.overla wyered.com /2008/04/why-we-wont-be-getting-vws-lane-assist/.
148. Xuan Di, Xu Chen, Eric Talley. Liability design for autonomous vehicles and human-driven vehicles: A hierarchical game-theoretic approach. *Transportation Research Part C* (2020), Vol. 118, 102710, pp. 1-29.
149. Željka Primorac. Normal Function of a Vehicle as a Means of Transport or a Machine for Carrying out Work in Motor Third Party Liability Insurance with Special Regard to the Latest Rulings of the Court of Justice of the European Union. *EU and Comparative Law Issues and Challenges* (2018) Series 2, No. 2, pp. 235-251.
150. Zia Wadud. Fully automated vehicles: A cost of ownership analysis to inform early adoption. *Transportation Research Part A: Policy and Practice* (2017), Vol. 101, pp. 163-176.
151. Zsolt Szalay, Tamás Tettamanti, Domokos Esztergár-Kiss, István Varga, Cesare Bartolini. Development of a Test Track for Driverless Cars: Vehicle Design, Track Configuration, and Liability Considerations. *Periodica Polytechnica Transportation Engineering* (2018), Vol. 46, Issue 1, pp. 29-35.

CJEU judgments:

1. *'ERGO Insurance' SE v 'If P&C Insurance' AS and Gjensidige Baltic' AAS v 'PZU Lietuva' UAB DK*. Judgment of the Court (Fourth Chamber) of 21 January 2016, joined cases No. C – 359/14 and C – 475/14, ECLI:EU:C:2016:40.
2. *Boston Scientific Medizintechnik GmbH v AOK Sachsen-Anhalt – Die Gesundheitskasse and Betriebskrankenkasse RWE*. Judgment of the Court (Fourth Chamber) of 5 March 2015, Joined Cases No. C – 503/13 and C – 504/13, ECLI:EU:C:2015:148.
3. *Churchill Insurance Company Limited v Benjamin Wilkinson and Tracy Evans v Equity Claims Limited*. Judgment of the Court (Fourth Chamber) of 1 December 2011, Case No. C – 442/10, ECR 1-12639.
4. *Commission of the European Communities v French Republic*. Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 52/00, ECR 2002 I-03827.
5. *Commission of the European Communities v Hellenic Republic.* Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 154/00, ECR 2002 I-03879.
6. *Commission of the European Communities v Italian Republic*. Judgment of the Court (Grand Chamber) of 28 April 2009, Case No. C – 518/06, ECR I-3491.
7. *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland*. Judgment of the Court (Fifth Chamber) of 29 May 1997, Case No. C – 300/95, ECR 1997 I-02649.
8. *Criminal proceedings against Rafael Ruiz Bernáldez*. Judgment of the Court (Fifth Chamber) of 28 March 1996, Case No. C – 129/94, ECR 1996 I-01829.
9. *Damijan Vnuk v Zavarovalnica Triglav d.d*. Judgment of the Court (Third Chamber) of 4 September 2014, Case No. C – 162/13, ECR – general.
10. *Daniel Fernando Messejana Viegas v Companhia de Seguroz Zurich SA, Mitsubishi Motors de Portugal SA*. Judgment of the Court (First Chamber) of 24 July 2003, Case No. C – 166/02, ECR 2003 I-07871.
11. *Declan O'Byrne v Sanofi Pasteur MSD Ltd and Sanofi Pasteur SA*. Judgment of the Court (First Chamber) of 9 February 2006, Case No. C – 127/04, ECR 2006 I-01313.
12. *Elaine Farrell v Alan Whitty, Minister for the Environment, Ireland, Attorney General and Motor Insurers Bureau of Ireland (MIBI)*. Judgment of the Court (First Chamber) of 19 April 2007, Case No. C – 356/05, ECR 2007 I-03067.
13. *FBTO Schadeverzekeringen NV v Jack Odenbreit*. Judgment of the Court (Second Chamber) of 13 December 2007, Case No. C – 463/06, ECR 2007 I-11321.
14. *Florin Lazar, représenté légalement par Luigi Erculeo v Allianz SpA.* Judgment of the Court (Fourth Chamber) of 10 December 2015, Case No. C – 350/14, ECR 2015-802.
15. *Fundo de Garantia Automóvel v Alina Antónia Destapado Pão Mole Juliana and Cristiana Micaela Caetano Juliana.* Judgment of the Court (Grand Chamber) of 4 September 2018, Case No. C – 80/17, ECR – general.
16. *Gradinger v Austria*, No. 15963/90, Case of European Court of Human Rights of 23 October 1995.
17. *International Fruit Company NV and others v Produktschap voor Groenten en Fruit*. Judgment of the Court of 12 December 1972, Joined cases No. 21 – 24/72, ECLI:EU:C:1972:115.
18. *Isabel Maria Pinheiro Vieira Rodrigues de Andrade, Fausto da Silva Rodrigues de Andrade v José Manuel Proença Salvador, Crédito Agrícola Seguros — Companhia de*

Seguros de Ramos Reais SA, Jorge Oliveira Pinto. Judgment of the Court (Grand Chamber) of 28 November 2017, Case No. C – 514/16, ECR – general.
19. *Johann Gruber v Bay Wa AG*, Judgment of the Court (Second Chamber) of 20 January 2005, in case No. C – 464/01, ECR 2005 I-00439.
20. *José Luís Núñez Torreiro v AIG Europe Limited, Sucursal en España and Unión Española de Entidades Aseguradoras y Reaseguradoras (Unespa)*. Judgment of the Court (Sixth Chamber) of 20 December 2017, Case No. C – 334/16, ECR – general.
21. *José Maria Ambrósio Lavrador, Maria Cândida Olival Ferreira Bonifácio v Companhia de Seguros Fidelidade Mundial SA*. Judgment of the Court (Third Chamber) of 9 June 2011, Case No. C – 409/09, ECR 2011 I-04955.
22. *Katarína Haasová v Rastislav Petrík and Blanka Holingová*. Judgment of the Court (Second Chamber) of 24 October 2013, Case No. C – 22/12, ECLI:EU:C:2013:692.
23. *Katja Candolin, Jari-Antero Viljaniemi and Veli-Matti Paananen v Vahinkovakuutusosakeyhtiö Pohjola and Jarno Ruokoranta*. Judgment of the Court (First Chamber) of 30 June 2005, Case No. C – 537/03, ECR 2005 I-05745.
24. *Línea Directa Aseguradora SA v Segurcaixa Sociedad Anónima de Seguros y Reaseguros*. Judgment of the Court (Second Chamber) of 20 June 2019, Case No. C – 100/18, ECR – general.
25. *Luís Isidro Delgado Mendes v Crédito Agrícola Seguros - Companhia de Seguros de Ramos Reais, SA*. Judgment of the Court (Sixth Chamber) of 14 September 2017, Case No. C – 503/16, ECR – general.
26. *Manuel Carvalho Ferreira Santos v Companhia Europeia de Seguros SA*. Judgment of the Court (Second Chamber) of 17 March 2011, Case No. C – 484/09, ECR 2011 I-01821.
27. *María Victoria González Sánchez v Medicina Asturiana SA*. Judgment of the Court (Fifth Chamber) of 25 April 2002, Case No. C – 183/00, ECR 2002 I-03901.
28. *Société Moteurs Leroy Somer v Société Dalkia France, Société Ace Europe*. Judgment of the Court (First Chamber) of 4 June 2009, Case No. C – 258/08, ECLI:EU:C:2009:351.
29. *Spedition Welter GmbH v Avanssur SA*. Judgment of the Court (Second Chamber) of 10 October 2013, Case No. C – 306/12, ECR C-2013-650.
30. *The Air Transport Association of America, American Airlines Inc., Continental Airlines Inc., United Airlines Inc. v The Secretary of State for Energy and Climate Change.* Judgment of the Court (Grand Chamber) of 21 December 2011, Case No. C – 366/10, ECR 2011 I-13755.
31. *The Queen, on the application of International Association of Independent Tanker Owners (Intertanko) and Others v Secretary of State for Transport*. Judgment of the Court (Grand Chamber) of 3 June 2008, Case No. C – 308/06, ECR 2008 I-04057.
32. *TNT Express Nederland BV v AXA Versicherung AG*. Judgment of the Court (Grand Chamber) of 4 May 2010, Case No. C – 533/08, ECR I-04107.
33. *Vitālijs Drozdovs v Baltikums AAS*. Judgment of the Court (Second Chamber) of 24 October 2013, Case No. C – 277/12, ECLI:EU:C:2013:685.
34. *Vítor Hugo Marques Almeida v Companhia de Seguros Fidelidade-Mundial SA and Others*. Judgment of the Court (Grand Chamber) of 23 October 2012, Case No. C – 300/10, ECR – general.
35. *Vitor Manuel Mendes Ferreira and Maria Clara Delgado Correia Ferreira v Companhia de Seguros Mundial Confiança SA*. Judgment of the Court (Fifth Chamber) of 14 September 2000, Case No. C – 348/98, ECR 2000 I-06711.

National case law:

Austria

1. Urteil des Obersten Gerichtshof (OGH) 2Ob22/85 vom 10. Oktober 1985. In English: Judgment of the Supreme Court. Judgment from October 10th, 1985 - 2Ob22/85.
2. Urteil des Obersten Gerichtshof (OGH) 2Ob261/04b vom 3. Februar 2005. In English: Judgment of the Supreme Court. Judgment from February 3rd, 2005 - 2Ob261/04b.
3. Urteil des Obersten Gerichtshof (OGH) 2Ob48/93 vom 16. September 1993. In English: Judgment of the Supreme Court. Judgment from September 16th, 1993 - 2Ob48/93.
4. Urteil des Obersten Gerichtshof (OGH) 2Ob59/89 vom 14. November 1989. In English: Judgment of the Supreme Court. Judgment from November 14th, 1989 - 2Ob59/89.
5. Urteil des Obersten Gerichtshofs (OGH) 2Ob24/16t vom 25. Mai 2016. In English: Judgment of the Supreme Court. Judgment from May 25th, 2016 - 2Ob24/16t.
6. Urteil des Obersten Gerichtshofs (OGH) 2Ob314/97h vom 2. September 1999. In English: Judgment of the Supreme Court. Judgment from September 2nd, 1999 - 2Ob314/97h.

