



2015/2103(INL)

7.10.2016

AMENDMENTS

1 - 93

Draft opinion
Georg Mayer
(PE589.230v01-00)

Civil Law Rules on Robotic
(2015/2103(INL))

Amendment 1
Dominique Riquet

Draft opinion
Citation 1 a (new)

Draft opinion

Amendment

- *whereas the Commission recently established the High Level Group GEAR 2030 tasked with producing a roadmap for the proper deployment of autonomous vehicles;*

Or. fr

Amendment 2
Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion
Citation 1 a (new)

Draft opinion

Amendment

- *having regard to the Declaration of Amsterdam of the Council, of 14-15 April 2016, on Cooperation in the field of connected and automated driving,*

Or. en

Amendment 3
Dominique Riquet

Draft opinion
Citation 1 b (new)

Draft opinion

Amendment

- *whereas a distinction should be drawn between automated vehicles*

(incorporating devices allowing the automatic execution of some driving operations) and autonomous vehicles (which perform all such operations). In the former case, driving must still be continuously monitored by the driver and remains entirely her responsibility. In the latter case, driving no longer requires continuous monitoring or any intervention by the user. In the former case the civil liability regime remains unchanged compared to that with conventional vehicles, while it needs to be adjusted in the latter case;

Or. fr

Amendment 4

Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion

Citation 1 b (new)

Draft opinion

Amendment

- *having regard to the to the European Parliament's resolution of 29 October 2015 on safe use of remotely piloted aircraft systems (RPAS), commonly known as unmanned aerial vehicles (UAVs), in the field of civil aviation,*

Or. en

Amendment 5

Andor Deli

Draft opinion

Paragraph -1 (new)

Draft opinion

Amendment

-1. *notes that robotics does not only*

concern automated vehicles, but also remotely piloted aircraft systems (drones), automated subway systems, auto-piloted aircrafts as well as other types of transport modes;

Or. en

Amendment 6
Notis Marias

Draft opinion
Paragraph 1

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety *might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of responsibility for car accidents;*

Amendment

1. Takes *the* view that the impact of automated vehicles on enhancing transport safety *should be further studied following the many accidents they have caused;*

Or. el

Amendment 7
Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion
Paragraph 1

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to

Amendment

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to

eliminate all accidents, which raises questions of responsibility for car accidents;

eliminate all accidents, which raises questions of responsibility for car accidents **and generates, amongst other things, the need for new insurance models and new insurance funds;**

Or. en

Amendment 8

Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion Paragraph 1

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be **impossible for** automated vehicles **to eliminate all** accidents, **which** raises questions of responsibility for car accidents;

Amendment

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that **without an appropriate internal market regulatory framework** it will be **difficult to decrease the risk of** accidents **involving** automated vehicles, **This** raises **liability issues and** questions of responsibility for car accidents;

Or. en

Amendment 9

Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion Paragraph 1

Draft opinion

1. takes view that the **impact of automated vehicles on enhancing transport safety** might potentially **be** a major **one**, since human errors are currently responsible for about 90% of

Amendment

1. takes view that the **automation and robotics, especially autonomous driving**, might potentially **have** a major **impact on enhancing transport safety**, since human errors are currently responsible for about

road accidents; notes *however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of responsibility for car accidents;*

90% of road accidents; notes *that liability questions related to automated transport need to be promptly addressed at international level to ensure the protection of citizens and consumers;*

Or. en

Amendment 10 **Karima Delli**

Draft opinion **Paragraph 1**

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of responsibility for car accidents;

Amendment

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of *civil* responsibility for car accidents, *including material damage and physical harm;*

Or. en

Amendment 11 **Dieter-Lebrecht Koch**

Draft opinion **Paragraph 1**

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to

Amendment

1. Takes *the* view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90 % of road accidents; notes however that it will be impossible for automated vehicles to

eliminate all accidents, *which raises* questions of responsibility for car accidents;

eliminate all accidents, *and that answers must therefore be found as soon as possible to* questions of responsibility for car accidents;

Or. de

Amendment 12 Andor Deli

Draft opinion Paragraph 1

Draft opinion

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of responsibility for car accidents;

Amendment

1. takes view that the impact of automated vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated vehicles to eliminate all accidents, which raises questions of responsibility *as well as ethical questions* for car accidents;

