Differing visions for the future of driving instruction and testing

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This presentation is based on an internal report that CAS has prepared for the RAC Foundation in the UK examining the implications of different visions of the future of vehicle automation for driver testing and training.

Fully automated, self-driving vehicles are already here and, if you could afford one and it was legal to do so, you could travel in one now. However, it is still not at all clear how quickly fully self-driving will penetrate the market. There are still issues concerning safety, cost, consumer acceptance and regulation that need to be resolved. For example, there is, as yet, no evidence that such vehicles can currently provide the extra safety benefits that are promised over and above those provided by the various automated driver assistance systems (ADAS) already in existence. Although developments are moving fast, it is still most likely that vehicle automation will proceed through a series of stages involving increasing levels of automation and different degrees of road sharing between vehicles at different levels of automation (i.e. mixed traffic).

There are any number of possible versions of the future, each of which has different implications for how vehicle operators (they may no longer strictly be drivers) will need to be trained. However, this presentation considers three of the most likely: fully self-driving vehicles with no controls usable by human drivers; vehicles with a fully self-driving mode but which retain controls which will allow human drivers to operate the vehicle; highly automated vehicles which nonetheless always require a human driver or operator to be in control. The degree to which traffic is mixed interacts with all of these scenarios to affect the nature of the training that will be needed.

The presentation considers the implications of the different visions for the skill sets required, both regarding the need for new skills and which existing skills will need to be retained, and the ways in which different levels of the GDE matrix should be interpreted and implemented in the learning to drive process.