Belgium

7. Cour de cassation. 19 mars 2012, C.09.0313.F. In English: Court of Cassation. Judgment from March 19th, 2012 - C.09.0313.F.
8. Cour de cassation. *Belge Etat v L.K.* 19 mars 2004, C.03.0037.F (60742). In English: Court of Cassation. Judgment from March 19th, 2004 - C.03.0037.F.

Bulgaria

9. Върховен касационен съд. Decision No 12/25.03.2016 in Case No 1018/2015. In English: Supreme Court.
10. Върховен касационен съд. Decision No 36/08.03.2016 in Case No 507/2015. In English: Supreme Court.
11. Върховен касационен съд. Decision No 40/18.03.2016 in Case No 188/2015. In English: Supreme Court.
12. Върховен касационен съд. Решение №165/26.10.2010 по дело №93/2010. In English: Supreme Court.

Croatia

13. Vrhovni sud Republike Hrvatske od 29. studenog 2002., br. Su-1331-VI/02 i 1372-11/02, u primjeni Zakona o obveznim odnosima. In English: The Supreme Court of the Republic of Croatia, November 29, 2002, no. Su-1331-VI/02 and 1372-11/02, in application of the Law on Obligations.
14. Vrhovni sud Republike Hrvatske od 5. ožujka 2020. i 15. lipnja 2020., br. Su-IV-47/2020-5, u primjeni Zakona o obveznim odnosima. In English: The Supreme Court of the Republic of Croatia, March 5, 2020, and June 15, 2020, no. Su-1331-VI/02 and 1372-11/02, in application of the Law on Obligations.

Cyprus

15. *Mavropetri v Louca* (1995) 1 CLR 66.
16. *Papakokkinou and others v Kanther* (1982) 1 CLR 65.

Czech Republic

17. Nejvyšší soud České republiky, sp. zn. 30 Cdo 1286/2005, ze dne 28.2.2006; In English: The Supreme Court of the Czech Republic. Judgment from February 28th, 2006 - 30 Cdo 1286/2005.
18. Nejvyšší soud České republiky, sp. zn. 30 Cdo 1627/2005, ze dne 31.1.2006; In English: The Supreme Court of the Czech Republic. Judgment from January 31st, 2006 - 30 Cdo 1627/2005.
19. Nejvyšší soud České republiky, sp. zn. 30 Cdo 2545/2008, ze dne 10. 7. 2008; In English: The Supreme Court of the Czech Republic. Judgment from July 10th, 2008 - 30 Cdo 2545/2008.
20. Nejvyšší soud České republiky, sp. zn. 30 Cdo 476/2011, ze dne 25. 4. 2012; In English: The Supreme Court of the Czech Republic. Judgment from April 25th, 2012 - 30 Cdo 476/2011.
21. Nejvyšší soud České republiky. sp. zn. 25 Cdo 1244/2017, ze dne 27.4.2017. In English: The Supreme Court of the Czech Republic. Judgment from April 27th, 2017 - 25 Cdo 1244/2017.
22. Nejvyšší soud České republiky. sp. zn. 25 Cdo 290/2012, ze dne 29. 5. 2013. In English: The Supreme Court of the Czech Republic. Judgment from May 29th, 2013 - 25 Cdo 290/2012.
23. Nejvyšší soud České republiky. sp. zn. 25 Cdo 3966/2009, ze dne 25. 1. 2012. In English: The Supreme Court of the Czech Republic. Judgment from January 25th, 2012 - 25 Cdo 3966/2009.
24. Nejvyšší soud České republiky. sp. zn. 25 Cdo 968/2008, ze dne 26.11.2009. In English: The Supreme Court of the Czech Republic. Judgment from November 26th, 2009 - 25 Cdo 968/2008.
25. Vrchní soud v Olomouci, sp. zn. 1 Co 87/2004, ze dne 23.2.2005. In English: Higher Court in Olomouc. Judgment from February 23rd, 2005 - 1 Co 87/2004.
26. Czech Republic: Vrchní soud v Praze, sp. zn. 1 Co 146/2010, ze dne 13. 7. 2010. In English: Higher Court in Prague. Judgment from July 13th, 2010 - 1 Co 146/2010.
27. Vrchní soud v Praze, sp. zn. 1 Co 265/2006, ze dne 29. 3. 2011; In English: Higher Court in Prague. Judgment from March 29th, 2011 - 1 Co 265/2006.
28. Vrchní soud v Praze, sp. zn. 1 Co 301/2008, ze dne 22. 1. 2009; In English: Higher Court in Prague. Judgment from January 22nd, 2009 - 1 Co 301/2008.
29. Vrchní soud v Praze, sp. zn. 1 Co 303/2010, ze dne 29. 3. 2011; In English: Higher Court in Prague. Judgment from March 29th, 2011 - 1 Co 303/2010.
30. Vrchní soud v Praze, sp. zn. 3 Co 49/2012, ze dne 15. 1. 2013. In English: Higher Court in Prague. Judgment from January 15th, 2013 - 3 Co 49/2012.

Denmark

31. KEN nr 10272 af 26.01.2018. In English: Danish Appeals Board. Decision from January 26th, 2018 – 10272.
32. KEN nr 11558 af 14.01.2015. In English: Danish Appeals Board. Decision from January 14th, 2015 – 11558.

Estonia

33. Harju Maakohus Kentmanni kohtumaja. 2-11-60772/8 (17.12.2012). In English: Harju County Court, Kentmann courthouse. Judgment from December 17th, 2012 - 2-11-60772/8.

34. Riigikohus. 3-2-1-111-05 (21.11.2005). In English: Supreme Court of Estonia. Judgment from November 21st, 2005 - 3-2-1-111-05.
35. Riigikohus. 3-2-1-144-00 (18.01.2001). In English: Supreme Court of Estonia. Judgment from January 18th, 2001 - 3-2-1-144-00.
36. Riigikohus. 3-2-1-7-13 (19.03.2013). In English: Supreme Court of Estonia. Judgment from March 19th, 2013 - 3-2-1-7-13.
37. Riigikohus. 3-2-1-81-05 (27.09.2005). In English: Supreme Court of Estonia. Judgment from September 27th, 2005 - 3-2-1-81-05.
38. Tallinna Ringkonnakohus. 2-03-519/15 (22.06.2006). In English: Tallinn District Court. Judgment from June 22nd, 2006 - 2-03-519/15.
39. Tallinna Ringkonnakohus. 2-03-798/7 (16.05.2006). In English: Tallinn District Court. Judgment from May 16th, 2006 - 2-03-798/7.
40. Tallinna Ringkonnakohus. 2-05-21469/17 (28.10.2008). In English: Tallinn District Court. Judgment from October 28th, 2008 - 2-05-21469/17.
41. Tallinna Ringkonnakohus. 2-09-66992/20 (08.02.2011). In English: Tallinn District Court. Judgment from February 8th, 2011 - 2-09-66992/20.

Finland

42. Supreme Court of Finland. Judgment from June 6th,1984 - HD:1984-II-122.

France

43. Cour d'appel de Dijon du 12 février 2008, n° de RG 05-02.080. In English: Dijon Court of Appeal. Judgment from February 12th, 2008 - RG 05-02.080.
44. Cour de cassation, Chambre civile 2, 21 novembre 2013, n° de pourvoi 12-14.714. In English: Court of Cassation. Judgment from November 21st, 2013 - 12-14.714.
45. Cour de cassation. Assemblée plénière du 10 novembre 1995, n° de pourvoi 94-13.912. Publié au bulletin. In English: Court of Cassation. Judgment from November 10th, 1995 - 94-13.912.
46. Cour de cassation. Chambre civile 1 du 13 mars 2007, n° de pourvoi 05-19.020. Publié au bulletin. In English: Court of Cassation. Judgment from March 13th, 2007 - 05-19.020.
47. Cour de Cassation. Chambre civile 1 du 8 juillet 2003, n° de pourvoi 00-18.216. Publié au bulletin. In English: Court of Cassation. Judgment from July 8th, 2003 - 00-18.216.
48. Cour de cassation. Chambre civile 2 du 1 juin 2011, n° de pourvoi 10-17.927. Publié au bulletin. In English: Court of Cassation. Judgment from June 1st, 2011 - 10-17.927.
49. Cour de cassation. Chambre civile 2 du 1 juin 2011, n° de pourvoi 10-20.036. Publié au bulletin. In English: Court of Cassation. Judgment from June 1st, 2011 - 10-20.036.
50. Cour de cassation. Chambre civile 2 du 10 mars 1988, n° de pourvoi 87-10.321. Publié au bulletin. In English: Court of Cassation. Judgment from March 10th, 1988 - 87-10.321.
51. Cour de cassation. Chambre civile 2 du 13 mai 2004, n° de pourvoi 02-17.545. Publié au bulletin. In English: Court of Cassation. Judgment from May 13th, 2004 - 02-17.545.
52. Cour de cassation. Chambre civile 2 du 13 octobre 2005, n° de pourvoi 04-17.428. Publié au bulletin. In English: Court of Cassation. Judgment from October 13th, 2005 - 04-17.428.
53. Cour de cassation. Chambre civile 2 du 14 décembre 2017, n° de pourvoi 16-26.687. Publié au bulletin. In English: Court of Cassation. Judgment from December 14th, 2017 - 16-26.687.