Or. en

Amendment 13 Henna Virkkunen

Draft opinion Paragraph 1

Draft opinion

1. takes view that the impact of automated *vehicles* on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for automated *vehicles* to eliminate all accidents, which raises questions of responsibility for car

Amendment

1. takes *the* view that the impact of automated *means of transport* on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes, however, that it will be impossible for automated *means of transport* to eliminate all accidents, which raises questions of

accidents;

responsibility for car accidents;

Or. fi

Amendment 14
Dominique Riquet

Draft opinion
Paragraph 1

Draft opinion

1. takes view that the impact of ***automated*** vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for ***automated*** vehicles to eliminate all accidents, which raises questions of responsibility for car accidents;

Amendment

1. Takes view that the impact of ***autonomous*** vehicles on enhancing transport safety might potentially be a major one, since human errors are currently responsible for about 90% of road accidents; notes however that it will be impossible for ***autonomous*** vehicles to eliminate all accidents, which raises ***in particular*** questions of ***the*** responsibility ***of the parties concerned and compensation for the victims in the event of*** accidents;

Or. fr

Amendment 15
Dominique Riquet

Draft opinion
Paragraph 1 a (new)

Draft28 opinion

1a. Recalls that the autonomous transport systems have long existed in the public transport sector (metro systems) and have proved their reliability and their high level of public acceptance;

Or. fr

Amendment 16

Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion

Paragraph 1 a (new)

Draft opinion

Amendment

1a. welcomes the numerous developments concerning robotics in all modes of transport, such as self-driving cars, ships and drones;

Or. en

Amendment 17

Olga Sehnalová

Draft opinion

Paragraph 1 a (new)

Draft opinion

Amendment

1a. Calls on the Commission to take note of the ongoing development of automation in rail, air and waterborne transport;

Or. cs

Amendment 18

Karima Delli

Draft opinion

Paragraph 1 a (new)

Draft opinion

Amendment

1a. takes the view that the emergence and increasing popularity of unmanned aircraft technology creates new challenges for protection and civil responsibility, including areas of material damage and protection of private data,

and urges the Commission to deliver an assessment on of the safety and environmental issues related to the massive use of drones;

Or. en

Amendment 19
Andor Deli

Draft opinion
Paragraph 1 a (new)

Draft opinion

Amendment

1a. takes the view that the switch to automated vehicles, besides its positive impact on road safety, fuel consumption, the environment and the creation of new employment opportunities in the telecommunication and automotive sectors, might also lead to job losses in the transport sector as well as have consequences on the insurance sector;

Or. en

Amendment 20
Dieter-Lebrecht Koch

Draft opinion
Paragraph 1 a (new)

Draft opinion

Amendment

1a. Draws attention to the fact that driver reaction time in case of an unplanned takeover of control of the vehicle is of vital importance and calls, therefore, on the stakeholders to provide for realistic values determining safety and liability issues;

Or. de

Amendment 21
Marie-Christine Arnautu

Draft opinion
Paragraph 1 a (new)

Draft opinion

Amendment

1a. Emphasises the particular importance of the Committee on Legal Affairs' draft report on the transport sector, given technological progress and in view of the fact that semi-automatic vehicles are already available on the market and fully automatic vehicles will soon also be available;

Or. fr

Amendment 22
Evžen Tošenovský

Draft opinion
Paragraph 1 a (new)

Draft opinion

Amendment

1a. emphasises that future development in all transportation modes, including vehicles, drones, vessels and logistics, will involve automated systems,; stresses that both technological and legal issues linked to this development need to be addressed;

Or. en

Amendment 23
Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion
Paragraph 1 a (new)

Draft opinion

Amendment

1a. stresses the importance of supporting further innovation in robotics, such as connected and automated vehicles and drones, to strengthen the global market position of Union industry;

Or. en

Amendment 24
Luis de Grandes Pascual

Draft opinion
Paragraph 2

Draft opinion

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Amendment

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress; ***stresses the importance of increasing energy efficiency by encouraging the use of powertrains using renewable fuels in automated vehicles; notes that automated vehicles could help increase road capacity and reduce traffic congestion due to the shorter safety distances needed between vehicles and the ability to better manage traffic flows, which would result in greater energy and environmental efficiency;***

