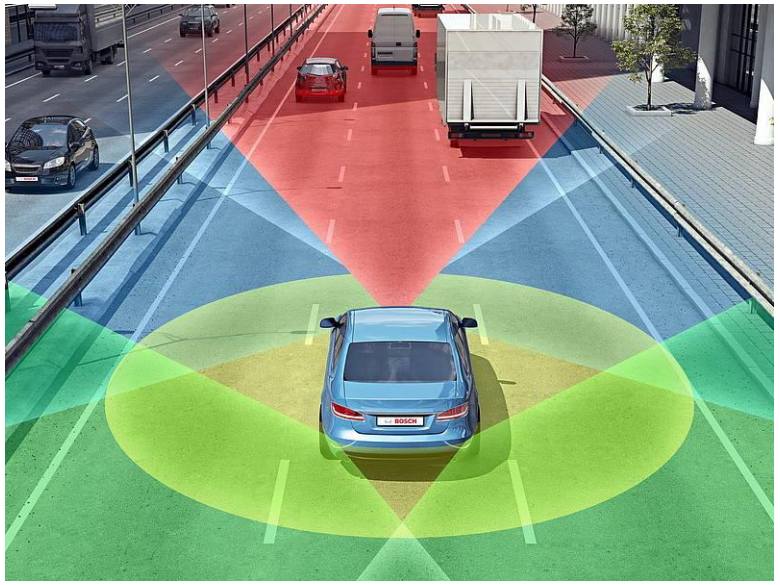
CONNECTING CAR AND AUTONOMOUS VEHICLE

EVOLUTION OF LAWS AS A RESULT OF CHANGE AND TECHNOLOGICAL INNOVATION

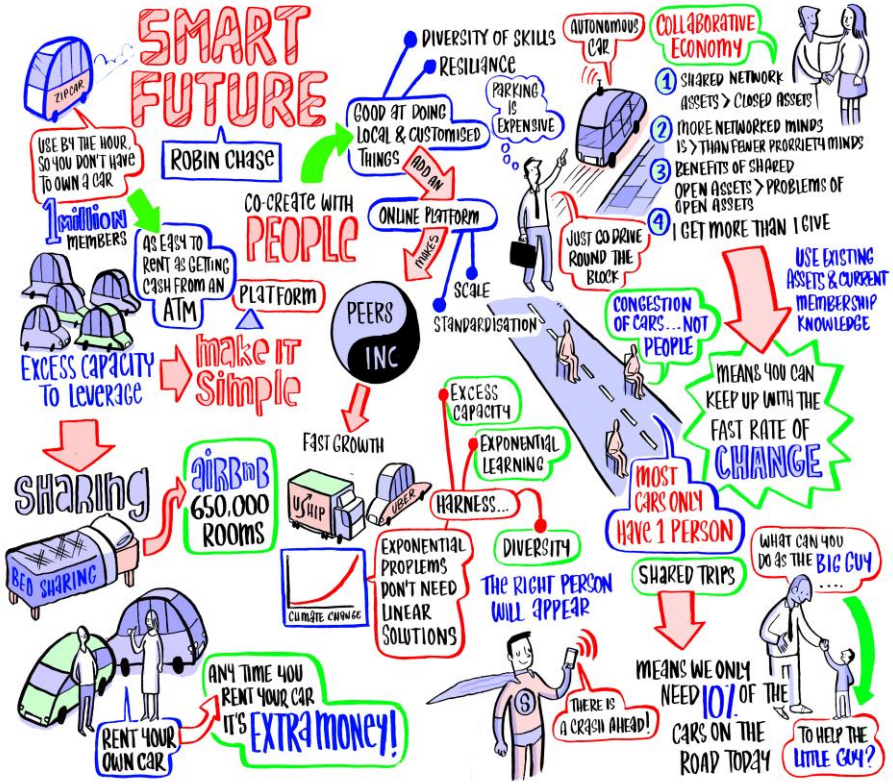


LUCIA VECERE

TECHNOLOGICAL DEVELOPMENTS AND THE REGULATOR

The technology in the world of mobility transport has been innovating the style of individual and collective life progress so fast that often the law fails to regulate in time.