54. Cour de cassation. Chambre civile 2 du 14 janvier 1987, n° de pourvoi 85-14.655. Publié au bulletin. In English: Court of Cassation. Judgment from January 14th, 1987 - 85-14.655.
55. Cour de cassation. Chambre civile 2 du 14 novembre 2002, n° de pourvoi 00-20.594. Publié au bulletin. In English: Court of Cassation. Judgment from November 14th, 2002 - 00-20.594.
56. Cour de cassation. Chambre civile 2 du 16 avril 1996, n° de pourvoi 93-18.897. Publié au bulletin. In English: Court of Cassation. Judgment from April 16th, 1996 - 93-18.897.
57. Cour de cassation. Chambre civile 2 du 16 décembre 2010, n° de pourvoi 10-17.096. Publié au bulletin. In English: Court of Cassation. Judgment from December 16th, 2010 - 10-17.096.
58. Cour de cassation. Chambre civile 2 du 16 novembre 1994, n° de pourvoi 93-10.156. Publié au bulletin. In English: Court of Cassation. Judgment from November 16th, 1994 - 93-10.156.
59. Cour de cassation. Chambre civile 2 du 16 octobre 1991, n° de pourvoi 89-14.865. Publié au bulletin; In English: Court of Cassation. Judgment from October 16th, 1991 - 89-14.865.
60. Cour de cassation. Chambre civile 2 du 17 février 1993, n° de pourvoi 89-11.859. Publié au bulletin. In English: Court of Cassation. Judgment from February 17th, 1993 - 89-11.859.
61. Cour de cassation. Chambre civile 2 du 17 juin 2010, n° de pourvoi 09-67.530. Publié au bulletin. In English: Court of Cassation. Judgment from June 17th, 2010 - 09-67.530.
62. Cour de cassation. Chambre civile 2 du 18 mai 2000, n° de pourvoi 98-10.190. Publié au bulletin. In English: Court of Cassation. Judgment from May 18th, 2000 - 98-10.190.
63. Cour de cassation. Chambre civile 2 du 18 octobre 1995, n° de pourvoi 93-16.640. Publié au bulletin. In English: Court of Cassation. Judgment from October 18th, 1995 - 93-16.640.
64. Cour de Cassation. Chambre civile 2 du 19 février 1997, n° de pourvoi 95-14.279. Publié au bulletin. In English: Court of Cassation. Judgment from February 19th, 1997 - 95-14.279.
65. Cour de cassation. Chambre civile 2 du 20 juillet 1987, n° de pourvoi 86-11.275. Publié au bulletin. In English: Court of Cassation. Judgment from July 20th, 1987 - 86-11.275.
66. Cour de cassation. Chambre civile 2 du 20 mai 2020, n° de pourvoi 18-26.564. Inédit. In English: Court of Cassation. Judgment from May 20th, 2020 - 18-26.564.
67. Cour de cassation. Chambre civile 2 du 21 juillet 1982, n° de pourvoi 81-12.850. Publié au bulletin. In English: Court of Cassation. Judgment from July 21st, 1982 - 81-12.850.
68. Cour de Cassation. Chambre civile 2 du 21 juin 2001, n° de pourvoi 99-15.732. Publié au bulletin. In English: Court of Cassation. Judgment from June 21st, 2001 - 99-15.732.
69. Cour de cassation. Chambre civile 2 du 22 janvier 2004, n° de pourvoi 02-14.918. Publié au bulletin. In English: Court of Cassation. Judgment from January 22nd, 2004 - 02-14.918.
70. Cour de cassation. Chambre civile 2 du 27 septembre 2001, n° de pourvoi 99-21.377. Inédit. In English: Court of Cassation. Judgment from September 27th, 2001 - 99-21.377.
71. Cour de cassation. Chambre civile 2 du 29 avril 1998, n° de pourvoi 96-18.421. Publié au bulletin. In English: Court of Cassation. Judgment from April 29th, 1998 - 96-18.421.
72. Cour de cassation. Chambre civile 2 du 3 mai 2006, n° de pourvoi 05-13.251. Inédit. In English: Court of Cassation. Judgment from May 3rd, 2006 - 05-13.251.
73. Cour de cassation. Chambre civile 2 du 31 mars 2011, n° de pourvoi 10-25.281. Inédit. In English: Court of Cassation. Judgment from March 31st, 2011 - 10-25.281.
74. Cour de cassation. Chambre civile 2 du 4 juillet 2007, n° de pourvoi 06-14.484. Publié au bulletin. In English: Court of Cassation. Judgment from July 4th, 2007 - 06-14.484.

75. Cour de Cassation. Chambre civile 2 du 4 mars 1998, n° de pourvoi 96-12.242. Publié au bulletin. In English: Court of Cassation. Judgment from March 4th, 1998 - 96-12.242.
76. Cour de cassation. Chambre civile 2 du 5 février 2004, n° de pourvoi 02-18.587. Publié au bulletin. In English: Court of Cassation. Judgment from February 5th, 2004 - 02-18.587.
77. Cour de cassation. Chambre civile 2 du 5 juin 2003, n° de pourvoi 01-17.486. Publié au bulletin. In English: Court of Cassation. Judgment from June 5th, 2003 - 01-17.486.
78. Cour de cassation. Chambre civile 2 du 6 février 2014, n° de pourvoi 13-13.265. Inédit. In English: Court of Cassation. Judgment from February 6th, 2014 - 13-13.265.
79. Cour de Cassation. Chambre civile 2 du 6 juin 2002, joint les pourvois n°00-10.187 et 00-11.233. Publié au bulletin. In English: Court of Cassation. Judgment in joint cases from June 6th, 2002 - 00-10.187 and 00-11.233.
80. Cour de cassation. Chambre civile 2 du 8 juillet 2004, n° de pourvoi 03-12.323. Publié au bulletin. In English: Court of Cassation. Judgment from July 8th, 2004 - 03-12.323.
81. Cour de cassation. Chambre criminelle du 14 mai 2019, n° de pourvoi 18-85.616. Inédit. In English: Court of Cassation. Judgment from May 14th, 2019 - 18-85.616.
82. Cour de cassation. Chambre criminelle du 3 septembre 2002, n° de pourvoi 01-85.432. Inédit. In English: Court of Cassation. Judgment from September 3rd, 2022 - 01-85.432.
83. Cour de cassation. Chambre criminelle du 5 octobre 2010, n° de pourvoi 09-87.385. Inédit. In English: Court of Cassation. Judgment from October 5th, 2010 - 09-87.385.
84. Cour de cassation. Chambre criminelle du 9 mars 2004, n° de pourvoi 03-84.991. Publié au bulletin. In English: Court of Cassation. Judgment from March 9th, 2004 - 03-84.991.
85. Cour de cassation. Chambre criminelle du mardi 23 octobre 2012, n° de pourvoi 11-83.770. Publié au bulletin. In English: Court of Cassation. Judgment from October 23rd, 2012 - 11-83.770.
86. Cour de cassation. Chambre criminelle du mardi 27 septembre 2016, n° de pourvoi 15-84.238. Publié au bulletin. In English: Court of Cassation. Judgment from September 27th, 2016 - 15-84.238.

Germany

87. BGH, Urteil v. 08.12.2015, Az: VI ZR 139/15. In English: German Federal Court of Justice. Judgment of the VI. Civil Senate from December 8th, 2015 - VI ZR 139/15.
88. BGH, Urteil v. 16.12.2008, Az.: VI ZR 170/07. In English: German Federal Court of Justice. Judgment from December 16th, 2008 - VI ZR 170/07.
89. BGH, Urteil v. 26.11.1968, Az.: VI ZR 212/66. In English: German Federal Court of Justice. Judgment from November 26th, 1968 - VI ZR 212/66.
90. BGH, Urteil vom 06.11.2008, Az.: VI ZR 171/07. In English: German Federal Court of Justice. Judgment from November 6th, 2008 - VI ZR 171/07.
91. BGH, Urteil vom 20.01.1998, Az.: VI ZR 59/97. In English: German Federal Court of Justice. Judgment from January 20th, 1998 - VI ZR 59/97.
92. BGH, Urteil vom 20.09.2011, Az.: VI ZR 282/10. In English: German Federal Court of Justice. Judgment from September 20th, 2011 - VI ZR 282/10.
93. BGH, Urteil vom. 02.10.1990, Az.: VI ZR 353/89. In English: German Federal Court of Justice. Judgment from October 2nd, 1990 - VI ZR 353/89.
94. BGH, Urteil vom. 09.04.1991, Az.: VI ZR 106/90. In English: German Federal Court of Justice. Judgment from April 9th, 1991 - VI ZR 106/90.

95. BGH, Urteil vom. 27.01.2015, Az.: VI ZR 548/12. In English: German Federal Court of Justice. Judgment from January 27th, 2015 - VI ZR 548/12.
96. BGH, Urteil vom.16.06.1959, Az.: VI ZR 95/58. In English: German Federal Court of Justice. Judgment from June 16th, 1959 - VI ZR 95/58.
97. OLG Nürnberg, Urteil vom. 01.08.1995, Az.: 3 U 468/95. In English: Nuremberg Higher Regional Court. Judgment from August 1st, 1995 - 3 U 468/95.
98. Urteil des Oberlandesgericht Celle, Az: 14 U 231/04 vom 12.05.2005. In English: Judgment of the Celle Higher Regional Court. Judgment from May 12th, 2005 - 14 U 231/04.

Greece

99. Πρωτοδικείο. ΜΠρΑθ 2478/2018, 606776/4715/2017. Court of First Instance. Judgment no. 2478/2018, 606776/4715/2017.
100. Μον.Πρ.Πατρ.441/2007. Court of First Instance of Patras. Judgment No. 441/2007.
101. Μον.Πρ.Ρεθυμ.60/2007. Court of First Instance of Rethymno. Judgment No. 60/2007.
102. Εφ.Λαρ.919/2005. Court of Appeal. Judgment No. 919/2005.
103. ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 1425/2010. (30.9.2010). In English: The Supreme Court of Greece. Judgment from September 30th, 2010 - 1425/2010.
104. ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 464/2017. (20.3.2017). In English: The Supreme Court of Greece. Judgment from March 20th, 2017 - 464/2017.
105. ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 624/2010. (14.4.2010). In English: The Supreme Court of Greece. Judgment from April 14th, 2010 - 624/2010.
106. ΤΟ ΔΙΚΑΣΤΗΡΙΟ ΤΟΥ ΑΡΕΙΟΥ ΠΑΓΟΥ. ΑΠ 90/2017 (12.1.2017). In English: The Supreme Court of Greece. Judgment from January 12th, 2017 - 90/2017.