Or. en

Amendment 25
Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion
Paragraph 2

Draft opinion

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Amendment

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress ***in the field of renewable technologies and to ease the diffusion of fast recharging automated stations fed from fully decarbonised and denuclearised electricity sources;***

Or. en

Amendment 26
Isabella De Monte

Draft opinion
Paragraph 2

Draft opinion

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) ***and*** calls on the Commission and Member States to pay attention to upcoming technical progress;

Amendment

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions); ***notes in addition that the high degree of flexibility offered by these vehicles could lead to further benefits;*** calls on the Commission and Member States to pay attention to upcoming technical progress;

Or. it

Amendment 27
Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion
Paragraph 2

Draft opinion

2. notes that automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to **pay attention to upcoming** technical progress;

Amendment

2. notes that automated vehicles, **vessels and aircraft systems** can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to **fully and timely reflect** technical progress **and promote innovation**;

Or. en

Amendment 28
Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion
Paragraph 2

Draft opinion

2. notes that **automated vehicles can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions)** and calls on the Commission and Member States to **pay attention to** upcoming technical progress;

Amendment

2. notes that **the impact of automation on the safety and sustainability of the transport system is partly unpredictable**; calls **therefore** on the Commission and Member States to **monitor the** upcoming technical progress **closely and evaluate its environmental and safety impacts carefully**;

Or. en

Amendment 29
Dieter-Lebrecht Koch

Draft opinion
Paragraph 2

Draft opinion

2. notes that automated vehicles can play an important role in developing

Amendment

2. Notes that automated vehicles can play an important role in developing

sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to ***and give support to*** upcoming technical progress;

Or. de

Amendment 30 **Henna Virkkunen**

Draft opinion **Paragraph 2**

Draft opinion

2. notes that automated ***vehicles*** can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Amendment

2. notes that automated ***means of transport*** can play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Or. fi

Amendment 31 **Dominique Riquet**

Draft opinion **Paragraph 2**

Draft opinion

2. notes that automated vehicles ***can*** play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Amendment

2. Notes that automated vehicles ***will be required to*** play an important role in developing sustainable transport (for example, through the potential for making savings in emissions) and calls on the Commission and Member States to pay attention to upcoming technical progress;

Or. fr

Amendment 32
Dieter-Lebrecht Koch

Draft opinion
Paragraph 2 a (new)

Draft opinion

Amendment

2a. Expects the Commission to ensure that the Member States adapt the existing legislation, such as the Vienna Convention, in a uniform manner in order to make driverless driving possible, and calls on the Commission, the Member States and the industry to implement the objectives of the Amsterdam Declaration on cooperation in the field of connected and automated driving as soon as possible;

Or. de

Amendment 33
Marie-Christine Arnautu

Draft opinion
Paragraph 2 a (new)

Draft opinion

Amendment

2a. Emphasises that efforts to establish legal consistency and a single market as a source of economies of scale must not undermine the sovereignty of Member States, especially where they are required to demand that manufacturers observe safety and liability rules in favour of the users of automatic or semi-automatic vehicles;

Or. fr

Amendment 34
Karima Delli

Draft opinion
Paragraph 2 a (new)

Draft opinion

Amendment

2a. *emphasises that transport modes, in which traffic control is already well established, such as public transport, must get the most attention when it comes to promoting autonomous driving;*

Or. en

Amendment 35
Isabella De Monte

Draft opinion
Paragraph 2 a (new)

Draft opinion

Amendment

2a. *hopes that the new vehicles will be accessible to all users, including those with reduced mobility;*

Or. it

Amendment 36
Isabella De Monte

Draft opinion
Paragraph 2 b (new)

Draft opinion

Amendment

2b. *points out that self-driving vehicles might do much to reduce noise pollution, especially in towns and cities;*

Or. it

Amendment 37

Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion

Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes; ***since the act of driving itself will become a complex technical exercise, it is of the utmost importance that such a knowledge-sharing system is conceived to protect the privacy of data contributed by consumers using automated vehicles;***

Or. en

Amendment 38

Luis de Grandes Pascual

Draft opinion

Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes; ***calls on the Commission and Member States to ensure that the safety of automated vehicles is considered to be essential or a sine qua non for a progressive integration in the market;***

