

A key driver for change

Driverless cars could bring undreamt of freedom to those whose disabilities mean they can't get behind the wheel. AXA has joined forces with tech experts to ensure that this push to transform society is steered safely to reality

Being picked up from your front door and chauffeured to wherever you need to go is the preserve of the super wealthy at present. But "being driven" is on its way for all of us – and when it arrives, it will have a profound impact on the most vulnerable members of society.

Professor Tony Pipe, deputy director of the Bristol Robotics Laboratory, has spent the past four years working towards making driverless cars a reality on our roads. He believes that "autonomous vehicles" could bring about the biggest social revolution since the development of the railway.

Pipe is working with the Venturer Alliance, a research and development consortium of which AXA is a partner, to understand the complex social, legal and insurance ramifications of taking the steering wheel out of our hands. The alliance is continuing the work of Venturer, an earlier collaboration co-funded by the government and industry.

"We need to give mobility to older adults, those who have become infirm and to people with disabilities that mean they can't drive manual cars," he says. "Being able to get someone from their door to where they need to be, when they need, safely and at a reasonable cost is the ultimate aim."

Paul Whittington, a postdoctoral researcher in assistive technologies at Bournemouth University, agrees. "Driverless car technology can be seen as

the future of vehicles," he says. "It will enable people with disabilities to become independent, improve their quality of life and achieve their potential."

Whittington has a personal interest in autonomous motoring as he has cerebral palsy, and is dependent on a powered wheelchair. "I use driverless technology every day," he says. He is referring to the automated transport and retrieval system (ATRS) that allows him to load and unload his chair and bring it to the driver's door.

Like many wheelchair users, Whittington found independent car travel a challenge. Even the key fob for his ATRS was difficult to manage because of his fingers' limited strength and dexterity.

The self-confessed technophile – "I had an interest in technology from the age of four" – knew that smart tech could provide an answer, and proved it by designing an adaptation as part of his undergraduate degree. The resulting "SmartATRS" system displays a web page that allows him to operate the technology via any touchscreen. "It has made it much easier for me to use," he says.

Whittington's postdoctoral research is dedicated to autonomous motoring. "Driverless cars will be life-changing," he says, "as they could have wide-reaching benefits for people with disabilities, and for society in general."

Pipe also believes that the technology offers huge advantages for everyone. "The social benefits and commercial

'We hope it will open the floodgates for other life-saving, life-changing autonomous systems'



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PROMOTED CONTENT

£28bn
the predicted value of the driverless car industry to the UK economy by 2035*

93%
the expected fall in accidents by 2040* thanks to autonomous vehicles

£3.7trn
the overall global saving created by driverless cars**

interests are combined, which is rare," he says. "It means we see real commitment from the government, researchers, manufacturers, legal and insurance companies, and charities supporting groups such as the elderly or those with disabilities. We hope it will open the floodgates for other life-saving, life-changing autonomous systems."

As well as giving new freedom to those with mobility challenges, automation should also improve safety for all road users. Extensive studies suggest that 90 per cent of road accidents are caused by human error. There appears to be huge potential for saving lives, reducing injuries and reducing damage to cars by replacing driver responsibility with smart technology.

But there is still a long road ahead. There have been



Above: Paul Whittington sees driverless cars as the future. Left and below: the Venturer partnership, of which AXA is a key part, investigates the implications of the technology

high-profile testing accidents outside the UK – and the British government is proceeding with caution. Pipe says: "A very careful approach is being taken in this country and across the European Union, and the technology is being developed hand in hand with the insurance and legal structures on which it depends. This is a safety-critical issue."

When will autonomous vehicles actually become an everyday reality? The internationally adopted automation scale considers full automation a "level five". Level one driver assistance, such as emergency braking and rudimentary parking help, is already part of our lives.

Other technology that, for instance, stops drivers straying out of their lanes and maintains a safe distance between vehicles is

increasingly common in the UK – albeit in more expensive cars.

How long until we hit level five? "I think that being able to get in your car, press a button and head off down a country road is two decades away," Pipe says.

So there is still a long way to go, and the route will be challenging, but AXA will be involved at every turn. Taking control of driving out of the hands of humans is possibly the most humane thing we can do. "This technology will change lives," says Pipe, "and, in the fullness of time, it is likely to save them as well."



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