Motor vehicles are higly complex system which need advanced technical and legal standards in terms of road safety requirements.



TECHNOLOGICAL DEVELOPMENTS AND THE REGULATOR

Different national jurisdictions can hinder the development of new technologies for system and vehicles.

European and international mobility requires a harmonised approach toward these new technologies.

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TECHNOLOGICAL STANDARDS
LEVELS OF AUTOMATION

SAE level	Name	Narrative Definition	Execution of Steering and Acceleration/ Deceleration	*Monitoring* of Driving Environment	Fallback Performance of *Dynamic Driving Task*	System Capability *(Driving Modes)*
***Human driver* monitors the driving environment**						
0	**No Automation**	the full-time performance by the *human driver* of all aspects of the *dynamic driving task*, even when enhanced by warning or intervention systems	Human driver	Human driver	Human driver	n/a
1	**Driver Assistance**	the *driving mode*-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	Human driver and system	Human driver	Human driver	Some driving modes
2	**Partial Automation**	the *driving mode*-specific execution by one or more driver assistance systems of both steering and acceleration/ deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	**System**	Human driver	Human driver	Some driving modes
***Automated driving system* ("system") monitors the driving environment**						
3	**Conditional Automation**	the *driving mode*-specific performance by an *automated driving system* of all aspects of the dynamic driving task with the expectation that the *human driver* will respond appropriately to a *request to intervene*	System	**System**	Human driver	Some driving modes
4	**High Automation**	the *driving mode*-specific performance by an automated driving system of all aspects of the *dynamic driving task*, even if a *human driver* does not respond appropriately to a *request to intervene*	System	System	**System**	Some driving modes
5	**Full Automation**	the full-time performance by an *automated driving system* of all aspects of the *dynamic driving task* under all roadway and environmental conditions that can be managed by a *human driver*	System	System	System	**All driving modes**

Source: Automated and Autonomous Driving, OECD/ITF, 2015 (adapted from SAE Standard J3016, SAE International 2014

INTERNATIONAL REGULATION
GEAR 2023 (Automotive Industry)

The new European Commission high-level group GEAR 2030 will debate the main challenges for the automotive industry in the next 15 years and will make recommendations to reinforce the competitiveness of the European automotive value chain.

Assisting and advising the Commission in:

(a) the competitiveness and sustainable growth of the automotive industry;
(b) policy and formulation of a set of sector-specific policy recommendations;
(c) identifying key areas which need to be addressed in order to facilitate the roll-out of autonomous and automated vehicles;
(d) bringing about an exchange of experience and best practices applied in the areas of education

INTERNATIONAL REGULATION UNITED NATIONS ECONOMIC COMMISSION for EUROPE (UNECE)

(UNECE) is one of five UN regional commissions, administered by the UN Economic and Social Council. The UNECE is the forum where 56 countries of Western, Central and Eastern Europe, Central Asia and North America come together to promote economic cooperation. The UNECE **Inland Transport Committee (ITC)** is a platform for international cooperation to facilitate the international movement of people and goods by inland transport modes. The ITC has two permanent subsidiary bodies whose work is relevant for the introduction of automated driving:

- The **Working Party on Road Traffic Safety (WP.1) is a permanent intergovernmental body** responsible for administering the international road-traffic related conventions including the 1968 Convention on Road Traffic and the 1968 Convention on Road Signs and Signals.

-The **World Forum for Harmonization of Vehicle Regulations (WP.29) is a permanent** intergovernmental body, responsible for the harmonisation of technical vehicle requirements. WP.29 prepares the work of the ITC to develop and adopt harmonised vehicle regulations.

INTERNATIONAL REGULATION
1968 VIENNA CONVENTION
The Treaty

The **Vienna Convention on Road Traffic of 1968** is an international treaty designed to facilitate international road traffic and to increase road safety by establishing standard traffic rules among the contracting parties. The Convention has been ratified by 73 countries to date. All EU Member States are signatories of the Vienna Convention – only the UK and Spain have not ratified it. The USA is not one of its signatories, but is a signatory of the 1949 Geneva Convention on Road Traffic, which imposes somewhat less 'extensive obligations' regarding the driver, making it is easier to allow autonomous vehicles.