Hungary

107. BDT2007. 1565. In English: Szeged Court of Appeal - 2007. 1565.
108. BDT2007. 1689. In English: Szeged Court of Appeal - 2007. 1689.
109. BH121. 1976. In English: The Kúria (Highest Court) - 121. 1976.
110. BH2011. 195. In English: The Kúria (Highest Court) - 2011. 195.
111. BH236. 2003. In English: The Kúria (Highest Court) - 236. 2003.
112. BH332. 1997. In English: The Kúria (Highest Court) - 332. 1997.
113. BH363. 1984. In English: The Kúria (Highest Court) - 363. 1984.
114. Općinski sud u Rijeci br. K 601/00 od 18. siječnja 2001. In English: Municipal court. Judgment from January 18th, 2001 - K 601/00.

Ireland

115. *Carroll v Clare County Council* (1975) IR 221.
116. *Flynn v South Tipperary County Council* (2017) IEHC 434.
117. *Hanrahan v Merck Sharp and Dohme* (1988) I.L.R.M 629.
118. *Hussey v Twomey & ors* (2009) IESC 1.
119. *Lindsay v Finnerty and Others* (2011) IEHC 403.
120. *McEneaney v Monaghan County Council* (2001) IEHC 14.
121. *Michael Tevlin v Kevin McArdle and the Motor Insurers Bureau of Ireland* (2014) IEHC 436.

122. *Moran v Fogarty* (2009) IESC 55.
123. *Myles v McQuillan* (2007) IEHC 333.
124. *Nolan v Wirenski* (2016) IECA 56.
125. *O'Sullivan v Dwyer* (1971) IR 274.
126. *Payne v Nugent* (2015) IECA 268.
127. *Sinnott v Quinnsworth Limited* (1984) ILRN 523.
128. *Vernon v Colgan* (2009) IEHC 86.
129. *Yun v MIBI and Tao* (2009) IEHC 318.

Italy

130. Cassazione civile, sez. 3, ordinanza 20/08/2018 n° 20795/18. In English: Court of Cassation (civil). Judgment from August 20th, 2018 - 20795/18.
131. Cassazione civile, sez. 6, ordinanza 17/09/2019 n° 23146/19. In English: Court of Cassation (civil). Judgment from September 17th, 2019 - 23146/19.
132. Cassazione Civile, sez. III, 15 marzo 2007, n. 6007. In English: Court of Cassation (civil). Judgment from March 15th, 2007 – 6007.

Latvia

133. Daugavpils tiesa. Nr. K12-0220-14/14 (22.01.2014). In English: Daugavpils Court. Judgment from January 22nd, 2014 - K12-0220-14/14.
134. LR Augstākā tiesa, Nr. SKC-156 (17.03.2004). In English: Supreme Court of the Republic of Latvia. Judgment from March 17th, 2004 - SKC-156.
135. LR Augstākā tiesa, Nr. SKC-23/2019 (31.01.2019). In English: Supreme Court of the Republic of Latvia. Judgment from January 31st, 2019 - SKC-23/2019.
136. LR Augstākā tiesa, Nr. SKC-40 (26.01.2005). In English: Supreme Court of the Republic of Latvia. Judgment from January 26th, 2005 - SKC-40.
137. LR Augstākā tiesa, Nr. SKK-181/2008 (28.04.2008). In English: Supreme Court of the Republic of Latvia. Judgment from April 28th, 2008 - SKK-181/2008.
138. LR Augstākā tiesa, SKK-96/2020 (14.01.2020). In English: Supreme Court of the Republic of Latvia. Judgment from January 14th, 2020 - SKK-96/2020.
139. Ludzas rajona tiesa, Nr. K22-0028 (08.02.2008). In English: Ludza District Court. Judgment from February 2nd, 2008 - K22-0028.

Lithuania

140. Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K-204/2009 (2009 m. gegužės 26 d.). In English: Supreme Court of Lithuania. Judgment from May 26th, 2009 - 2K-204/2009.
141. Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K–424/2008 (2008 m. gruodžio 9 d.). In English: Supreme Court of Lithuania. Judgment from December 9th, 2008 - 2K–424/2008.
142. Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 2K-50/2010 (2010 m. kovo 2 d.). In English: Supreme Court of Lithuania. Judgment from March 2nd, 2010 - 2K-50/2010.
143. Lietuvos Aukščiausiasis Teismas. Baudžiamoji byla Nr. 3K-3-364/2007 (2007 m. spalio 8 d). In English: Supreme Court of Lithuania. Judgment from October 8th, 2007 - 3K-3-364/2007.

144. Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. 3K-3-371/2003 (2003 m. kovo 26 d.). In English: Supreme Court of Lithuania. Judgment from October 26th, 2003 - 3K-3-371/2003.
145. Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. 3K-3-560/2010 (2010 m. gruodžio 27 d.). In English: Supreme Court of Lithuania. Judgment from December 27th, 2010 - 3K-3-560/2010.
146. Lietuvos Aukščiausiasis Teismas. Civilinė byla Nr. e3K-3-251-1075/2018 (2018 m. birželio 22 d.). In English: Supreme Court of Lithuania. Judgment from June 22nd, 2018 - e3K-3-251-1075/2018.
147. Panevėžio apygardos teismo nutartis 2009 m. kovo 13 d. byloje Nr. 1A-124-350/2009. In English: District Court of Panevėžis. Judgment from March 13th, 2009 - 1A-124-350/2009.

Luxembourg
148. Cour d'appel. 21-01-2014 (44/14 V), Not. 21340/02/CD. In English: Court of Appeal. Judgment from January 21st, 2014 - 44/14 V.
149. Cour de cassation (cassation civile) 14-07-2009 (51/09), 2659. In English: Court of Cassation. Judgment from July 14th, 2009 - (51/09), 2659.
150. Cour de cassation, 12-07-2010 (322/10 VI), Not 20696/09/CC. In English: Court of Cassation. Judgment from July 12th, 2010 - 322/10 VI.

Malta
151. *Borg Falzon Louis v Korporazzjoni Enemalta*, 1358/1999/1, Civil Court (First Hall) of 19 November 2013.
152. *Busuttil Linda et v Muscat Dr Josie et*, 2429/1998/1, Civil Court (First Hall) of 30 November 2010.
153. *Busuttil Linda et v Muscat Dr Josie et*, 2429/1998/1, Court of Appeal (Civil, Superior) of 27 June 2014.
154. *Caruana Alexander v Bonnici Daniel*, 253/2000/1, Civil Court (First Hall) of 15 March 2011.
155. *Farrugia Antoinette pro et noe v Farrugia Nicholas*, 67/2003/1, Court of Appeal (Civil, Superior) of 28 February 2014.
156. *Farrugia Peter Sive Pierre v ID-Direttur Tal-protezzjoni civili et*, 159/2004/1, Court of Appeal (Civil, Superior) of 18 July 2017.
157. *Valenzia Brian Noe v Camilleri Joseph*, 1207/1985/1, Court of Appeal (Civil, Superior) of 27 June 2003.
158. *Vella Govanni v Cilia Michael*, 46/2002/1, Court of Appeal (Civil, Inferior) of 23 June 2004.

Netherlands
159. Hof Arnhem 14 December 1999, NJ 2000, 742. In English: Arnhem Court of Appeal. Judgment from December 14th, 1999 - NJ 2000 (742).
160. HR 1 June 1990, NJ 1990, no. 13914 (578). In English: Supreme Court. Judgment from June 1st, 1990 - NJ 1990 (578).
161. HR 1 November 1996, NJ 1997, 134. In English: Supreme Court. Judgment from November 1st, 1996 - NJ 1997 (134).

162. HR 15 January 1993, NJ 1993, 568 (Puts/Ceha). In English: Supreme Court. Judgment from January 15th, 1993 - NJ 1993 (568).
163. HR 19 January 2001, NJ 2001, 524 (Ter Hofte/Oude Monnink Motors). In English: Supreme Court. Judgment from January 19th, 2001 - NJ 2001, (524).
164. HR 2 May 1997, NJ 1997, 662. In English: Supreme Court. Judgment from May 2nd, 1997 - NJ 1997, (662).
165. HR 26 June 1998, NJ 1998, 778, Kramer/ABN AMRO. In English: Supreme Court. Judgment from June 26th, 1998 - NJ 1998, (778).
166. HR 8 July 1992, NJ 1992, 714 AMC/O. In English: Supreme Court. Judgment from July 8th, 1992 - NJ 1992, (714).
167. HR 27 October 2000, RvdW 2000, 212. In English: Supreme Court. Judgment from October 27th, 2000 - RvdW 2000, (212).
168. Rb Rotterdam, 19 May 2004, NJF 2004, 517. In English: Court of Rotterdam. Judgment from May 19th, 2004 - NJF 2004, (517).

Poland

169. Sąd Najwyższy. Sygn. akt II CKN 605/00 (18 kwietnia 2002r.). In English: Supreme Court. Judgment from April 18th, 2022 - II CKN 605/00.
170. Sąd Najwyższy. Sygn. akt II CKN 756/97 (19 maja 1998 r.). In English: Supreme Court. Judgment from May 19th, 1998 - II CKN 756/97.
171. Sąd Najwyższy. Sygn. akt II CSK 94/10 (17 września 2010 r.). In English: Supreme Court. Judgment from September 17th, 2010 - II CSK 94/10.
172. Sąd Najwyższy. Sygn. akt II UKN 681/98 (10 czerwca 1999r.). In English: Supreme Court. Judgment from June 10th, 1999 - II UKN 681/98.
173. Sąd Najwyższy. Sygn. akt III CSK 279/2010 (3 czerwca 2011 r.). In English: Supreme Court. Judgment from June 3rd, 2011 - III CSK 279/2010.
174. Sąd Najwyższy. Sygn. akt V CSK 448/16 (7 kwietnia 2017 r.). In English: Supreme Court. Judgment from April 7th, 2017 - V CSK 448/16.
175. Sąd Najwyższy. Sygn. akt V CSK 558/17 (11 stycznia 2019 r.). In English: Supreme Court. Judgment from January 11th, 2019 - V CSK 558/17.

