ROBERT GORDON UNIVERSITY

CM3100 – Computer Ethics and Law

Coursework Element 1

Darie-Dragos Mitoiu

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This document contains the coursework element one task for the module called CM3100 Computer Ethics and Law.

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Element 1 - Recommendations

As the automated and connected vehicles are used more and more each year for transport it seems that this event presents some clear promises to defeat the classic automotive vehicles with the associated industry. This event could produce a revolution when it comes to the mobility and transportation elements, nevertheless the complexity of these autonomous vehicles grows as much as their use which ultimately will lead to the rise of legal and ethical issues that must be considered in order to allow the process of evolution of these machines continue. According to Automotive IQ (2019) the classic laws and regulations cannot offer a promising solution to the autonomous vehicles problem and because of this governments or the relevant authorities responsible of the creation of these laws and regulations need to find a balance between overregulating the market in cause and protecting the consumer. The use of autonomous and connected vehicles as a fleet of taxis in Aberdeen will bring a series of legal and ethical issues that must be considered and resolved before allowing the autonomous vehicles to make part of the day to day life in Aberdeen. According to Automotive IQ (2019) a legal commentator has considered and evaluated the autonomous vehicles question and it got to the conclusion that "development of driverless cars threatens to tear up the rule book". The adoption of autonomous and connected vehicles or the autonomous taxis fleet in Aberdeen will bring legal issues that can be represented by elements such as public interest, data protection, liability, insurance and intellectual property.

The British Computer Society Code of Conduct suggests that when it comes to the public interest topic some rules that must be considered for the autonomous taxis fleet technological project are: to "have due regard for public health, privacy, security and wellbeing of others and the environment" and to "promote equal access to the benefits of IT and seek to promote the inclusion of all sectors in society wherever opportunities arise". It is safe to say that in order to ensure a level of professionalism the rules mentioned must be respected as the project is put into use.

The data protection element will imply the consideration of tools such as the Internet of Things (IoT) as the ever growing autonomous and connected vehicles will present some kind of software that will require internet connection which will ultimately lead to data being continuously sent back and forth between software applications, these software applications are represented in the form of clients and servers. According to Autonomous IQ (2019) when it comes to an element such as data protection, the autonomous vehicles will need to collect large amount of data in order to ensure the normal functionality of the autonomous vehicles. It is safe to say that the General Data Protection Regulation 2018 must be considered in order to cover the legal aspect of the autonomous taxis fleet project due to the large amount of data being collected, the collection of data ranging from any user data to more technical data being collected through cameras, radar and ultrasonic detections (Autonomous IQ 2019). Some best practices for the data protection element would be the use of encryption for any processing of user data and the ability to give the person that would use the autonomous vehicle the option to delete any relevant data after the service was offered by the autonomous vehicle. The encryption of user data can be justified by the continuous transfer of user data between software applications and storage of such user data by the autonomous vehicle. These measures should be considered as the information could lead to identification of the person in cause and due to the ever-increasing cyber-attacks.

The liability element refers to the level of accuracy that the autonomous vehicles will present for the unforeseen events that could occur during runtime of the system and to which extend the driver or the person present in the vehicle it is required to interact with the autonomous vehicle (Automotive IQ 2019). According to Automotive IQ (2019) as the level of automation and interconnectivity of the vehicles increases, the responsibility for possible car accidents will move towards the manufacturer of the autonomous vehicles instead of the person present in the car when considering both hardware and software aspects of the vehicle. It is safe to say that a possible law that must be considered for the liability element it is the Consumer Protection Act 1987 as this law will protect the person involved in a possible car accident due a defect present in the autonomous vehicle architecture.

The liability element it is associated most of the time with the insurance element as the reliability question of the autonomous vehicles will imply the driver or the person present in the vehicle to be covered by some kind of insurance in case of possible events that could cause damage to the driver or person in cause. This insurance element will imply the acknowledgment of the law called Insurance Act 2015; this law will require the presentation of the risks involved when using an autonomous vehicle to the person that will make use of such vehicle in case the autonomous vehicle will not be able to provide a precision rate of 100% when driving which is less likely due to the continuous dynamicity of the day to day traffic (Automotive IQ 2019).

The intellectual property element will imply the need to develop, purchase and license different types of technologies that do not belong specifically to the classical area of the automotive industry, these types of technologies refer most of the time to software applications related to elements such as radar, collision, avoidance technologies, artificial intelligence and machine learning (Automotive IQ 2019). It is safe to say that the intellectual property element will imply the acknowledgment of the law called Intellectual Property Act 2014; this law will require the software products related to the autonomous vehicle to present a license if the software is not provided by the manufacturer, any use of unlicensed software will breach the law in cause.

The adoption of autonomous and connected vehicles or the autonomous taxis fleet in Aberdeen will also bring a series of ethical issues beside the legal ones which can be represented largely by the key challenge of how an autonomous vehicle will value a human life in case of possible accidents. According to Snell (2019) when autonomous vehicles are put into use there will always exist scenarios where the autonomous vehicles will be put in a situation where there is some possibility that a mistake could be made by the vehicles and this event directly leading to the loss of life, these events must be considered because the decision taken by the autonomous vehicles related to who lives and who dies becomes a core ethical element for the autonomous vehicles in cause. These scenarios could be represented by the example of having a group of people consisting of 10 persons and an obstacle which will require an autonomous vehicle to make a decision if it should drive over the group of 10 persons or it should drive into the obstacle and kill the driver instead and save the group of 10 persons (Snell 2019). In the example mentioned previously one could argue that keeping 10 persons alive instead of 1 it is the sensible decision to be made by the autonomous vehicle. According to Snell (2019) it may not be required to decide how much a human life it is worth as the ethics are not the same in all countries and regions. If a mechanism will be put in place for such scenarios where the autonomous vehicle may harm the driver to save other people, the driver or customer must be informed of such mechanism before putting the autonomous taxis fleet project into use.

References

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