Or. en

Amendment 39
Henna Virkkunen

Draft opinion
Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated **vehicles**, and invites them to create **a knowledge-sharing system to record** the outcomes of tests and pilot schemes;

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated **means of transport**, and invites them to create **procedures enabling** the outcomes of tests and pilot schemes, **and accident and risk situation data, to be shared efficiently among stakeholders**;

Or. fi

Amendment 40
Notis Marias

Draft opinion
Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct **further** research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Amendment

3. Calls on the Commission and Member States to conduct **more extensive and in-depth** research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Or. el

Amendment 41
Olga Sehnalová

Draft opinion
Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated vehicles ***in all transport modes***, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Or. cs

Amendment 42
Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion
Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated ***vehicles***, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of automated ***transport***, and invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Or. en

Amendment 43
Dominique Riquet

Draft opinion
Paragraph 3

Draft opinion

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of ***automated*** vehicles, and

Amendment

3. calls on the Commission and Member States to conduct further research to assess the safety and environmental implications of ***autonomous*** vehicles, and

invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

invites them to create a knowledge-sharing system to record the outcomes of tests and pilot schemes;

Or. fr

Amendment 44
Dominique Riquet

Draft opinion
Paragraph 3 a (new)

Draft opinion

Amendment

3a. *Points out that through route optimisation, the fight against congestion, the optimisation of the use of the propulsion system and their communication with flow control systems, autonomous vehicles will help improve environmental factors, particularly in urban nodes;*

Or. fr

Amendment 45
Marie-Christine Arnautu

Draft opinion
Paragraph 3 a (new)

Draft opinion

Amendment

3a. *Calls upon the Commission to take up the issue of the distribution of the added value generated by the improvement and generalisation of robotics, so that transport workers are not left behind by this technological revolution;*

Or. fr

Amendment 46

Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion

Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure; ***such unprecedented volume of data raises significant questions about the value that can be created with it, and about how it must be shared between entrepreneurs, government, consumers contributing the data and society as a whole;***

Or. en

Amendment 47

Evžen Tošenovský

Draft opinion

Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure; ***points out in this regard the need for a high density of secure high-speed wireless networks based on state-of-the art technologies;***

Or. en

Amendment 48

Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion

Paragraph 4

Draft opinion

4. underlines that automated *cars* will require a high level of safe interaction with *the* transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. underlines that automated *vehicles, vessels and aircraft systems* will require a high level of safe interaction with *corresponding and developing* transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure, *while ensuring privacy and data protection*;

Or. en

Amendment 49

Ivan Jakovčić

Draft opinion

Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure; *calls on local and regional authorities to implement the applications required for the above purposes*;

Or. hr

Amendment 50

Henna Virkkunen

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated *cars* will require ***a high level of safe interaction with the transport infrastructure*** and that the high volume of data will need to be securely transferred in real time between automated *vehicles* and *such* infrastructure;

Amendment

4. underlines that automated *means of transport* will require ***efficient and secure communication both between means of transport and between means of transport and*** the infrastructure and that the high volume of data will need to be securely transferred in real time between automated *means of transport* and *the* infrastructure;

Or. fi

Amendment 51
Olga Sehnalová

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated *cars* will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. underlines that automated *vehicles in all transport modes* will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Or. cs

Amendment 52
Karima Delli

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be

Amendment

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure, ***existing traffic flows and their management*** and that the

securely transferred in real time between automated vehicles and such infrastructure;

high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Or. en

Amendment 53
Dieter-Lebrecht Koch

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. Underlines that automated cars will require a high level of safe **and reliable** interaction with the transport infrastructure and that the high volume of data will need to be securely **and reliably** transferred in real time between automated vehicles and such infrastructure;

Or. de

Amendment 54
Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated **cars** will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between **automated** vehicles and such infrastructure;

Amendment

4. underlines that automated **transport** will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely **and reliably** transferred in real time between vehicles and such infrastructure **in all conditions**;

Or. en

Amendment 55
Dominique Riquet

Draft opinion
Paragraph 4

Draft opinion

4. *underlines* that *automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;*

Amendment

4. *Emphasises* that *the huge volume of future data generated by vehicles and exchanged from vehicle to vehicle and from vehicles to infrastructure will require a substantial investment in road, energy and ICT infrastructure as well as in data protection systems;*