Portugal

176. Supremo Tribunal de Justiça (STJ) de 01-03-2007, Revista nº 4025/06 - 7.ª Secção. In English: Supreme Court of Justice. Judgment from March 1st, 2007 - 4025/06 - 7.ª.
177. Supremo Tribunal de Justiça (STJ) de 14-10-2008, Revista nº 2618/08 - 6.ª Secção. In English: Supreme Court of Justice. Judgment from October 14th, 2008 - 2618/08 - 6.ª.
178. Supremo Tribunal de Justiça (STJ) de 29-01-2019, Revista nº 1382/16.8T8VRL.G1.S1 - 1.ª Secção. In English: Supreme Court of Justice. Judgment from January 29th, 2019 - 1382/16.8T8VRL.G1.S1 - 1.ª.
179. Supremo Tribunal de Justiça (STJ) de 29-03-2007, Revista nº 709/07 - 7.ª Secção. In English: Supreme Court of Justice. Judgment from March 29th, 2007 - 709/07 - 7.ª.
180. Tribunal Constitucional, Acórdão nº 565/2018, Diário da República nº 241/2018, Série II de 2018-12-14. In English: Constitutional Court, Judgment from December 14th, 2018 - 565/2018.

Slovakia

181. Najvyšší súd Slovenskej republiky, sp. zn. 5 Cdo 71/03, z 29. januára 2004. In English: The Supreme Court of the Slovak Republic. Judgment from January 29th, 2004 - 5 Cdo 71/03.
182. Ústavný súd Slovenskej republiky, sp. zn. 3 Cdo 326/2006, z 26. júla 2007. In English: The Constitutional Court of the Slovak Republic. Judgment from July 26th, 2007 - 3 Cdo 326/2006.
183. Ústavný súd Slovenskej republiky, sp. zn. 5 Cdo 265/2009, z 12. februára 2011. In English: The Constitutional Court of the Slovak Republic. Judgment from February 12th, 2011 - 5 Cdo 265/2009.
184. Ústavný súd Slovenskej republiky, sp. zn. II. ÚS 695/2017, z 5. decembra 2018. In English: The Constitutional Court of the Slovak Republic. Judgment from December 5th, 2018 - II. ÚS 695/2017.
185. Višje sodišče v Celju, sodba Cp 1036/2009, 06.05.2010. In English: Higher Court. Judgment from May 6th, 2010 - Cp 1036/2009.
186. Višje sodišče v Kopru, sodba I Cp 137/2005, 14.02.2006. In English: Higher Court. Judgment from February 14th, 2006 - I Cp 137/2005.

Slovenia

187. Višje sodišče v Ljubljani, II Cp 4658/2010, 23.03.2011. In English: Higher Court in Ljubljana. Judgment from March 23rd, 2011 - II Cp 4658/2010.
188. Vrhovno sodišče Republike Slovenije, II Ips 387/2006, 24.01.2008. In English: The Supreme Court of the Republic of Slovenia. Judgment from January 24th, 2008 - II Ips 387/2006.
189. Vrhovno sodišče Republike Slovenije, sodba II Ips 248/98, 04.02.1999. In English: The Supreme Court of the Republic of Slovenia. Judgment from February 4th, 1999 - II Ips 248/98.
190. Vrhovno sodišče Republike Slovenije, sodba II Ips 440/99, 08.03.2000. In English: The Supreme Court of the Republic of Slovenia. Judgment from March 8th, 2000 - II Ips 440/99.
191. Vrhovno sodišče Republike Slovenije, sodba II Ips 598/95, 13.03.1997. In English: The Supreme Court of the Republic of Slovenia. Judgment from March 13th, 1997 - II Ips 598/95.

Spain

192. Tribunal Supremo - Sala Primera, de lo Civil. STS 490/2013 de 15 julio de 2013 (Recurso 761/2011). In English: Supreme Court - First Chamber, Civil. Judgment from July 15th, 2013 - STS 490/2013.
193. Tribunal Supremo. Sala de lo Civil. STS 4290/2015 de 23 octubre de 2015 (583/2015). In English: Supreme Court. Civil. Judgment from October 23rd, 2015 - STS 4290/2015.
194. Tribunal Supremo. Sala de lo Civil. STS 6523/1987 (20/10/1987). In English: Supreme Court. Civil. Judgment from October 20th, 1987 - STS 6523/1987.
195. Tribunal Supremo. Sala de lo Contencioso. STS 21/1990 (03/01/1990). In English: Supreme Court. Judgment from January 3rd, 1990 - STS 21/1990.
196. Tribunal Supremo. Sala de lo Contencioso. STS 2356/1989 (05/04/1989). In English: Supreme Court. Judgment from April 5th, 1989 - STS 2356/1989.

197. Tribunal Supremo. Sala de lo Contencioso. STS 2640/1988 (15/04/1988). In English: Supreme Court. Judgment from April 15th, 1988 - STS 2640/1988.

Sweden

198. Försäkringsjuridiska föreningens rättsfallssamling FFR 1961: 291. In English: Insurance Legal Association's case collection (FFR) 1961: 291.
199. NJA 1943 s.486. In English: Supreme Court. New legal archive - 1943 s.486.
200. NJA 1958 s.39. In English: Supreme Court. New legal archive - 1958 s.39.
201. NJA 1981 s.920. In English: Supreme Court. New legal archive - 1981 s.920.
202. NJA 1993 s.41. In English: Supreme Court. New legal archive - 1993 s.41.
203. NJA 1996 s.377. In English: Supreme Court. New legal archive - 1996 s.377.
204. NJA 1999 s.632. In English: Supreme Court. New legal archive - 1999 s.632.
205. RH 1995: 100. In English: Court of Appeal - 1995: 100.
206. SkfVN 1947: 34. In English: Non-life Insurance Conditions Committee. Ruling 1947: 34.
207. SkfVN 1948: 21. In English: Non-life Insurance Conditions Committee. Ruling 1948: 21.
208. SkfVN 1948: 58. In English: Non-life Insurance Conditions Committee. Ruling 1948: 58.
209. SkfVN 1950: 55. In English: Non-life Insurance Conditions Committee. Ruling 1950: 55.
210. SkfVN 1958: 77. In English: Non-life Insurance Conditions Committee. Ruling 1958: 77.

United Kingdom

211. *Allied Maples v Simmons & Simmons* (1995) 4 All ER 907 Court of Appeal.
212. *Baker v Willoughby* (1969) UKHL 8; (1970) AC 467.
213. *Boys v Chaplin* (1971) AC 356, (1969) 3 WLR 322, (1969) 2 All ER 1085.
214. *Caparo Industries pIc v Dickman* (1990) 2 AC 605 House of Lords.
215. *Carroll v Fearon* (1999) E.C.C. 73.
216. *Donoghue v Stevenson* (1932) AC 562 House of Lords.
217. *Eagle v Garth Maynard Chambers* (2003) EWCA Civ 1107.
218. *Evans v Triplex Safety Glass Co Ltd* (1936) 1 All ER 283.
219. *Froom v Butcher* (1976) 1 QB 286.
220. *Gardner v Moore and others*. HL 1984, (1984) AC 548.
221. *Gerbrandt v Deleeuw* (1995) B.C.J. No. 1022.
222. *Gorringe v Calderdale Metropolitan Borough Council* HL 1 Apr 2004 (2004) UKHL 15, (2004) 1 WLR 1057, (2004) RTR 27, (2004) 2 All ER 326.
223. *Heil v Rankin* CA 13 Jun 2000 (2000) EWCA Civ 187, (2001) QB 272, (2001) PIQR Q3, (2000) 2 WLR 1173.
224. *Jacobs v Motor Insurers' Bureau* (2010) EWHC 231 (QB).
225. *Jobling v Associated Dairies* (1982) AC 794.
226. *Lamoon v Fry* CA 29 Apr 2004 (2004) EWCA Civ 591.
227. *Lane v Holloway* (1967) 3 WLR 1003 Court of Appeal.
228. *Liddell v Middleton* CA 1996 (1996) PIQR P36.

229. *Murphy v Brentwood District Council* (1990) 2 All ER 908, (1991) UKHL 2, (1991) 1 AC 398.
230. *Nettleship v Weston* (1971) 3 WLR 370 Court of Appeal.
231. *Sam v Atkins* (2005) EWCA Civ 1452.
232. *Scott v The London and St Katherine Docks Co* CEF 1865 (1865) 3 H and C 596.
233. *Smith v Nottinghamshire Police* CA 23 Feb 2012 (2012) EWCA Civ 161, (2012) RTR 294.
234. *Streeter v Hughes & Anor* (2013) EWHC 2841 (QB).
235. *Wellesley Partners LLP v Withers LLP* (2015) EWCA Civ 114.

United States
236. *Wilhelm Winter, Cynthia Zheng v G.P. Putnam's Sons.* United States Court of Appeals, (9th Circuit). 938 F.2d 1033 (1991).