INTERNATIONAL REGULATION
1968 VIENNA CONVENTION
Liability principle

The introduction of autonomous driving vehicles involves many problems of adaptation and change in the law in force, in particular regarding the identification of regulatory criteria of individual and social consequences of driving rules and the responsibility of the driver.

One of the basic principles of the **Vienna Convention** has been the concept that: **a driver must always be fully in control and responsible for the behavior of a vehicle in traffic.**

INTERNATIONAL REGULATION
1968 VIENNA CONVENTION
Amendment Process

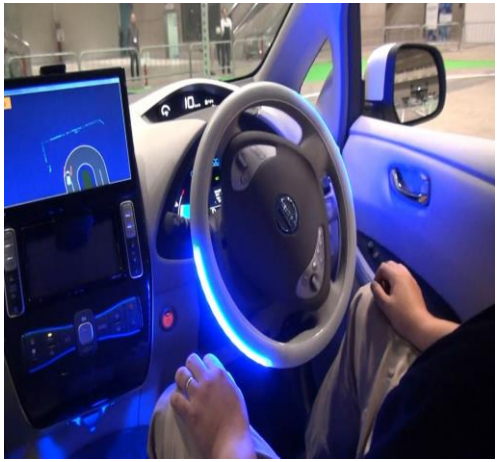
WP.29, the UNECE (United Nations Economic Commission for Europe) World Forum for Harmonization of Vehicle, has engaged in discussions with Working Party 1, which is responsible for the Convention, to address inconsistencies between the Convention and WP.29 regulations.

In March 2014, article 8, last paragraph, was mildly reformed, in the part that stipulates that the driver must be able to constantly have control of the vehicle, providing that: "**every vehicle has a driver and that must be always in the possibility to control the vehicle** ".

PROSPECT OF LIABILITY FOR CONNECTING CAR AND AUTONOMOUS VEHICLE

The amendament agreed by the U.N. Working Party of Road Traffic Safety would allow a car to drive itself, as long as the system can be overridden or switched off by the driver.

A driver must be present and able to take the wheel anytime.



Provided the amendment clears all bureaucratic hurdles, all 73 Countries which are party in 1968 Vienna Convention would have to work the new rules into their laws. (Italy has not yet implemented it effectively)

ACCIDENT BETWEEN VEHICLES WITH AUTONOMOUS DRIVING

How to identify main factors that caused accident between vehicles with autonomous driving?

How to recognize the responsibility of human and technical factors with reasonable certainty?

For driverless vehicles the mobility is taking place mainly on routes dedicated for such vehicles, for which, as required by law, the presence of a black box is mandatory, because it is able to register the dynamics of the vehicle in order to support the reconstruction of events with additional evidence to discern, where possible, the human responsibility from the technical one.

RESPONSIBILITY PROOF AND BLACK BOX

The black box thus understood is a device equipped with GPS radiolocation and accelerometer, can detect some basic information (location, paths, crash events, acceleration and deceleration, braking, stopping, running and walking times of activation and safety devices) that are sent to a database that can be accessed by insurance companies, the state authority for motor vehicles and the police, within their competence and in case the necessary conditions for access to information are fulfilled.

At the moment, within the European framework, **there is no basis to the general adoption of the black box**, which is seen primarily not as an instrument in favour of the correct definition of responsibilities in the event of an accident, but as a benefit for the insurance company to limit the liability covered and the repayments.

LIABILITY FOR CONNECTING CAR AND AUTONOMOUS VEHICLE

INSURANCE RISK

ITALIAN CASE

The autonomous driving vehicles strongly change the potential yardsticks risk to cause damage to people and property (RCA); for the traditional vehicle such risks are mainly related to the consequences of human behavior of the driver.

INSURANCE ITALIAN CASE

The vehicle insurance for civil liability, compulsory in Italy by art. 193 of the Highway Code, is too costly and difficult to justify when compared with the costs in other European countries, and for this it has been disputed for several years whether and how to contain them.

Competition law approved on 12 October 2015, as well as other several reforms try to provide for the single tariff for merit, which has leveled class with relevant differences in the risk assessment, in relation to the place of residence of the holder, and introduced the discount required on the RCA rate of at least 10% for all vehicles equipped with a black box.