Or. fr

Amendment 56
Notis Marias

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated cars will require a high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Amendment

4. Underlines that automated cars will require a *particularly safe and* high level of safe interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Or. el

Amendment 57
Isabella De Monte

Draft opinion
Paragraph 4

Draft opinion

4. underlines that automated cars will

Amendment

4. underlines that automated cars will

require a high level of *safe* interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

require a high level of *safety and of* interaction with the transport infrastructure and that the high volume of data will need to be securely transferred in real time between automated vehicles and such infrastructure;

Or. it

Amendment 58
Aldo Patriciello

Draft opinion
Paragraph 4 a (new)

Draft opinion

Amendment

4a. *warns, however, that data collection and processing must never intrude on the privacy of the end user;*

Or. it

Amendment 59
Dieter-Lebrecht Koch

Draft opinion
Paragraph 4 a (new)

Draft opinion

Amendment

4a. *Stresses the importance of smart and interconnected transport infrastructure and therefore calls on the Commission and the Member States to establish an appropriate comprehensive, cross-border and interoperable infrastructure;*

Or. de

Amendment 60
Isabella De Monte

Draft opinion
Paragraph 4 a (new)

Draft opinion

Amendment

4a. *stresses that technology of this type can bring benefits from the point of view both of tourism and of facilitating connections with remoter regions;*

Or. it

Amendement 61
Dominique Riquet

Projet d'avis
Paragraph 4 a (new)

Projet d'avis

Amendement

4a. *Adds that access to these data must be facilitated in accordance with current regulations in order to best determine the responsibilities of the parties involved in the event of an accident for the benefit of the victims;*

Or. fr

Amendment 62
Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion
Paragraph 5

Draft opinion

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the security of **IT regarding** automated cars;

5. underlines that it is necessary to focus on ensuring and strengthening the security of **ICT systems to ensure the full compliance with the demands of safe, secure and reliable** automated **transport systems and data protection**;

Or. en

Amendment 63
Henna Virkkunen

Draft opinion
Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on *ensuring and strengthening the security of IT* regarding automated cars;

Amendment

5. underlines that it is necessary to focus on *the communication infrastructure* regarding automated *means of transport and their use and on developing IT, not least with a view to ensuring and strengthening its security*;

Or. fi

Amendment 64
Karima Delli

Draft opinion
Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated cars;

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated cars, *while respecting the Union and Member States' legislation on privacy and data protection*;

Or. en

Amendment 65
Evžen Tošenovský

Draft opinion
Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on ensuring and strengthening the

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the

security of IT regarding automated cars;

security of IT *and a high level of data protection* regarding automated cars;

Or. en

Amendment 66

Matthijs van Miltenburg, Pavel Telička, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated *cars*;

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated *modes of transport*;

Or. en

Amendment 67

Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated *cars*;

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding automated *vehicles*;

Or. en

Amendment 68

Dominique Riquet

Draft opinion Paragraph 5

Draft opinion

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding *automated* cars;

Amendment

5. underlines that it is necessary to focus on ensuring and strengthening the security of IT regarding *autonomous* cars;

Or. fr

Amendment 69
Dominique Riquet

Draft opinion
Paragraph 5 a (new)

Draft opinion

Amendment

5a. *Calls on the Commission to develop a civil liability regime, including on the burden of proof, adapted to the development of autonomous vehicles; stresses the importance of ensuring a clear division of responsibilities between the designers, the manufacturers of the various components and the assemblers of autonomous vehicles, the service providers (transport services or the services necessary for the operation of autonomous vehicles) and the end users in order to ensure the safety and rights of passengers, data protection and protection against piracy;*

Or. fr

Amendment 70
Evžen Tošenovský

Draft opinion
Paragraph 5 a (new)

Draft opinion

Amendment

5a. *underlines the critical importance of reliable positioning and timing*

information provided by the European satellite navigation programmes Galileo and EGNOS for the implementation of automated vehicles, particularly for navigation and safety systems in automated vehicles on the one hand and for intelligent transport systems and traffic management systems on the other hand;

Or. en

Amendment 71

Notis Marias

Draft opinion

Paragraph 5 a (new)