EU and national documents:

European Union

1. Commission of the European Communities. Report from the Commission to the Council, the European Parliament and the European Economic and Social Committee. Third report on the application of Council Directive on the approximation of laws, regulations and administrative provisions of the MSs concerning liability for defective products (85/374/EEC of 25 July 1985, amended by Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999) of 14th of September 2006, Brussels, COM (2006) 496 final.
2. Commission staff working document. Evaluation of Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the MSs concerning liability for defective products of 7th May 2018, Brussels, SWD (2018) 157 final.
3. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. Strengthening victims' rights in the EU. Brussels of 18 May 2011. COM (2011) 274 final.
4. Directorate General for Internal Policies "Policy Department C: Citizens' Rights and Constitutional Affairs. Choice of Law for Cross Border Road Traffic Accidents", Brussels, 2012 PE 462.292.
5. European Commission Expert Group. Final Report of the Commission Expert Group on European Insurance Contract Law. European Union 2014.
6. European Commission Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament and 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 ensure against such liability (2018) COM 336 final.
7. European Commission Staff Working Document Impact Assessment accompanying the documents Proposal for a Directive of the European Parliament and of the Council amending 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. OJ SWD/2018/247 final.
8. European Commission. Frequently asked questions: Commission proposal to amend the Motor Insurance Directive. (2018) MEMO/18/3732.
9. European Commission. Inception Impact Assessment. REFIT review of the Motor Insurance Directive of July 24, 2017. Q4 2017. Ref. Ares/2017/3714481.
10. European Commission. Press release "Have a safe trip: Commission consults on how to help victims of road accidents abroad". Brussels of 19 July 2012. IP/12/807.
11. European Commission. Press release: "Motor vehicle insurance: the Commission proposes a Directive to deal with the problems of victims of car accidents abroad". Brussels of 15 October 1997. IP/97/881.
12. European Parliament Report of 28 January 2019 on the proposal for a directive of the European Parliament and of the Council amending Directive 2009/103/EC of the European Parliament and 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 ensure against such liability. COM(2018)0336 – C8-0211/2018 – 2018/0168(COD).
13. European Parliament resolution of 15 January 2019 on autonomous driving in European transport (2018/2089(INI)).
14. European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).
15. European Parliament. Robots and artificial intelligence: MEPs to call for EU-wide liability rules. Briefing. 13-16 February 2017 - Strasbourg plenary session. (Civil law rules on robotics 2015/2103(INL)).
16. European Telecommunications Standards Institute (ETSI). *Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service*. Standard ETSI EN 302 637-2. 2014.
17. Expert Group on Liability and New Technologies – New Technologies Formation. Liability for Artificial Intelligence and Other Emerging Technologies. *Publication Office of the European Union*: Brussels, 2019.
18. FOT-Net (Field Operational Test Networking and Methodology Promotion) and CARTRE (Coordination of Automated Road Transport Deployment for Europe). FESTA Handbook: Version 7 (2018), pp. 1-213.
19. Horizon 2020 Commission Expert Group to advise on specific ethical issues raised by driverless mobility (E03659). Ethics of Connected and Automated Vehicles: recommendations on road safety, privacy, fairness, explainability and responsibility. 2020. *Publication Office of the European Union*: Luxembourg.
20. Independent Expert Group on the Ethics of Connected and Automated Vehicles (CAVs). Ethics of Connected and Automated Vehicles. Luxembourg: *Publication Office of the European Union* (2020). ISBN 978-92-76-17867-5.
21. Internal Market, industry, Entrepreneurship and SMEs. Report on compensation of victims of cross-border road traffic accidents in the EU: comparison of national practices, analysis of problems and evaluation of options for improving the position of cross-border victims. Contract ETD/2007/IM/H2/116.
22. Proposal for a regulation of the European Parliament and of the Council laying down harmonized rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union legislative acts. COM/2021/206 final.

23. The EU Agency for Cybersecurity (ENISA): Cyber Security and Resilience of smart cars: good practices and recommendations. *Publications Office of the European Union: Luxembourg*, 2016, TP-07-16-043-EN-N.
24. The EU Agency for Cybersecurity (ENISA): Cybersecurity Challenges in the Uptake of Artificial Intelligence in Autonomous Driving. *Publications Office of the European Union: Luxembourg*, 2021, EUR 30568 EN.

Austria
25. Bundesministerium Verkehr, Innovation und Technologie. Aktionspaket Automatisierte Mobilität 2019-2022. Wien 2018. In English: Federal Ministry of Transport, Innovation and Technology. Action Package Automated Mobility 2019-2022. Vienna 2018.

Belgium
26. Direction Générale Statistique. Tables de mortalité et espérance de vie. 24/01/2019 (9993040). In English: Directorate General Statistics. Mortality tables and life expectancies.

Bulgaria
27. Министерство на транспорта, информационните технологии и съобщенията. Проект на Концепция за развитието на изкуствения интелект в България до 2030 г. In English: Ministry of Transport, Information Technologies and Communications. Draft Concept for the development of artificial intelligence in Bulgaria until 2030.

Croatia
28. Hrvatski sabor. Nacionalna razvojna strategija Republike Hrvatske do 2030. godine. NN 13/2021. In English: Croatian Parliament. National development strategy until 2030. NN 13/2021.

Cyprus
29. Γ. Καρούσος: Η Κύπρος έχει επενδύσει και εφαρμόσει Ευφυή Συστήματα Μεταφορών στους αυτοκινητόδρομους. In English: Cyprus has invested and implemented Intelligent Transport Systems on the highways.

Czech Republic
30. Ministerstvo dopravy. Akční plán autonomního řízení. In English: Ministry of Transportation. Action plan for autonomous driving. Action Plan on the Future of the Automotive Industry in Czech Republic “Czech Automotive Industry 2025”.

Denmark
31. Bekendtgørelse om Autonomous Mobility A/S' forsøg med selvkørende motorkøretøjer i Københavns Nordhavn. BEK nr 206 af 16/03/2020. In English: Notice on Autonomous Mobility A/S trials with self-driving vehicles in Copenhagen. BEK no 206 of 16/03/2020.

Estonia

32. Riigikantselei. *Final report: self-driving vehicles on Estonian roads may signal the end of traffic deaths* (2018). Retrieved online from <https://www.riigikantselei.ee/en/news/final-report-self-driving-vehicles-estonian-roads-may-signal-end-traffic-deaths>.

Finland

33. Eettistä tietopolitiikkaa tekoälyn aikakaudella -selonteko. VM/2527/00.01.00.01/2017. In English: Ethical information policy in the era of artificial intelligence – presentation.

France

34. Cour de cassation. Bulletin d'information N°663 du 15 juin 2007 : Diffusion de jurisprudence, doctrine et communications. In English: Court of Cassation. Newsletter N°663 of 15 June 2007: Case law, doctrine and communications.

Germany

35. Bundesministerium für Verkehr und digitale Infrastruktur. Ethik-Kommission. Automatisiertes und Vernetztes Fahren (2017), pp. 1-33. In English: Federal Ministry of Transport and Digital Infrastructure. Ethics Committee. Automated and connected driving.
36. GDV (German Insurance Association). Initiative: REFIT review of the Motor Insurance Directive. F6707, 6437280268-55 (2017).

Ireland

37. Department of Transport. *Cabinet approves legislation to test Autonomous vehicles on public roads*. Press release 2019. Retrieved online from https://www.gov.ie/en/press-release/2dd62e-cabinet-approves-legislation-to-test-autonomous-vehicles-on-public-r/.

Latvia

38. Ministru kabineta rīkojums Nr. 587. Par Reģionālās politikas pamatnostādnēm 2021.-2027. gadam. In English: Order No. 587 on regional policy guidelines for 2021-2027 promoting the availability of sharing and support infrastructure.

Lithuania

39. Lietuvos Respublikos susisiekimo ministro patvirtintas savivaldžių automobilių bandymų ir dalyvavimo viešajame eisme sąlygų ir tvarkos aprašas, Nr. 12-01-30, 2018). In English: Description of the conditions and procedure for self-driving vehicle tests and participation in public traffic approved by the Minister of Transport of the Republic of Lithuania, No. 12-01-30, 2018.
40. Lietuvos Respublikos Vyriausybė. Nutarimo projektas dėl Lietuvos Respublikos penktosios kartos judriojo ryšio (5G) plėtros 2020-2021 m. gairių patvirtinimo. 19-14237(3). In English: The Government of the Republic of Lithuania. Draft resolution on the development of fifth generation mobile communications (5G) in the Republic of Lithuania in 2020-2021. Approval of guidelines. 19-14237(3).

Luxembourg

41. Le gouvernement du Grand-Duché de Luxembourg. Conseil de gouvernement. Résumé des travaux du Conseil de gouvernement du 20 avril 2018. In English: The Government of

the Grand Duchy of Luxembourg. Council of Government. Summary of the work of the Council of 20 April 2018.
42. Luxinnovation. Collaboration internationale. Conduite autonome transfrontalière. (Harmonisation – Des tests courant 2018). Luxinnovation. Rapport annuel 2018. In English: Luxinnovation. International collaboration. Cross-border autonomous driving. (Harmonisation - Tests during 2018). Luxinnovation. Annual report 2018.
The Government of the Grand Duchy of Luxembourg. *Autonomous cross-border mobility tested in Schengen*. Press-release (2019). Retrieved online from <https://www.tradeandinvest.lu/news/autonomous-cross-border-mobility-tested-in-schengen/>.

Malta
43. Intelligent and Smart mobility is one of the priorities of the Maltese government. IT-TLETTAX-IL LEĠIŻLATURA. P.L. 4564.

Poland
44. Wykorzystanie dróg na potrzeby prac badawczych nad pojazdami autonomicznymi). Ustawa z dnia 20 czerwca 1997 r. Prawo o ruchu drogowym. Dz.U.2020.110 t.j. In English: The use of roads for research work on autonomous vehicles.

Romania
45. HOTĂRÂRE nr. 90 din 28 ianuarie 2020. MONITORUL OFICIAL nr. 127 din 19 februarie 2020. In English: Decision No. 90 of January 28, 2020. OJ No. 127 of February 19, 2020.

Slovakia
46. Ministerstvo vnútra Slovenskej republiky. Dodatok Č. 2 k zmluve o poskytnutí nenávratného finančného príspevku. Z314011U087/D02. In English: Ministry of the Interior of the Slovak Republic. Addendum No. 2 to the contract on the provision of a non-refundable financial contribution. Z314011U087/D02.

Slovenia
47. Sporazum o partnerstvu med Slovenijo in Evropsko komisijo za obdobje 2021-2027 (Izhodiščni osnutek - verzija II). “Strategija razvoja prometa v Republiki Sloveniji do leta 2030” In English: Partnership agreement between Slovenia and the European Commission for the period 2021-2027 (Starting draft - version II). “Strategy for the development of transport in the Republic of Slovenia until 2030”.

Spain
48. Dirección General de Tráfico. Subdirección General de Gestión de la Movilidad. Instrucción 15/V-113. In English: Directorate General for Traffic. Instruction 15/V-113.

Sweden
49. *Slutbetänkande av Utredningen om självkörande fordon på väg*. Elanders Sverige AB, Stockholm 2018. In English: Final report on the Investigation of the self-driving vehicles on the road.

United Kingdom
50. Law Commission and Scottish Law Commission. *Automated Vehicles: A joint preliminary consultation paper*. (2018), pp. 1-212.