Even Competition Law proposal for 2017 includes an amendment that obliges the government to issue a decree defining the limits within which it will become compulsory to 'install *black box, first on vehicles for public transport and for private transport.*

GERMAN POLICY ABOUT CONNECTING CARS AND AUTONOMOUS VEHICLES

Germany is the EU Country which most is working at government level in this area through the definition of actions and regulatory measures to regulate and promote the development of connecting cars and autonomous vehicles.

the Ministry of Transport has promoted new appropriate indicators in place of the previous, with tripartite division between: 1) the vehicle assisted by automated systems, supported by increasingly disengaged automated services, 2) vehicle driving partially autonomous, for which the driver always retains control of automated systems and can take action by bringing the final fulfillment operations and 3) vehicle autonomous driving without direct human intervention, which is not within the rules of civil liability of the use of vehicles.

It is also studying a proposal that would make compulsory the installation of black boxes in vehicles to autonomous driving.

The possibility of requiring the black box in high-level vehicles automation however opens the debate on the protection of data transmitted and processed in a continuous manner and their availability.

THECNOLOGY
INDIVIDUAL AND SOCIAL RIGHITS

Technology can and must come to the aid, without threatening the guarantees of protection of individual and social rights.

MAIN ISSUES:

*Consumer Protection
* Insurance
* Privacy
* Digital contracts

CONSUMER PRINCIPLES

DATA PROTECTION

Legislation should ensure informed consent on access to a car's data. This means that consumers need to be fully informed about what data are being transmitted and for what purpose. Drivers should retain ownership of the data their car produces and control over how they are used for as long as they own the vehicle.

FAIR COMPETITION

A variety of service providers should have the right to develop products and functionalities for car data, ensuring fair competition in an open market place. This enables the driver's ability to choose their preferred service provider to access vehicle data and offer associated functionalities via an open, secure system

FREE CHOICE

Drivers should have the right to choose their preferred service provider and match the right products and level of service to their needs. The right to choose from a variety of safe product functionalities needs to be guaranteed. The service providers must also be changeable throughout the lifetime of the vehicle and without any additional administrative burden.

CONSUMER PROTECTION
“What Europeans think about the connected cars”

A **recent study of FIA Region I**, on what Europeans think about the connected cars, that has **analized attitudes toward vehicle connectivity in 12 European Countries**, shows a clear disconnection between the data tracked and what citizens are willing to accept

The Countries are: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Italy, The Netherlands, Poland, Spain and UK. Data were collected in October 2015, via 12.000 on line questionnaires; the target group include women and men, aged between 18 and 70 who travel by car.

CONSUMER PROTECTION
"What Europeans think about the connected cars" sharing vehicle data

IT'S MY DATA (: Data generated by the car should be owned by the driver or owner of the vehicle (90%). Almost all drivers wanted the possibility to switch off all communication from their vehicle (91%).

CONFORT LEVELS WITH SHARING CAR DATA: When it came to sharing vehicle data consumers were overall willing to share vehicle data, although this consumer preference is on sharing traditional repair, maintenance and technical information. The acceptance to share information generated by the car also depend on context.

Consumers were more reluctant to share drivers' profiles and personal data, such as entertainment preferences, usage of connected features and identity.

ACCESS TO CAR DATA NEEDS A TIME LIMIT: very few respondents would accept that a one-time consent to access their data would be valid throughout the lifetime of the vehicle. **MY CAR MY DATA** is the name of *FIA Region I Campaign about consumer's informed consent on sharing data by car*.

DIGITAL CONTRACTS

The Digital Single Market Strategy encompasses very different initiatives; some of them have a direct impact on consumer protection and mobility.

On 9 December 2015, the European Commission (DG JUST) published Directive proposals on 1) Contract rules for Online Purchase and 2) on certain aspects concerning contracts for the supply of digital content. The Parliament sees a link between the two proposals and is dealing with them simultaneously. In a common JURI-IMCO Committee meeting in April, the Commission presented the key aspects of both proposals.

