Survey finds an ‘open mind’ on the coming of self-driving vehicles (SDVs) and identifies key groups which will be influential in the future deployment of vehicles.

1 Introduction

As part of the UK Autodrive Project, the University of Cambridge was commissioned to carry out a national survey of public attitudes towards self-driving vehicles (SDVs). The survey, comprising 49 questions, was conducted in October-November 2016 and attracted more than 3,000 respondents (of which 2850 were subsequently validated after filtering for quality and completeness).

The results of the survey are summarised below under two principal headings:

‘Attitudinal Findings’ – in which the attitudes of the public are presented within four broad categories:
• Familiarity and Disposition
• Reservations
• Benefits Conferred
• Trust

Social Segments – in which key sub-groups of respondents are identified and their significance is explained.

2 Attitudinal Findings

2.1 Familiarity and Disposition

76% of respondents expressed familiarity with the concept of driverless cars, so it is clear that a majority of the public is aware of the technology and the possibility of its arrival at some time in the future. The general level of awareness is very high, but there is also a reasonable level of awareness of some of the more detailed aspects of the ‘forerunners’ of driverless technology which are already beginning to appear on cars which are available for sale today. Examples include adaptive cruise control (40% expressed awareness/familiarity) and lane-keeping assistance (34%).

Most significantly, however, it is clear that whilst the general levels of awareness are extremely high, the technology has not yet been around for long enough for hard-line attitudes to set in. The responses reveal a remarkably open mind to the arrival of SDVs, with very few expressing strong opposition to the idea.
2.2 Reservations

Whilst very few respondents expressed outright opposition to the idea of SDVs, many expressed some reservations about the ability of the new technologies to replace the driver completely. In response to questions about what levels of control they would like to retain, 85% expressed a desire to retain some control over the choice of route, and 74% wanted to retain an option to drive manually.

Safety and security featured high on the list of concerns, with fears of hacking being at the top of the list (54%). Nevertheless, it was interesting to find that even in this highly publicised area, a sizeable minority (38%) expressed neutral feelings about the subject.

2.3 Benefits

The findings showed that the public has a wide range of views about the possible benefits of SDVs, with 23% suggesting that the most popular use would be for shopping excursions, followed by commuting (22%), social/leisure travel (22%), and 15% who might use an SDV when they are planning to drink alcohol.

Alternative use of time was widely seen as a benefit. Relieving the driver of the traditional responsibilities of driving would make time available to do other things (time recovery). The most popular uses of recovered time were relaxing (looking out of the window – 55%, and doing nothing – 24%), responding to e-mails (37%), making phone-calls (35%), eating/drinking (35%), socialising/chatting (33%), reading a book or other printed material (31%). There was very wide agreement that SDVs could become a major benefit to people with disabilities (80% agreed).
Finally, when questioned about operations and ownership, a slight majority of respondents saw greater potential for SDVs in the realm of public or shared transport systems than in the traditional private ownership arrangement. The preferred means of booking access to a future shared transport system was clearly via a smartphone app (45%), with home telephone (27%) and conventional hailing at a public bus stop (23%) being the other most cited candidates.

2.4 Trust

Despite the general open-minded disposition towards SDVs, there are some issues around trust which will need to be addressed. When questioned about which types of user would benefit most from the widespread availability of SDVs, 80% responded by suggesting people with disabilities, 42% suggested parents or older loved ones, 36% suggested ‘people of my own age/lifestyle’, and 18% suggested children (school run). The implication is ‘everyone else except me’, a response which suggests an element of uncertainty, or lack of trust, in the new technology.

3 Social Segments

Previous work by others (for example, the Traveller Needs Survey carried out in 2015 by the Automotive Council and Transport Systems Catapult) identified particular groupings amongst the general population when questioned about transport needs and intelligent mobility. Interrogation of the responses to the UK Autodrive questionnaire showed that these specific groupings did not show up clearly in this survey, but other groups were identified which are of particular interest within the SDV context. These groups might be of particular interest to the producers of SDVs on the one hand, and to national/local government on the other. The first two groups (the Established Urbanites and the Young Professionals) might be of particular interest to the vehicle manufacturers because of their potential to become early adopters. The second two groups (The Traditionals and the Millennial Agnostics) might be of particular interest to Central Government and Local Authorities because of the need for these bodies to allay the concerns of the public about the potential widespread adoption of driverless technologies.
The four social groups are identified on the following diagram which shows technology acceptance levels across different generational bands. The groups are characterised as follows:

1. **The Traditionals** – This is a large swathe of the respondents who hold the ‘neutral centre-ground’ comprising mainly adults living in towns or rural areas. Whilst not particularly against SDVs this cohort is less likely to be interested in them.

2. **Millennial Agnostics** – Represented by a sub-set of young adults of working age who are less excited about new technologies.

3. **Young Professionals** – A distinct set of early career professionals with high levels of technology awareness and a willingness to adopt.

4. **Established Urbanites** – A small, but important, sub-set of the older generational band represented by technology-aware, higher income, urban dwellers, who could be influential in persuading their contemporaries of the benefits of SUVs.

---

### Next Steps

The work on public attitudes will continue within UK Autodrive until the end of the programme in October 2018. The results of this initial survey will be used to provide a basis for the deeper exploration of public attitudes through local focus groups. These will be convened in a number of cities, both in the UK and abroad. Towards the end of the programme, the national survey will be repeated to test if any material changes in public attitudes have occurred over the life of the project.