United States
51. National Transportation Safety Board. Highway Accident Report: Collision Between a Car Operating with Automated Vehicle Control Systems and a Tractor-Semitrailer Truck Near Williston, Florida May 7, 2016. *Washington, DC United States* NTSB/HAR-17/02, Accident ID: HWY16FH018, pp. 1-53.
52. Society of Automotive Engineers (SAE). *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*. Standard SAE J3016-2018. 2018.

SANTRAUKA

Per pastaruosius porą dešimtmečių technologijų pažanga pasiekė naujas ribas. Dėl spartaus technologijų augimo visuomenė atsidūrė sudėtingoje padėtyje, kai technologijos gali atnešti tiek papildomos naudos, tiek turėti neigiamą poveikį, jei iki pradedant jomis naudotis nebus įtvirtinto tinkamo teisinio reguliavimo. Šiuo metu Europos Sąjungoje pradėjus testuoti automatizuotas transporto priemones (angl. *Intelligent Connected Vehicles*, ICVs) visų šalių narių įstatymų leidėjai toliau ieško galimo tvaraus automatizuotų transporto priemonių civilinės atsakomybės reguliavimo būdo. Siekdami sumažinti neigiamą poveikį nukentėjusiesiems dėl incidentų, susijusių su automatizuotomis transporto priemonėmis, teisės aktų leidėjai turėtų išgryninti esmines naujas teisines sąvokas ir atskleisti galimus teisinius padarinius, susijusius su automatizuotų transporto priemonių naudojimu. Nors automatizuotų transporto priemonių naudojimas vienos valstybės ribose nekeičia poreikio įtvirtinti automatizuotų transporto priemonių civilinės atsakomybės reglamentavimą nacionaliniu lygmeniu, joms naudoti visoje Europos Sąjungoje reikia bendro sprendimo dėl automatizuotų transporto priemonių civilinės atsakomybės reglamentavimo ES lygmeniu. Atsižvelgiant į dažną transporto priemonių, registruotų įvairiose ES šalyse, sąveiką bendroje erdvėje, daugėja tarpvalstybinių eismo įvykių. Todėl nukentėjusieji tarpvalstybiniuose eismo įvykiuose, kuriuose dalyvauja automatizuota transporto priemonė, neišvengiamai susidurs su būtinybe kreiptis su reikalavimu dėl žalos atlyginimo. Kadangi bendras ES požiūris į automatizuotų transporto priemonių civilinę atsakomybę dar neįtvirtintas, nukentėjusieji tarpvalstybiniuose eismo įvykiuose gali likti be optimalios kompensacijos net tuo atveju, jei jų valstybėje narėje jau yra reglamentuota automatizuotų transporto priemonių civilinė atsakomybė.

Automatizuotų transporto priemonių civilinės atsakomybės reglamentavimo analizei atlikti būtina atsižvelgti į esamą konvencinių motorinių transporto priemonių reglamentavimą bei nukentėjusiųjų teisių apsaugos vystymąsi tiek Europos Sąjungos lygmeniu, tiek nacionaliniu valstybių narių lygmeniu. Nors jau nuo 1972 m. kuriami teisiniai instrumentai, kuriais siekiama toliau stiprinti tarpvalstybinių eismo įvykių nukentėjusiųjų apsaugos sistemą, nukentėję asmenys vis dar susiduria su tam tikromis kliūtimis siekdami gauti kompensaciją už patirtą turtinę ir neturtinę žalą. Teisinės problemos, su kuriomis susiduria nukentėjusieji eismo įvykiuose dalyvaujant konvencinėms motorinėms transporto priemonėms, ES lygmeniu nėra naujos. Tačiau nukentėjusiųjų eismo įvykiuose dalyvaujant automatizuotoms transporto priemonėms apsaugos bei kompensacijų mechanizmo kūrimas yra tik pradiniame etape. Siekiant užkirsti kelią atsirasti panašių su konvencinėmis motorinėmis transporto priemonėmis teisinių problemų, kuriant nukentėjusiųjų incidentuose su automatizuotomis transporto priemonėmis apsaugas ir kompensacijų mechanizmą būtina atskleisti pagrindines priežastis, kurios daro neigiamą poveikį nukentėjusiesiems eismo įvykiuose su konvencinėmis motorinėmis transporto priemonėmis.

Atsižvelgiant į prasidėjusius automatizuotų transporto priemonių bandymus tiek Europos Sąjungos, tiek nacionaliniu lygmeniu, yra pagrindo kalbėti apie mišraus eismo augimo tikimybę. Mišrus eismas yra eismas dalyvaujant tiek konvencinėms motorinėms transporto priemonėms ir eismo dalyviams be motorinių transporto priemonių, tiek automatizuotoms transporto priemonėms. Be tinkamo automatizuotų transporto priemonių civilinės atsakomybės reglamentavimo nukentėjusiam asmeniui mišriame eisme dalyvaujant automatizuotai transporto priemonei gali būti taikoma nepakankama kompensacija, palyginti su Europos Parlamento ir Tarybos 2009/103/EB direktyvoje dėl motorinių transporto priemonių valdytojų civilinės atsakomybės draudimo ir privalomojo tokios atsakomybės draudimo patikrinimo (Transporto priemonių draudimo direktyva) nustatytomis garantijomis ir įtvirtinu kompensacijos mechanizmu.

Atsižvelgiant į dabartinius teisinius iššūkius, susijusius su automatizuotų transporto priemonių civilinės atsakomybės reglamentavimu, svarbu išskirti dvi atskiras nukentėjusiųjų kategorijas, reikalaujančias optimalios apsaugos įtvirtinimo: (1) nukentėjęs vartotojas (t. y. vartotojas, patyręs žalą naudodamas automatizuotą transporto priemonę kaip jos savininkas arba teisėtas naudotojas) ir (2) nukentėję asmenys nuo automatizuotos transporto priemonės (t. y. kitų automatizuotų transporto priemonių naudotojai, konvencinių motorinių transporto priemonių valdytojai, kiti eismo dalyviai, tokie kaip keleiviai, pėstieji, dviratininkai ir nukentėję turto savininkai (pavyzdžiui, apgadintų atitvarų arba apgadinto namo savininkas). Dėl šios priežasties atsižvelgiant į dešimtmečius trunkančią nukentėjusiųjų nuo eismo įvykių bei nukentėjusiųjų vartotojų nuo gaminių su trūkumais apsaugos sistemos plėtrą ES ir siekiant išvengti galimo diskriminacinio poveikio dėl skirtingų kompensavimo mechanizmų nukentėjusiems asmenims, teisinis požiūris į automatizuotų transporto priemonių civilinės atsakomybės reglamentavimą turėtų būti formuojamas atsižvelgiant į jau patikrintus Europos Sąjungos lygmeniu kompensavimo mechanizmų dėsnius.

Šioje disertacijoje siūlomas sinergetinis automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas, kuris turėtų būti vertinamas kaip gamintojo civilinės atsakomybės už netinkamos kokybės produktus ir motorinių transporto priemonių valdytojų civilinės atsakomybės reglamentavimo ES lygmeniu simbiozė, įskaitant būtinus papildymus, atsižvelgiant į automatizuotų transporto priemonių naujoviškumą, sudėtingumą ir specifiką. Disertacijoje analizuojamas sinergetinio automatizuotų transporto priemonių civilinės atsakomybės reglamentavimo įgyvendinimas ir tinkamumas remiantis jo atitiktimi Europos Sąjungos ir valstybių narių teisiniam požiūriui. Sinergetinis automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas turėtų būti skirtas dabartinėms teisinėms spragoms užpildyti. Siekiant išvengti galimo optimalaus nukentėjusiųjų apsaugos lygio sumažėjimo dėl numatomų neigiamų padarinių, susijusių su automatizuotų transporto priemonių incidentais, šiame tyrime daugiausia dėmesio skiriama sinergetinei automatizuotų transporto priemonių civilinei atsakomybei įgyvendinti Europos Sąjungos lygmeniu. Sinergetinis automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas yra skatinamas nustatant vienodas taisykles, susijusias su civiline atsakomybe siaurame kontekste, tuo siekiama užkirsti kelią neigiamam poveikiui nukentėjusiesiems tarpvalstybiniuose įvykiuose, priklausomai nuo to, kurioje valstybėje šie įvyko.

Šio tyrimo tikslas – atsakyti į pagrindinį teisinį klausimą, ar įmanoma Europos Sąjungos lygmeniu įtvirtinti vienodą automatizuotų transporto priemonių civilinės atsakomybės reglamentavimą, ir jei taip, ar sinergetinis automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas gali būti laikomas tvariu lyginant su apsauga, įtvirtinta direktyvoje dėl valstybių narių įstatymų ir kitų teisės aktų, reglamentuojančių atsakomybę už gaminius su trūkumais (Direktyva 85/374/EEB) ir Transporto priemonių draudimo direktyvoje, įskaitant visus siūlomus pakeitimus.

Siekdama šio tyrimo tikslo, autorė nagrinėja šešis pagrindinius uždavinius. Išsamiai nagrinėja tiek privalomąsias transporto priemonių valdytojų civilinės atsakomybės (TPVCA), tiek gamintojų civilinės atsakomybės, kilusios dėl produktų su defektais, apsaugą, reikalavimus ir kompensacijų mechanizmus, nustatytus Europos Sąjungoje. Šioje disertacijoje nagrinėjama TPVCA ir gamintojų civilinės atsakomybės, kilusios dėl produktų su defektais, apsaugos tarpusavio sąsaja tiek Europos Sąjungos, tiek nacionaliniu lygmeniu. Atskleidžiamos pagrindinės problemos ir jų priežastys, su kuriomis susiduria nukentėjusieji TPVCA įvykiuose ir incidentuose, kilusiuose dėl produktų su defektais, atsižvelgiant į esamą reglamentavimą ES. Šiame tyrime įvairių automatizuotų transporto priemonių kontekste apibūdinamos naujų dalyvaujančių subjektų pareigos bei siekiama nustatyti atsakomybės pasiskirstymą tarp minėtų

subjektų. Autorė analizuoja valstybių narių nacionalinį požiūrį bei automatizuotų transporto priemonių civilinės atsakomybės teorijų tendencijas. Šiame tyrime atskleidžiami įvairių automatizuotų transporto priemonių civilinės atsakomybės sistemų privalumai ir trūkumai bei parodomas jų galimas poveikis tiek nukentėjusiesiems nuo automatizuotų transporto priemonių, tiek automatizuotų transporto priemonių naudotojams.