The Commission proposes full harmonisation of the conformity criteria for the goods, of the hierarchy of remedies and of the periods of the reversal of the burden of proof and legal guarantees. Consumers should also be entitled to termination or price reduction if the seller does not repair or replace the goods within a reasonable time. Consumers would also have the right to terminate in case of minor defect. The period for the shift of the burden of proof is extended to two years. The proposal will not fully harmonise unfair terms rules.

DIGITAL CONTRACTS REFORM

The European Commission has launched a far-reaching reform of the European Union's regulatory framework for electronic communications.

The proposed legislative reform is part of the Commission's "Digital Single Market" program, which is aimed at creating better access for consumers and businesses to online goods and services across Europe.

The Commission's reform proposals comprise both political action plans and legislations which should be implemented by 2025. The proposed is set out in two legislative proposals:

1) the proposal for a directive which is called "European Electronic Communications Code" (the Code)
2) the proposal for a regulation which would transform the Body of European Regulators for Electronic Communications ("BEREC") from a mere advisory body to a decentralized EU agency with certain regulatory and decision-making powers as well as administrative and advisory functions.

DIGITAL MARKET
CONSUMER EUROPEAN PROTECTION
state of European legislation

(from The European Parliament Legislative Observatory)

Proposal for a **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on certain aspects concerning contracts for the online and other distance sales of goods** (COM (2015) 635)

The Digital Single Market Strategy adopted by the Commission on 6 May 2015 announced a **legislative initiative on harmonised rules for the supply of digital content and the online sales of goods**. This initiative is composed of a proposal on certain aspects concerning contracts for the supply of digital content, and a proposal on certain aspects concerning contracts for the online and other distance sales of goods

Last document: European Economic and Social Committee (27 April 2016) and last discussions **within the Council or its preparatory bodies (21 June 2016)**

DIGITAL MARKET
CONSUMER EUROPEAN PROTECTION
EU Cross –border Regulation

specifically highlighting:

Proposal for a Regulation on cross-border portability of online content services;

Developing high-quality cross-border parcel delivery services;

Abolishing geo-blocking;

The entry into operation of the Online Dispute Resolution platform.

The Commission explains the need to "act now" before it is too late, since any delay regarding digital content entails a risk of national laws emerging, leading to fragmentation of the EU market and causing obstacles to both consumers and suppliers participating in cross-border transactions**.**

ACTUAL FOCUS:

"***rules on formation, validity or effect of contracts, including the consequences of the termination of a contract***"

PRIVACY - EUROPEAN POLICY

The new **Data Protection Regulation was adopted in May and would enter into force in 2018**. By then privacy will need to be implemented by the data controller and not by the vehicle manufacturer. Pseudonymised data are still considered personal until completely anonymous.

Although the consent is a very important legal basis, it is not encouraged by Data Protection Authorities, as it is often not informed. The legal basis for the processing is very important and consent may be withdrawn if it is not informed. Another basis could be vital interest or public interest. Public interest has to be decided by public policy (not by private party) and usually preceded by law (national or EU)

The European Commission launched a public consultation on C-ITS. Replies submitted to this public consultation will be analysed and taken into consideration during the development of the C-ITS Master Plan.

PRIVACY - EUROPEAN POLICY
European Data Protection Supervisor (EDPS)

The General Data Protection Regulation (GDPR) is one of the EU's greatest achievement, whose focus now turns to its implementation. This will involve ensuring the accountability of controllers and increasing cooperation with independent data protection authorities .

Vision, Objectives and Action 2015-2019 The EDPS (European Data Protection Supervisor) vision is to help the EU lead by example in the global dialogue on data protection and privacy in the digital age. It sets three strategic objectives and ten actions. Strategies are:

(1) Promoting technologies to enhance privacy and data protection;
(2) Identifying cross-disciplinary policy solutions;
(3) Increasing transparency, user control and accountability in big data processing.

EDPS vision is broad because EU advisory body is constantly requested by law to exercise consultative role on issues which may have an impact also on private sectors and IT issues (recently, for instance, on the green paper on mobile health and road safety). So the strategy envisions the EU as a whole, not for any single institution, becoming a beacon and a leader in debates that are inspiring at global level.

