European Economic and Social Committee

TEN/673
Connected and automated mobility

OPINION

European Economic and Social Committee

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions - On the road to automated mobility: An EU strategy for the mobility of the future
[COM(2018) 283 final]

Rapporteur: **Ulrich SAMM**

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Sector responsible	Section for Transport, Energy, Infrastructure and the Information Society
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1. Conclusions and recommendations

1.1 The EESC welcomes the communication on connected and automated mobility that offers a wealth of new features for consumers and transport businesses. The EESC is convinced about the **benefits of automated mobility** for our society as it will provide new services for the mobility of people, with more possibilities for the shared economy, potential for optimisation of traffic with environmental advantages, and mobility for those who cannot drive themselves.

1.2 The EU **automotive industry**, with its expertise in developing vehicle technologies, is well-positioned to seize these opportunities, provided, however, that the EU defines standards to enable operation across borders and interoperability between different car brands.

1.3 A key feature of automatic or semi-automatic driving is that it could significantly improve the active **safety of ground vehicles** and might reduce fatalities significantly, or even eliminate them entirely. Fatal accidents with automated vehicles during the pioneering phase, however, could become a showstopper for this technology. The EESC recommends, therefore, that all pilot projects and test procedures with autonomous driving be performed under the **highest safety standards** possible, even when this boundary condition may slow down developments compared to competitors outside the EU. In the long run this will provide better products with higher acceptance.

1.4 The EESC believes that **driverless cars** (level 5) will only be accepted when they provide the same safety as other transport systems for passengers like trains or large airplanes (almost **100% safety**). This represents a big hurdle, as long as autonomous vehicles and conventional cars and other road users (cyclists, pedestrians, special-purpose vehicles) are driving on the same roads. "100% safety", however, may be key to solving specific **ethical issues** linked to autonomous vehicles.

1.5 The EESC acknowledges that **semi-automatic vehicles** (level 1-4) with a number of assistance systems can already reduce fatalities, and therefore supports the Commission's approach of enhancing the number of new safety features for vehicles as part of the revision of the General Safety Regulation for motor vehicles. The EESC, however, notes two problematic areas which may be a hurdle for public acceptance: a) additional **costs** and b) the growing **complexity** of driving a car.

1.6 The usual training for getting a driver's licence does not cover the most modern technology of assistance systems. Obviously there is a need for additional training. The EESC believes that the automotive industry, together with municipalities, must as a matter of urgency offer **training courses** and **training areas** for private and professional drivers; otherwise the introduction of the new safety-related technologies will be hampered significantly.

1.7 Training in semi-automatic driving requiring new skills and responsibilities will be key to the development of a modern profile for **professional drivers** and to responding to the growing demand in transport.

1.8 The EESC recognises the potential for the eventual large-scale loss of jobs (i.e. lorry and bus drivers) if full automation (level 5) does become successfully introduced in the future. The EESC asserts that the benefits of automation must be shared by society as a whole and therefore urges the **social partners** to jointly plan the future developments and eventually negotiate new collective bargaining agreements on the introduction of automation in road transport.

1.9 The **product liability** directive should be reformed so that it covers both movable products and services as well as products with embedded software, so that consumers do not have to search to find out who is liable. Moreover, in a more complex digital environment the **burden of proof** in case of product failures is also a matter of concern and should be regulated in a consumer-friendly way. The Committee urges the Commission in particular to anticipate the changes in the insurance directive related to driverless motor vehicles and to guarantee the compensation of accident victims.

1.10 With increased **connectivity** vehicle data can be accessed from every corner of the world. We know from the area of smartphones and PCs that this causes significant risks and challenges regarding safety, security and privacy. The same standards cannot be accepted for vehicles, where there is a risk of death or injury. The EESC emphasises, therefore, that any new regulation on data access for vehicles must follow the **safety first** principle.

1.11 The EESC welcomes the approach of the Commission in giving priority to regulating the protection of vehicles against cyber-attacks, ensuring secure and trustworthy communication between vehicles and infrastructure and providing a sound **data protection** level in compliance with the General Data Protection Regulation.

1.12 The EESC is ready to participate in the anticipated **assessment** by the Commission of the socio-economic and environmental impacts of driverless mobility and the **EU forum** to address specific ethical issues.

2. Introduction

2.1 The "**Europe on the Move**" initiative comprises a number of legal initiatives being delivered in three packages. The first package reflected Europe's ambition to make rapid progress towards putting in place a clean, competitive and connected mobility system by 2025, which is key to a well-functioning Single European Transport Area[1]. The second package focused more on instruments to reduce emissions from road transport[2]. The third package, which is currently being delivered and is dealt with in this opinion, focuses on safety issues with the strategy presented in the Communication "**On the road to automated mobility**"[3].

2.2 Ground transport technology in particular will most likely be revolutionised by **digitalisation**. This communication, therefore, has to be seen in the wider context, comprising other issues

1 OJ C 246, 28.7.2017, p. 64.

2 OJ C 262, 25.7.2018, p. 75.

3 COM(2018) 283 final.

such as the future of work, research and innovation, Artificial Intelligence (AI), and the skills agenda.