Draft opinion

Amendment

5a. Calls on the Member States and the Commission to launch an in-depth study into the future implications of the increasing use of automated transport at the workplace and to seek adoption of the necessary framework legislative provisions, so as to make the transition as smooth as possible for workers affected, thereby ensuring the protection of jobs;

Or. el

Amendment 72

Dieter-Lebrecht Koch

Draft opinion

Paragraph 5 a (new)

Draft opinion

Amendment

5a. Draws attention to the high added value provided by autonomous vehicles for persons with reduced mobility, as such vehicles allow them to participate better in individual road transport and thereby

facilitate their daily lives;

Or. de

Amendment 73
Marie-Christine Arnautu

Draft opinion
Paragraph 5 a (new)

Draft opinion

Amendment

5a. *Calls on the Commission, which may be required to promote transport industries for a legitimate economic purpose, not to make the product user bear most of the burden of civil liability;*

Or. fr

Amendment 74
Dominique Riquet

Draft opinion
Paragraph 5 b (new)

Draft opinion

Amendment

5b. *Stresses that in case of damage, the consumer of a mobility service provided by an autonomous system cannot be made to bear the burden of proof of the causal link between the damage and the harmful event; furthermore, in order to protect victims, prior evidence of liability must not be required of them;*

Or. fr

Amendment 75
Notis Marias

Draft opinion
Paragraph 5 b (new)

Draft opinion

Amendment

5b. *Acknowledges that the unconsidered development of automated systems could engender serious social and economic dangers; calls on the Union and the Member States to seek a structured public debate with the direct involvement of civil society concerning the implications of these technological developments as soon as possible; urges those involved in research into the automatisisation of transport to provide constructive input through a critical approach to their field of study;*

Or. el

Amendment 76
Merja Kyllönen, Kateřina Konečná, Stelios Kouloglou

Draft opinion
Paragraph 6

Draft opinion

Amendment

6. calls on the Commission to propose a single roadmap for automated and connected vehicles and other transportation and for closer collaboration of all relevant stakeholders;

6. calls on the Commission to propose a single roadmap for automated and connected vehicles and other transportation and for closer collaboration of all relevant stakeholders, *including a careful analysis and recommendations regarding the dynamics and the development of the market;*

Or. en

Amendment 77
Matthijs van Miltenburg, Jozo Radoš, Gesine Meissner, Izaskun Bilbao Barandica

Draft opinion
Paragraph 6

Draft opinion

6. calls on the Commission to **propose a single roadmap** for automated and connected vehicles and **other transportation and for closer collaboration of all relevant stakeholders**;

Amendment

6. calls on the Commission to **develop a shared European strategy** for automated and connected vehicles and **to review and adapt where necessary the Union regulatory framework to support the development and use of automated and connected vehicles**;

Or. en

Amendment 78
Dieter-Lebrecht Koch

Draft opinion
Paragraph 6

Draft opinion

6. calls on the Commission to propose a single roadmap for automated and connected vehicles and other transportation and for closer collaboration of all relevant stakeholders;

Amendment

6. Calls on the Commission to propose **by 2019** a single roadmap for **the deployment of interoperable**, automated and connected vehicles and other transportation and for closer collaboration of all relevant stakeholders;

Or. de

Amendment 79
Dominique Riquet

Draft opinion
Paragraph 6

Draft opinion

6. calls on the Commission to propose a single roadmap for **automated and connected** vehicles and other transportation and for closer collaboration of all relevant stakeholders;

Amendment

6. calls on the Commission to propose a single roadmap for **autonomous and automated** vehicles and other transportation and for closer collaboration of all relevant stakeholders;

Or. fr

Amendment 80
Pavel Telička

Draft opinion
Paragraph 6

Draft opinion

6. calls on the Commission to propose *a single roadmap for automated and connected vehicles and other transportation and for closer collaboration of all relevant stakeholders;*

Amendment

6. calls on the Commission to propose *in due time concrete measures with the aim of creating an appropriate legal and policy framework for safely integrating automated and connected vehicles into regular transportation;*

Or. en

Amendment 81
Andor Deli

Draft opinion
Paragraph 6 a (new)