Šio tyrimo tikslui pasiekti yra naudojami šeši pagrindiniai tyrimo metodai. Sisteminės analizės metodu siekiama išnagrinėti tiek su TPVCA ir gamintojų civilinės atsakomybės, kilusios dėl produktų su defektais, ES teisinių priemonių trūkumus, tiek jų tvarumą, turint tikslą atskleisti numatomą riziką, susijusią su sinergetiniu automatizuotų transporto priemonių civilinės atsakomybės reglamentavimu esant tarpvalstybiniam elementui Europos Sąjungos lygmeniu. Lyginamuoju metodu lyginamos tiek su TPVCA susijusios nacionaliniu lygmeniu teisės aktų nuostatos, tiek valstybių narių teismų praktika, siekiant atskleisti atsirandančią konvergenciją ir esminius civilinės atsakomybės režimų skirtumus. Šiame tyrime lingvistinis metodas yra pasitelkiamas analizuojant valstybėse narėse galiojančius Transporto priemonių draudimo direktyvos vertimus, atspindinčius tam tikrus esminius skirtumus. Naudojant lingvistinį metodą galima atskleisti valstybių narių požiūrį į esamas ir kuriamas teisines sąvokas, susijusias su TPVCA reglamentavimu. Istorinis metodas šiame tyrime naudojamas analizuojant TPVCA ir gamintojų civilinės atsakomybės, kilusios dėl produktų su defektais, raidą tiek nacionaliniu, tiek Europos Sąjungos lygmeniu. Pasitelkiant istorinį metodą atskleidžiamas valstybių narių požiūris į civilinės atsakomybės ir kompensavimo mechanizmų vystymąsi. Disertacijoje doktrinos analizės metodas plačiai taikomas visuose tyrimo etapuose aptariant esamą doktriną ir mokslinius pasiūlymus tiek nacionaliniu, tiek Europos Sąjungos lygmeniu. Aprašomasis metodas retai naudojamas disertacijoje siekiant apibūdinti Europos Sąjungos Teisingumo Teismo (ESTT) sprendimus ir valstybių narių teismų praktiką bei atskleisti su automatizuotomis transporto priemonėmis susijusius techninius duomenis.

Disertacijoje taip pat analizuojamas automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas, taikant gamintojų civilinės atsakomybės, kilusios dėl produktų su defektais, direktyvą kartu su Transporto priemonių draudimo direktyva, remiantis griežta gamintojo atsakomybe, Europos Sąjungos lygmeniu. Siekiant nustatyti, ar užtektų direktyvos dėl gamintojų civilinės atsakomybės papildymų automatizuotų transporto priemonių civilinei atsakomybei reguliuoti Europos Sąjungoje, toliau analizuojamas atsakomybės paskirstymo pasikeitimas, gynybos priemonės gamintojų civilinės atsakomybės direktyvos kontekste ir atsakomybės paskirstymas naujiems dalyviams pereinamuoju laikotarpiu (t. y. mišriame eismo sraute dalyvaujant tiek automatizuotoms transporto priemonėms, tiek motorinėms transporto priemonėms) ir visiškai automatizuotame eismo sraute.

Šiame tyrime analizuojamas atsakomybės be kaltės režimas kaip vienas iš automatizuotų transporto priemonių civilinės atsakomybės Europos Sąjungoje reguliavimo pasiūlymas. Atsakomybės be kaltės reguliavimui užtikrinti taikomas „pirmosios šalies“ (angl. „first-party“) draudimas. Siekiant nustatyti, ar atsakomybės be kaltės režimas, užtikrinamas per draudimo bendrovę, gali būti pripažintas tvariu ir proporcingu Europos Sąjungos lygmeniu, disertacijoje analizuojami draudimo rizikos paskirstymo principai. Taip pat atsakoma į klausimą, ar vertikalus „pirmosios šalies“ civilinės atsakomybės privalomojo draudimo įvedimas Europos Sąjungos lygmeniu priverstų daugumą valstybių narių nukrypti nuo nusistovėjusios civilinės atsakomybės režimo vizijos nacionaliniu lygmeniu.

Šioje disertacijoje siūloma gamintojo griežtosios atsakomybės ir automatizuotų transporto priemonių griežtosios atsakomybės (įtraukiant automatizuotų transporto priemonių privalomąjį draudimą)

simbiozė, t. y. sinergetinis automatizuotų transporto priemonių civilinės atsakomybės reglamentavimas. Disertacijoje pateikta išsami valstybėse narėse taikomų atsakomybės režimų analizė leidžia daryti išvadą, kad šiose šalyse gali būti pripažintas ir įtvirtintas sinergetinis automatizuotų transporto priemonių civilinės atsakomybės režimas.

Disertacijoje išsamiai nagrinėjama automatizuotos transporto priemonės savininko (turėtojo) ir automatizuotos transporto priemonės naudotojo dilema, atsižvelgiant į skirtingus galimus automatizuotų transporto priemonių civilinės atsakomybės reglamentavimo būdus; ar pagrįsta ir proporcinga griežtos atsakomybės sąlygą taikyti subjektui, kuris paskirsto didžiąją dalį rizikos, arba, kitaip tariant subjektui, vykdančiam papildomą didesnio pavojaus šaltinio kontrolę (t. y. pirminiam pavojingo objekto naudotojui).

Šiame tyrime pateikiamas galimas automatizuotos transporto priemonės „kaip transporto priemonės“ ir automatizuotos transporto priemonės „kaip produkto“ reguliavimas. Atsižvelgiant į tyrime analizuojamus galimus automatizuotų transporto priemonių incidentų scenarijus, nagrinėjamas neatsargumas, neatsargumo sąlygos bei, nustačius neatsargumą, kaip atsakomybė paskirstoma, kai įvykiai susiję su automatizuotomis transporto priemonėmis „kaip transporto priemone“ ir automatizuotomis transporto priemonėmis „kaip produktu“. Automatizuotos transporto priemonės „kaip produkto“ kontekste nagrinėjamas atsakomybės pasiskirstymas tarp (1) automatizuotos transporto priemonės naudotojo ir automatizuotos transporto priemonės gamintojo, (2) nukentėjusiojo nuo automatizuotos transporto priemonės ir automatizuotos transporto priemonės gamintojo, (3) automatizuotos transporto priemonės gamintojo ir infrastruktūros operatoriaus bei (4) automatizuotos transporto priemonės gamintojo ir ryšio paslaugų teikėjo. Teisiniai santykiai tarp nurodytų subjektų yra skirtingi ir apima arba dvipusę atsakomybę, arba vienpusę atsakomybę.

Siekiant užtikrinti nukentėjusiųjų nuo konvencinių motorinių transporto priemonių ir nukentėjusiųjų įvykiuose, susijusiuose su automatizuotomis transporto priemonėmis, kompensavimo mechanizmų pusiausvyrą, šiame tyrime analizuojamas vienodo kompensavimo mechanizmo nukentėjusiesiems incidentuose, susijusiuose su automatizuotomis transporto priemonėmis, įgyvendinimas Europos Sąjungoje.

MOKSLINIŲ PUBLIKACIJŲ SĄRAŠAS

„*Motor Third Party Liability after CJEU Interpretation of the Directive 103/2009/EC in VNUK Judgment*“ puklikuotas VU mokslo žurnale „Teisė“, t. 111 (2019).

„*Connected Automated Driving: Civil Libility Regulation in the European Union*“ publikuotas VU mokslo žurnale „Teisė“, t. 114 (2020).

„*Regulatory Architecture of Data Processing for Connected and Automated Driving in Europe*“ publikuotas mokslo žurnale International Journal of Law and Public Administration Vol. 2 No. 2 (2019).

„*Intelligent connected mobility 4.0: Regulatory concepts*“ publikuotas mokslo žurnale Maastricht Journal of European and Comparative Law, Vol. 29, No. 1 (2022).

LIST OF PUBLICATIONS

„*Motor Third Party Liability after CJEU Interpretation of the Directive 103/2009/EC in VNUK Judgment*". Vilnius University Research Papers Journal „Teisė" (Law), Vol. 111 (2019).

„*Connected Automated Driving: Civil Libility Regulation in the European Union*". Vilnius University Research Papers Journal „Teisė" (Law), Vol. 114 (2020).

„*Regulatory Architecture of Data Processing for Connected and Automated Driving in Europe*". International Journal of Law and Public Administration, Vol. 2 No. 2 (2019).

„*Intelligent connected mobility 4.0: Regulatory concepts*". Maastricht Journal of European and Comparative Law, Vol. 29 No. 1 (2022).

KONFERENCIJŲ SĄRAŠAS

„*Choice of law in the European Union cross-border traffic collisions: right to just and favourable compensation to victims*“ Актуальні проблеми прав людини, держави та правової системи: матеріали XVIII Міжнародної студентсько-аспірантської наукової конференції (18-19 квітня 2019 року). Aktualios žmogaus teisių, valstybės ir teisinės sistemos problemos: XVIII tarptautinė mokslinė konferencija (2019 m. balandžio 18–19 d.).

„*Electrically power-assisted cycles (EPACs) after the European Commission's REFIT review and proposal to Amend Directive 2009/103/EC“* Teisė 2.0.: nauji metodai, nauji dėsniai: 7-oji tarptautinė doktorantų ir jaunųjų mokslininkų konferencija, 2019 m. balandžio 25–26 d.: konferencijos pranešimai.

LIST OF ATTENDED CONFERENCES

"*Choice of law in the European Union cross-border traffic collisions: right to just and favourable compensation to victims*". Actual problems of human rights, state and legal system: materials of the XVIII International Student and Postgraduate Scientific Conference (18–19 April 2019).

"*Electrically power-assisted cycles (EPACs) after the European Commission's REFIT review and proposal to Amend Directive 2009/103/EC*". Law 2.0.: new methods, new laws: 7th international conference of PhD students and young researchers, 25–26 April 2019: conference papers.

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