3. Gist of the proposal

3.1 With this Communication, the Commission proposes a comprehensive EU approach towards connected and automated mobility, setting out an ambitious European agenda, providing a common vision and identifying supporting actions for the development and deployment of key technologies, services and infrastructure.

3.2 The Commission is pursuing the **Vision Zero by 2050** project because automatic driving has the potential to be a game-changer and may significantly reduce fatalities or even eliminate them entirely. In this way it also contributes to the achievement of the **Sustainable Development Goals** on Good Health and Well-Being as well as on Sustainable Cities and Communities.

3.3 In order to make the EU stronger in terms of technology and infrastructure for automated mobility, the Commission is funding various instruments and proposes a set of initiatives:

- the **Connecting Europe Facility** with EUR 450 million to support digitisation in transport with the aim of facilitating automation;
- large-scale testing based on **5G** cross-border corridors;
- priorities in **research and innovation funding** (Horizon 2020 and the next Framework Programme).

3.4 By 2019, the EU will offer **Galileo**'s initial high-accuracy services for free, making it the first to be able to offer such a navigation service on a worldwide basis.

3.5 In order to ensure an internal market for the safe take-up of automated mobility, the Commission is proposing (mostly as part of the revision of the General Safety Regulation for motor vehicles):

- to work with Member States on guidelines to ensure a harmonised approach for national ad-hoc vehicle **safety assessments** of automated vehicles;
- to initiate work with Member States and stakeholders on a new approach for vehicle **safety certification** for automated vehicles;
- **new safety features** for automated vehicles as part of the revision of the General Safety Regulation for motor vehicles;
- to regulate **data recorders** for automated vehicles;
- to regulate **platooning** so as to ensure standardisation of data exchanges across different brands;
- to regulate the protection of vehicles against **cyber-attacks**;
- to address the need for specifications relating to **access** to vehicle data for **public authorities'** needs;

- to adopt a delegated regulation to ensure secure and **trustworthy communications** between vehicles and infrastructure and a sound **data protection** level in compliance with the General Data Protection Regulation.

3.6 Following a Council conclusion, the Commission intends to assess the **socioeconomic and environmental impact** of automation and digitalisation in the field of transport, taking into account the new skills needed in that sector. For this purpose the Commission will:

- consult interested parties on the socioeconomic and environmental impacts of driverless mobility;
- support the acquisition of new skills, retain and reskill the workforce in the sector through the **new skills agenda** for Europe;
- provide an EU forum to address specific **ethical issues** raised by driverless mobility.

4. General comments

4.1 Digitalisation and automation based on fast and reliable internet offer a wealth of **new features** for consumers and businesses that seek better quality, convenience, flexibility, affordability and safety in road transport.

4.2 The EU automotive industry, with its expertise in developing vehicle technologies, is well-positioned to seize these opportunities. The EESC emphasises that the general aim must be to harmonise systems or find technical solutions to enable them to operate across borders, as this is vital to the smooth functioning of the **internal market**.

4.3 The **connectivity** among vehicles and between vehicles and fixed infrastructure is a key feature that will be necessary to make full use of digital technology. The EESC therefore welcomes the timetable for developing high-capacity broadband infrastructure at European level that would provide uninterrupted 5G coverage with very high-capacity internet connectivity along all major terrestrial transport paths[4].

4.4 The EESC once more encourages the Commission to pursue the **Vision Zero by 2050** project further. A key feature of automatic or semi-automatic driving is that it could significantly improve the active safety of ground vehicles and might reduce fatalities significantly, or even eliminate them entirely.

5. Public acceptance and socio-economic impact

5.1 The new technologies can only be implemented successfully when the socio-economic impact has also been addressed properly. Public acceptance is key for the introduction of automated mobility.

4 OJ C 125, 21.4.2017, p. 51.

5.2 The EESC is convinced about the benefits of connected and automated mobility for our society as it will provide **new services** for the mobility of people, with more possibilities for the shared economy and the environment, and mobility for those who cannot drive themselves.

5.3 For **safety and** liability issues one has to distinguish clearly between semi-automatic and autonomous driving. In semi-automatic vehicles (**levels 1-4)** new technologies (radar, camera, laser) assist the driver, while autonomous cars (level 5) do not require a driver at all. In the first case the driver remains responsible in all circumstances, while in the second case the liability issue needs to be clarified. The EESC is convinced that autonomous cars have to fulfil the same safety standards as other passenger transportation systems such as trains or large airplanes. When human error is eliminated then automatic transport systems must be 100% safe.

5.4 Our society is to a certain degree tolerant towards human error, which explains the acceptance of about 25 000 road fatalities in the EU (2016). This is quite different in other transport systems where passengers are passive. The demand for 100% safety for autonomous vehicles represents a big hurdle as long as these vehicles, conventional cars and other road users (cyclists, pedestrians, special-purpose vehicles) are driving on the same roads.