Draft opinion

Amendment

6a. calls on the Commission to prepare a clear Union legal framework on automated vehicles in order to respond to the technological development trends in the automotive sector and to ensure that the Union remains the leading car manufacturer thus contributing to the technological development and economic growth of the Union; urges the finalisation and launch, as soon as possible, of the satellites which are needed in order to complete the European Galileo positioning system, so that such system can be used as the default positioning system in automated vehicles;

Or. en

Amendment 82
Marie-Christine Arnautu

Draft opinion
Paragraph 6 a (new)

Draft opinion

Amendment

6a. Calls on the Commission to specifically address the problem of the social reclassification of workers in road, sea and air transport so that improvements in and the generalisation of automatic vehicle technologies become synonymous with unemployment;

Or. fr

Amendment 83
Ivan Jakovčić

Draft opinion
Paragraph 6 a (new)

Draft opinion

Amendment

6a. bearing in mind that innovative technological solutions for automated vehicle applications are developing rapidly, calls on the Commission to draw up legislation on transport using the automated vehicles that will result from technological change;

Or. hr

Amendment 84
Luis de Grandes Pascual

Draft opinion
Paragraph 6 a (new)

Draft opinion

Amendment

6a. notes that the development of automated vehicles requires a proactive and committed institutional approach on

*the part of the Union and Member States
as well as the involvement of technology
centres and of the automotive industry;*

Or. en

Amendment 85

**Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin,
David Borrelli, Laura Ferrara**

Draft opinion

Paragraph 6 a (new)

Draft opinion

Amendment

*6a. calls on the Commission to develop
European infrastructural standards to
allow the diffusion of autonomous
vehicles and a road map to implement
them;*

Or. en

Amendment 86

Dieter-Lebrecht Koch

Draft opinion

Paragraph 6 a (new)

Draft opinion

Amendment

*6a. Calls for legislative frameworks
for the deployment of unmanned aircraft
in civil aviation to be created by 2017;*

Or. de

Amendment 87

Dieter-Lebrecht Koch

Draft opinion

Paragraph 6 b (new)

Draft opinion

Amendment

6b. *Calls on the Commission and Member States to include the use of automated vehicles in the initial and advanced training of HGV drivers and to make this part of the training needed to obtain a car driving licence;*

Or. de

Amendment 88

Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin, David Borrelli, Laura Ferrara

Draft opinion

Paragraph 6 b (new)

Draft opinion

Amendment

6b. *invites the Commission to study the potential economic and social consequences of robotics and automation in the tourism sector and related industries;*

Or. en

Amendment 89

Luis de Grandes Pascual

Draft opinion

Paragraph 6 b (new)

Draft opinion

Amendment

6b. *notes that the development of automated vehicles should always take into account Union legislation on personal data protection;*

Or. en

Amendment 90

**Dario Tamburrano, Daniela Aiuto, Isabella Adinolfi, Laura Agea, Tiziana Beghin,
David Borrelli, Laura Ferrara**

Draft opinion

Paragraph 6 c (new)

Draft opinion

Amendment

6c. calls on the Commission to study the potential economic and social consequences of robotics and automation over the full life cycle of transport systems, including active and preventive maintenance, fleet management, temporary storage (e.g. parking systems for city vehicles), and dismantling and other operations guaranteeing a smooth flow of the corresponding materials into the circular economy;

Or. en

Amendment 91

Luis de Grandes Pascual

Draft opinion

Paragraph 6 c (new)

Draft opinion

Amendment

6c. supports the impetus to the development and commercialization of automated and connected vehicles in the Union from 2019, in line with the Amsterdam Declaration of April 2016, and calls for the establishment of an appropriate Union technical and regulatory framework;

Or. en

Amendment 92

Luis de Grandes Pascual

Draft opinion
Paragraph 6 d (new)

Draft opinion

Amendment

6d. *notes that a potential authorization of the use of automated vehicles needs to have as a prerequisite certain regulatory and legislative changes. Some of those changes should be focused on insurance law and civil liability;*

Or. en

Amendment 93
Luis de Grandes Pascual

Draft opinion
Paragraph 6 e (new)

Draft opinion

Amendment

6e. *concerning unmanned aircraft, recalls the measures set out in Regulation (EC) No 216/2008 of the European Parliament and of the Council, of 20 February 2008, on common rules in the field of civil aviation and establishing a European Aviation Safety Agency^{1a} to ensure homogeneity and safety;*

^{1a} *Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1).*

Or. en