(Presentation of the EDPS Strategy 2015-2019 Brussels, 2 March 2015)

UE-U.S.
PRIVACY SHIELD European Data Protection and Supervisor (EDPS)

Data flows are global. The EU is bound by the Treaties and the Charter of Fundamental Rights of the European Union which protect all individuals in the EU. Like national data protection authorities in the EU, the EDPS recognises the value, in an era of global, instantaneous and unpredictable data flows, of a sustainable legal framework for commercial transfers of data between the EU and the U.S., which represent the biggest trading partnership in the world.

The **draft Privacy Shield** may be a step in the right direction but as it is currently formulated it does not adequately include, in EDPS view, all appropriate safeguards to protect the EU rights of the individual to privacy and data protection also with regard to judicial redress.

Therefore, a **longer term solution** would be welcome in the transatlantic dialogue, to also enact in binding federal law at least the main principles of the rights to be clearly and concisely identified, as is the case with other non EU countries which have been ‘strictly assessed’ as ensuring an adequate level of protection; what the CJEU in its Schems judgment expressed as meaning ‘essentially equivalent’ to the standards applicable under EU law, and which according to the Article 29 Working Party, means containing 'the substance of the fundamental principles' of data protection.

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UE-U.S.
PRIVACY SHIELD

As of 1 August 2016, U.S. companies can now self-certify compliance to the EU-U.S. Privacy Shield ("Privacy Shield") to the U.S. Department of Commerce (see https://www.privacyshield.gov/welcome).
Privacy Shield is a new legal mechanism that provides **"adequate protection"** within the meaning of EU data protection laws for transatlantic data flows to the United States. Privacy Shield replaces the U.S.-EU Safe Harbor Arrangement ("Safe Harbor") as a key mechanism for EU to U.S. data transfers, as the European Court of Justice (CJEU) had invalidated the European Commission's finding of adequacy for Safe Harbor in its *Schems* decision of 6 October 2015.

As with Safe Harbor, Privacy Shield functions through a self-certification process by which U.S. companies agree to adhere to a set of Privacy Principles and Supplemental Principles.
Although a company must apply sufficient resources to build and develop its program, the self-certification mechanism itself is an online process which requires the organization to provide information about its program and pay a fee. (Baker & McKenzie Legal Bytes)

FINAL considerations

The self-driving car raises more possibilities and more questions than perhaps any other transportation innovation under present discussion. Self-driving cars have become the archetype of our future transportation. Still, important concerns emerge. Will they fully replace the human driver? What ethical judgments will they be called upon to make? What socioeconomic impacts flow from such a dramatic change? Will they disrupt the nature of privacy and security? Many of these large questions will require longer and more thorough dialogue with government, industry, academia and, most important, the public. **In contexts such as that offered by the conference organized by Prevention Routière Internationale**

FINAL REMARKS

MAIN POINTS:

1) **policy makers face challanges in designing the appropriate legal and regulatory frameworks** so that new technologies are used properly and for the benefit of society

2) Road traffic is a higly regulated area as it bears huge risks for all traffic users in public spaces. **The automation of vehicles changes the driving risk** in many regards and therefore **requires an assessment of all traffic and vehicle related regulation**.

3) European mobility requires a harmonised approach towards these new technologies, while **fragmented regulatory approaches would hinder implementation and jeopardise European competitiveness.**

FINAL REMARKS

4) The **fundamental principles of Vienna Convention**, laid in art 8, “that a driver is always fully in control and responsible for the behaviour of a vehicle in traffic", in its amendment being redefined "every vehicle must have a driver" and in the future for highly automated system it will sound like “every vehicle must have a driver who may take the hands off the wheel, but must be ready at all times to take over the driving functions and who can override the system and switch it on and off.
In the future a further amendment process is therefore necessary to permit driverless vehicles.

5) The **regulatory environment relating to cybersecurity, data privacy and liability issues** is of particular importance in the development of automated driving.

6) The debate on data privacy regarding connected automated vehicles is evolving in parallel with new technologies. The connected car has the capability to generate, store and transmit user's personal data. As third parties can access and use sensitive driver and driving data, **legislation seems necessary to protect personal privacy of consumers in connected vehicles**.

THANK YOU
FOR ATTENTION

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