5.5 Fatal accidents with automated vehicles could become a showstopper for this technology, even when the rate of accidents is relatively low. The EESC recommends, therefore, that all pilot projects and test procedures with automatic driving be performed under the highest safety standards possible. This boundary condition may slow down development compared to competitors outside the EU, but on the other hand it will enhance public acceptance and in the long run provide better products. The EESC notes that 100% safety with automated vehicles might only be made possible with the significant re-designing of the road system.

5.6 For the development of ethical guidelines for highly automated vehicles the EESC recalls the "human in command approach" principle, as emphasised several times in other opinions. According to this principle, only humans make "responsible decisions", which has consequences for the design of autonomous vehicles and the environment in which they are allowed to operate. Nevertheless, the safety-critical actions of driverless vehicles, e.g. to avoid accidents, can raise serious "ethical issues" at programming level which must be addressed.

5.7 The EESC acknowledges that semi-automatic vehicles (level 1-4) can already reduce fatalities and therefore supports the Commission's approach of enhancing the number of new safety features for vehicles as part of the revision of the General Safety Regulation for motor vehicles. The EESC notes two problematic areas which may be a hurdle for public acceptance: a) additional technical features can increase the cost of a car significantly and b) a growing number of assistance systems can make driving a car much more complex.

5.8 The usual training for getting a driver's licence (light vehicles, lorries and buses) has not covered and does not cover the most modern technology of assistance systems. Obviously there is a need for additional training for newcomers as well as for experienced drivers. Moreover, consumers must be given clear and unambiguous information about the features of a modern vehicle at the time of purchase, rental or car-sharing. The EESC proposes that the automotive industry, together with municipalities, offer training courses and training areas for private and

professional drivers. The driving test for new drivers wishing to obtain a licence should incorporate safety training on the use of new technology/automation features. Training in semi-automatic driving will be key to the development of a modern profile for professional drivers, and may require new skills and responsibilities.

5.9 The EESC recognises the potential for the eventual large-scale loss of jobs (i.e. lorry and bus drivers) if full automation (level 5) does become successfully introduced in the future. We call on the Commission to acknowledge the wider concern that the introduction of new technology/digitalisation/automation across a wide range of sectors (transport, manufacturing, financial services etc.) may lead to large-scale job losses with relatively few new jobs being created to take their place. The EESC asserts that the benefits of new technology/digitalisation/automation must be shared by society as a whole, and not simply be used to benefit private businesses in the reduction of their labour costs. It is also important to notice, however, that even today professional drivers do more than simply steer a vehicle and in future, when the need for pure driving is reduced (with level 5), the tasks of professionals in the transport business can be further extended, which might largely compensate for the reduction of pure driving tasks.

5.10 The EESC fully recognises that the introduction of semi-automatic (levels 1-4) and fully automatic (level 5) systems to lorries and buses will have impacts on jobs and conditions of work. We therefore urge the social partners to jointly plan future developments and eventually to negotiate new collective bargaining agreements on the introduction of new technology/digitalisation/automation in road transport. It is to be welcomed that some trade unions (e.g. UNITE in the UK) have already developed model collective bargaining agreements to protect jobs, ensure retraining and up-skilling and ensure that any cost savings are fairly shared with the workforce.

5.11 The product liability directive should be reformed so that it covers both movable products and services as well as products with embedded software, so that consumers do not have to search to find out who is liable (see also opinion INT/857). Moreover, in a more complex digital environment the burden of proof in case of product failures is also a matter of concern and should be regulated in a consumer-friendly way.

5.12 The EESC welcomes the fact that EU data protection rules are increasingly recognised at international level as setting out some of the highest standards of data protection in the world and welcomes the approach of the Commission in giving priority to regulating the protection of vehicles against cyber-attacks, ensuring secure and trustworthy communication between vehicles and infrastructure and providing a sound data protection level in compliance with the General Data Protection Regulation.

5.13 With increased connectivity, vehicle data can be accessed from every corner of the world. This possibility opens the door to plenty of untapped potential. However, this also brings significant risks and challenges regarding safety, security and privacy. Vehicles require much higher standards in safety, security, and privacy compared with smartphones, for example. The EU is urged to develop such standards and to negotiate corresponding world-wide agreements on these standards.

5.14 The access to vehicle data is highly relevant for the competition in after-sales care, in particular for independent repair and maintenance providers, with possible consequences for consumer choice and costs. The EESC encourages the EC to implement the rules for data usage as soon as possible, in particular in view of the fact that EU automotive industries (for example the detailed "Nevada" concept developed by the EU automotive industries (source VDA)) have already provided detailed proposals for a fair platform for data exchange with third parties in a secure and discrimination-free manner, as well as taking into account customers' privacy rights.

5.15 The Commission should take into account the fact that the infrastructure needed for the operation of connected and autonomous cars differs tremendously among Member States. Also the market surveillance authorities in all Member States should have sufficient resources to be able to cope with the new technologies.

Brussels, 17 October 2018.

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The president of the European Economic and Social Committee